



1. Overview

The Construction Manager at Risk (CMR) consults with the Architect/ Engineer (AE) and the OSU Project Manager (PM), prepares a preliminary project schedule, makes recommendations for phased construction, prepares cost estimates, and, when documents are sufficiently complete, proposes a cost which is capped by a Guaranteed Maximum Price (GMP), and finally executes the construction as a contractor who holds the subcontracts.

2. Procure Services

2.1 Overview

- 2.1.1 Before proceeding with procurement, verify that project has been approved to move forward.
- 2.1.2 The Architect Engineer (AE) and Construction Manager at Risk (CMR) services are typically advertised at approximately the same time. Since the CMR is advertised for a longer period than the AE, the AE is procured first and attends the CMR interview as a non-scoring team member.
- 2.1.3 The AE shall be procured per the [RFQ](#) or the [Pre-Qualification](#) process
- 2.1.4 The AEs responsibilities are per the AE agreement and Article 3 of the CMR's General Conditions

2.2 RFQ Phase

2.2.1 **Advertising** (*O.R.C. 9.331*)

- Complete Request for Qualifications ([RFQ](#)) document per instructions
 - Post in the Ohio Register- minimum 30 days
- Complete [Newspaper advertisement](#)
 - One-time ad, in county where project is located, 30 days before qualifications deadline
- Document questions from firms and answers.
 - Use "[RFQ Q&A](#)" form
 - Post with Ohio Facilities Construction Commission (OFCC)

2.2.2 **Submittals**

- Receive qualifications per RFQ instructions
- Issue rejection letter to any submittal received after the advertised deadline
- Complete [CMR 330 Scoresheet](#)
- Create "[Shortlist Approval Memo](#)" per instructions
- Evaluate the submittals and recommend minimum of 3 to shortlist
- Review recommended shortlist with leadership at the "330 Meeting"
- Obtain approvals per memo instructions

2.3 RFP Phase

2.3.1 **Issue "Shortlist Notification"**

- Issue "Shortlist Notification" letters containing submission deadline, and pre-proposal meeting and interview schedules to each firm and enclose (per template)
 - [CMR RFP](#)
 - Proposal and [Best Value Rating Proposal Form](#)
(Complete all fields in pink on the "Pricing Proposal", "Rating Form" and "Ex C" tabs, which includes qualification and pricing ratings)
 - Other materials as necessary by project
- Issue "Not Shortlisted" notification to each firm not shortlisted via email (per template)



2.3.2 Conduct Pre-proposal Submission Meetings

- Invitees: University Architect, and/or Associate University Architect, Director of Projects (DoP), Project Manager (PM), User Representatives, shortlisted CMR firms and any additional attendees as necessary

2.3.3 Conduct Interviews

- Purpose - Clarify and respond to questions related to proposal
- Firms conduct a presentation at the interview, interview team asks questions about team and proposal
- Rank firms based on the final evaluation of each to determine best value
- Complete "[CMR Selection Approval](#)" memo and obtain approvals per instructions

2.3.4 Issue "Selected" Notifications

- Issue "Intent to Award" letter to the selected CMR (per template)
 - Enclose "[Construction Manager at Risk Technical Proposal Guidelines](#)"
 - All documents should be received within 5 business days of letter issue date
- Issue "Not Selected" notifications to the remaining firms (per template)

2.3.5 Submittal of Contracting Documents

- The CMR will submit the following, per the "Intent to Award" letter:
 - Letterhead proposal
 - Supporting documents per "[Construction Manager at Risk Technical Proposal Guidelines](#)"

2.3.6 Negotiation

- Ensure the CMR and the PM mutually understand the requirements required (including use of contingency funds, and distribution of savings)
- Ensure firm is able to provide necessary personnel, equipment, and facilities to perform the services within the time required.
- Agree upon procedure and schedule for determining a GMP using an open book pricing method and shall represent the total maximum amount to be paid by the owner to the CMR for the project and shall incl. costs of all the work, verify General Conditions costs align with the contract and what is included in the CMR fee, and contingency.
- If the CMR fails to successfully negotiate a contract, the firm will be notified in writing of termination of negotiations. Negotiations may begin with the next ranked firm.
- Identify is Design Assist is applicable

2.4 Pre-construction Agreement

2.4.1 FDC Approval

- PM completes "[Technical Proposal Transmittal](#)"
 - Attach contracting documents
 - Obtain FDC Director of Projects (DoP) approval
 - Send to Contract Administrator to process the Agreement

2.4.2 Agreement

- Create Pre-construction Agreement and send to CMR for signature (per template)
- Review Contract, exhibits, and supporting documents for compliance per [CMR Technical Proposal Guidelines](#)
- Enter Contract into the FDC Project Management system
- Route for Approvals



- Send “Award of Contract/ Notice to Commence Pre-Construction Services” to the CMR (per template)
- Issue a no cost Change Order that specifies the GMP Amendment will be executed based on 75% complete construction documents (per [CMR RFP Article 3.2](#))
 - The CMR, AE and Owner shall all agree on the requirements of the 75% submittal

3. Manage Services

3.1 Pre-construction Phase (G.C. Article 5)

3.1.1 Organizational Meeting (G.C. 5.2)

- Attendees: OSU PM, User, AE, and CMR key personnel
- Review responsibilities, scope of services, communication, programming documents, time periods, agree on number and timing of GMP's, scope and timing of deliverables design phase
- CMR must submit initial or revised Project Schedule within 5 days after meeting
- AE will prepare and distribute minutes within 5 days after meeting

3.1.2 Program Verification (G.C. 5.3)

- Review of Provisional Program Documents
 - AE will submit provisional Program Documents
 - “Opinion of Document Characteristics” by CMR within 10 days
 - Comments responded to by AE
 - Program Verification Stage Submission by CMR within 14 days
 - Program Schedule – Preliminary construction progress schedule
 - Updated staffing plan
 - Program estimate – Prelim. estimate of construction cost
- Program Documents Review
 - Conduct review meeting to agree to any changes to Schedule, Budget or clarifications
 - AE and CMR will revise submissions accordingly within 5 business days
 - Upon agreement, the revised Program Verification submissions become “Approved Program of Requirements”
- [BIM requirement](#) – Design Intent

Program Verification Checklist	
<input checked="" type="checkbox"/>	PoR/Program Verification deliverables approved, project may proceed to next design phase
<input checked="" type="checkbox"/>	Programming/ Program Verification phase payment requests by AE reviewed and approved
<input checked="" type="checkbox"/>	Design acceptance letter prepared and submitted

3.2 Schematic Design (SD) (G.C. 5.4)

3.2.1 Preliminary Life Cycle Cost Analysis

- AE will submit energy consumption alternative design concepts
- If 5,000 sf or more, Cost of facility ownership, operation, and maintenance

3.2.3 Review of provisional SD documents

- AE will distribute provisional SD Docs
- CMR will submit “Opinion of Document Characteristics” within 10 days of above
- Review meetings and/or comments received and consolidated
- Comments incorporated by AE
- AE comment responses distributed

SD Phase Checklist	
<input checked="" type="checkbox"/>	SD Deliverables by AE approved. Project can proceed to next design phase
<input checked="" type="checkbox"/>	SD phase payment requests by AE reviewed and approved
<input checked="" type="checkbox"/>	Design acceptance letter prepared and submitted



3.2.4 CMR's SD submission within 14 days of above

- Schematic Design Schedule – preliminary construction progress schedule
- Cost evaluations for alternative materials and systems
- Schedule analysis –alternative phasing and sequencing
- Prelim. Site Logistics Plan
- Updated Staffing Plan
- Schematic Design Estimate- estimate of construction cost

3.2.5 SD Documents Review

- Hold review meeting if necessary
- Revised SD submission within 5 days of above

3.2.6 [BIM Requirement](#): Design Intent

3.3 Design Development (DD) (GC 5.5)

3.3.1 Review of provisional DD Documents

- DD documents distributed for review by AE
- CMR will submit "Opinion of Document Characteristics" within 10 days of above
- Review meetings and/or comments received and consolidated
- Comments are incorporated/ responded to by AE
- AE comment responses distributed
- DD deliverables by AE produced in accordance with the Work Plan and Scope of Services

3.3.2 The CMR's DD submission within 14 days of above

- Updated Project Schedule (Exhibit D)
- Alternates with descriptions (if any)
- Allowances with written descriptions. Establish unit prices when necessary to support allowance usage (if any)
- Design Development Schedule – developed Construction Progress Schedule
- Cash-flow forecast for project (PM submits to Project Services)
- Refined Site Logistics Plan
- Updated Staffing Plan
- Design Development Estimate – Detailed estimate of Construction Cost

3.3.3 DD documents

- Hold review meeting if necessary
- Revised Design Development Submission by AE & CM within 5 days of above

3.3.4 [BIM requirements](#) – Design Intent

3.4 University Governance Requirement

- Project may require Board of Trustees approval prior to routing the GMP amendment (before Construction Phase)
- Refer to current Board of Trustee thresholds and submittal guidelines

3.5 Construction Documents (CD) (G.C. 5.6)

3.5.1 Review Provisional CD

- CD documents distributed for review by AE
- "Opinion of Document Characteristics" within 10 days
- Review meetings and/or comments received and consolidated
- Comments incorporated/responded to by AE
- AE comment responses distributed

<u>DD Phase Checklist</u>	
<input checked="" type="checkbox"/>	DD Deliverables by AE approved. Project can proceed to next design phase
<input checked="" type="checkbox"/>	DD phase payment requests by AE reviewed and approved
<input checked="" type="checkbox"/>	Design acceptance letter prepared and submitted

<u>CD Deliverables Checklist</u>	
<input checked="" type="checkbox"/>	CD deliverables produced in accordance with the Work Plan and AE Scope of Services
<input checked="" type="checkbox"/>	CD phase payment requests reviewed and approved
<input checked="" type="checkbox"/>	Design Acceptance letter prepared and submitted
<input checked="" type="checkbox"/>	Cover sheet signature letters prepared and submitted to the approp. Parties
<input checked="" type="checkbox"/>	Permits secured by AE
<input checked="" type="checkbox"/>	Specialty permits secured by CMR
<input checked="" type="checkbox"/>	Pre-bid meeting scheduled and agenda prepared



- 3.5.2** CD Submission within 14 days of above
- Updated Staffing Plan
 - Updated Project Schedule
 - Fully developed Construction Progress Schedule
 - Revised Cash-flow Forecast for Project
 - Fully developed Site Logistics Plan
 - Construction Documents Estimate-detailed unit-cost estimate of the construction cost

- 3.5.3** CD Review
- Hold review meeting if necessary
 - Revised CD submissions by AE and CMR within 5 days of above

- 3.5.4** BIM Requirements
- Design Intent

3.6 GMP Development

- 3.6.1** Bidding- Subcontractors (G.C. 4.5)
- [Subcontracting Plan](#) (G.C. 4.2 & 4.7)
 - Bidder [Pre-Qualification Criteria](#) approval (G.C. 4.3 & 4.4)
 - [Prospective Bidders](#) list approval
 - If CMR will self-perform Work, bid must be received by Project Manager 4 hours prior
 - [“Recommendation of Award”](#) and [“ROA for Non-Specialty”](#)

- 3.6.2** [Tangible Property](#) letter

3.7 GMP Amendment (G.C. 5.7)

- 3.7.1** Timing of proposal and submittal: The CMR shall submit their GMP proposal within 14 days of receiving the 75% construction documents.

- 3.7.2** CMR’s Submittal format
- Completed and signed GMP Amendment (Exhibit D from Pre-Construction Agreement)
 - Confirmation that constructability review comments have been incorporated and addressed
 - Exhibits A - M (See Section 4. “List of Agreement Exhibits and Descriptions”, page 9)
 - Include Project Name and Number, and GMP number (if multiple GMP’s)
 - Every exhibit must be included. The exhibit shall indicate if it is not applicable.
 - Contracting documents per [“CMR Technical Proposal Guidelines”](#)

- 3.7.3** Review and approval
- PM shall distribute the GMP Proposal for review to: DoP, CA, Dir. of PM, and AE
 - Refer to page 9, [“GMP Proposal and Amendment Exhibits”](#) for additional guidance
 - FDC
 - PM completes [“Technical Proposal Transmittal”](#)
 - Attach contracting documents
 - Obtain Director of Projects (DoP) approval
 - Send to Contract Administrator to process the Agreement
 - University
 - Create GMP Agreement – Do not use completed GMP Exhibit provided by CMR
 - Enter contract into the Project Management system
 - Send GMP Agreement to the CMR for signature



- Check documents for contract compliance
- Complete “Project Summary Sheet” and “Construction Manager at Risk Contract Checklist” (*per template*)
- Route for signatures

3.7.4 Issue contract

- GMP Notice to Proceed (per template)
- Notice of Commencement (per template)
- Tax Exemption Certificate (per template)
- Change status in Project Management system to “Construction”

3.8 Construction Phase

3.8.1 “[Pre-construction Agenda](#)” and meeting

- [Emergency Call List](#) - Prior to starting the project, the CMR must submit 3 names with cell phone numbers for emergencies

3.8.2 Prevailing Wage (G.C. 1.2)

- Prior to starting construction the CMR shall send the following to the Prevailing Wage coordinator (per instructions on “Notice to Proceed”)
 - [Payroll Schedule](#)
 - Contractor email addresses for Prevailing Wage notifications

3.8.3 Progress Meetings (G.C. 6.6)

- AE shall schedule weekly progress meetings, prepare written report and distribute

3.8.4 Correction of Work (G.C. 6.23)

- If CMR provides defective work or fails to perform work a “[72 hour notice](#)” will be issued
 - AE or PM issues “72 Hour Notice”
 - CMR Responds

3.9 Change Orders (G.C. 7.2)

3.9.1 Pre-GMP Change Orders

- A change order may be executed in the Pre-construction phase to start construction activities prior to the GMP Amendment. Immediately after the GMP amendment is executed a second change order must be issued to offset the amount.

3.9.2 Construction Change Orders

- AE will prepare the [Change Order form](#), attached documentation, and enter the Potential Change Order into the Project Management system
- CMR will sign and return the Change Order to the AE
- AE signs the Change Order and forwards to OSU PM & CA
- The Contract Administrator applies the Change Order in the Project Management system and routes for PM and DoP approval
- A fully executed Change Order modifies the contract documents, authorizes and directs the CMR to proceed

3.10 Contingency/ Allowance Use Authorization (CMR)

- Used for expenses that will be funded either with the CMR’s contingency or specific allowances (G.C. 9.2.5.2.1)
 - Subcontract sum is lower than actual subcontract sum (except CM self-performed work)
 - Subcontractor’s breach of contract
 - Remediation of defective Work
 - Additional cost required to complete the Work within Contract Times where CM would not get a modification
- CMR completes and signs “[Contingency/ Allowance Authorization](#)” form
- Must be approved by PM and submitted with Payment Request



- Before final payment a Change Order will be issued to reconcile Contract Sum so that it reflects the actual amounts due for Allowances
- After project is bid out any remaining Buy-out/ Bid Savings is transferred to construction contingency and reviewed at 25, 50 and 75% completion for return
- Contingency return shall be reviewed and 25%, 50% and 75% completion and a deduct change order will be prepared for the mutually agreed upon contingency return amount

3.11 Retainage (ORC 153.12&153.14)

- Retainage on labor shall be at the rate of 8% until a payment request submitted is 50% complete or greater. Then no additional retainage on future payments can be withheld.
- Retainage for material stored shall be at the rate of 8% until installed or delivered to site
- When substantial completion of all work had occurred, the contractor may request the retainage held on labor to be released via payment request

3.12 Schedule of Values (SOV) and Subcontractor Material Supplier Declaration (SMSD) (G.C. 9.2.8)

- Should be submitted within 14 days of "Notice to Proceed"
- Must be submitted and approved prior to submitting any [CMR Payment Request](#) for GMP (Construction Phase) Work
- [Recommendation of Award](#) letters must be included as CMR bids individual packages
- All Subcontractors must be enrolled in BWC Drug-Free Safety Place
- As new Subcontractors of any tier are added to the project a new SMDS with only additional subcontractors and material suppliers must be submitted
- Enter Subcontractors and Material Suppliers on SMSD to the Project Management system
- Validate EDGE is documented per [CMR Payment Request](#) instructions
- Validate totals equal contract issued to date and are in agreement with Recommendation of Awards received
- Record SOV version and approval dates in the Project Management system

3.13 Payment Requests (G.C. 9.2.9)

3.13.1 SOV and SMSD must be approved prior to processing any CMR Payment Requests

3.13.2 Project Accountant processes Escrow deposit

3.13.3 Submittal Process

- CMR Submit Pencil copies (via email) to the AE and PM
 - Version 1: Detailed Level-Review with AE and PM
 - Version 2: Summary Level-Version to be submitted for payment approval
- Submit payment application to (link)

3.13.4 Approval Process

- PA enters invoice into the Project Management system
- Pay Applications must be approved by the following prior to check issuance; Project Manager (PM), Contract Administrator (CA), Project Accountant (PA), PW Coordinator. Final payment requests also require Director of Projects (DoP) approval

3.13.5 Certified payroll reports are submitted to prevailingwage@osu.edu (G.C. 1.2)

3.13.6 Retainage is released after the Final CMR Payment Request is submitted

3.13.7 Increased bonding must be validated prior to payment for a Change Order that increases the contract amount



3.14 Certificate of Substantial Completion (G.C. 6.27)

3.14.1 Inspection

- CMR submits signed CM Punch List to the AE with request for “Substantial Completion Inspection”
- AE accepts or rejects the request within 3 days
- AE conducts inspection
- AE prepares “[Certificate of Substantial Completion](#)” and submits to OSU PM

3.14.2 CM completes Punch List items within 30 days after the date of Substantial Completion (G.C. 6.27.3)

3.15 Closeout – As-Built Document Submission (G.C. 6.25.2)

3.15.1 The CM shall submit its As-Built Document submission to the AE before final payment and execution of the Certificate of Contract Completion

- As-Built Documents must be submitted prior to execution of “[Certificate of Contract Completion](#)” and final payment
 - Certificate of Occupancy
 - Inspection Certificates
 - Letter of Approval for fire suppression system
 - Operation and Maintenance manuals
 - As-Built Document
 - Drawings showing locations of concealed utilities
 - Warranties and guarantees assigned to OSU
 - Affidavit that subcontractors have been paid in full
 - Final certification of payroll reports
 - Affidavit of compliance with O.R.C. 4115

3.16 Demonstration and Training (G.C. 6.29)

3.16.1 CMR will perform demonstration and training of OSU's maintenance personnel prior to “Certificate of Contract Completion” and final payment



4. List of Agreement Exhibits and Descriptions

Pre-Construction Agreement Exhibits

Exhibit A: Personnel Costs Rate Schedule

- Template – provided by CMR with Best Value proposal form

Exhibit B: Preconstruction Stage Reimbursable Expenses Schedule

- Template – provided by CMR Best Value proposal form

Exhibit C: General Conditions Costs Description

- Template- provided by CMR Best Value proposal form

Exhibit D: GMP Amendment

Exhibit E: Supplementary Conditions

GMP Proposal and Amendment Exhibits

Exhibit A: Basis Documents - identifies drawings, specifications and other documents by number, title and date (G.C. 5.7.6.2)

- Establishes the “Basis” for the GMP Amendment and Exhibits
- Includes Design Intent Statement which defines the scope to the extent that the CMR can assign a cost to it
- AE must review

Exhibit B: Assumptions & Clarifications - A complete list of clarifications made by the CMR in the preparation of the GMP (G.C.5.7.6.4)

- Developed by the CMR from the Basis Documents and Design Intent Statement
- Assumptions & Clarifications from subs are not permitted
- Items reasonably inferred that are part of a complete system
- Document discussions, meetings, and items agreed to
- Documents must be updated with any contract modifications
- AE must review
- Look for key words like “in lieu of” or “instead of”
- Validate reason for any scope specifically excluded

Exhibit C: Project Estimate - A detailed estimate of the Construction Cost of Work that is subject to the GMP proposal (G.C. 5.7.6.5)

- Allocates the cost of each item of trade Work to labor and materials organized in trade categories
- Summary format – a detailed breakdown of CMR’s construction stage personnel costs and G.C. costs attached

Exhibit D: Project Schedule - (G.C. 5.7.6.6)

- Preconstruction and activities by design phase
- Updated at each design phase
- Must identify contingency review dates at 25, 50 and 75% completion

Exhibit E: Construction Progress Schedule - (G.C. 5.7.6.7)

- Critical Path schedule detailing specific construction activity dates

Exhibit F: Staffing Plan - An outline of the qualifications and experience of the CMR’s project manager and superintendent, unless previously approved. (G.C. 5.7.6.8)

- Names, titles, and qualifications of CM’s project manager and superintendent
- Staff members assigned to the project- names, titles, roles. # of hours, rates and time periods



Exhibit G: Subcontractor Work Scopes - Detailed scope-of-work description for each anticipated Subcontract for the Work that is the subject of the GMP proposal (G.C. 5.7.6.9)

Exhibit H: Scope of CM's Self-Performed Work - Detailed scope-of-Work description for all Work to be performed by the CMR or CMR Affiliated entity. (GC 5.7.6.10)

- Identify scopes of Work the CMR intends to perform themselves or by a CMR affiliated entity
- AE must disclose in the spec if CM or CM affiliated entity intends to bid on a particular scope of work
- Scope reviews

Exhibit I: Schedule of Allowances - List of all allowances including a detailed description with related measurement and payment terms (GC 5.7.6.11)

- Establishes items of work the University agrees are not detailed enough in the GMP Basis Documents for the CMR to provide a definitive price
- Back-up must be provided with CMR's Payment application
- Part of the amount of "Total Construction" (see Exhibit C)
- Are to held with the CMR, not the subcontractor scopes of work

Exhibit J: Schedule of Unit Prices - List of all Unit Price Work (if any) including a detailed description with related measurement and payment terms (G.C. 5.7.6.12)

- Used to determine the adjustment amount of "Cost of Work" (change orders)

Exhibit K: Schedule of Alternates - List of all Unit Price Work (if any) including a detailed description with related measurement and payment terms (G.C. 5.7.6.13)

- OSU may accept, reject or defer (pending) at time of bidding and GMP
- Deferred alternates should have a decision deadline

Exhibit L: Schedule of Incentive and Shared Savings - List of all performance incentives/ bonuses (if any) and related measurement/ entitlement and payment terms (G.C. 5.7.6.14 & GC 9.2.5.7)

- Shared Saving Change Order shall be executed no more than 30 days before final payment
- To determine shared savings, PM will calculate contingency at 25%, 50%, and 75% of the contract time
- Scorecard defines how incentives are "earned"
- Requires FOD Assistant VP approval

Exhibit M: General Conditions Costs Descriptions

- Template- provided by [CMR Best Value Rating Proposal Form](#)

5. List of Additional Tools and Resources

The following is a list of resources in addition to those mentioned within the process above:

- [Construction Manager at Risk GMP Deliverables Transmittal](#)
- [CMR Score Sheet Pricing Comparison](#)
- [Professional Services Agreement Summary w/CMR](#)
- CMR GMP Proposal Responsibility Matrix
- Deliverables Checklist – Quick Reference Guide
- Building Information Modeling (BIM)
 - o Section 1. [Basics](#)
 - o Section 2. [Project Delivery Standards](#)
 - o [LOD Matrix of BIM Deliverables](#)

Document Record		
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