

DEPARTMENT OF ADMINISTRATIVE SERVICES

# CONSTRUCTION ADMINISTRATOR'S PROCEDURE MANUAL

**CONSTRUCTION SERVICES**  
**Building Design and Construction**

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Commissioner



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# General Information

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### 1.0 GENERAL INFORMATION

#### 1.1 Purpose of this Manual

This Construction Administration Procedures Manual provides Construction Administrators with guidelines, standards, and procedures for administering Department of Administrative Services Construction Services (DAS) construction projects.

##### **Manual Update**

This Manual will be updated from time to time to reflect changes in statute, regulation, policy and procedures. Updates will be posted in a Manual Notice as a preface to the Manual. Any questions, comments, or suggestions regarding this Manual should be submitted to DAS Project Support Services.

##### **Introduction to DAS**

DAS is responsible for most new building and capital improvements to State property and buildings. The authority of the DAS is defined under Title 4a and 4b of the Connecticut General Statutes.

##### **Organization of the DAS**

The DAS consists of the following units: Project Management, Technical Service, Procurement, Legal, Project Support Services and Offices of State Building Inspector and Fire Marshal.

DAS utilizes three different project delivery methods: Design-Bid-Build (D-B-B), which is the most common delivery system; Design-Build (D-B); and Construction Manager at Risk (CMR) for major projects. DAS has the primary state responsibility for hiring architects, engineers, construction administrators, construction managers and contractors related to building and facility projects. DAS also provides technical resources, as a statewide service, for all state agencies related to buildings design and improvements, and the management of several statewide programs – such as all underground tank replacements, ADA support, and asbestos and lead removal.

Building Design and Construction includes teams that handle all agency needs throughout the State. Each team has qualified professional staff to comply with their agencies' requirements. A team may consist of the following types of staff:

- Assistant Director of Project Management (ADPM) [Team Leader],
- Project Managers (PMs),
- Associate Project Manager (ASPM)
- Assistant Project Managers (APM)
- Administrative support.

The ADPMs manage the Project Teams to assure the agencies' needs are being met. The PM or ASPM is directly responsible for the project, and is the main contact with the Agency and the Consultant on a day to day basis. The APMs are the project support staff that have professional expertise in construction, codes, mechanical, electrical, or other areas that can complement the PM or ASPM.

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### 1.2 Department Documents and Forms

Documents and Forms referenced in this Manual are available on the Department Webpage or in the [DAS Web-based Library](#). Click on the Library (Forms and Publications) at the top of the web page and select the appropriate form number series to view or copy the appropriate form(s). The forms are revised periodically and re-posted to the Library. Prior to using any previously copied forms, the current version of the form on the Library should be consulted. The forms are arranged by project stage. A more specific listing of the Documents and Forms commonly used as part of the Construction Administration process can be found in Section 3.0 of this Manual.

### 1.3 Abbreviations

<b>ADPM</b>	<b>Assistant Director Project Manager</b>
<b>A/E</b>	<b>Architect/Engineer</b>
<b>CA</b>	<b>Construction Administrator</b>
<b>CCD</b>	<b>Construction Change Directive</b>
<b>CD</b>	<b>Construction Documents</b>
<b>CGS</b>	<b>Connecticut General Statutes</b>
<b>CM</b>	<b>Construction Manager</b>
<b>CMR</b>	<b>Construction Manager at Risk</b>
<b>CPM</b>	<b>Critical Path Method</b>
<b>CxA</b>	<b>Commissioning Agent</b>
<b>DAS</b>	<b>Department of Administrative Services</b>
<b>D-B</b>	<b>Design-Build</b>
<b>D-B-B</b>	<b>Design-Bid-Build</b>
<b>DAS PM</b>	<b>DAS Project Manager</b>
<b>DD</b>	<b>Design Development</b>
<b>FT</b>	<b>Functional Performance Test</b>
<b>GC</b>	<b>General Contractor</b>
<b>GMP</b>	<b>Guaranteed Maximum Price</b>
<b>MEP</b>	<b>Mechanical, Electrical, and Plumbing</b>
<b>RFI</b>	<b>Request for Information</b>
<b>LEED</b>	<b>Leadership in Energy and Environmental Design (a US Green Building Council designation)</b>
<b>SD</b>	<b>Schematic Design</b>
<b>WAO</b>	<b>Work Authorization Order</b>

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### 1.4 Definitions

**Acceptance of the Work:** The Owner's acknowledgement of the Acceptance of the Work, through the Certificate of Acceptance, that all Work has been completed, with the exception of heating and cooling systems requiring seasonal testing, and approved deferred Functional Performance Testing, to certify Functional Completion of those systems. Owner's prior written approval shall be required for any and all such exceptions.

**Addendum (Pl: Addenda):** A written or graphic instrument issued by the Architect, Engineer, Consultant, and/or Owner before execution of the construction contract(s) that modifies or interprets the bidding or proposal documents by additions, deletions, clarifications, or corrections.

**Additional or Deleted work:** Work required by the Department that, in the judgment of the Commissioner, involves any addition to, deduction from, or modification of the Work required by the Contract Documents.

**Agency:** The (User) Agency of the State of Connecticut having administrative authority of the facility in which the Work is being performed.

**Application for Payment, Partial Payment or Requisition:** Constructor's certified request for payment for completed portions of the Work and, if the construction contract so provides, for materials or equipment suitably stored pending their incorporation into the Work.

**Approved Deferred Functional Performance Testing:** Execution of checklists and Functional Performance Testing that is delayed only upon written request by the CMR and the written approval of the DAS PM for any required check or test that cannot be completed including, but not limited to, the building's structure, required occupancy conditions or other deficiency.

**Architect, Engineer, or Landscape Architect:** A sole proprietor, partnership, firm, corporation or other business organization under contract with the Owner, commissioned to prepare Contract Drawings and Specifications, to advise the Owner and in certain cases, to perform regular inspections during construction and when authorized to perform the duties of the Construction Administrator. Also referred to as the A/E.

**As-built Drawings:** Construction Drawings revised by the Constructor to show all significant modifications made during the construction process.

**Base-Bid:** Monetary value stated in the Bid Proposal form as the sum for which the bidder offers to perform the Work described in the Bidding Documents, exclusive of adjustments for Supplemental Bids.

**Bidder:** A sole proprietor, partnership, firm, corporation, or other business organization submitting a Bid on the Bid Proposal Form for the Work contemplated, including Work to be performed by any Subcontractor.

**Bidding Documents:** Collectively, the bidding requirements and the proposed Contract Documents, including any addenda issued prior to receipt of Bids, including competitive bidding for Subcontracts for designated portions of the Work.

**Bid or Bid Proposal Form:** A complete and duly signed proposal to perform Work (or a designated portion thereof) for a stipulated sum submitted in accordance with the Bidding Documents.

**Building Envelope Commissioning Agent (BECxA):** An entity agreed upon by the Owner who leads, plans, schedules, and coordinates the commissioning team to implement the Commissioning Process specific to the building envelope. Where CxA is referenced in this manual also refer to the phase requirements for a BECxA found in the Consultants Procedure Manual when those services are applicable.

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**Calendar Day:** Each Day in a calendar including weekends and holidays. Whenever the word “Day” is used it shall be understood to mean calendar day stated in the Bidding Documents, unless stated otherwise.

**Cash Allowance:** An amount established in the Contract Documents for inclusion in the Contract Sum to cover the cost of prescribed items not specified in detail, and as shown in the allowance schedule.

**Certificate of Acceptance:** A document issued by the Owner to the Constructor stating that all Work specified in the Certificate of Acceptance has been completed and accepted by the Owner.

**Certificate of Compliance:** A document certifying that a portion of the project completed, either the design portion or construction portion, has been performed in substantial compliance with the Connecticut State Building Code and all other applicable codes as required by Chapter 541 of the Connecticut General Statutes (CGS).

**Certificate of Functional Completion:** A document issued by the Owner to the CMR when all remaining Testing, Adjusting and Balancing (TAB) and commissioning responsibilities of the Construction Manager and their Subcontractors (except for seasonal or Approved Deferred Functional Performance Testing and controls training), have been certified as complete by the Owner’s Commissioning Agent (CxA).

**Certificate of Occupancy:** Document issued by the authority having jurisdiction certifying that all or a designated portion of a building is approved for its designated use.

**Certificate of Substantial Completion:** A document prepared by the Architect or Engineer (A/E) and approved by the Owner on the basis of an inspection stating:

- That the Work, or a designated portion thereof, except for Functional Testing, approved Deferred Performance Functional Testing, and controls training, is determined to be Substantially Complete;
- the date of Substantial Completion;
- the responsibilities of the Owner and the Constructor for security, maintenance, heat, utilities, damage to the Work and insurance; and
- The time within which the Constructor shall complete the remaining Work.

**Change Order:** Written authorization signed by the Owner, authorizing a modification in the Work, an adjustment in the Contract Sum, or an adjustment in the Contract Time.

**Commissioner:** The State of Connecticut, Department of Administrative Services (DAS) - Construction Services (CS) Commissioner acting directly or through specifically authorized DAS personnel or agent(s) having authority to perform duties defined in the General Conditions of the Contract for Construction.

**Commissioning (Cx):** A systematic process of ensuring that all building systems perform interactively according to the Contract Documents, the design intent, and the building’s operational needs. Commissioning involves various phases: pre-design, design, construction, pre-occupancy and post occupancy.

**Commissioning Agent (CxA):** An entity agreed upon by the Owner who leads, plans, schedules, and coordinates the commissioning team to implement the Commissioning Process.

**Commissioning Plan (Cx Plan):** A plan that includes a list of all equipment to be commissioned, delineation of roles for each of the primary commissioning participants, and details on the scope, timeline, and deliverables throughout the commissioning process.



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**Construction Administrator:** A sole proprietor, partnership, firm, corporation or other business organization, under contract or employed by the Owner to oversee the fulfillment of all requirements of the Contract Documents. The authorized Construction Administrator may be a Clerk of the Works, an Architect, a consulting Architect, a consulting Construction Administrator, a consulting Engineer etc. or any other designee as authorized and identified by the Owner.

**Construction Change Directive:** A written authorization signed by the Owner, directing a modification in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum, Contract Time or both.

**Construction Documents:** Drawings, and Specifications, Signed and sealed by the Architect and Engineers that set forth in detail the requirements for the construction of the Project and have received a Building Permit from the State of Connecticut Department of Administrative Services / Construction Services, Office of State Building Inspector.

**Construction Manager at Risk (CMR):** A sole proprietor, partnership, firm or corporation, under a Construction Manager at Risk agreement with the Department. The CMR is responsible for the performance of the Work under the Contract Documents.

**Constructor:** An entity under contract with the Owner to construct a building. For purposes of this Manual, the Constructor refers to the GC, CMR or Design-Build Contractor.

**Contract:** The contractual agreement by and between the Department and the Construction Administrator (CA).

**Contract Documents:** The Agreement between Owner and Contractor, Conditions of the Contract (General Conditions, Supplementary Conditions, General Requirements and other Conditions), Drawings, Specifications, and Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract, all of which shall constitute the Contract Documents.

**Contractor or General Contractor:** A sole proprietor, partnership, firm or corporation, under direct Contract with the **DAS** responsible for performing the Work under the Contract Documents. Whenever the words "Contractor" or "General Contractor" (GC) are used it shall be understood to mean Contractor.

**Contract Sum:** The sum stated in the construction contract, which is the total amount payable by the Owner to the respective Constructor for performance of the Work under the Contract Documents. When using a CMR Agreement, the Contract Sum shall mean the Guaranteed Maximum Price.

**Contract Time:** The period of time allotted in the construction contract for Substantial Completion of the Work, including authorized adjustments thereto. The Contract Time is the sum of all Working Days and Non-Working Days as further defined herein and specified in the construction Contract Documents.

**Cost Of The Work:** When using a CMR Contract, those costs necessarily incurred by the CMR in the proper performance of the Work. Such costs shall be at rates not higher than those customarily paid at the place of the Project except with prior approval of the Owner.

**Critical Path Method (CPM):** See Schedule.

**Department or Owner:** The State of Connecticut, Department of Administrative Services / Construction Services acting through its Commissioner or specifically authorized Department personnel or agent.

**Department of Administrative Services Project Manager:** The individual employed by the Owner, designated and authorized by the Commissioner, to be responsible for the overall management and oversight of the Project, and to represent the (User) Agency.

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**Design-Build Contractor or Design-Build Entity:** A sole proprietor, partnership, firm or corporation, under direct contract with the Department, responsible for the design and construction of a project.

**Final Payment:** The last payment made by the Owner to the Constructor made after notice of the Acceptance of the Work. Payment shall include the entire unpaid balance of the Contract Sum as adjusted by modifications.

**General Conditions:** That part of the construction contract entitled General Conditions of the Contract for Construction, part of Division 00 of the Specifications.

**General Requirements:** That part of the construction contract entitled General Requirements, which is Division 01, "General Requirements", of the Specifications.

**Guarantee:** See Warranty.

**Guaranteed Maximum Price (GMP):** GMP shall mean the sum of the Cost of the Work as developed by the CMR and the CMR Fee for the construction and post-construction phase Work, including all sales, use and consumer and other taxes required by law; all other fees, General Conditions, bonds, required permits and insurance; tools, construction machinery, and temporary facilities required at the construction site; and all other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated in the Work. If the Owner and CMR cannot agree on a GMP, the Owner may terminate the agreement and proceed with the construction phase through other means, including but not limited to a different CMR or different project delivery method.

**Manual:** For purposes of this document, the "Manual" is the Construction Administration Procedures Manual.

**Non-Working Days:** All Saturdays, Sundays, twelve (12) Legal State Holidays, and any other Days identified in the construction contract or any Subcontracts held by the Constructor relevant to its performance of the Work that the Constructor or Subcontractors, as appropriate, are not permitted to execute the Work. The restriction of Non-Working Days may be suspended upon the approval or direction of the Commissioner.

**Notice To Proceed:** Written notice, issued by the Commissioner or the Commissioner's authorized representative, to the Constructor, authorizing the Constructor to proceed with the Work and establishing the date for commencement of the Contract Time.

**Overhead:** Indirect costs including: supervision (any position over the foreman), field and home office expense, insurance, and small tools and consumables.

**Project:** The total construction of which the Work performed under the Contract Documents may be the whole or a part.

**Project Elements:** The permanent structures, site improvements and other permanent developments at the site specifically defined and specified in the Contract Documents requiring construction and services, which construction and services may constitute the whole or part of the Project.

**Project Manager:** The individual employed by the Owner, designated and authorized the Commissioner, to be responsible for the overall management and oversight of the Project, and to represent the Agency. This individual or individuals may be a Project Manager, an Associate Project Manager or an Assistant Project Manager.

**Project Manual:** The set of documents assembled for the Work which includes, but is not limited to Contract Documents, Bidding Requirements, Sample Forms, General Conditions of the Contract for Construction, General Requirements, and the Specifications.

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**Project Record Documents:** The documents, certificates, and other information relating to the Work, materials, products, assemblies, and equipment the contractor is required to accumulate during construction and convey to the owner for use prior to final payment and project closeout.

**Proprietary Specification:** A specification that describes a product, procedure, function, material, assembly, or piece of equipment by trade name and/or by naming the manufacturer(s) or manufacturer's procedure, exact model number, item, etc., of those products acceptable to the Owner.

**Request for Proposals and Proposal:** The document issued by the Owner to solicit proposals for a Project and document submitted in response to such solicitation.

**Retainage:** A percentage of each Application for Payment and a percentage of the total Contract Sum retained by the Owner.

**Schedule:** The Constructor is to utilize a Critical Path Method (CPM), as required by the construction contract, showing all events expected to occur and operations to be performed, and indicating the Contract Time, start dates, durations and finish dates, as well as Substantial Completion and Acceptance of the Work, rendered in a form permitting determination of the optimum sequence and duration of each operation.

**Schedule of Values:** A document furnished by the Constructor to the Architect or Engineer and Owner stating the portions of the Contract Sum allocated to the various portions of the Work, which is to be used for reviewing the Constructor's Applications for Payment.

**Shop Drawings:** Drawings that illustrate construction, materials, dimensions, installation, and other pertinent information for the incorporation of an element or item into the construction as detailed Contract Documents.

**Specifications:** The description, provisions and other requirements pertaining to the method and manner of performing the Work and/or to the quantities and quality of materials, equipment, construction systems, standards, and workmanship to be furnished under the Contract Documents.

**Subcontractor:** A Subcontractor is a person or entity who has a direct contract with the Constructor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate Contractor or subcontractors of a separate Construction Phase Services.

**Submittals:** Documents including, but not limited to, samples, manufacturer's data, Shop Drawings, or other such items submitted to the Owner and Architect or Engineer by the Constructor for the purpose of approval or other action, as required by the Contract Documents.

**Substantial Completion:** The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents, the determination of which shall be represented by the issuance by the Owner of a Certificate of Substantial Completion.

**Substitution:** Any deviation from the specified requirements, which is defined as follows: A replacement for the specified material, device, procedure, equipment, etc., which is not recognized or accepted as equal to the first manufacturer or procedure listed in the Specification after review by the A/E, and may be rejected or approved by the Owner. The Substitution is not equal to the specified requirement in comparison to the first manufacturer or first procedure listed in the Specifications in one or more of the following areas: the substance and function considering quality, workmanship, economy of operation, durability, and suitability for purposes intended; size, cost, and rating. The Substitution constitutes a modification in the

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scope of Work, the Schedule, or the Architect/Engineer's design intent of the specified material, device, procedure, equipment, etc.

**Superintendent:** The Constructor's representative at the site who is responsible for continuous field supervision, coordination, and, completion of the Work, and, unless another person is designated in writing by the Constructor to the Owner and the Construction Administrator, also responsible for the prevention of accidents.

**Supplemental Bid:** The monetary value stated in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted.

**Unit Price:** The monetary value stated by the Owner or the Constructor, as a price per unit of measurement for materials or services as described in the Contract Documents and/or Bidding Documents.

**Warranty:** A written, legally enforceable assurance of specified quality or performance of a product or Work or of the duration of satisfactory performance.

**Work:** The construction and services required by the construction contract, and including all labor, materials, equipment and services provided or to be provided by the Constructor to fulfill the Constructor's obligations. The Work may constitute the whole or a part of the Project whether on or off the site of the Project, and including all labor, materials, equipment and services provided or to be provided by Subcontractors, Sub-subcontractors, material suppliers or any other entity for whom the Constructor is responsible for under or pursuant to the construction contract.

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### 1.5 Statutory and Regulatory References

Statutory and Regulatory references are cited throughout the Manual, and within other DAS Manuals, Contract Documents, Forms, Checklists, Schedules and Report templates.

This section includes a listing and summary description of the most frequently used statutory and regulatory references regarding Construction Administration. To view the full text of any of the referenced statutes, click on the Connecticut General Assembly ["Browse Statutes"](#) hyperlink, search for the relevant Section from the list of "Titles" and click on the appropriate hyperlink. To view the full text of any of the referenced regulations, click on the Connecticut eRegulations - ["Title Contents"](#) hyperlink, select the referenced "Title", and then select the referenced "Subtitle".

#### **STATUTORY REFERENCES**

**CGS Section 4a-1. Department of Administrative Services. Commissioner. Successor department authority.** Constitutes the DAS as a successor department to the DPW.

**CGS Section 4a-1a. Commissioner and Department of Administrative Services substituted for former commissioner and department.** Substitutes the "Commissioner of Administrative Services" wherever the term "Commissioner of Public Works," "Public Works Commissioner," or "Commissioner of Construction Services" is used. Substitutes the "Department of Administrative Services" wherever the term "Department of Public Works" or "Department of Construction Services" is used.

**CGS Section 4a-100. Prequalification of Contractors and substantial Subcontractors... Regulations. Renewal. Revocation. Notice re state contractors or substantial Contractors. Appeal...** Prequalification, Subcontractor, principals and key personnel, aggregate work capacity rating, single project limit, contract, and substantial Subcontractor are defined. Contractor prequalification classification penalties and awards are defined.

**CGS Section 4b-1. Duties of Commissioner of Administrative Services.**

**CGS Section 4b-1b. Transfer of authority from former Department of Construction Services to Department of Administrative Services.** Constitutes the DAS as successor to the Department of Public Works and its successor agency, the Department of Construction Services and the Department of Public Safety's Division of Fire, Emergency and Building Services, except the portion of said division concerning emergency services.

**CGS Section 4b-3. State Properties Review Board established... Review by board of transactions, contracts and acquisition of development rights. Appeals.**

**CGS Section 4b-23. State facility plan. Responsibilities of... Commissioner of Administrative Services and Properties Review Board.** State facility plan guidelines are established. Process for reviewing, approving or rejecting facility plans is defined.

**CGS Section 4b-24b. Construction contracts. Total cost basis projects. Requirements.** Design Build Projects.

**CGS Section 4b-51. ...Selection of consultants for certain projects.** Commissioner's authority to select consultants to be on a list to perform a range of services pursuant to a task letter detailing services to be performed under a consultant services contract.

**CGS Section 4b-52. Repairs or changes to state premises...** must conform to DAS guidelines and procedures for agency-administered projects.

**CGS Section 4b-53. Allocation of bond proceeds for art work in construction or remodeling of state buildings...**

**CGS Section 4b-55. State Construction Services Selection Panel; Definitions.** Consultant, Consultant Services, Project, Selection Panel, and User Agency defined.

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**CGS Section 4b-56. State Construction Services selection panels... Membership.**

**CGS Section 4b-57. Invitation of responses. Consideration by selection panel. Selection of Consultants.**

**CGS Section 4b-58. Contracting for consultant services. Selection of Consultants.**

**CGS Section 4b-61. Contracting for design professional services.**

**CGS Section 4b-91. Process for bidding for public works contracts. Prequalification requirements. Exceptions.**

**CGS Section 4b-92. "Lowest responsible and qualified bidder" defined.**

**CGS Section 4b-93. Contract Specifications; sub-trades, subcontracts.**

**CGS Section 4b-94. Rejection of bids.**

**CGS Section 4b-95. General bid form requirements. Selection by awarding authority. Subcontractors.**

**CGS Section 4b-96. Subcontract, form. Procedure on failure of Subcontractor to execute subcontract. General bidder's responsibilities.**

**CGS Section 4b-100a. Construction services award panels. Screening, interview and selection of contractors. Regulations.**

**CGS Section 4b-103. Construction manager at-risk project delivery contracts.**

**CGS Section 4-61. Actions against the state on... public works contracts. Arbitration. Process for disputed claims.**

**CGS Section 16a-38k. Building construction standards for new construction or renovation of certain state facilities. Regulations. Exemptions.**

**CGS Section 22a 1. Policy of the state. Policy regarding Environmental Impact Evaluations.**

**CGS Section 22a-326. Legislative finding; policy of the state. Policy regarding soil erosion and sediment control.**

**CGS Section 22a-327. Definitions. Definitions related to soil erosion and sediment control.**

**CGS Section 22a-328. Guidelines for soil erosion and sediment control.**

**CGS Section 29-276b. "Threshold limit" defined. Requirements when structure or addition will exceed threshold limit. Standards for facilities which perform testing of construction materials.**

**CGS Section 32-9n. Office of Small Business Affairs. Small and minority business assistance.**

**CGS Section 46a-56. Commission duties. Commission on Human Rights & Opportunities.**

**CGS Section 46a-68e. Contractors and Subcontractors required to file compliance reports with CHRO.**

**CGS Section 46a-68f. Compliance reports to include labor union practices.**

### **REGULATORY REFERENCES**

**Title 4, Subtitle 4-131a. Department of Administrative Services. Art Work in State Buildings Open to Public Use.**

**Title 4a, Subtitle 4a-52. Department of Administrative Services. State Purchasing Procedures.**

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**Title 4a, Subtitle 4a-63. Department of Administrative Services.** Procedure for Disqualification or Suspension of Contractors.

**Title 4a, Subtitle 4a-100. Department of Administrative Services.** Prequalification and Evaluation of Contractors.

**Title 4a, Subtitle 4a-101. Department of Administrative Services.** Evaluation of Contractors.

**Title 4b, Subtitle 4b-24. Department of Administrative Services.** State Real Property. Selection Panels for Design-Build Teams and Special Legislation Contractors.

**Title 4b, Subtitle 4b-53. Department of Administrative Services.** Purchases for State Building Works of Art Account.

**Title 4b, Subtitle 4b-100. Department of Administrative Services.** Procedure for Alleged Violation or Violations of Bidding and Contracts - Part II Chapter 60 of CGS.

**Title 16a, Subtitle 16a-38k. Planning and Energy.** Establishment of High Performance Building Construction Standards for State-Funded Buildings.

**Title 19a, Subtitle 19a-332a. Department of Public Health.** Asbestos Abatement.

**Title 22a, Subtitle 22a-66. Environmental Protection.** Use of Pesticides.

**Title 22a, Subtitle 22a-174. Environmental Protection.** Abatement of Air Pollution.

**Title 22a, Subtitle 22a-449(c). Environmental Protection.** Hazardous Waste Management.

**Title 22a, Subtitle 22a-449(d). Environmental Protection.** Underground Storage Tank System Management.

**Title 29, Subtitle 29-252. Public Safety and State Police.** CT State Building Code.

**Title 29, Subtitle 29-276b. Public Safety and State Police.** Standards for Testing of Construction Materials.

**Title 29, Subtitle 29-291a. Public Safety and State Police.** CT State Fire Prevention Code.

**Title 29, Subtitle 29-292. Public Safety and State Police.** CT State Fire Safety Code.

**Title 29, Subtitle 29-401. Public Safety and State Police.** State Demolition Code.

**Title 46a, Subtitle 46a-68j. Commission on Human Rights and Opportunities.** Contract Compliance.

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### 2.0 CA PROJECT ADMINISTRATION

#### 2.1 General Responsibilities

The CA must understand the basic responsibilities and interrelationships of all team members; i.e., the Owner or any consultants retained by the Owner, the Architect/Engineer(s), the Constructor, and Subcontractors; and be proactive in keeping all parties on schedule and on budget.

The CA is expected to thoroughly document and record all decisions that are made and events that take place on the job site; and effectively manage the flow and retrieval of project records to ensure compliance with the Contract Documents.

Provide timely and comprehensive technical evaluations of issues that arise related to the sufficiency of plans and Specifications, report to the DAS PM including a recommendation, and actively advise the PM in negotiations and the resolution of disputes.

The CA will work under the direction of the DAS PM in consulting with State and Federal agencies to become familiar with those agencies' concerns, requirements, and procedures as they relate to a particular construction project.

If a duty or responsibility set forth in this Manual is not applicable to a particular Contract, then it shall be specifically identified in the Contract as not applicable or not required. Duties or responsibilities described in this Manual that have not been specifically excluded by the Contract cannot be waived by the Owner, unless memorialized in writing in advance by the DAS PM, and confirmed in writing by the Deputy Commissioner of DAS.

As part of its field supervision responsibilities, the CA will inspect all Work performed by the Constructor and Subcontractors for conformance to the Contract Documents; and reject all Work found to be defective, unacceptable and nonconforming to the Contract Documents, or damaged.

The CA may also be required to contract, and/or provide oversight for, special services. Such services may include, but are not limited to, those provided by a licensed land surveyor, geotechnical engineer, test boring firm, special inspector, Commissioning Agent or other special consultant as may be required by the Contract.

Accordingly, the CA will need to become familiar with and, to the extent applicable to a CA, comply with (i) the provisions set forth in the "DAS Consultants Procedure Manual," which may be amended and/or supplemented from time to time, and (ii) the provisions of the Contract Documents, more specifically defined in Section 1.31 of the General Conditions of the Contract for Construction and Section 00 72 23 of the General Requirements for the Project.

#### 2.1.1 SOFTWARE REQUIREMENTS

##### 2.1.1.1 PMWeb.

The Department utilizes "PMWeb" as their project management and recording system software. PMWeb training will be provided to the project Team and project Sub-consultants.

The CA and all of the CA sub-consultants are required to utilize PMWeb for project specific documentation as directed by the DAS PM. All State construction project documents not created in PMWeb shall be scanned, uploaded and maintained, for the project, and linked to the corresponding record in PMWeb by the CA in the PMWeb Document Management System. The CA will monitor the use of the PMWeb System by the Constructor. Sub-consultants should also attend the PMWeb training as part of the project team.



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### 2.1.1.2 Primavera Project Planner/Microsoft Project

The Department uses Primavera Project Planner, Microsoft Project, or such other scheduling software as determined by DAS, for project scheduling. The Contract Documents will specify the scheduling software that is to be used on a particular project.

Where Primavera Project Planner software is specified, the CA will be provided one copy of the current version of the software and software manual for use by the CA's scheduler on the project. The software will be licensed in DAS's name. Upon completion of the CA's scheduling services, the software, manual, and license will be returned to DAS for its continued use with the project.

### 2.1.2 MASTER SCHEDULE

The CA is responsible for creating, maintaining, and monitoring the project Master Project Milestone Schedule. The CA shall incorporate the major pre-design, design, preconstruction, construction, closeout into the schedule, and review and approve all activities of the project.

The CA is to incorporate the constructor's construction schedule into the Master Project Milestone Schedule, when available; and shall include other activities that may not be part of the A/E or constructor's responsibilities, but are essential to project completion i.e., environmental impact statements, asbestos removal, easement acquisition, other contractors.

The CA is also responsible for keeping all parties apprised of their schedule requirements and responsibilities and keeping the DAS PM apprised of progress in relation to the Project Milestones. If slippage occurs in the schedule, the CA shall provide recommendations for schedule recovery.

### 2.1.3 CONSTRUCTION COST ESTIMATE REVIEW AND REPORTING

State Construction Project Cost estimates shall be prepared in the standard Construction Specifications Institute (CSI) format and in ASTM Uniformat II. ASTM Uniformat II hierarchically groups building elements into twelve (12) "systems based" levels. For a detailed description of Uniformat II design specifications, cost estimating, and cost analysis, please refer to ASTM Document E1557-97 (NISTIR 6389). The aforementioned report can be found under the heading "Uniformat II" in the [DAS Web-based Library](#), 8000 Series – Technical Information. An example of how to summarize a project description in Uniformat II can be found on page 33 of the aforementioned report. The ASTM Uniformat II Cost of the Work Estimate submission for the Schematic Design, Design Development, and Contract Document Phases shall be in compliance with the requirements set forth in the Consultants Procedure Manual.

All cost estimates prepared by the CA are to be reconciled with the Architect, and if a CMR project, the CMR's cost estimate. All cost estimates should be prepared on the basis of calculated quantities and production costs commensurate with the degree of design detail known or assumed at the time of preparation.

In order to ensure the Project remains within budget at each Phase, the CA, A/E and Project Team are expected to participate in Value Engineering activities as part of their Contract.

**The CA will immediately notify the DAS PM, in writing, if and when it becomes apparent the construction budget is exceeding the established budget for the building and site work.**

A thorough examination of the Contract Documents should be done prior to completing the cost estimate to reconcile any differential in the project scope and to avoid conflicting Specification requirements.

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### 2.1.4 DOCUMENT REVIEW AND REPORTING

The CA shall prepare a “Document Review” report for each design phase submittal by the Architect. The “Document Review” report will include the following tasks:

- 1) Action Item Agendas,
- 2) Constructability Reviews and Reporting, including detailed review of the Plans and Specifications. This review will be conducted with electronic documents prepared by the A/E in accordance with the Consultants Procedure Manual.
- 3) Field Operations Analysis,
- 4) Project Schedule, and
- 5) Budget Refinement.

The initial “Document Review” report will be prepared during the SD Phase. During each subsequent Phase, the CA will update and refine its “Document Review” of previously defined tasks for the report for that Phase.

### 2.1.5 ACTION ITEM AGENDA REPORTS

The CA shall provide “Action Item Agenda” reports to monitor significant issues and track subsequent activity that may impact the project schedule or budget. Typical issues may include, but are not limited to, programming, timetables, RFI’s, alternative systems data, unit costs, items to be concluded, etc. The “Action Item Agenda” report will be included with all Project Progress meeting reports.

### 2.1.6 CONSTRUCTABILITY REVIEW AND REPORTING

Constructability Reviews will identify discrepancies in the plans and Specifications, ambiguities in the Contract Documents, potential problems with phasing and sequencing, site constraints or other factors that could add costs to the Constructor’s bids or result in change orders during construction.

The CA is responsible for reviewing the Contract Documents to ensure an accurate and well-coordinated set of plans and Specifications, and for determining the adequacy and completeness of the documents for both bidding and construction of the project. The review shall encompass information from the plans, technical Specifications, appropriate appendices and information gained by site inspections.

The Specifications must describe the Work to be done, explain what documents are to be submitted before the Work starts, and what documents are to be submitted after the Work is completed. Technical Specifications must discuss the materials to be incorporated, execution of the Work, what will be tested, who will provide testing and how the Constructor will get paid for the Work. The Specifications must corroborate the Drawings, and the Drawings must corroborate the Specifications.

If the project delivery method is D-B, the CA is also responsible for performing a review of the criteria architect’s deliverables (Volumes 1, 2, and 3 of the Request for Proposal) to identify deficient or potentially vague items that may require clarification, and report its findings promptly in writing to the DAS PM.

As stated below for each Design Phase, the CA will produce a written Constructability Review Report, identifying risks including conflicts, errors or omissions that could impact schedule, cost or quality of the Work, notify the Owner if particular comments are not resolved, and make recommendations to improve the quality of all documents. Cost impacts shall be estimated for major review comments. If requested, the CA will perform similar reviews for proposed change order Work during construction.

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### 2.1.7 FIELD OPERATIONS ANALYSIS

The Construction Administrator will perform the necessary investigation and planning for project access strategy during construction. The analysis will be refined in the schematic, design development, and contract documents issue phases. The plan will include, but not be limited to, the review of the following:

- a) Staging of work.
- b) Temporary walks.
- c) Means of egress and fall protection.
- d) Field operation locations.
- e) Temporary field utility usage and feeds.

### 2.1.8 SUBMITTAL REPORTS

Submittals consist of all drawings, diagrams, illustrations, schedules, cost estimates, catalog cuts; product data, warranties and samples; and other data or information which are specifically prepared by or for the Constructor and submitted by the Constructor to illustrate some portion of the Work. Submittals should illustrate what items are to be installed and how the Work will be performed.

It is imperative that the CA review Submittals for purposes of quality control. The CA will review Submittals for compliance with the Contract Documents and further certify that all integrated products function to their intended use and conform to project Specifications. The CA shall document any observed code violations; changes that may affect code compliance; the use of any materials, assemblies, components, or equipment prohibited by code; major or substantial changes between the technical submissions and the Work in progress; or any deviation from the technical submissions that may constitute a hazard to the public.

The CA shall compile the Submittals and findings as part of a comprehensive Submittal Report to be presented to the DAS PM at the conclusion of each Design Phase. The Submittal Report shall be distributed in the number and format specified in the Contract.

The Submittals and corresponding report will become part of the permanent project record.

### 2.1.9 HIGH PERFORMANCE BUILDING REQUIREMENTS

New DAS construction projects with costs in excess of five (5) million dollars, or renovation projects with costs in excess of two (2) million dollars, are required to comply with the High Performance Building (HPB) Regulations, which requirements are more specifically detailed in the Connecticut Building Standard Guidelines Compliance Manual for High Performance Buildings, ASHRAE Guideline 0-2005 (for commissioning guidance and requirements) and the DAS Capital Projects High Performance Buildings Guidelines. The CA will assist in coordinating activities associated with meeting these requirements.

More specifically, the CA's responsibilities associated with these requirements include, but are not limited to, the following:

- 1) Participate in the Owner's Project Requirements development workshop(s).
- 2) Coordinate participation by agency facilities operation during commissioning activities in the design, testing, training phases as appropriate.
- 3) Review and comment on changes to the Owner's Project Requirements.
- 4) Monitor HPB goals and requirements during design and construction.
- 5) Review the Commissioning Agent's progress reports.
- 6) Submit documents as required by DAS/CS.

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If the construction contract calls for the project to be LEED Silver Certified, the CA is also required to:

- 1) Have a LEED Accredited Professional as part of its primary team for this purpose.
- 2) Monitor LEED points during construction.

### 2.1.10 BUILDING INFORMATION MODEL (BIM)

The CA shall become familiar with and follow the DAS/CS provisions set forth in the “BIM Guidelines” as amended and revised current with the date of the Contract. The provisions of the “BIM Guidelines” are incorporated by reference herein. The CA shall have the skill necessary to use BIM and also be able to analyze the deliverables utilizing BIM that are prepared by the Constructor, its Subcontractors, the A/E, or its sub-consultants, so that the CA can perform its various responsibilities set forth in this Manual and in its Contract.

### 2.1.11 SCOPE OF WORK SUMMARY BY PROJECT PHASE

As a consultant for the State, the CA may be required to provide Design Phase, Bid/Procurement Phase, and/or Construction Phase Services.

The CA's scope of work for Design Phase Services may include, but is not limited to the following:

- A. Pre-Design Phase services**, more specifically defined in the Contract and Section 2.2.1 of this Manual that include, but are not limited to:
  - 1) Create the master schedule and report on the schedule; and
  - 2) Review and prepare a written report on the accuracy and completeness of the initial construction cost estimate.
- B. Design Phase services** include schematic design, design development, Contract Documents, and bidding/procurement phases.
- C. Schematic Design Phase services** are more specifically defined in the Contract and Section 2.2.2 of this Manual that include, but are not limited to:
  - 1) Maintain and refine the project Master Schedule;
  - 2) Prepare an “Action Item Agenda” to track issues that may impact the project schedule and/or budget;
  - 3) Prepare a “Constructability Review” for the SD Phase, inclusive of:
    - a) Site conditions,
    - b) MEP systems overview,
    - c) Soil conditions from the geotechnical report prepared by others, and
    - d) Sustainable design strategies which may include LEED Silver (or gold or platinum) certification, if required, and the client agency's policies and standards for healthy buildings.
  - 4) Investigate and plan a project access strategy for construction in the form of a “Field Operation Analysis” that will be refined by project phase;
  - 5) Prepare an independent construction cost estimate based on the SD document submission;
  - 6) Identify and recommend value engineering/cost reduction alternatives that could lead to a project cost savings based on SD document submission;

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- 7) Prepare a "Document Review" report inclusive of the following tasks:
  - a) Action item agendas,
  - b) Constructability reviews and reports,
  - c) Field operations analysis,
  - d) Schedule refinement, and
  - e) Budget refinement;
  - f) Project site conditions;
  - g) Material selections;
  - h) The major building systems and prepare a report with consideration for initial costs, long term operating and maintenance costs, the impact on the schedule, among other things; and
  - i) The adequacy of space allotments for maintenance of mechanical, telephone, and fire protection equipment.

**D. Design Development Phase services**, more specifically defined in the Contract and Section 2.2.3 of this Manual that include, but are not limited to:

- 1) Update the previously described tasks and prepare a "Document Review" report for the DD Phase;
- 2) Identify and recommend value engineering/cost reduction alternatives that could lead to a project cost savings based on DD document submission;
- 3) Prepare an independent construction cost estimate based on the DD document submission; and
- 4) Prepare a written evaluation of the CxA's performance to date utilizing the Department's form and criteria.

**E. Contract Document services at 50% completion**, more specifically defined in the Contract and Section 2.2.4 of this Manual that include, but are not limited to:

- 1) Update the previously described tasks and prepare a "Document Review" report at 50% completion of the Contract Documents Phase;
- 2) Identify and recommend value engineering/cost reduction alternatives that could lead to a project cost savings;
- 3) Prepare an independent construction cost estimate; and
- 4) Prepare a written evaluation of the CxA's performance to date utilizing the Department's form and criteria.

**F. Contract Document services at 100% completion**, more specifically defined in the Contract and Section 2.2.4 of this Manual that include, but are not limited to:

- 1) Update the previously described tasks and prepare a "Document Review" report at 100% completion of the Contract Documents Phase;
- 2) Prepare an independent construction cost estimate;
- 3) Review and recommend changes to the *Division 1 General Requirements* to make project specific.
- 4) Participate in an Independent Third Party Review or "Redi-Check" Construction Document Review and provide an estimate of the potential cost of these findings,

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including, but not limited to, cost savings from avoided or prevented subsequent change orders.

- 5) Review the project drawings and the Project Manual to insure that systems, equipment, components, materials, and construction techniques are fully identified and specified, including interfaces between trades, so as to permit proper and complete bidder response. Review the Specifications in their entirety for clarity of language including, but not limited to, detecting potential ambiguities and/or conflicts in the Specifications. Findings shall be reported promptly in writing to the DAS PM.
- 6) Prepare a written evaluation of the CxA's performance to date utilizing the Department's form and criteria.

The CA's scope of work for **Bid/Procurement Phase Services** (more specifically defined in the Contract and Section 2.3 of this Manual) may include, but are not limited to the following:

- 1) Recommend changes to bid format instructions and working procedures to clarify alternate bids, Supplemental Bids, and Unit Price requests or materials that are to be supplied by others;
- 2) Participate in pre-bid conferences, route inquiries for clarification, and if appropriate, recommend the issuance of Addenda; and
- 3) Partner with DAS in substantiating bidder qualifications and participate in the review of bid proposals for the inclusion of items that meet the intended value and scope required of the bidding documents.
- 4) Additional duties for CMR Projects are included in the Contract.

The CA's scope of work for **Construction Phase Services** (more specifically defined in the Contract and Section 2.4 of this Manual) may include, but are not limited to the following:

- 1) Scheduling services (services may vary based on total project value);
- 2) Review and recommendation for approval of the Schedule of Values payment;
- 3) Review and recommendation for approval of periodic requisitions for partial payment;
- 4) Establish and conduct project meetings, then record and distribute meeting minutes;
- 5) Supervision and inspection services;
- 6) Project documentation, records, and reporting services;
- 7) Review, log and monitor the approval process for change orders, and if requested by the State, negotiate change orders between the State and the Constructor;
- 8) Monitor and update the construction budget;
- 9) Project closeout services;
- 10) Review, and if appropriate, recommend for approval all Constructor applications for payment; and
- 11) Claims and dispute resolution services.

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### 2.2 Design Phase Services

#### 2.2.1 PRE-DESIGN PHASE (PD)

If Pre-Design services are included in the Contract, the CA is responsible for providing a preliminary evaluation of the initial program, site conditions, project schedule, and construction budget.

##### 2.2.1.1 Master Schedule (PD)

Following interviews with the user groups and designers, the Owner will obtain, organize, monitor, and forward to the CA all of the end users and consultants' schedules and Critical Path Method (CPM) tasks for input into the Master Schedule. The CA will provide data entry only on these tasks.

The initial schedule will contain an estimate of construction time and the architect's design schedule, and will be reviewed by the CA at the completion of the Pre-Design Phase. Prior to the start of the SD Phase, the Owner will update the schedule based on the CA's comments and an updated design schedule from the architect. This schedule will become the basis upon which the CA shall create its initial master schedule.

##### 2.2.1.2 Budget Cost Analysis (PD)

Pre-Design estimates are prepared in the early planning phases of a proposed project to assess programmatic requirements and budget constraints in order to establish project scope and quality expectations. It provides a distribution of costs by building elements within the allocated budget. These costs reflect the performance and quality levels anticipated by the client. This estimate is also a cost plan for comparing subsequent estimates and for monitoring and controlling costs as design progresses.

The A/E assembles an initial construction cost estimate at the completion of the Pre-Design Phase utilizing Unifomat II, Level 1. The CA shall review the cost estimate for accuracy, completeness and conformance to the budget.

The CA will then coordinate with the A/E to prepare a written analysis on the impact of the "Cost of the Work" budget's "Major Project Elements" and on the overall Project Schedule, including construction duration.

#### 2.2.2 SCHEMATIC DESIGN PHASE (SD)

##### 2.2.2.1 Master Schedule (SD)

Following interviews with the user groups and designers, the Owner will obtain, organize, monitor, and forward to the CA all of the end users and consultants' schedules and Critical Path Method (CPM) tasks for input into the Master Schedule. The CA will provide data entry on these tasks and any other tasks the CA deems appropriate to track project progress and verify future milestones.

Utilizing the prescribed scheduling software, the CA will assign a duration and relationship to each task, add or delete tasks, identify the logic of interrelationships and milestones, and perform schedule management activities to identify the Project's critical path and timeline. Schedule submissions are to be coordinated with the A/E's design submissions throughout the design process.

Items to be identified during subsequent refinements include milestones for departmental occupancy, Shop Drawings and CA reviews, special support services, and float times.

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### 2.2.2.2 Constructability Review and Reporting (SD)

Upon receipt of the SD Phase records, the CA will prepare a "Constructability Review" report of the early design documents. The report will be based upon an inspection that will include, but is not limited to, the following:

- 1) On-Site Conditions,
- 2) Proposed MEP Systems overview,
- 3) Soil Conditions based upon the geo-technical report provided by others,
- 4) Sustainable Design Strategies which may include LEED Silver (or Gold or Platinum) certification, if required, and the client agency's policies and standards for healthy buildings,
- 5) Underground Water,
- 6) Site Utilities,
- 7) Foundation Systems,
- 8) Structural Frame,
- 9) Roofing Systems,
- 10) Exterior Wall Systems,
- 11) Interior Finish Systems,
- 12) Conveying Systems,
- 13) Special Construction Items,
- 14) Asbestos and other Hazardous Materials, and
- 15) Existing Conditions of any of the above.
- 16) All required permitting

### 2.2.2.3 Cost Estimate/Analysis (SD)

The CA will prepare an independent construction cost estimate and written analysis, based on their review of the SD documents, for submission to the Department. The primary goal of the SD Phase cost estimate is to clearly define a feasible concept within the allocated budget in a form that the Owner can understand and approve before proceeding to the DD Phase.

To prepare the estimate, a current cost data base will be utilized in conjunction with actual quantity takeoffs, knowledge of material and Subcontractor availability, manpower and off hour shift studies, and experience with systems and finishes on similar projects. Close attention must be paid to providing timely and comparable data to support value engineering. Input from various trade contractors and vendors will also be sought.

**Project costs shall not exceed the established budget for construction and site work without prior written authorization from the Department.**

The written report will utilize the "Major Group Elements" – Level I of ASTM Unifomat II, Sections A through G inclusive, to analyze the impact of the "Cost of the Work" budget's "Major Group Elements," the overall Project Schedule, and appropriate alternatives for consideration will be recommended. All cost analysis will be representative of inflation to time of construction.

### 2.2.2.4 Document Review and Reporting (SD)

The CA shall prepare a "Document Review" report as described in the General Responsibilities Section of this Manual (Section 2.1.4).



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### 2.2.2.5 Value Engineering

The CA will coordinate and participate in a Value Engineering (VE) review during the SD Phase. The VE Team should be multi-disciplined to bring a balanced perspective to the review. The VE Team should identify elements of the design which may be eliminated without impacting program requirements as well as systems and assemblies that may be changed without altering functionality but achieving both short and long term savings. The CA shall report the total, or life cycle, costs with respect to the initial cost, long term cost, anticipated life of the component and all other time-related factors, including cost associated with maintenance and operation.

### 2.2.2.6 Site Conditions

During the SD Phase, the CA will participate in evaluating the impact of known soils, subsurface geology, groundwater, unsuitable material, rocks, topsoil re-use, milled pavement and associated site elements.

### 2.2.2.7 Material Reviews Report

During the SD Phase, the CA will report on the advisability of materials selections and provide detailed information, including identification and potential availability of long-lead/specialty items, availability of labor and materials, durability of materials, construction methodology, and special sequencing or protection. Existing conditions and code compliance issues should also be considered. The report should include recommendations of alternative methods and materials best suited or common to the project and its location.

### 2.2.2.8 Systems Review

During the SD Phase, the CA will participate in reviews of the proposed roof, structural, mechanical, electrical, plumbing, conveyance, sprinkler, telecommunications, and life safety systems to consider initial cost, availability, impact on the overall program, comfort and convenience, long term maintenance and operating costs, and impacts on schedule.

### 2.2.2.9 Space Requirements

During the SD Phase, the CS will participate in a review of the adequacy of space allotments for maintenance of mechanical, telephone, and fire protection equipment.

## 2.2.3 DESIGN DEVELOPMENT (DD)

During the Design Phase, the CA is responsible for advising and making recommendations to the Owner and Architect concerning design alternatives, but does not have the authority to change or alter the project drawings, Specifications, or Addenda. The CA is not responsible for determining whether the project drawings and Specifications are compliant with applicable laws, statutes, ordinances, life safety codes, rules, and regulations. However, if the CA recognizes an issue, deficiency, or discrepancy in the drawings and Specifications, or a compliance issue with respect to the applicable laws, statutes, etc., it is responsible to promptly notify the Architect and Owner of the deficiency or discrepancy in writing.

### 2.2.3.1 Document Review and Reporting (DD)

The CA shall prepare a "Document Review" report as described in the General Responsibilities Section of this Manual (Section 2.1.4).

### 2.2.3.2 Constructability Review and Reporting (DD)

At 50% completion of the DD documents, if applicable, the CA will prepare a "Constructability Review" report of the proposed building components and features, for the purpose of evaluating cost effectiveness, ease of construction, fabrication, and installation. Building features that

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have the potential to add significant cost and time to the project should be avoided.

At 100% completion of the DD documents, the CA will prepare a “Constructability Review” report of the entire DD Phase. The CA will update and refine its review of previously defined tasks from the SD Phase and 50% DD analysis and extend its review to include, but not be limited to, an analysis of the following:

- 1) Availability of materials and labor,
- 2) Identification of long lead items,
- 3) Durability and intended use of materials and equipment,
- 4) Space requirements and allotments of equipment and building systems,
- 5) Functional systems checks, assessment of controls, and building management systems in coordination with the CxA.
- 6) Envelope design in coordination with the BECxA
- 7) Construction methodology,
- 8) Identify past problems with proposed materials or equipment, and propose alternatives that could lead to cost savings;
- 9) Systems not analyzed during the SD Phase, including, but not limited to furniture systems, computer systems, telecommunication systems, and finish systems.
- 10) Effect of blasting and pile driving or any construction activities potentially effecting adjacent structures.

### 2.2.3.3 Value Engineering (DD)

The CA will prepare a report recommending alternative materials, products, systems, equipment, or methods that provide equal or superior performance at lower cost. Impact on schedule and sequencing will be analyzed and reported.

Subsequent Phase reviews will also include an analysis of furniture, computer, telecommunications, and finish systems not previously available.

### 2.2.3.4 Cost Estimate/Analysis (DD)

The CA will prepare an independent construction cost estimate and written analysis, based on their review of the DD documents, for submission to the Department. During the DD Phase, all aspects of the design for each discipline are developed and coordinated. See the Consultants Procedure Manual for document deliverables during this phase.

The DD estimate shall contain an amount of detail commensurate with the design plans, specifications, and details submitted by the A/E. The CA will work to minimize the use of Cash Allowances in this estimate, and will clearly identify the scope and price of allowances. During the entire DD Phase, cost verification and, if necessary, Value Engineering, will be required to ensure that the design as developed remains within the project budget.

The DD cost estimate will be derived from actual takeoffs, Subcontractor and vendor input, and material and labor cost data. All quantitative systems information shall be provided in detail.

**The CA will immediately notify the DAS PM, in writing, if and when it becomes apparent the construction budget is exceeding the established budget for the building and site work.**

The written report will utilize the “Major Group Elements” – Level II of ASTM Uniformat II, Sections A through G inclusive, to analyze the impact of the “Cost of the Work” budget’s “Major Group Elements,” the overall Project Schedule, and appropriate alternatives for consideration

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will be recommended. The DD Phase Cost Estimate shall be reconciled with the Uniformat II Cost Estimate done at the SD Phase, including an explanation of any significant variances.

### 2.2.3.5 FF&E Move Services (DD)

If applicable, the CA will assist the Owner, Constructor, and A/E with coordinating the schedule of move services for FF&E.

The CA will integrate the move-in schedule and the information systems schedule into the Master Schedule to track project progress and verify future move milestones. The CA will notify the Department, promptly in writing, of any scheduling conflicts with recommendations for resolution.

## 2.2.4 CONTRACT DOCUMENTS

### 2.2.4.1 Document Review and Reporting (CD)

The CA shall prepare a "Document Review" report as described in the General Responsibilities Section of this Manual (Section 2.1.4).

If the PM has requested an interdisciplinary coordination ("Redicheck") of the documents during this phase, then the CA shall participate in the meeting(s) which identifies the findings and shall review the coordination items and provide cost estimates of these findings, including, but not limited to, cost savings from avoided or prevented subsequent change orders.

### 2.2.4.2 Constructability Review and Reporting (CD)

The CA will prepare "Constructability Review" reports at 50% completion of the Contract Documents Phase and 100% of the Contract Documents Phase. The CA will update and refine its review of tasks defined in the previous phase.

At 50% completion of the Contract Documents Phase, the CA will prepare a "Constructability Review" report of the proposed building components and features, for the purpose of evaluating cost effectiveness, ease of construction, fabrication, and installation. Building features that have the potential to add significant cost and time to the project should be avoided.

At 100% completion of the Contract Documents Phase, the CA will conduct a final review of all Contract Documents for compliance with contract specifications and to ensure construction feasibility.

For CMR projects, the CMR shall prepare and submit a site mobilization plan inclusive of cost and schedule implications of site mobilization work to the CA for review and comment. The CA shall be responsible for reviewing the site logistics plan to confirm the following items, if applicable, are included:

- 1) Site fence and access gates,
- 2) Truck wheel wash area,
- 3) CA office trailer,
- 4) Constructor's office trailers, and
- 5) Constructor's storage trailers or storage laydown areas, and a
- 6) Building Excavation Plan may include the following:
  - a) Ramp,
  - b) Excavation Scope,
  - c) Crane Locations,

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- d) Shoring,
- e) Site access and traffic ways,
- f) Temporary utility locations,
- g) Offsite utility locations,
- h) Excavation spoils storage area,
- i) Soil erosion control plan,
- j) Dewatering, and
- k) Any other item that can impact the project cost and schedule.

### 2.2.4.3 FF&E Move Services (CD)

The CA will assist the Owner in developing an Occupancy Plan for the completed project, which may include, but is not limited to the development of move schedules, cost estimates and inventory lists. The CA will assist the Owner, as necessary, with move coordination, relocation assistance or furniture coordination services at project completion.

### 2.2.4.4 General Requirements Review and Recommendations

At 100% completion of the Contract Documents, the CA will attend meetings and work sessions with the Owner, Agency, and Architect to recommend changes to the Division 1 General Requirements.

### 2.2.4.5 Value Engineering (CD)

The CA will prepare a report recommending alternative materials, products, systems, equipment, or methods that provide equal or superior performance at lower cost. Impact on schedule and sequencing will be analyzed and reported.

Subsequent Phase reviews will also include an analysis of furniture, computer, telecommunications, and finish systems not previously available.

### 2.2.4.6 Cost Estimate/Analysis (CD)

As the final drawings and specifications are developed, the CA will prepare and issue two independent construction cost estimates utilizing the standard CSI format and the "Major Group Elements" – Level III of ASTM Uniformat II for review by the Department.

At 50% completion of Contract Documents, the A/E will present and submit copies of the Plans and Project Manual to the CA for preparation of the first independent cost estimate. This estimate shall be derived from actual takeoffs, Subcontractor and vendor input, and material and labor cost data. All quantitative systems information shall be provided in detail. The cost estimate prepared at 50% completion of Contract Documents shall be reconciled with the Uniformat II Cost Estimate done at the DD Phase, the A/E Cost Estimate, and the Constructor's Cost Estimate, and shall include an explanation of any significant variances.

**The CA will immediately notify the DAS PM, in writing, if and when it becomes apparent the construction budget is exceeding the established budget for the building and site work.**

A second and final independent cost estimate shall be prepared at 100% completion of the Contract Documents. At this stage, the design team will present and submit copies of the final project plans and Project Manual, which the CA will utilize to prepare and issue the final

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independent construction cost estimate and written analysis based on their review of the Contract Documents.

The CA will review the Contract Documents to ensure that systems, equipment, components, materials, and construction techniques are fully identified and specified, including interfaces between trades, for inclusion in the final estimate to permit proper and complete bidder response to the Bid Package. The CA will also review, analyze, recommend and upon Department approval execute any changes to the Supplemental Conditions to ensure that all special requirements and conditions are addressed in the final estimate. Any changes to the General Conditions requires both the Department's and the Attorney General's approval.

The final estimate will itemize all materials and equipment shown on the drawings and listed in the specifications; be derived from actual takeoffs, Subcontractor and vendor input, material and labor cost data; and incorporate any changes made to the plans and specifications during the Design Review process. All quantitative systems information shall be provided in detail.

The CA will prepare a written estimate report during this phase, utilizing the "Major Group Elements" – Level III of ASTM Unifomat II, Sections A through G inclusive, to analyze the impact of the "Cost of the Work" budget's "Major Group Elements," and the overall Project Schedule. The Final Cost Estimate shall be reconciled with the A/E's and for CMR projects, the CMR's Cost of the Work Estimate. As directed by the Owner, the A/E, in conjunction with the DAS PM, Constructor, and CA, shall take the appropriate action to correct and/or avoid potential cost overruns and make adjustments to their Contract Documents Phase Cost Estimate, which may require adjustments to the Contract Documents.

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### 2.3 Bid/Procurement Phase Services

#### 2.3.1 Bidding/Procurement Process

##### 2.3.1.1 CA Responsibilities for Design-Bid-Build Projects

The CA is responsible for reviewing the complete bid package for compliance with CGS 4b-91 through 4b-96, and is responsible for analyzing the drawings and specifications of systems, equipment, components, materials, and construction techniques for completeness to ensure a proper response to the base bids. The CA may recommend changes to the bid format instructions and working procedures to clarify alternate bids, supplemental bids, and Unit Price requests or materials that are to be supplied by others.

To implement and coordinate bid procedures, the CA will participate in pre-bid conferences, route inquiries from prospective bidders to the proper source for clarification and interpretation, and if appropriate, respond to questions from prospective bidders in the form of Addenda. The CA will review the Architect's responses to RFI's within two (2) calendar days of receipt and take the appropriate next step (see Appendix I for a workflow diagram of the RFI process).

Upon receipt of bids, the CA will participate with the Department in substantiating bidder qualifications and participating in the review of bid proposals to verify that all major aspects of the design have been included in the low bid. The CA will analyze the Bid Tabulations, Bid Proposal Forms, Constructor and Subcontractor Questionnaire Submittals and advise the DAS PM, in writing, of any problems associated with the lowest responsible qualified bidders.

##### 2.3.1.2 CA Responsibilities for CMR Projects

CA responsibilities for CMR projects is as follows:

- 1) Assist in identifying critical & long-lead time materials. Monitor to ensure the CMR coordinates and expedites, as necessary, the ordering and delivery of materials.
- 2) Develop a list of required permits and approvals as may be applicable and track the permit approval process.
- 3) Review CMR's construction schedule and verify that it meets the contract requirements, and incorporate into the Master Project Milestone Schedule.
- 4) Attend trade contractor scope reviews and kick-off meetings.
- 5) Coordinate with and assist DAS in negotiating with and entering into a GMP construction agreement with the CMR selected by DAS. Assist DAS in negotiating with any other contractors retained by the State. Provide recommendations on the construction agreement, as necessary, to make certain that the SOV provided by the CMR facilitates cost-tracking during construction & is coordinated w/ the specified schedule milestones, and that scope definitions are clearly identified in the Contract Documents.
- 6) Review the CMR's bid format and procedures, and recommend any changes to said format.
- 7) Review and clarify alternate bids, supplemental bids, and Unit Price requests or materials supplied by others.
- 8) Attend and participate in all pre-bid conferences.
- 9) Attend bid openings and participate in clarifying and answering all questions during bidding.

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- 10) Review of all the CMR's bid packages for completeness of work scope. Carefully review and identify all contingencies placed in the bid packages and identify those to the DAS Project Manager.
- 11) Review Subcontractors' bid proposals & qualifications.
- 12) Review supporting documentation from CMR on all bid packages and buy-out plan.
- 13) Review CMR's recommendation for award and purchasing requests.
- 14) Provide recommendations in the development of the GMP.
- 15) Provide a complete review of the CMR's final GMP submission and provide written comments to DAS, together with a written recommendation to accept or not accept.
- 16) Participate in any other related meetings and activities as required during the development of the GMP.

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### 2.4 Construction Phase Services

Construction Phase Services expedite and improve the efficiency of the construction process through professional planning and execution of project activities, all focused upon fulfilling the Department's scope, cost, quality, and time requirements.

The CA's Construction Phase Services are to run concurrent with the construction Contract Time, plus ten percent (10%), plus ninety calendar days for project closeout. For example, if the construction Contract Time is equal to three hundred (300) calendar days, then the CA Construction Phase Services would run four hundred twenty (420) days ( $300+30+90=420$ ). The commencement date of construction services is the date the Notice to Proceed is issued by the DAS PM.

The CA is responsible for scheduling and managing a pre-construction conference prior to the commencement of Work, and coordinating project meetings during construction to assess the progress and performance of the Work in accordance with the Contract Documents, and to take action, as required, to resolve problems.

The CA is responsible for preparing and providing a monthly progress report (see Form 7045, under the 7000 Series Construction Phase Forms, in the [DAS Web-based Library](#) for a template of the Monthly Report) to the DAS PM, ADPM, and User Agency not later than fourteen (14) days after the monthly requisition has been processed for payment. The report shall consist of, among other things, an evaluation of the Design Team's, Constructor's and PM's performance of duties. The failure of one of the team members to perform its duties does not excuse the CA from performance of its duties.

The CA is required to promptly report to the Deputy Commissioner of DAS/CS and Chief Architect, in writing, if one or more members of the project's team fails to perform its duties. Failure to perform by a member of the project's design team does not excuse the CA from the performance of its duties.

The CA is responsible for reviewing and approving the Constructor's safety program prior to the commencement of Work, and for monitoring the Constructor's adherence to the safety program throughout the Construction Phase.

Throughout the Construction Phase, the CA will monitor the progress of the Work; maintain complete, clear and accurate records related to the performance of the Work; track, project, and monitor the construction schedule and costs to remain on time and on budget; and establish methods and procedures to minimize the impact of claims.

All Project communications must be administered through the DAS PM or with his/her prior knowledge. The CA does not have the authority to change or alter the Contract Documents, unless otherwise approved by a change order. However, if the CA recognizes a discrepancy in the Contract Documents, he/she is required to notify the Architect and Owner, in writing, of the discrepancy to seek resolution.

During the Construction Phase, the CA will coordinate the allocation of mobilization areas, and the use of site and facilities for the project. The CA shall provide construction operations oversight of each Work component for efficient and orderly installation; inspect all Work for compliance with the Contract Documents; and coordinate the timing of construction activities



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to avoid conflicts that could impact the progress of the Work. If deficiencies in the Work are discovered, the CA will take the necessary action to obtain corrections and interpretations so that the Work can be completed on schedule. If the matter cannot be resolved, the CA is authorized to reject all Work found to be defective, unacceptable and nonconforming to the Contract Documents.

At project completion, the CA is responsible for the collection and review of all Warranty, Guarantee and Operations and Maintenance (O&M) manuals, record or as-built drawings, and all other required closeout documents. If the CA determines that the Work has been completed in accordance with terms and conditions of the Contract Documents, the CA will recommend to the DAS Acceptance of the Work and Final Payment to the Constructor.

CA Construction Phase Services are more specifically defined in Sections 2.4.1 through 2.4.12 of this Manual. For additional information regarding Consultant Construction Phase responsibilities and coordination refer to Section 3.5.5 of the Consultants Procedure Manual (see the Consultant Procedures Manual - 0400, under the 0000 Series – Project Manuals and Guidelines, in the [DAS Web-based Library](#)).

### 2.4.1 PRE-CONSTRUCTION CONFERENCE

The CA is responsible for scheduling and managing a Pre-Construction Conference, prior to the Contract Start Date. Meeting participants should include representatives to the CA, Owner, Agency, A/E, and their consultants; the Constructor and their major Subcontractors; and any other required parties as determined by the PM. The purpose of the conference is to gain commitment to project goals and procedures from the meeting participants. The roles and responsibilities of the Constructor, their Subcontractors, and personnel assignments will be reviewed and discussed in detail.

The agenda will depend on the specific project needs. Topics for discussion shall include, but are not limited to:

- 1) **Notice to Proceed.** Any questions regarding the Notice to Proceed will be discussed.
- 2) **Explanation of chain of command.** Included are routing of Shop Drawings, samples, project reports, scheduling reports, test reports, maintenance instructions, etc.
- 3) **Communications channels.** This is a reminder of the contractually mandated paths for communications among the participants.
- 4) **Project meetings.** Scheduling, agenda, and attendance at project meetings are discussed.
- 5) **Duties of the Owner and Constructor.** The General Conditions and Contract Documents shall be reviewed in their entirety for clarity of language to detect potential ambiguities or conflicts. If ambiguities or conflicts are discovered, the CA will promptly report its findings, in writing, to the A/E and the DAS PM. Moreover, the CA shall:
  - a) Review the General Conditions article regarding construction schedules with the Constructor;
  - b) Review with the Constructor the notice provisions in the construction contract and record those provisions in the minutes;
  - c) Emphasize RFI contract provisions.

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- 6) **Submittals.** Schedules are outlined for submittal of engineering data, Shop Drawings and operation and maintenance manuals, tests and inspections, and other Submittals (including items required, procedures, number of copies, and distribution). Constructors are to identify specification section with each submittal. Constructors are reminded of their obligations with respect to shop drawing review and submittal.
- 7) **Progress payments.** A Schedule of Values is established for the Work of all trades, as well as procedures for progress payments. These procedures cover the handling of Retainage and partial lien waivers; payment for materials on hand and materials stored off site; inspection, insurance, and title for stored materials; any special requirements for government agencies; scheduling of consultant's site visits; and submission of payroll records with requisitions for payment.
- 8) **List of Subcontractors.** The CA shall collect a copy of all sub-contracts and remind the Constructor that the General Conditions may require the Constructor, after award of the contract, to notify the architect in writing of the names of Subcontractors or other persons or organizations proposed for portions of the Work designated in the bidding requirements.
- 9) **Employment practices.** Any requirements regarding wage rates or similar issues are clarified.
- 10) **Utilities.** Responsibilities for temporary and permanent utility services will be reviewed.
- 11) **Scheduling.** Job progress scheduling requirements include frequency of updates, times for Submittals and approvals, work sequence, dates when owner-furnished equipment and furnishings are required, and the process for schedule revisions and schedule recovery are established.
- 12) **Contract changes and clarification.** Procedures are set up for handling proposals, RFI's, requests for backup information for change proposals, change orders, and Construction Change Directives. Supplemental instructions are developed, such as procedures for obtaining interpretations of the Contract Documents (no changes will be made without appropriate authorization in writing). The CA is to make certain the A/E's response is prompt and thorough to maintain the construction schedule.
- 13) **Security.** Job site security during nonworking hours is reviewed. On-site and off-site storage is reviewed.
- 14) **Safety Program.** Identification of safety risk, safety management, special safety procedures, and OSHA requirements are discussed.
- 15) **Parking.** Parking areas are designated.
- 16) **Storage.** Areas are assigned for temporary storage of equipment and materials; special protection is required for stored materials and equipment.
- 17) **Permits.** Licenses, permits, and inspections required by local building authorities are reviewed. A checklist for permits, certifications, and approvals can be found under the 3000 Series – Design Phase Forms in the [DAS Web-based Library](#) (Form 3030).
- 18) **Right-of-way.** Restrictions are reviewed on use of the site, access, or availability of rights-of-way, as are special requirements or cautions regarding adjacent property, protection of trees, and similar issues.

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- 19) **Testing and Inspections.** The extent of testing laboratory and inspection services is reviewed, as is the CA's responsibility for coordinating, scheduling, and reporting on these services
- 20) **Overtime.** Notice and scheduling necessary for overtime work are arranged.
- 21) **Cleanup.** Responsibilities for cleanup and trash removal are reviewed.
- 22) **Closeout.** Procedures for closing out the project are delineated, including record drawings and other required submissions.
- 23) **Public relations.** Policies regarding statements to the media, anticipated public interest in the project, and restrictions on construction operations and other public relations activities are discussed. Construction sign requirements are determined.
- 24) **Separate contracts.** Their impact on the Work of the project is evaluated. Requirements for coordination with other contractors on the site are discussed.

A sample agenda for the Pre-Construction Conference can be located in the [DAS Web-based Library](#), under the 7000 Series – Construction Phase Forms (Form 7015).

### 2.4.2 PROJECT SAFETY

The CA is responsible for reviewing and approving the safety program for the project provided by the Constructor prior to the commencement of Work. The safety program will demonstrate the Constructor's ability to comply with applicable provisions of federal and state safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed, and their ability to comply with the applicable provisions of the Associated General Contractors' "Manual of Accident Prevention in Construction", the standards of the Connecticut Labor Department and Occupational Safety and Hazard Association (OSHA). If there are any deviations from the safety program, the CA is to notify, in writing, the Department and the Constructor. Upon seeing an unsafe or threatening situation, the CA will immediately inform the Constructor, in writing, of the situation to take action and will report, both orally and in writing, the situation to the DAS PM.

### 2.4.3 CONSTRUCTION BUDGET

The CA is responsible for tracking, projecting, and monitoring costs through the Construction Phase. As contracts are awarded, the individual line item estimates are replaced with actual committed amounts, plus cost estimates for any unknowns or contingencies. The goal is to manage the incurred costs, estimated costs and costs to complete in order to stay within the budget.

### 2.4.4 SCHEDULING SERVICES

Scheduling duties performed by the CA during the Construction Phase effectively allow it to monitor the progress of the project and coordinate the Project Team. The project schedule contains activity durations, interdependencies, and constraints that allow the Project Team to evaluate the logical relationships between project tasks; identify the time and resource impact those tasks will have on the project, and serves as a tool to evaluate alternative execution strategies so that the Project Team can meet Department objectives.

All schedules produced by the CA must be controlled, reviewed, analyzed and reported on by an expert schedule consultant provided, or retained, by the CA. The Schedule Consultant must

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have a minimum of 10 years of experience in developing, reviewing and analyzing Critical Path Method (CPM) schedules and must be adept in CPM schedule methodology and the current version of the project planning software specified in the Contract Documents. During construction, the Schedule Consultant will visit the project site a minimum of once every thirty (30) days to evaluate progress on site and review schedule related issues.

During the construction process, the CA will review, analyze and report on the Constructor's CPM schedule Submittals to ensure the requirements of the Contract Documents have been met, and to validate the actual start and finish dates for consistency with the Work performed. The CA will also review change orders for potential impact on the project schedule. The CA will produce a monthly report with a narrative summary of the physical progress of construction during the period. If applicable, the report should make note of potential delays and problems, the impact such delays may have on the performance of each Subcontractor, as well as the impact such delays may have on the overall project completion date.

More specifically, the CA will review, analyze, and report on all schedule Submittals provided by the Constructor, which may include, but are not limited to: 1) Preliminary Schedule, 2) Baseline Schedule, 3) Schedule Updates, 4) Schedule Revisions, 5) Recovery/Acceleration Schedule, 6) Change Orders, 7) As-Built Schedule, 8) Schedule Alerts, and 9) Weather Day Analysis.

For each schedule submitted by the Constructor, the CA shall:

- 1) Review the schedule to ensure that the Constructor has met the requirements of the Contract Documents.
- 2) Ensure that all schedules and schedule updates prepared by the Constructor are submitted in a timely manner, with the specified content, in the form and format required by the Contract Documents.

In addition, the CA is required to perform the following tasks on schedule Submittals:

- i. Preliminary Schedule: The Preliminary Schedule review and report should cite the appropriateness of work activities and all schedule deficiencies, errors, etc.
- ii. Baseline Schedule: The Baseline Schedule review shall include an analysis of the scheduling logic, the appropriateness of work activities, coding, cost and resource loading, and the critical path. Upon completion of the review, the CA is to prepare a report documenting its findings with a recommendation for approval or rejection of the submittal to the DAS PM. After the DAS PM has reviewed the report and made a determination as to the acceptance or rejection of the submittal, the CA will assist the DAS PM in preparing a written response to the Constructor based on the determination.
- iii. Schedule Updates: The CA is to provide the DAS PM with a monthly review and report of the project schedule. The monthly report should include a narrative summary of the physical progress of construction during the period. If applicable, the report should make note of potential delays and problems, the impact such delays may have on the performance of each Subcontractor, as well as the impact such delays may have on the overall project completion date. The report will validate the Constructor's actual start and finish dates to ensure the dates are consistent with the time period when the Work was performed, and list any variations that could impact the baseline schedule.

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- iv. **Schedule Revisions:** The CA is responsible for reviewing the Constructor's audit report to validate and assess the appropriateness of changes to schedule logic, activities, and durations. If any of these changes impact the critical path, the CA is to notify the DAS PM, promptly in writing, of the impact. If the project schedule updates indicate that milestone dates will not be met, the CA is to notify the DAS PM and make recommendations on how the matter may be resolved. After the DAS PM has reviewed the scheduling reports, the CA will assist the DAS PM in preparing monthly responses to the Constructor.
- v. **Recovery/Acceleration Schedules:** The Constructor is required to submit a recovery schedule if a project falls twenty one (21) or more calendar days behind the current baseline schedule. If the CA believes that the implementation of a recovery or acceleration schedule is appropriate to the project, the CA shall advise the DAS PM accordingly. If directed by the DAS PM, the CA will request a recovery or acceleration schedule from the Constructor. The CA is responsible for reviewing and reporting on all recovery and acceleration schedules, including increased resource loading, to determine the reasonableness and appropriateness of the schedule in achieving the desired result.
- vi. **Change Orders:** The CA is responsible for reviewing each change order for schedule impact and providing the DAS PM with a written statement on the impact.
- vii. **As-Built Schedule:** The CA is responsible for verifying the actual start and finish dates shown on the Constructor's final CPM schedule submittal to ensure the as-built schedule accurately shows when the Work was performed by the Constructor and/or trade contractors during execution of the project.
- viii. **Schedule Alerts:** The CA is responsible for keeping the DAS PM alerted and apprised of any items or issues, which are causing, or may cause, an impact on the critical path. The CA shall use its best efforts to work with the DAS PM to ameliorate any potential adverse impact on the schedule.
- ix. **Weather Days Allowance:** The CA is responsible for tracking and recording daily weather conditions to determine its impact, if any, upon the baseline schedule critical path. Based upon its analysis of the weather, the CA will advise the DAS PM on the granting or denial of "weather days" when requested by the Constructor. With each recommendation granting or denying weather days, the CA will provide a written explanation of the basis of its recommendation. A Weather Day shall be defined as a day when the magnitude of a weather parameter (precipitation or temperature) is such that it creates conditions that inhibit the ability of the General Contractor to work productively on critical path construction activities.

All reports and recommendations provided by the CA are to be submitted in writing. If there is any variation to the project that will impact the schedule, the CA will document the variant and update or revise the schedule to reflect actual performance to date. As appropriate, the CA should look for opportunities to recover slippages. If the CA believes that the implementation of a recovery or acceleration schedule is appropriate, the CA will advise the DAS PM, and when directed, request the recovery or acceleration schedule from the Constructor.

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### 2.4.5 PROJECT MEETINGS

The CA is responsible for coordinating periodic project meetings with the client agency, the Constructor, the A/E and other State officials, as required, to assess the progress of the Work to make certain the Work is on schedule and is performed in accordance with the Contract Documents. The CA will conduct, record and distribute meeting minutes at all project meetings.

There are three (3) types of Construction Phase meetings: pre-construction, progress, and special meetings.

Refer to Section 2.4.1 of this Manual for a detailed description of the purpose and content of the pre-construction conference.

Progress meetings are designed to monitor compliance with schedules and the requirements of the Contract Documents, to coordinate the efforts of the Constructor, and to allow short and mid-term planning and problem solving. Each progress meeting should have a specific purpose with clearly defined and realistic goals. Subjects for discussion may include a comparative analysis of the project budget and construction cost estimates based on current drawings and specifications, making allowances and assumptions for detail not shown or known; review of the Master Schedule, Milestone Schedule and any additional detailed sub schedules for the project; and discussion/resolution of any issues which have been reviewed and discussed, but not yet addressed. Meeting minutes should identify project questions, issues and concerns; include an action list detailing items requiring follow-up, the parties responsible, the schedule by when action is expected, and a record source when an issue has been resolved. Project meetings shall be conducted weekly or as may otherwise be required by the DAS PM or other State officials.

Special meetings are called, as necessary, to resolve issues of an immediate or short term planning nature that cannot wait until the regularly scheduled progress meetings, or to discuss issues requiring detailed discussions not suitable for the progress meeting. Although the CA has primary responsibility for determining the need for these meetings, the Owner, A/E, Constructor or State officials may call a special meeting through the CA.

### 2.4.6 DOCUMENTATION, RECORDS AND REPORTING

It is important that the CA maintain complete, clear and accurate records related to the performance of the Work. Complete documentation supports the Department's position if a formal dispute or formal claim is made.

The CA is responsible for maintaining Project Record Documents, including, but not limited to 1) Contract Documents and records relative to changes in the Work; 2) a record of project files and progress reports required to track, monitor, and administer the Contract Documents; and 3) a record of the Constructor's applications for payment. The CA shall make all such records available to the Architect and upon completion of the Project shall deliver them to the DAS PM. The CA shall maintain and preserve such records until three years after the latter of i) the final payment under its Contract, or ii) the expiration or early termination of its Contract.

More specifically, the CA shall maintain at the Project site for the Owner:

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- 1) One record copy of all Contracts, Drawings, Specifications, Addenda, Change Orders and other modifications, in good order and marked currently to record changes and selections made during construction, and in addition, approved Shop Drawings, Product Data, Samples and similar required Submittals. In the case of each subcontract, the CA shall maintain documents that delineate the sub-contractors performance and/or lack of performance. The CA shall maintain records as provided by Contract, in duplicate, of principal building layout lines, elevations of the bottom of footings, floor levels and key site elevations certified by a qualified surveyor or professional engineer.
- 2) All project files, correspondence, meeting minutes, schedules with monthly updates, permits, testing and inspection reports, daily log book/project diary, monthly photo log of events, and monthly progress reports in the form and format specified in the Contract, and all relevant paperwork required to track, monitor, and administrate the contract documents. For a template of the monthly report, see Form 7045, under the 7000 Series – Construction Phase Forms, in the [DAS Web-based Library](#).
- 3) Records of applications for payment from the Constructor, including:
  - a) Accounting records on authorized Work performed under unit costs, including but not limited to certified payrolls and copies of accounts, bills and vouchers for additional Work performed on the basis of actual costs of labor and materials, and other Work requiring accounting records.
  - b) Records of reimbursable expenses, expenses pertaining to additional services, and direct personnel expenses for services performed on the basis of a multiple.

### 2.4.6.1 Submittal Review and Reporting

The CA is required to review all proposals submitted by the Constructor to ensure that the end result of the proposed submission conforms to the design intent depicted in the Contract Documents and meets the expectations of the Owner (see Appendix III for a workflow diagram of the Submittal Process).

If a proposal submission considers material and equipment, the CA is required to examine and furnish recommendations to the State regarding the proposed material and equipment. If the proposal submission will make changes in the construction Work, the CA shall review and report such changes to the State. So as not to delay the project, the CA is required to submit its recommendations and reports within five (5) calendar days of receipt of the Constructor's proposal. In the event that the incorporation of an approved Substitution will require revisions or additions to the Contract Documents, the CA shall review and monitor all costs related to the revisions or additions.

As part of the monthly progress report the CA is responsible for providing the DAS PM with a summary of all Submittals reviewed for the reporting period, outlining 1) any code violations observed; 2) any changes that may affect code compliance; 3) the use of any materials, assemblies, components, or equipment prohibited by code; 4) any major or substantial changes between the technical submissions and the Work in progress; or 5) any deviation from the technical submissions that may constitute a hazard to the public. The CA will include as an appendix to the report, a detailed list of those Submittal Items from the Document Control section of PMWeb to ensure the DAS PM remains current on the status

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of those Submittals in process. For a template of the monthly report, see Form 7045, under the 7000 Series – Construction Phase Forms, in the [DAS Web-based Library](#).

### 2.4.7 SUPERVISION AND INSPECTION

The CA is responsible for the field supervision and inspection of the Work of the Constructor, Subcontractors, and any additional service providers for compliance with the Contract Documents.

The CA is responsible for reviewing the Shop Drawings for compliance with the Contract Documents without assuming any of the liabilities or responsibilities of the A/E and will serve as the State's liaison with the Constructor. The CA must have a clear understanding of the intent of the Contract Documents and when required, will assist the Constructor in obtaining from the State and the A/E additional details or information to properly execute the Work.

Requests for clarifications and interpretations of the Contract Documents will be reported to the A/E through the CA. The CA shall initiate, track, and process all such requests in writing. Clarifications and interpretations issued by the A/E shall be reviewed by the CA and DAS PM, and thereafter transmitted by the CA to the Constructor for action.

Modification requests made by the Constructor will be considered and evaluated by the CA. The CA shall forward the modification request and its related recommendation to the A/E and the DAS PM for consideration. Decisions rendered by the A/E and DAS PM will be transmitted to the Constructor for action.

The CA will conduct on-site daily inspections and monitor the Work in progress for compliance with the Contract Documents and determine if the Work is being completed in a timely and acceptable manner. The CA is authorized to reject all Work found to be defective, unacceptable or non-conforming to the Contract Documents.

The CA shall promptly prepare a written report of all Work found through its inspections to be unsatisfactory, faulty or defective, does not conform to the Contract Documents, has been damaged, or does not meet the standard of approval. The CA must follow up to be certain the issue isn't simply reported on and the need for resolution overlooked. The CA has a duty to report on observed and/or reported code violations that the reasonable and prudent CA would observe in the Work, but that would be missed if the CA were limited to checking for conformance with the Contract Documents. The report shall include the CA's professional opinion of the Work that it believes should be corrected or rejected, or should be uncovered for observation, or requires special testing, inspection, or approval. If corrective action is recommended, the CA shall include a Work schedule to complete the corrective action.

Work that was reported as deficient, but can be approved with corrective action, shall remain open until:

- 1) Corrective Work occurs, thereby achieving compliance, or
- 2) An Engineering Bulletin is issued by the Architect identifying an alternate means of compliance that has been reviewed and approved by the OSBI. Approval of the alternate means of compliance must be obtained prior to altering the Contract Documents.



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Modification requests or letters of acknowledgment from the authority having jurisdiction will be documented and maintained as part of the Project Records to satisfy Certificate of Occupancy mandates.

If corrective action is not taken on a deficiency, the CA will provide the DAS PM with supporting data to substantiate unsatisfactory performance and issue a deficiency notice to the Constructor for failure to install the Work per the plans and specifications. The CA shall maintain a log of all deficiency notices and corrections made as part of the Project Records. If there is a dispute between the Constructor and the CA regarding an inspection and rejection of the Work, the CA may suspend Work on the non-compliant portion of the Work until the dispute can be referred to and decided by the Commissioner.

The CA is also responsible for coordinating and scheduling, in the presence of appropriate personnel, all tests, equipment and systems start-ups, and operating/maintenance training. The CA shall maintain adequate records thereof, and observe, record, and report in writing to the DAS and the A/E appropriate details relative to the test procedures and start-ups.

The CA shall not schedule inspections or tests until the related Work has been completed and is ready for inspection/testing. If the inspections or tests are premature, then the CA shall be responsible for the costs related to re-inspection and re-testing. For more information, please refer to the Certificate of Occupancy Checklist Requirement (Form 7160) and the OSBI Inspection Request (Form 7170), under the 7000 Series – Construction Phase Forms, in the [DAS Web-based Library](#).

### 2.4.8 CHANGE IN THE WORK

A modification in the Work, an adjustment in the construction contract sum, or an adjustment to the construction contract schedule for a construction project administered by a GC or CMR may be authorized by a written Change Order (CO), signed by the Owner.

A change request may come from the A/E due to a change in the drawings, specifications, or field conditions; or the request may come from the Owner/Agency for additions, deletions or other revisions; or the request may come from a Construction Change Directive, issued by the Owner. Change Order requirements are set forth in Article 13 of the General Conditions (see Division 00 Front End Documents and General Conditions, under the 5000 Series Forms – General Conditions and General Requirements, in the [DAS Web-based Library](#)).

The process (see Appendix IV for a workflow diagram of the CO Process) for administering a CO for a Proposal Request (PR) or for a Construction Change Directive (CCD) is as follows:

The CA will review the CO Proposal for completeness. If the documents are in order, the CA will promptly forward the CO Proposal to the architect for further review and copy the DAS PM. If necessary, the architect will produce a revision sketch or revised specification for the proposed change based on the submission and will make a recommendation to the Department on whether to proceed with the CO Proposal. All forms, supporting documentation, and the corresponding recommendation are to be submitted to the CA for final review prior to submission to the Department.

Upon receipt of the request and recommendation, the CA shall review the documentation for design deficiencies or design additions, perform an independent cost estimate and analysis for

## CA Project Administration

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the request, determine responsibility for the cost of the resulting construction contract modification, and estimate the recovery cost and schedule impact of the request for change. Upon completion of its review and analysis, the CA will forward its recommendation, along with the CO Proposal, supporting documentation, and the A/E's recommendation to the Department for approval.

Upon approval by the Department, the CA will issue a CO and Notice to Proceed with the Work, to the Constructor, with a copy of the same to the project Architect. For a CCD, the CA will issue a signed copy of Form 7350 to the Constructor as a Notice to Proceed with the noted change(s), effective immediately,

In the event an agency seeks a change request, the Owner, through the CA, may also order modifications in the Work for additions, deletions or other revisions. To process an Agency Change Request, the CA must first receive an official user Agency Change Request (Form 7055) from the DAS PM, signed by the Commissioner of the user Agency (or authorized agent) and the DAS Commissioner (or authorized agent). The Constructor shall provide the CA and the Owner a complete detailed accounting of all costs relating to the Additional Work, including but not limited to certified payrolls and copies of accounts, bills and vouchers to substantiate actual costs for any Change Directive or CO.

The State may request that the CA negotiate the proposed request with the Constructor on its behalf for an Agency Change Request. Negotiations may include Work to be performed, duration, cost, and schedule impact. All negotiation sessions are to be documented by a written record that is to be transmitted to the State. The written record shall include inspection reports, progress reports, instructions given, a record of the Contractor's or CMR's and client agency's statements, records of existing conditions, test reports, photographs, and a summary report on the merits of the requested change order.

**A Change in the Work for Design Build Projects.** A change in the Terms and Conditions of a D-B construction contract or a change in the Work that results in an adjustment to the Contract Price or Substantial Completion Date on a D-B project may be implemented by an Agreement Amendment only.

Except for clarifications, or as may be otherwise expressly provided in the construction contract, neither the Design-Builder nor the Owner can make any changes to the Project or to the Work except under an executed Agreement Amendment. An Agreement Amendment is not effective until executed by the Owner and Design-Builder, and approved by the State Properties Review Board and the Office of the Attorney General.

#### 2.4.9 CONTRACTOR PAYMENTS

During the Construction Phase, the Constructor will submit monthly progress payment requests to the CA for review and, if applicable, recommendation for payment. The CA will review the payment request to ensure compliance with DAS's procedures, accounting and contract requirements. The CA will forward the payment request to the A/E for review and recommendation for payment if the payment request is representative of the Work completed. The A/E must sign requisition for the payment to be processed. If approved, the CA will forward the requisition, its recommendation, and the A/E's recommendation to the DAS for processing.

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The CA is also responsible for monitoring the Constructor's payments made to its Subcontractors and shall report any potential irregularities to the DAS.

### 2.4.10 CLAIMS AND DISPUTES

The CA will administer the construction contract fairly and in accordance with the contract terms and conditions. The CA will establish methods and procedures to minimize the impact of claims through prompt and equitable resolution with minimal disruption to the ongoing construction effort. Procedures should address receiving and disposition of claims submitted, merit evaluation, entitlement evaluation, negotiation and settlement procedures, handling of disputes, and appeal procedures. All claims and potential claims should be discussed weekly at the progress meetings. Claims requirements are set forth in Article 38 of the General Conditions (see Division 00 Front End Documents and General Conditions, under the 5000 Series Forms – General Conditions and General Requirements, in the [DAS Web-based Library](#)).

Proactive implementation of the above referenced procedures will help avoid or mitigate most issues that arise. Upon receipt, the CA should promptly evaluate all notices of claims by the Constructor or contractors and make recommendations to the Owner for resolution.

If the Constructor or a contractor provides a verbal notice of claim, it should be documented in the project records and the Constructor or contractor be advised to provide written notice immediately. All claim notices must be provided in writing. Upon receipt of written notification by the Constructor or contractor, the CA shall respond in writing, acknowledging receipt, and requesting any appropriate additional information required for evaluation. Any written statements by the Constructor or contractor that are not correct, shall be promptly refuted by the CA, in writing. Copies of all claims correspondence are sent to the DAS PM.

The CA will investigate the claim to determine whether the claim is valid under the terms of the construction contract. The merit of a claim must be determined before any effort is expended in determining the compensation owed to the Constructor or contractor. To determine the merit of a claim, the CA will perform a preliminary analysis to identify what caused the claim; identify the contract language pertinent to the claim; determine the potential for contractual entitlement; identify the potential costs by obtaining an estimate or actual cost backup for the cost and time that has resulted or will result from the issues contained in the claim, and if necessary, request additional information to complete its analysis.

If the claim has or will impact the project schedule, the CA should acquire the baseline schedule and all updated project schedules to conduct a schedule analysis. The CA should compare as-planned and as-built schedules to determine which activities were delayed and whether concurrent delays occurred; identify periods of delay, disruption or acceleration, and if possible, associate claim issues with the identified periods.

Once the preliminary and schedule analyses are complete, and if it is determined that the Constructor's claim has merit, the damage analysis can start. All records pertinent to the claim should be retrieved, copied, numbered, and retained in a separate file pertaining only to the claim. Such records may include, but are not limited to, relevant correspondence, meeting minutes, memos, schedules, and RFI's. Using these records, the CA can assess the full impact attributable to its claim and prepare damage calculations for each issue. The CA should

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analyze both direct and indirect costs, including **Overhead** costs, relating to the claim to determine the total compensation due to the Constructor or contractor.

The results of the claims analysis are to be presented to the Department in report form, documenting the strengths and weaknesses of the Constructor's or contractor's position, and include the CA's proposed settlement value and recommendations on proceeding with settlement negotiations (if applicable). The CA shall provide support to the State, the DAS PM, the Attorney General, and outside counsel, as required, within the duration of its contract and should assist the Department in resolving any outstanding claims brought by the Constructor or Subcontractor until the claim has been resolved.

### **2.4.11 CONSTRUCTION COMPLETION**

#### **2.4.11.1 Construction Closeout Meetings**

The CA is responsible for scheduling and administering close out progress meetings with the Constructor, A/E, and DAS, to ensure a timely and orderly closeout.

#### **2.4.11.2 Punch Lists**

During the Construction Phase, the CA will provide for inspection of the Work, noting both the status and quality of Work in place. Items that require corrective action are placed on a punch list, and the Constructor is required to make the necessary corrections. This process is continuous and all punch list items must be remedied before a project is closed out and accepted by the Owner.

The Owner and/or the A/E may also make an inspection and possibly add items to the punch list when the Constructor declares Substantial Completion. Corrective action for those punch list items will be managed by the CA.

#### **2.4.11.3 Systems Testing and Demonstrations**

Prior to scheduling the inspection for the Certificate of Compliance, the CA shall coordinate and schedule equipment/systems testing with the Constructor, Architect and if applicable, the CxA. Start-up procedures shall be obtained from the Architect to develop testing procedures and parameters. If CxA services are required pursuant to the Contract Documents, please refer to Section 2.5.2 of this Manual.

The Constructor will demonstrate to the CA and Architect that the systems operate according to the construction contract documents, the design intent, and the building's operational needs. If applicable, the CxA will validate the test, adjust, and balance effort, and lead functional acceptance testing of commissioned systems. Functional testing must be completed satisfactorily prior to final acceptance of the project. Evidence of completed functional testing is sufficient to accept the building at the inspection for Substantial Completion.

The CA shall maintain Project Record Documents verifying each piece of equipment or system was properly installed and is functioning properly. Project Record Documents will be turned over to the Department at project completion.

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### 2.4.11.4 Training

If specialized training in the operation of Constructor installed equipment is required, the CA will coordinate such training, prior to scheduling the inspection for the Certificate of Compliance. This entails defining the procedures for training and subsequent scheduling, monitoring and documenting the training sessions.

Care will be taken to ensure that the end user has adequate time to assemble the appropriate personnel to attend training sessions. Operations and Maintenance manuals, approved by the Architect, are required to perform the training. The CA is responsible for verifying that systems are tested and manuals are in place before training sessions are initiated.

The training sessions shall be conducted by the systems installers or specialty contractors to ensure that the end users can: 1) Start, operate and shut down the systems efficiently and safely; 2) Efficiently maintain and, if appropriate, repair the systems; 3) Identify parts and service supplies; and 4) Understand Warranty terms and conditions.

### 2.4.11.5 CONSTRUCTION COMPLETION INSPECTIONS

The CA is responsible for coordinating all of the inspections leading up to the issuance of a Certificate of Occupancy. These inspections include but are not limited to all special inspections required pursuant to the construction contract documents, and other tests and inspections required by the Office of the State Building Inspector (OSBI), the Office of the State Fire Marshal (OSFM), Public Health (DPH), Energy and Environmental Protection (DEEP), and other Federal or local government agency inspections.

For a complete listing of required State inspections, refer to Form 7160 – Certificate of Occupancy Checklist Requirements, a copy for which can be found under the 7000 Series – Construction Phase Forms in the [DAS Web-based Library](#). If special inspection services are required pursuant to the Contract Documents, please refer to Section 2.5.1 of this Manual.

#### 2.4.11.5.1 Temporary Certificate of Occupancy

At the written request of the Constructor, the CA will coordinate and schedule life safety testing and inspections with the OSBI, the OSFM, A/E, Constructor, and DAS PM.

The CA shall conduct a pre-inspection meeting to verify that the trade work has been completed and tested prior to inspection, and ready for testing for operation by the OSBI and State Fire Marshal. The CA will document the results of the pre-inspection and formally request the inspection by completing Form 7170 - OSBI/OSFM Inspection Request. Form 7170 must be submitted a minimum of forty eight (48) hours prior to the proposed inspection date, via email to [OSBI.Inspections@ct.gov](mailto:OSBI.Inspections@ct.gov).

The timing and requirements for OSBI/OSFM inspections are discussed at the Pre-Construction Conference. Code requirement detail for the Connecticut State Building Code, Fire Safety Code and Fire Prevention Code can be found on the [Office of State Building Inspector](#) homepage under current State Building Code Documents and on the [Office of State Fire Marshal](#) homepage under current Connecticut Fire Code Documents.

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The Building Official and Fire Marshal are authorized to make or require additional inspections to further ascertain compliance with the provisions of the State's Building Code, Fire Safety Code and Fire Prevention Code.

At the time of inspection, the CA will assemble and make readily available any pertinent information (Shop Drawings, manufacturer's data, engineering judgements, SKS, etc.) for the inspection and accompany the inspector for the duration of the inspection. Failure to verify completion of the Work or lack of preparedness for the inspection will result in the inspection being aborted and rescheduled until such time that the Work is complete and all preparations have been made. Failure to be prepared for requested inspections may result in a negative score on the CA's performance evaluation. If the CA schedules an inspection when Work is not yet complete, the CA will be held responsible for the cost of re-inspection.

If the Work is in substantial compliance with the State's Building Code and all other applicable codes as required by Chapter 541, Connecticut General Statutes, the State Building Official will issue a Temporary Certificate of Occupancy for the Project.

### 2.4.11.5.2 Certificate of Substantial Completion

At the written request of the Constructor (see Form 7805 – Contractor's Request for Substantial Completion Inspection, under the 7000 Series – Construction Phase Forms, in the [DAS Web-based Library](#)), the CA will coordinate and schedule the inspection of designated portions of the Work for Partial or Substantial Completion with the State Chief Architect, A/E, Constructor, and DAS PM.

During the inspection, the CA will draft a project punch list of remaining Work to be performed by the Constructor. If the punch list items are not critical to occupancy or use, the Work will be declared substantially complete and a Certificate of Substantial Completion will be issued by the State Chief Architect.

If the inspection discloses any item to be non-compliant with the Contract Documents, the Constructor will be required to complete or correct such item and request a re-inspection for the A/E, CA, and Owner to make a determination that the Work is Substantially Complete.

### 2.4.11.5.3 Certificate of Occupancy

Following the issuance of the Certificate of Substantial Completion, the CA will schedule and administer closeout progress meetings with the Constructor, A/E, and DAS PM to assess and monitor the progress of Work toward the completion of remaining punch list items. All punch list items must be resolved within ninety (90) days of Substantial Completion. The CA will review and if appropriate, recommend reductions in project Retainage relative to progress made toward final closeout.

Upon completion of all punch list items the CA will coordinate, at the written request of the Constructor, the inspection for the issuance of a Certificate of Occupancy (C of O). If the Work was completed in accordance with the Application for Building Permit, and related plans as approved by OSBI, and has been found compliant with the State's Building Code and all other applicable codes as required by Chapter 541, Connecticut General Statutes, the State Building Official will issue the Certificate of Occupancy.

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### 2.4.12 CONSTRUCTION CLOSEOUT

#### 2.4.12.1 Warranties / Guarantees / Spare Parts

The CA shall establish procedures for the collection and review of all Warranty, Guarantee and O&M manuals for compliance with the Contract Documents. Please refer to Section 01 78 30 of the General Requirements for the Specification/Warranty Table and Form of Warranty templates.

The Constructor is to maintain a comprehensive checklist of all constructed items having a warranty or spare part requirement in the submittal portion of PMWeb. The CA, in coordination with the DAS PM, shall develop a system for transfer, cataloging and storage of spare parts. The CA shall monitor the progress of spare part and warranty submissions in PMWeb.

Prior to the recommendation of Final Payment to the Constructor, the CA shall receive and review all maintenance and operation manuals, and warranties and guarantees for completeness and compliance with the Contract Documents. All such information shall be assembled in a logical format and thereafter turned over to the Owner pursuant to the Contract Documents.

#### 2.4.12.2 Record Drawings

The CA shall establish procedures for assembling and handling record or as-built drawings. Record drawings must be prepared in a timely manner, while the information is current and available. One (1) set of contract drawings should be maintained in the Constructor's field office for the express use of recording as-built information. Periodically, the CA should examine the Constructor's as-built drawings to ensure that pertinent information is being recorded in an accurate and timely manner. If adequate as-built records are not being maintained, an appropriate reduction in the Constructor's periodic payment request should be considered.

A complete set of as-built drawings, reproduced in both number and format specified by the Contract Documents, must be received from the Constructor, checked by the CA and forwarded to the A/E, through the DAS PM, to prepare the Record Drawings in conformance with the Contract Documents.

The Design Firm will submit the Record Drawings to the CA in accordance with the requirements of the Consultants Procedure Manual. The CA will review the Record Drawings for completeness and submit them to the Department for its archives and for distribution to the end user.

#### 2.4.12.3 Other Closeout Documents

The CA shall establish procedures for assembling and handling all other required closeout documents which may include but are not limited to schedules, bonds, certificates of inspection, and test reports. All such items must be reviewed for conformance with the Contract Documents prior to the release of the Constructor's Final Payment.

Once all closeout documents have been received and reviewed for compliance with the Contract Documents, and the CA has conducted a final assessment of the project to verify that all Work has been completed, the CA will transmit said documents and turnover all keys and maintenance stocks to the State.

# CA Project Administration

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### 2.4.12.4 Certificate of Acceptance

Once all parties are satisfied that the Constructor has met all of its required contractual obligations, the CA will promptly notify the DAS, in writing, that to the best of their knowledge, and on the basis of their observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and recommend to the DAS Acceptance of the Work and Final Payment to the Constructor. A duly authorized representative of the State and the Owner of the Project will certify that the Work is complete and accepted by the Owner by signing the Certificate of Acceptance (see Form 7820, under the 7000 Series – Construction Phase Forms, in the [DAS Web-based Library](#)).

### 2.4.12.5 Final Requisition

All final waivers from the Subcontractors and major suppliers must be received and uploaded to PMWeb prior to acceptance of the final requisition. An authorized person on behalf of the Constructor is to sign and notarize three (3) copies of the requisition, which must be certified by the CA and Architect prior to submission to the Department.

## 2.5 Special Services

At the option of the State, the CA may be required to contract and provide oversight for Special Services. Such services may include, but are not limited to those provided by a licensed land surveyor, geotechnical engineer, test boring firm, special inspector, or other special consultant as may be required pursuant to the Contract Documents.

If the CA is required to contract for Special Services, the CA will need to obtain a minimum of three (3) written proposals, in a sealed envelope, from firms qualified by the State to perform said service. The Department shall be responsible for reviewing such proposals and selecting a qualified firm to perform the Work. Once a selection has been made, the Department will notify the CA that it is authorized to engage the services of the qualified firm for the specified services.

### 2.5.1 SPECIAL INSPECTION SERVICES

If the CA is required to contract for Special Inspection Services, it will be responsible for preparing the scope of services to conform to the Connecticut State Building Code and the Statement of Special Inspections developed and signed by the project Architect. The proposed scope of work for Special Inspection Services must be reviewed and approved by the Department prior to distribution to qualified firms.

### 2.5.2 COMMISSIONING AGENT

Many State construction projects are required to conform to the High Performance Building Standards established under the Regulations of the Office of Policy and Management, [Title 16a, Subtitle 16a-38k](#). For such projects, the services of a Commissioning Agent (CxA) will be required.

Accordingly, the CA may be required to contract for and/or provide oversight for Commissioning Services provided by a CxA pursuant to the Contract Documents and the CA's Contract (see Appendix V for a workflow diagram of the Commissioning Process). If the CA is required to contract for Commissioning Services, the CxA will be required to meet the minimum



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qualifications established by the Department and must be determined to be acceptable to the Department.

The CxA will perform its scope of work in conformance with Section 3.5.5.2 of the DAS Consultant Procedures Manual (see the Consultant Procedures Manual - 0400, under the 0000 Series – Project Manuals and Guidelines, in the [DAS Web-based Library](#)) and in conjunction with the project scope detailed in the Contract Documents. The CA will evaluate the CxA's performance at the completion of 50% Construction and 100% Construction utilizing DAS's form and criteria. The CA is responsible for confirming that off the CxA's duties were completed and that the CxA certified that the duties were completed.

#### 2.5.3 FF&E Move Services

Fourteen (14) days prior to the move-in date, the CA will verify that workstations/desks are installed and telecommunications systems equipment is delivered.

Seven (7) days prior to the move-in date, the CA will verify all purchased and donated furniture has been received, installed, inspected and is in proper working order. The CA will verify that all audio visual equipment, mail processing equipment, copiers, multi-function devices, and other equipment requiring power and data connections provided by third-party vendors or through existing service contracts has been received, installed, inspected, tested, and proven to be in proper working order, and confirm move plans and instructions have been received and distributed according to contract specifications. The CA will coordinate the use of onsite loading docks, elevators, etc., at the point of pick-up and delivery, for move equipment, boxes, and other related material.

On the day of move-in, the CA will assist the Owner, as necessary, with the arrangement of security and police details; coordinate site access for move-in with existing on-site security; confirm voice/data cut over, and server connection completion; perform a pre-move and post occupancy damage inspection and evaluation of building inventory; receive, inspect, accept or reject furniture; and supervise the physical move.

# Reference Documents

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### 3.0 REFERENCE DOCUMENTS

#### 3.1 [Project Manuals & Guidelines \(0000 Series\)](#)

DAS Consultants Procedure Manual  
DAS Selection & Bidding Manual  
DAS Capital Projects High Performance Buildings Guidelines

#### 3.2 [Design Phase Forms \(3000 Series\)](#)

Form 3030 Checklist for Permits, Certifications & Approvals  
Form 3150 Certificate of Compliance, Part I

#### 3.3 [General Conditions & General Requirements \(5000 Series\)](#)

Design-Bid-Build (D-B-B), Major  
Design-Bid-Build (D-B-B), Minor  
Construction Manager at Risk (CMR)  
Design-Build (D-B)

#### 3.4 [Bid Phase Forms \(6000 Series\)](#)

Form 6030 Bid Addendum  
Form 6035 Bid Addendum Transmittal

#### 3.5 [Construction Phase Forms \(7000 Series\)](#)

Form 7015 Preconstruction Meeting Agenda  
Form 745 Contractor Performance Evaluation  
Form 7045 Monthly Executive Report Template  
Form 7055 Construction Phase Change Request  
Form 7150 Certificate of Compliance  
Form 7160 Checklist for Certificate of Occupancy  
Form 7170 OSBI Inspection Request  
Form 7315 RFI Response  
Form 7330 Proposal Request  
Form 7340 Change Order Proposal  
Form 7341 Change Order Proposal Workbook  
Form 7350 Construction Change Directive  
Form 7360 Change Order  
Form 7370 Change Order Transmittal  
Form 7380 Change Order Checklist  
Form 7810 Certificate of Substantial Completion  
Form 7820 Certificate of Acceptance  
Form 7825 Contractor Reporting Form  
Form 7840 Transfer of Custody Insurance Notification  
Form 7850 Subcontractors Partial Lien Waiver Release  
Form 7870 Project Summary Report  
Form 7900 Subcontractor Final Lien Waiver Release

## Reference Documents

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#### 3.6 [Technical Information \(8000 Series\)](#)

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ASTM Document E1557-97 or “Uniformat II”

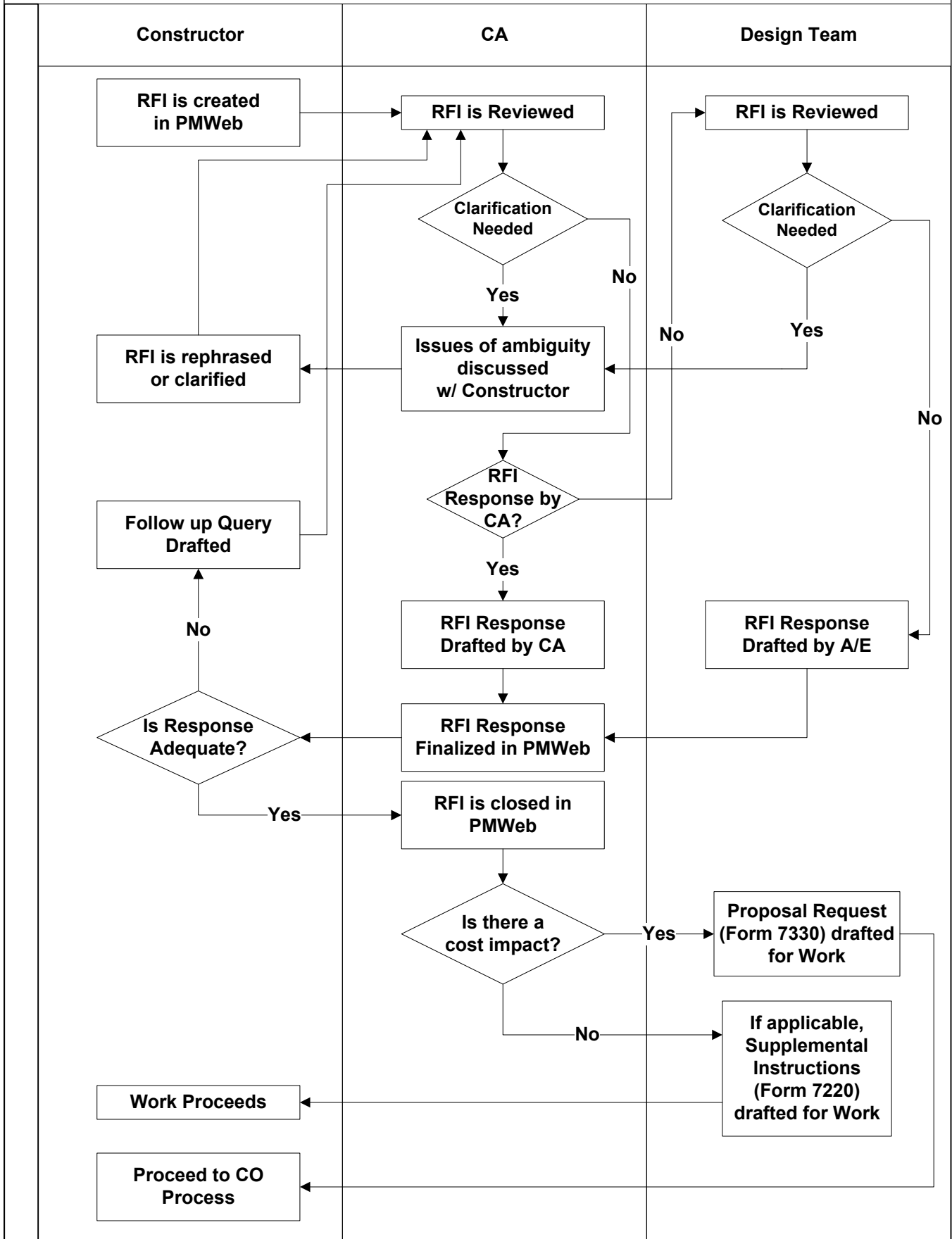
#### 3.7 Other Referenced Documents

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[CT Building Standard Guidelines Compliance Manual for High Performance Buildings](#)

## **Appendix I – RFI Workflow Diagram**

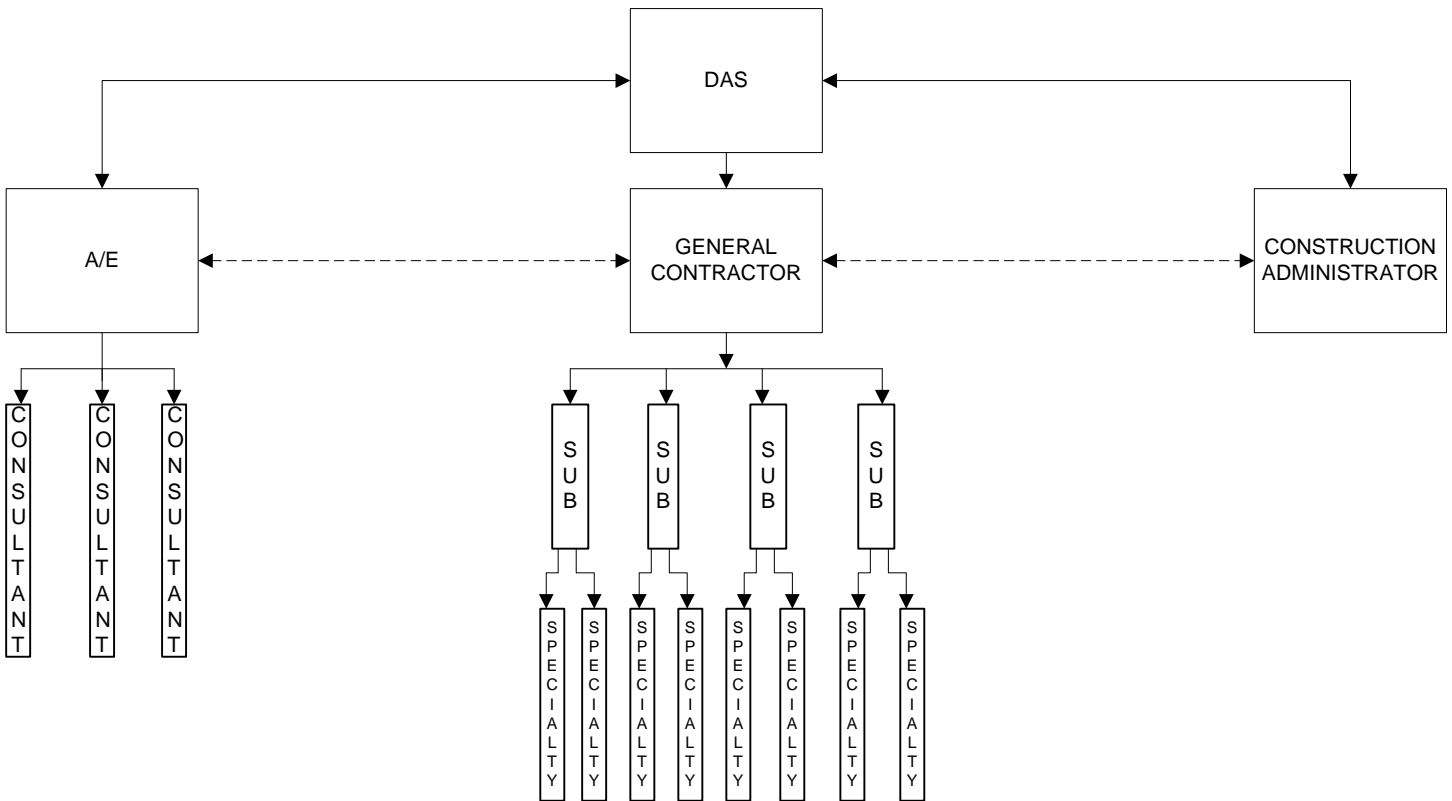
# RFI Workflow



## **Appendix II - Project Delivery Methods & Sequence**

# PROJECT DELIVERY METHOD WORKFLOWS

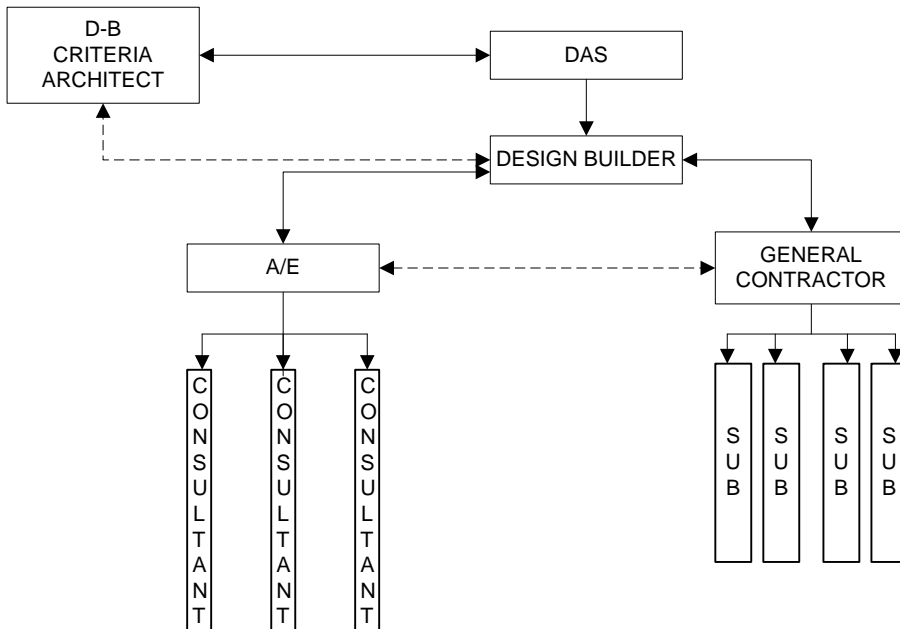
## D-B-B PROJECT ORGANIZATION



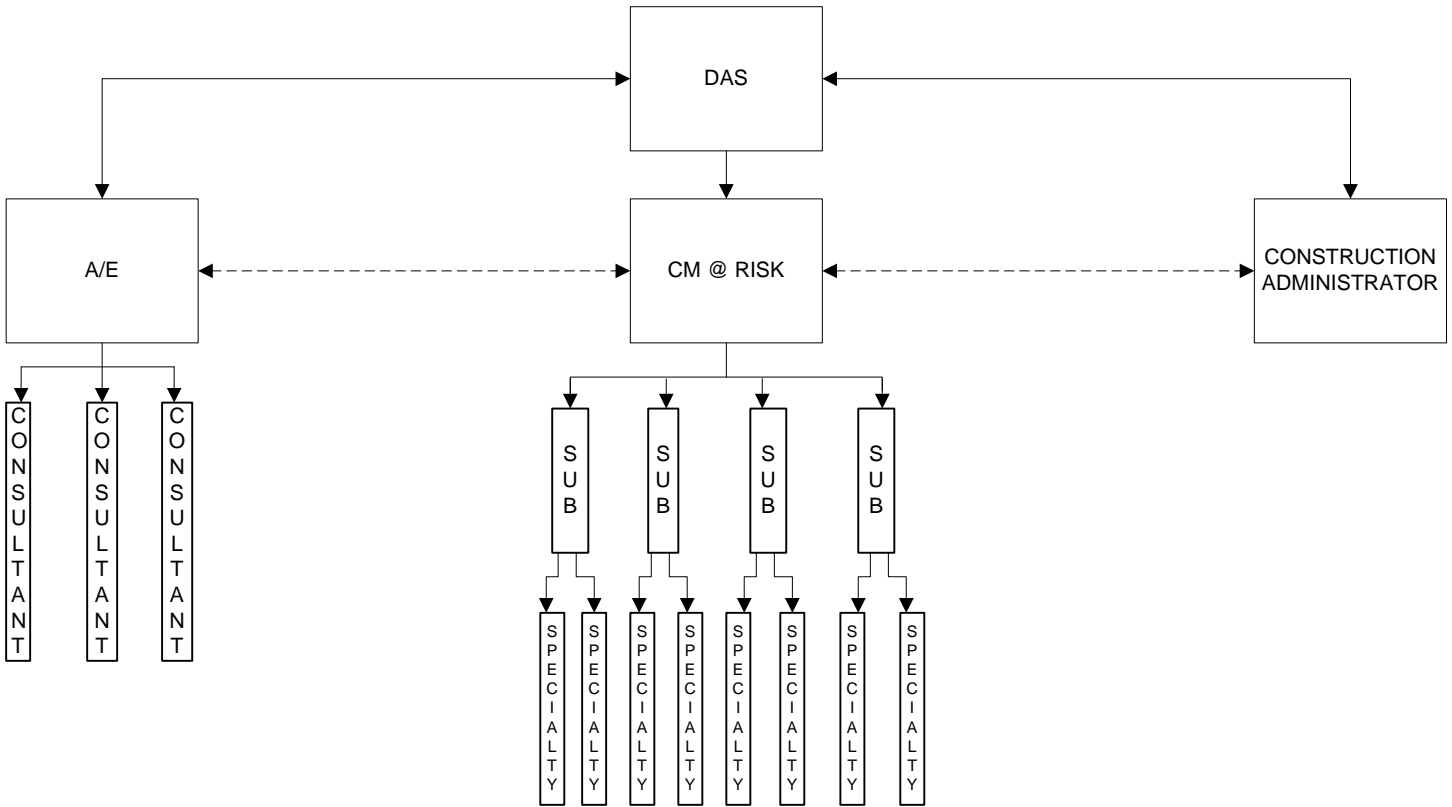
## D-B-B PROJECT DELIVERY METHOD SEQUENCE



## D-B PROJECT ORGANIZATION



**CMR PROJECT ORGANIZATION**



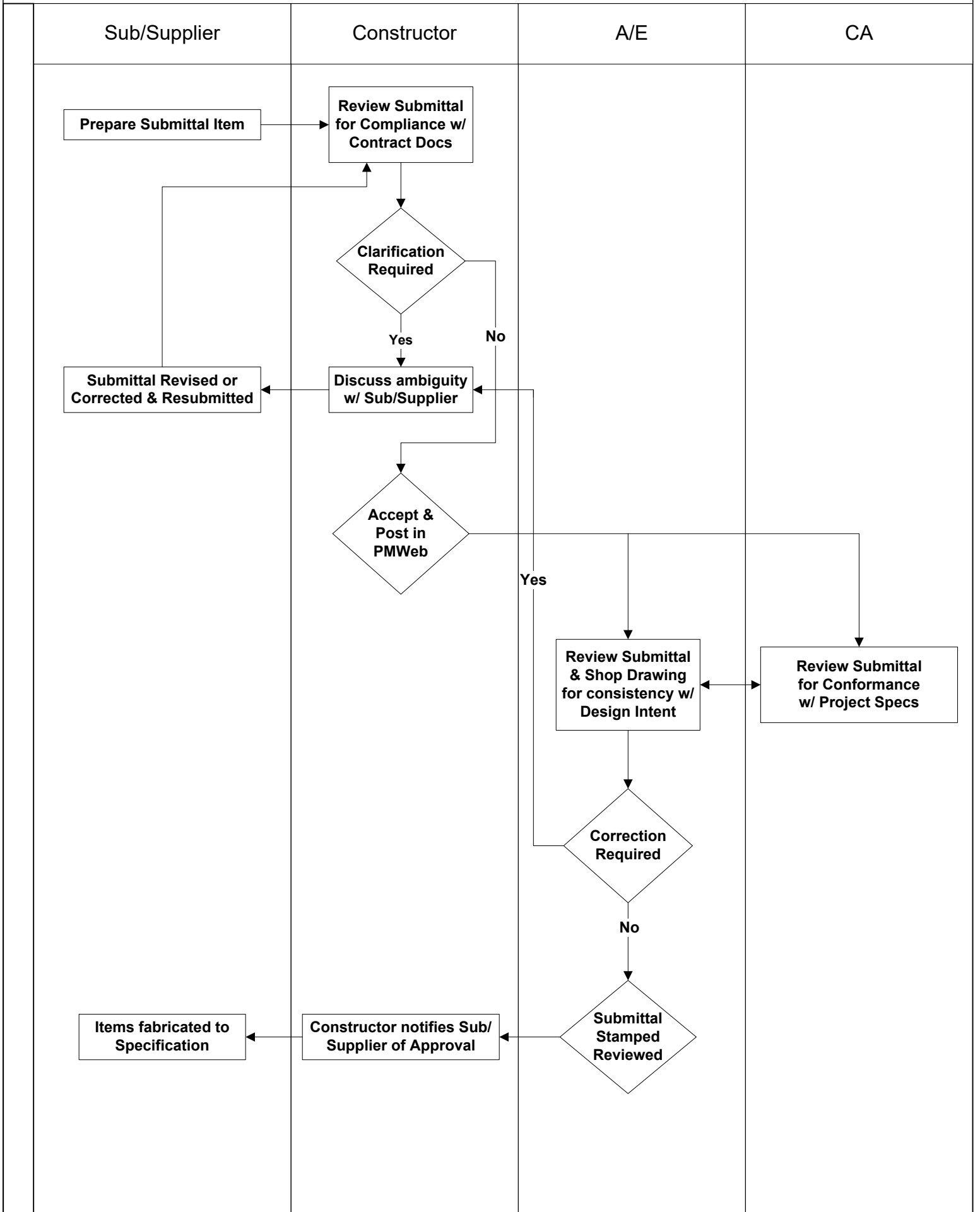
**CMR PROJECT DELIVERY METHOD SEQUENCE**





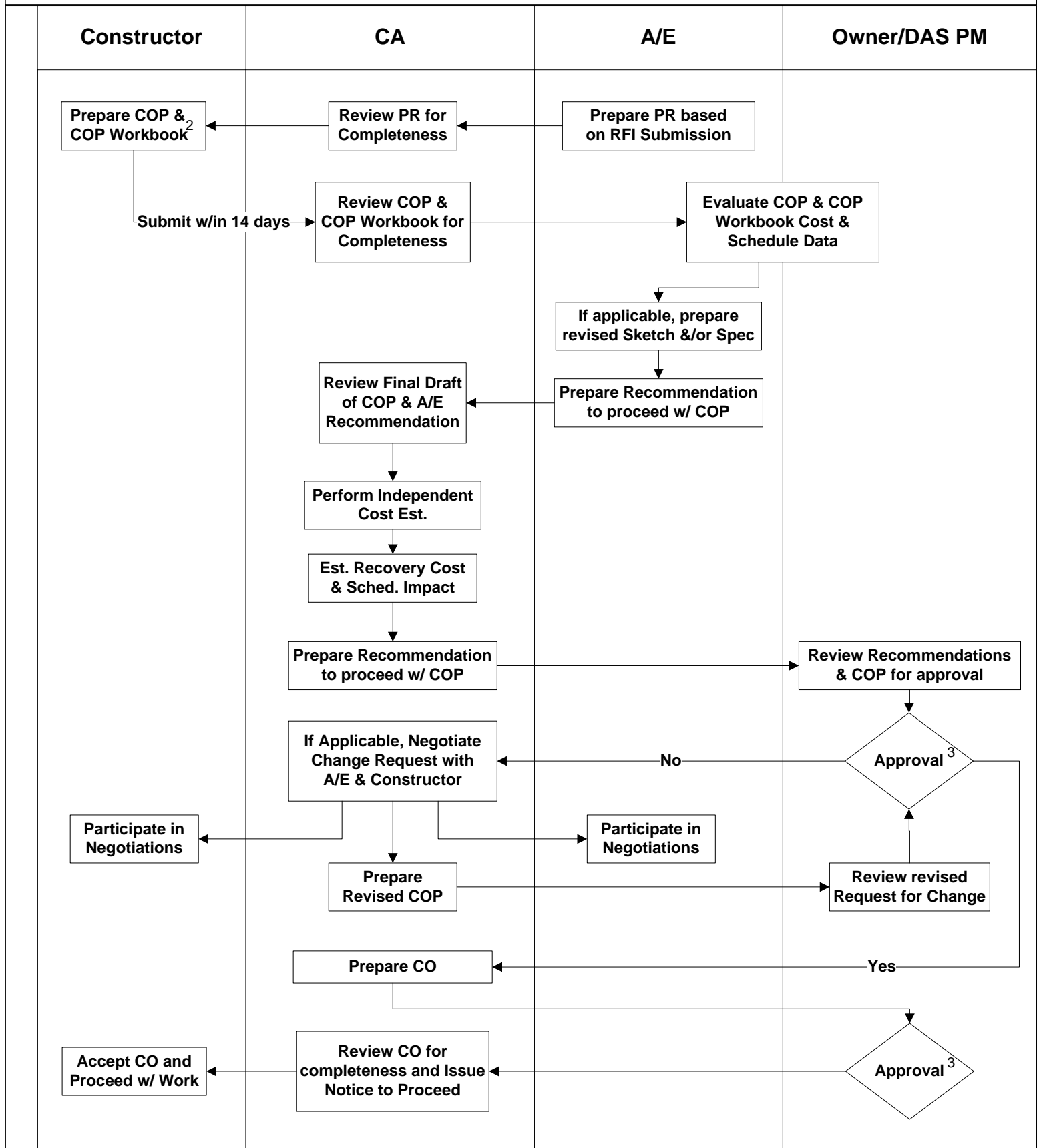
## **Appendix III – Submittal Workflow Diagram**

# Submittal Process Workflow



## **Appendix IV – Change Order Workflow Diagram**

# CHANGE ORDER WORKFLOW <sup>1</sup>



1. The CO Workflow is only applicable to CMR & D-B-B projects. A change in the Terms and Conditions of a D-B construction contract or a change in the Work that results in an adjustment to the Contract Price or Substantial Completion Date on a D-B project may only be implemented by an Agreement Amendment.

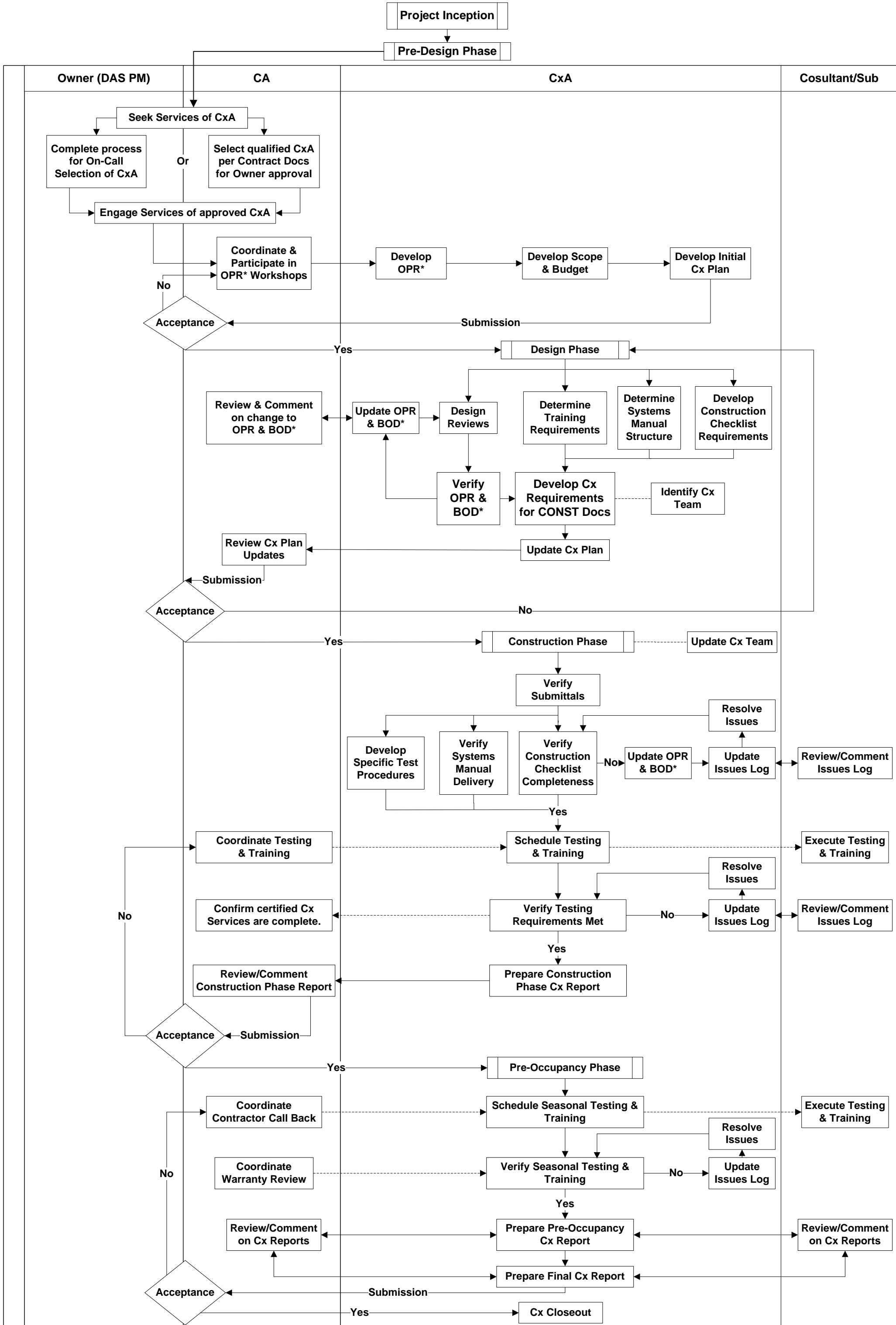
2. The COP & COP Workbook are to be prepared in accordance with the requirements of Article 13 of the General Conditions.

3. If the total cost increase is <\$50k – DAS PM approval; if >\$50k and <\$100k – ADPM approval; if >\$100 – Deputy Commissioner approval.

Acronyms & Forms: Proposal Request (PR – Form 7330), Change Order Proposal/Workbook (COP – Form 7340 & 7341), Change Order (CO – Form 7360).

## **Appendix V – Commissioning Workflow Diagram**

# COMMISSIONING PROCESS WORKFLOW



\*Owner Project Requirements (OPR), Basis of Design (BOD)