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Introduction

Purpose and Intent

This Manual outlines the procedures used by the Ohio Facilities Construction Commission (“OFCC”) to manage capital improvement projects. It also details standard office procedures associated with the day-to-day operation of OFCC. Each section of the Manual describes the current practices and procedures required to undertake and successfully complete capital projects for Ohio agencies.

Variations in the sequence of activities may be required due to unique project circumstances. For example, it is not uncommon for an issue to arise in a project, which requires some activities to be performed piecemeal, or in non-typical sequence, or both. In such cases, the reader must use professional judgment in interpreting and applying the requirements.

Other clarifications, which will facilitate using the Manual:

- The content of this Manual is not intended to conflict with or contradict any federal regulation or State code, and in the case of any apparent conflict or contradiction, the federal regulation or State code will prevail.
- The provisions of this Manual are not to be interpreted as superseding any requirements of the Architect/Engineer Agreement, Construction Management Agreement, Consultant Agreement, Contactor Contract, or the “State of Ohio Standard Requirements for Public Facility Construction.
- The material in this Manual cannot address all situations and should not be interpreted as containing definitive requirements, which supersede the use of good professional judgment.
- The procedures outlined in detail are appropriate for large, complex projects. OFCC may, in consultation with the Owner, agree to modify or delete some elements of a procedure in simpler projects.
- Where reference is made to the “Architect/Engineer and CM” or “Architect/Engineer or CM,” or a reference is otherwise made to a CM, the reader should disregard the reference to CM on projects in which no CM is involved. The references typically apply to the CM as Adviser delivery method, in which the CM is an agent of, or adviser to, the owner.

Style and Graphics

The Manual is subdivided into sections, which are numbered and titled to correspond to the coding system, which OFCC uses to identify project activities for naming and filing of documents. Although the coding system is primarily chronological, it does deviate from a chronological model in some respects, which may seem counterintuitive and require explanation. For example:

- While retaining the services of a specialty Consultant may occur during or even after construction, information on procurement of all Consultants is located under the general heading “Procurement” in the 100 series to place it with other procurement processes, most of which occur earlier in the project process.
- Although payment of Architect/Engineers, Consultants, and CMs typically occur throughout a project, information on those activities is presented under the general heading “Design” in the 200 series - as payment to them usually occurs, for the first time, during the Design Stage of the project.
- Even though a Constructability Review Consultant is frequently retained when a project is in the Design Stage, information on the procurement of such a Consultant is located in the 100 series) information on the Constructability services is located under the general heading “Extra Services” in the 500 series.

The exhibits, which are typically standard forms created by OFCC, are identified by the technical document names used for filing purposes as well as by the formal document title. The technical document names follow OFCC's coding system, thus the documents can be readily associated with the sections to which they primarily pertain.

OFCC's intent is that the Manual will be available as a fully interactive web-based document, which will include hyperlinks to referenced topics within the Manual, as well as links to documents on the Web sites of
OFCC and other agencies. Hyperlinks are shown in the Manual in boldface font and underlined, thus: **Link To Other Location.** The user can activate the link by a “click” of the mouse button. Where links to documents are not yet active, or where the document is not yet available, the inactive link or item is noted in the text as “in progress.”

**Anticipating Change and Working with Changes**

Readers should check the OFCC website to confirm that they are using the current version of the applicable portion of the Manual. As text in the Manual is revised, the area in *The Ohio Facilities Construction Manual* containing a revision from the previous version, whether the change is an addition, a deletion, or a modification, will be indicated with a vertical line in the margin of the page. Also, the footer of each page will indicate the original issue date and the date of the most current change, even if the individual page does not contain a revision.

OFCC will retain electronic versions of earlier editions of *The Ohio Facilities Construction Manual*. The State Library also maintains a collection of previous versions as PDF files.

**Stakeholders**

Each project requires the services of numerous individuals, firms, agencies and organizations all working together to advance the successful execution of each building program. Members of each project team become a stakeholder in the process and each have a vested interest in the successful outcome of the program.

The project stakeholders on typical projects and some of their roles and responsibilities are shown below:

- **The Contracting Authority** is an entity which is legally empowered to administer State capital construction projects, including entering into contracts with design professionals and contractors. For most projects not administered by Owners under local authority, OFCC exercises that authority and therefore may be considered the Contracting Authority for most purposes. Some business processes in OAKS Capital Improvements (“OAKS CI”) use the term in lieu of OFCC or Institutional Designee.

- **The Owner** is typically any State-funded college, university, agency, board, or commission. “Sponsoring Agency” and “Using Agency” are other terms commonly used to connote the Owner. This Manual generally uses the term “Owner” to represent any of these entities. (The Contracting Authority and the Owner may, on occasion, be the same entity.)

- **Users** may include employees, visitors, clients, students, patients, inmates, etc. The Owner commonly acts on behalf of the Users of the facility. If the interests of the Users do not closely coincide with those of the Owner, or the Users are not represented by the Owner in the project, or both, the Users should be considered as separate stakeholders.

- **The Ohio Facilities Construction Commission** (“OFCC”) is available to manage capital improvement projects for any State agency, including any board, commission, college, university, public school district, or others as requested and within the intent of controlling statute and policy. OFCC can assist agencies in all types of projects and in any phase of a project. OFCC can provide services, which extend from early planning of a project through design and construction and into occupancy. When OFCC manages a project on behalf of an Owner, the Owner or defined set of users is the client of OFCC, and OFCC acts as the Contracting Authority.

- OFCC is subdivided into customer service teams that facilitate effective management of the activities of the office:
  - **The Capital Planning Services** group assists agencies and colleges in the development of strategic capital master plans in preparation of their biennial capital budget requests to the state.
  - OFCC provides **Project Services** through the review of local administration requests and the direct management of design and construction projects. This unit is further subdivided into Programs named for the clients they serve (Agency, Corrections, and Higher Education).
Introduction

- **Energy Services** provides design as well as auditing and contracting opportunities for the efficient use of energy resources in state government facilities and operation.

- The **Program Services** unit provides enterprise-wide standard contracting documents for capital improvement projects.

- The **Executive Director** is the chief executive officer of OFCC, is responsible for the vision and mission of the office, and directs all activities of the organization.

- **Program Managers**: A Program Manager leads a customer service team, which serves a certain set of agencies or school districts. Each is a design professional or professional manager with substantial experience in the management of capital projects and personnel management. A Program Manager may act in the capacity as Project Manager on certain projects. Each Program Manager manages a team of Project Managers, Project Coordinators and other specialists. These individuals are the primary contact for Stakeholders for daily management of OFCC administered-projects.

- **Chiefs**: A Chief leads a customer service team, which serves special needs of all agencies and institutions, and supports OFCC staff. A Chief is a design professional or professional manager with substantial experience in the management of capital projects, personnel management, and contract documents preparation. The Chief functions in a role similar to a Program Manager, and may serve in a dual role with the responsibilities of each.

- Other OFCC Personnel include:
  - **Project Managers** may be licensed architects, professional engineers, or individuals trained in construction management or another relevant field and are responsible for the day-to-day management of the capital projects assigned to them. Their responsibilities are broad and they operate with limited supervision.
  - **Project Coordinators** are responsible for performing many of the critically important and time-sensitive administrative functions, which do not require professional licensing or specialized construction training. They generally administer bidding, contract preparation and execution, processing of change orders and payment requests from A/Es and Contractors, and provide frequent general coordination between any of the project team members.
  - **Energy Specialists** are Project Managers who function in OFCC Energy Services in roles similar to other Project Managers. They are typically professional engineers with special expertise in energy analysis and conservation.
  - The **Communications Team** prepares and publishes all major OFCC publications such as the Ohio Register and OFCC News You Can Use, produces OFCC marketing and communication documents, and maintains the OFCC website and associated electronic communications.
  - **Fiscal Officers** perform general accounting services, including accounts payable and receivable and provide fiscal management and planning for OFCC operations.
  - **Administrative Support** staff assist the entire office in the administration of OFCC, including assisting with development of OFCC policy and procedures, generation and management of internal forms and documents, performing basic personnel management tasks, organizing and staffing OFCC training programs, and managing filing, mailing, telephones, supplies, vehicles and other operational matters.

- The **Office of Budget and Management ("OBM")** is a cabinet level agency within the executive branch of Ohio government. The primary mission of OBM is to provide fiscal accounting and budgeting services to State government. These services include coordination, development and generalized monitoring of agency operating and capital budgets.

- The **State Controlling Board** is administered by OBM and is comprised of members of the State legislature. It authorizes the expenditure of capital funds. The President of the Controlling Board is appointed by the Governor and serves as an employee of the OBM per statute.
Communication

Written correspondence of any nature that is related to a project should include the assigned project number. Failure to include the project number may cause a delay in delivering the document to its intended party. Send correspondence addressed to the individual most directly related to the issue or concern and if desired, provide a courtesy copy (“cc”) to other individuals within OFCC and other parties as appropriate.

With few exceptions, nearly all routine project management and administration is within the purview of the Project Manager, the Project Coordinator, or the Fiscal Officer. The following chart illustrates many types of documents normally sent to OFCC and indicates the recommended addressees. Address the document to the primary recipient; send copies to others.

<table>
<thead>
<tr>
<th>Project Related</th>
<th>Primary</th>
<th>Secondary</th>
<th>Courtesy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Project Correspondence</td>
<td>PM</td>
<td>PC</td>
<td>OPT</td>
</tr>
<tr>
<td>Non-routine Project Correspondence</td>
<td>PRM</td>
<td>CP</td>
<td>PM, PC</td>
</tr>
<tr>
<td>Payment Requests</td>
<td>PC</td>
<td>PM</td>
<td>OPT</td>
</tr>
<tr>
<td>Notice of Lien</td>
<td>FO</td>
<td>PC</td>
<td>PM</td>
</tr>
<tr>
<td>Application for Local Administration</td>
<td>PRM</td>
<td>PS</td>
<td>DIR</td>
</tr>
<tr>
<td>Bid Package (for bids at OFCC)</td>
<td>PC</td>
<td>PM</td>
<td>OPT</td>
</tr>
<tr>
<td>Ohio Register Advertisement</td>
<td>PS</td>
<td>PRM</td>
<td>FO</td>
</tr>
<tr>
<td>Notification of Claims</td>
<td>PM</td>
<td>ED</td>
<td>CP, PRM</td>
</tr>
<tr>
<td>Article 8 Dispute Resolution Request</td>
<td>ED</td>
<td>CP</td>
<td>PM</td>
</tr>
<tr>
<td>Other</td>
<td>PM</td>
<td>CP, PRM</td>
<td>OPT</td>
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<th>Non-Project Related</th>
<th>Primary</th>
<th>Secondary</th>
<th>Courtesy</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFCC general office</td>
<td>ED</td>
<td>N/A</td>
<td>OPT</td>
</tr>
<tr>
<td>Invoices for OFCC business items</td>
<td>FO</td>
<td>ED</td>
<td>OPT</td>
</tr>
<tr>
<td>Other</td>
<td>ED</td>
<td>OPT</td>
<td>OPT</td>
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</tbody>
</table>

**Electronic Mail (“E-mail”)**

OFCC requests that the senders of email put the Project Number in the subject line of email—preferably at the beginning, followed by a brief (2-6 word) description of the email topic. Ask those that send email to the office to do the same for all project-related emails. This will assist in sorting the email for filing and archiving.

**OAKS CI Unifier Mail (“U-mail”)**

The Unifier product includes a simple electronic mail system with an inbox associated with each project. The rules of use are similar as e-mail. Use this tool with caution as the search and retrieval of these communications are limited. Each OAKS CI user has the opportunity to select the notification options when a task is assigned to them, or when they are copied on a step in the business process workflow. This will send a regular e-mail to the user.

**Telephones**

For a listing of all State office and employee telephone numbers, please see the Web link: [http://ohio.gov/phonedir/query.aspx](http://ohio.gov/phonedir/query.aspx).
History of the Ohio Facilities Construction Commission

Public Works was originally a Board formed for the purpose of building and maintaining Ohio’s canal transportation system. Created in 1921, the Office of the State Architect and Engineer was originally established in the Department of Highways and Public Works, located in the Ohio-Hartman Building, formerly the Hartman Hotel, at 275 South Fourth Street.

It was listed as the Division of Public Lands and Buildings in the 1923 Columbus City Directory. In 1927, the Department was split between Highways and Public Works. In 1930, the office was listed as the Division of Architects and Engineers in the Department of Public Works, and in 1933 moved to the new Departments of State Building, now the Thomas J. Moyer Ohio Judicial Center, at 65 South Front Street.

In 1974, Public Works was “demoted” to a Division when the departments of Finance, State Personnel, and Public Works were reorganized into the Department of Administrative Services (DAS) and the Office of Budget and Management, and moved to the new State Office Tower, subsequently named for Governor James A. Rhodes, at 30 East Broad Street.

It became an office in the General Services Division (GSD) of DAS in 1995, and the office moved to the General Services Center at 4200 Surface Road. After being located downtown since its inception, the office moved to the West side of Columbus just inside the I-270 outerbelt. For a short period of time in the late 1990s, it was known as the Office of Construction Management.

In 1997, the Ohio School Facilities Commission (OSFC) was created by the Ohio General Assembly. The Governor appointed State Architect Randy Fischer to be the first Executive Director of the new agency. While OSFC was separate from the State Architect’s Office, many documents and practices were shared between the two organizations. With the passage of Construction Reform legislation that authorized single-prime General Contracting at any value, Construction Manager at Risk, and Design-Build Project Delivery methods, key personnel of both offices worked closely together for a year to implement the program.

Prior to the establishment of the Office of the State Architect and Engineer in 1921, the individual state Boards engaged outside architects and contractors to serve their construction needs on an ad hoc basis. Consolidation of authority in one agency allowed for consistency of policy and procedure, as well as standardized contracts and conditions.

The Administrative Act of 1921 provided an architectural expert employed by the state, which allowed centralized planning and administration. In 1921, the only agency exempt from central administration was the Adjutant General. Over the years, this authority has eroded significantly, and state institutions of higher education have had varying degrees of interaction with the office. The following 19 individuals served as the appointed State Architects since the inception of the office:

Don Welsch ......................... 1978 - 1981

With the passage of Am. Sub. H.B. 487 by the 129th General Assembly, signed by the Governor on June 11, 2012, the State Architect’s Office merged with the Ohio School Facilities Commission to create the Ohio Facilities Construction Commission, effective September 10, 2012. The dedicated staff of both organizations are turning the page of another chapter in the history of the State of Ohio’s Capital Improvements Program.
000 | Concept Development

Sections in this Group describe the steps from the earliest conception of a project to the conclusion that a project is feasible and that funding is available. The Sections consist of the following:

010 | Owner Vision
020 | Project Definition
030 | Planning
040 | Feasibility
050 | Budgeting
060 | Funding
070 | Local Administration
080 | Selecting a Project Delivery Method
085 | Design-Bid-Build
090 | Construction Management
095 | Design-Build

Capital Planning Lifecycle  Figure 000.1
This Section discusses how an Owner becomes aware that a need or problem exists, and outlines a process to determine whether the solution might be acquisition, modification, or construction of buildings or other facilities. It also describes creation of the initial statement of goals and objectives, operational problems to address, and physical elements to be included.

Perceived Need

An Owner may become aware that a need or situation exists for which a design and construction project may be the answer, or part of the answer. In planning jargon this is often referred to as a “perceived need.” While some needs will be perceived as they develop, some may be foreseen years before the issue actually manifests itself. An Owner may discover such needs by a myriad of means.

While the term “perceived need” implies a reactive posture, an Owner may sense opportunities or conceive of operational changes proactively. Such efforts may respond to an indicator that shows performance below the performance of peer institutions, such as: declining applications for service, ineffective service delivery, high operating costs, inadequate quality or reliability, high employee absenteeism or turnover, staff health problems, etc. An aspect of the operation may play a strategically significant role in the quality, efficiency, or effectiveness of service delivery, and resulting effort to actively seek improvements or innovation, perhaps even to be a leader in its field.

While many projects arise out of and are driven by a perceived need, often it is the availability of funds which brings operational issues to a head or which initiates a process to identify worthy construction projects. Many Owners maintain a “wish list” of desired projects, some of which may remain on the list for years and, because of their low priority or insufficient availability of funding, may never be formally proposed, receive funding, or be performed. The Owner may have an internal process for evaluating such proposals, which projects must maneuver before they reach consideration at a higher level.

The State of Ohio utilizes a formal process by which Owners may submit projects for consideration for funding. On a biennial basis, Owners of State facilities may submit proposed projects for consideration for capital funding.

In addition to State capital funds, the availability of other sources of funding may foster interest in pursuing a construction project. Such funds may be used by the Owner or, for facilities owned by an entity other than the State, constitute matching funds.

Facility Needs Assessment

A Facility Needs Assessment is a tool to help the Owner determine what facilities are available to address its needs, and whether those facilities are sufficient, or whether they need to be modified or supplemented. The Facility Needs Assessment can also be seen as an interactive study, which considers how the Owner’s operations may be modified to suit existing or proposed facility resources. It is a step, which represents the first effort to fill what the Owner wants to accomplish in a project.

The Facility Needs Assessment involves an analysis of the Owner’s current facility inventory, space utilization, deficiencies, and conditions with regard to the long-range goals the Owner has for a facility, as well as the apparent needs of a proposed project. For a project which involves the use or creation of space in buildings, the Owner of a facility of some complexity, the Facility Needs Assessment is the step which makes the initial determination as to whether, at the most basic level, the facility has sufficient space, a shortage or a surplus of space of certain types, and whether the proposed project will involve use of existing space, relocation of other activities to permit that use, the acquisition or construction of new facilities, or other options.

While a Facility Needs Assessment is most commonly thought of as tool to analyze the use of, or need for, floor area in buildings, the concept is applicable to the assessment of other kinds of facilities.

The scope of the Facility Needs Assessment should strike an appropriate balance between cost, time, and the relative significance of the issues to be studied. For a very simple project, the Facility Needs Assessment
may be as simple as an acknowledgement that a piece of equipment needs to be replaced in its existing location, and that the project need not involve any of the other Owner’s facilities. A Facility Needs Assessment for a project of moderate complexity may be as straightforward as determining whether there is sufficient square footage in an existing building for a proposed expanded use, and consist of a simple analysis and a few thoughts regarding functionality and cost. A Facility Needs Assessment for a large, complex project may include analyses of building use patterns, estimation of future growth, assessment of the functionality and life expectancy of existing facilities, and, at the extreme, could evolve into a full-fledged Master Planning exercise.

The ultimate goal of the Facility Needs Assessment is the fundamental determination as to whether the project will involve renovation or new construction, or even demolition, and the approximate magnitude of each. Additional information of interest includes what kind of facilities or space is appropriate and assessing the economics of the various alternatives.

Although the Facility Needs Assessment is presented as a required step in the Owner Vision, note that a simple project, which does not involve expansion or the relocation of activities, will probably not require a Facility Needs Assessment. A single building occupied by a single user group may involve such straightforward issues that a Facility Needs Assessment is not warranted. A simple Facility Needs Assessment may be performed early in the formative stages of project, or it may have been performed in some other context and in fact predate the project.

Vision Statement

Finally the Owner must consolidate and articulate the various concepts into a single vision. The statement may include a commentary about the philosophical, social, or corporate intent that the Owner wishes to address or wishes to accomplish with the culmination of the project. In essence, this becomes the Owner’s Vision Statement.

To create this document, the Owner should Include a project justification statement. This statement includes the problem statement, the goals and objectives, and spells out the Owner’s intentions for the project.

Problem Statement

Once an Owner realizes that it has a problem, or opportunity, one of its first tasks is to achieve consensus among the stakeholders as to the essence of the problem, and to define the problem in a problem statement. To do so, it must of course identify the stakeholders, and determine their roles in the process. This may be a complex, difficult task in itself.

For simple problems, the problem statement may be a single, obvious declarative sentence such as “renovate the HVAC system to replace aged equipment and provide reliable, cost-efficient heating and cooling.” For complex problems, the problem statement may have to address many issues and will therefore contain numerous statements. In drafting the problem statement, the Owner should try to ensure that, the statements are discrete, do not conflict with each other, are not mutually exclusive, and are worded generally enough so that they do not unnecessarily presuppose a solution, or bias the decision process toward a certain solution.

The ability to state the problem presupposes that the Owner can determine what organizational outcome is desired for the problem. For problems of no more than moderate complexity, it is safe to say that an Owner will probably find the acceptable solution within fairly well defined boundaries. For example, faced with a space shortage, the desired organizational outcome may be that the program has enough space to operate, but will probably not be to abandon the program or raise user fees to discourage usage. For unusual problems, determining the desired organizational outcome may not be so simple, and may require a substantial and sophisticated effort.
Goals and Objectives

Once the problem has been defined and stated, the Owner should list the goals and objectives it hopes to achieve in resolution of the problem. “Goals” are general statements of purpose. “Objectives” are more specific, often measurable statements of what should be achieved.

Once they are determined, the Owner should prioritize its goals and objectives for the project. Prioritizing may be politically difficult and may require a substantial effort to achieve consensus.

Each goal or objective may not easily fit into a single category. For example, the variables quantity, quality, and the time it takes to complete a project may interact to permit more than a single combination of those elements. A minimum quality and size might be required in a project, but a higher quality of space might make a lower quantity of space acceptable. The goal and objective statements should be crafted to permit addressing such tradeoffs where they occur.

Operational Plans

After identifying the goals and objectives, the Owner should develop alternative operational plans to achieve those goals and objectives. Alternative plans may be generated by staff input, brainstorming, focus groups, or any number of procedures for generating ideas.

For complex problems, there may be several operational plans, which show promise. In addition to actually implementing the day-to-day operational elements or physical plant requirements of each plan, each may involve diverse requirements such as coordination with a strategic plan, staffing requirements, approval by a board of directors, obtaining licenses, arranging operating funds, etc. In a business context, for example, a plan may involve all departments of the organization including: human resources, finance, accounting, operations, legal, marketing, strategic planning, etc.

In most circumstances it is natural that Owners will look for solutions which are purely operational, and solutions which are the simplest, least costly, and easiest to implement. Where the situation requires, consideration of alternatives may extend to more costly and time-consuming solutions, including those involving construction. The implications of a particular plan for an Owner's physical plant may be minimal, or very substantial.

It would be pointless to conceive of operational plans without some regard for operational feasibility. An Operational Plan must be analyzed for operational feasibility. Doing so requires that the various stakeholders and disciplines involved review all aspects of the plan to ensure that it will work as an integrated whole and that no critical ingredient is missing.

Creation of operational alternatives and testing their operational feasibility is usually an iterative process, with refinement of the alternatives going hand-in-hand with increasingly rigorous reviews of feasibility. The feasibility review should intensify as the range of alternatives is narrowed.

The analysis of physical structures and proposed construction projects for feasibility involves a large number of issues, which are unique to construction and therefore merits separate treatment.

To narrow the field of potential solutions, the Owner must compare and evaluate them. While the focus of this Manual is primarily design and construction projects, some ways in which plans can be compared are equally applicable to plans, which involve the physical plant and to those which do not.

Many large facilities have a Master Plan, which is used to guide and control development, and coordinate the content and sequence of different projects. The Owner must determine whether each alternative requires the completion of other projects, interacts or conflicts with other projects, or complies or conflicts with principles articulated in the Master Plan.
Project Complexity

Although the focus of this Section thus far has been primarily the substance of a particular plan or project, an Owner which is considering or actually defining a construction project should have a basic understanding of the factors which may make the plan relatively easy or extremely difficult to achieve. Cost, quality, and the time and resources required for implementation, and other issues interact in complex ways. Underestimation of the complexity of a project may mean that, from the outset, it is misconceived and will have a low probability of successful completion.

Construction is a unique industry; a discussion of the characteristics of construction projects in the abstract is warranted. Following is an attempt to identify some of the characteristics, which distinguish simple projects from complex ones, and to identify resources which an Owner may need to employ to deal with that complexity. While the language used is rather general, the items are formulated with an eye to their particular relevance to construction projects. For the sake of illustration, projects will be discussed in categorical terms, very simple and very complex. The Owner must consider where on the continuum of complexity the project lies, be aware of the risks which that complexity implies, and take appropriate steps to manage it.
This Section deals with the process the project team should follow after it has determined that a construction project is part of the preferred solution to the Owner’s goals and objectives, which it has identified. This task primarily involves the creation of a formal, written definition of the project, the Space and Functional Program, and assessment of existing relevant facilities.

Programming Overview

Generally, programming is the process of defining, describing, and quantifying the physical and qualitative and quantitative requirements of a project, determining the probable cost required to achieve those requirements, and identifying and analyzing issues which will impact the project. The process may address tangible as well as intangible requirements. The finished product is an architectural program, or simply, the Program.

Developing the program is a process, which occurs at several points in the development of a project. The level of detail required increases as the development of the project evolves. In the model utilized in this Manual, those points and the respective terms used to identify them are as follows:

- Preliminary Program
- Space and Functional Program
- Program of Requirements
- Verification of the Program

Although the Manual presents programming as a series of discrete activities identified by specific terms, programming is inherently an iterative process, and there are no hard and fast rules for exactly what level of detail is required at each step, and the terms used by some may differ from those used in the Manual. The Manual presents the concepts in accordance with the above model, with the understanding that the programmer may modify the structure of the process as the project and situation warrant.

The earliest steps in the programming process are those in which the Owner's insights are most essential and where it would be difficult for a Consultant to perform the programming. The latter steps in the programming process require professional skills and specialized resources, which suggest that a Consultant may be required. The Manual will present comments on the use of Consultants and the management of the programming process in several areas. With regard to a particular project, that information may be applicable.
to an earlier or later stage of the programming process, or not at all, depending on how much of the programming is performed by the Owner or a Consultant.

**Administration of the Programming Process**

The term “programmer” as used in this Section should be interpreted as the Owner, Owner’s staff, Consultant or other entity which performs the programming. The programmer may be an individual or team of individuals.

If the Owner chooses to retain a Consultant to prepare the Space and Functional Program, the Owner will have to exercise considerable care in outlining the project and clarifying how the Consultant will obtain the information and insights needed to prepare the program.

The Owner identifies any unusual issues which may be involved in the project. This will help the Owner determine whether the Owner's staff or a Consultant would be most appropriate to perform the programming. If the Owner chooses to have a Consultant to perform the programming, the Owner must define project sufficiently so that the Consultant can identify and quantify the tasks to be performed. The fundamental question for a Consultant in determining a fee is: “How many person-hours of work will be involved and by persons of what job descriptions”? The fee negotiated must fairly reflect the scope and complexity of the services required.

**Preliminary Program**

The Preliminary Program represents the first effort to identify and list the various activities which need to be accommodated, the kinds of spaces or other construction elements required in a project, and to generate a preliminary budget. It constitutes the most fundamental ideas about the content of project preliminary budget and can only be prepared by the Owner.

The Preliminary Program should include all of the information developed in the Owner Vision, a list of the kinds of areas or other specific design elements of interest are required, a statement about the size or capacity of those facilities or spaces, an estimate of the total square footage involved, and a project budget.

**Space and Functional Program**

After the Owner has created a Preliminary Program and has reason to believe that further investment in the concept is warranted, the Owner must prepare a Space and Functional Program. The Space and Functional Program is the first complete statement of what the project is intended to include and accomplish, and must identify the quality, quantity and cost of the project in considerable detail.

Project involving substantial renovation or construction should include the following items in the Space and Functional Program:

- The Preliminary Program, updated to reflect the additional detail developed below. Any significant changes should be specifically noted.

- Where the floor area involved is an appropriate measure of the quantity of work involved, a listing of the number and approximate size of each room or space, as well as estimates of the size of all ancillary spaces, and the size of the entire building or area involved in the construction. The net area, net to gross and gross areas.

- Where floor area is not an appropriate measure of the quantity of work involved, a listing of relevant facilities, as appropriate. For simple projects not involving the renovation or creation of floor area, the description of the physical elements involved may be on a system-by-system basis, or may be a list of components, equipment, etc.

- A listing of all other improvements, including site work, as applicable.

- An estimate of the total square footage involved or other measure of other facilities, as appropriate.

- An updated project budget.
030 | Planning

This Section serves as a general guide to the Planning Stage of a project, in which major project issues are addressed in detail, and a detailed program, the Program of Requirements, is created.

Planning Overview

The planning process is the step, which defines the project and resolves any discrepancies or omissions in the users’ needs before the primary responsibility for completing the project is transferred to the A/E. It involves formal complex processes that the Owner may elect to have a substantial portion of the work performed by a Consultant or Consultants. Generally, the tasks involved fall into two categories:

- The Program of Requirements (POR) is the formal statement of what the construction project is intended to include and accomplish. The POR must identify the quality, quantity and cost of the project in sufficient detail that designers can proceed with the project based on its contents. It also serves as the basis for the A/E Agreement, the negotiation of fees for the Agreement, and the A/E’s services themselves, so it must be thorough enough so that the Owner and all members of the design team understand all of the requirements for the project and the services required to accomplish it, and there is as little room as possible for misunderstanding on any issue.

- In the planning process, the Owner must finalize the issues, which will not be addressed in the POR or by the A/E in the design of the project. Such issues will vary widely depending the project. They may include (where applicable):
  - Operational issues
  - Obtaining consensus for the project among all interested parties
  - Licenses or other approvals not related to the design and construction
  - Site acquisition
  - Resolving any zoning conflicts
  - Verifying funding sources and the approximate amounts of funds required
  - Resolution of such issues is generally the Owner’s responsibility.

Program of Requirements

Facility programming is the process of defining the Owner’s project needs and the relationships of the various project components. The final product of facility programming activities is the Program of Requirements (POR). It is usually prepared by the Owner or a Consultant qualified in detailed facilities programming. PORs for projects at Universities and Colleges must be approved by the Board of Regents.

OFCC requires that the Owner have an acceptable POR before OFCC issues or publishes a Request for Qualifications (RFQ) for Professional Design Services for the project. The Owner must make complete copies of the POR available upon request prior to the due date for the responses to the RFQ.

Alternatively, the Owner may include the preparation of a POR in the A/E’s scope of work. Such work will be considered an Additional Service and Owners will identify these Additional Service needs if required, with the project announcement or request for project management by OFCC.

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<td>The A/E or the Owner must submit the POR and any changes or revisions for approval through the Program of Requirements business process.</td>
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Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.
The Owner may revise the POR at its own expense prior to beginning of any design stage. If the Owner makes any such revisions, the Owner will redate and reissue the revised POR. Revisions to the POR subsequent to commencement of design may result in additional fees and may delay progress on the project. These are important issues which must be taken into account prior to making any modifications to the POR. After the POR is first made available to AEs, OFCC requires all revisions to the POR be formally issued and approved in writing by the Owner. The A/E must identify all deviations from the POR at each submittal in the design stage.
This Section addresses the process of determining whether a design and construction project which previously has been somewhat defined is actually viable. Where there are multiple alternatives available to achieve the Owner's objectives, this Section also addresses the process of determining which of those alternatives is the most attractive.

Feasibility Concept

In the State of Ohio, physical facilities that are functional and durable are normally very high on every Owner's priority list. There are probably very few projects in which the highest need, goal, or objective is aesthetics. Although the State traditionally uses a competitive bid process to obtain the lowest cost to construct a design, it is not normally the State's intention to construct "cheap" buildings.

Architects and Engineers are selected on the basis of their qualifications, including their experience, expertise, and ability to convert the Owner's conceptual desires into physical reality. They are given a budget as a constraint, as a challenge, and as a parameter to advise them toward the limits of the design.

Operational flow and the effect of the concept on operations are key components of a highly rated feasible concept. The cost of operating a facility is always greater than the cost of construction, therefore, an operational scheme with high efficiency is desirable. The effect that the project will have on the Owner's operation is a high-ranking consideration. Most State agencies must operate effectively and efficiently at all times.

Feasibility Analysis should be performed when the Owner needs to know fundamentally in what direction a project should go, such as whether a proposed site or building is physically capable of supporting, and is appropriate for the project. Where the Owner is not faced with such major decisions, or where there are no options to consider, a Feasibility Analysis is not required.

Analysis of a Single Scheme

At the simplest level, Feasibility Analysis may be conducted to determine whether a single proposed scheme can be accomplished within certain constraints. Such constraints may include constraints imposed by a specific site or existing building.

Analysis of the feasibility of a single proposed scheme primarily involves determining whether a sufficient number of the highly ranked goals and objectives can be met with the funds reasonably expected to be available to make the project worth performing.

The analyst should identify the goals and objectives which can be achieved, and those which cannot. If an acceptable number of goals and objectives can be achieved, the project may be said to be "feasible". Although cost is generally a secondary consideration, the analyst should offer an opinion of the probable cost required to attain the achievable goals and objectives.

Analysis of Alternatives

Feasibility Analysis may also be performed when there are distinct alternatives to compare and evaluate, such as when an Owner must compare alternatives, which may include utilizing an existing facility, renovating an existing facility, constructing a new facility, or leasing a facility.

Fundamentally, a Feasibility Analysis involving multiple alternatives considers the restrictions inherent in the sites, opportunities inherent in the sites, the quality of the "fit," which can be achieved between the Owner's goals and objectives and the site, after construction is complete, for each alternative.

Although a choice between alternatives may be made on a holistic basis, it is usually more useful to analyze the differences between one alternative and another on an issue-by-issue basis.

Generally, a Feasibility Analysis focuses on the physical issues involved in a project, with only a secondary consideration of any direct economic implications. Public Owners generally are dealing with an established facility and therefore do not have a large range of options (as would a private firm seeking to expand or
relocate) and has public service objectives, which are not directly quantifiable in economic terms. Accordingly, the range of issues, which a public Owner must consider is probably a narrower range than that which a private owner would have to consider.

Issues which deal with long-term operational costs, or future capital costs which may be required, represent a level of economic analysis which is generally beyond the scope of a Feasibility Analysis and is appropriate only when the Owner is not associated with any institutional identity or location, has many site choices over a significant geographical area, or has objectives which are largely financial in nature. Analysis of such considerations may involve full-blown real estate investment analysis, which transcends the scope of a typical Feasibility Analysis.

The Feasibility Analysis may identify more than one alternative, which is feasible. In which case, the analyst must focus on those few alternatives, which satisfy more of the project requirements and present those in full detail.

Performing the Feasibility Analysis

Feasibility Analysis can be a very complex undertaking. On projects of low or moderate complexity, the issues of interest can usually be narrowed to a select list, and the scope of study can be limited. Absent those simplifications, a full Feasibility Analysis, which would be required for a number of very different alternatives, involves the following steps:

- Identify and describe the alternatives;
- Quantify the differences between the alternatives;
- Analyze the differences;
- Total the total costs or points;
- Consider abstract, qualitative or other differences, which cannot be fairly analyzed by costs or points; and
- Make a recommendation.

Buildings are complex objects. Listing the differences between them, let alone assigning costs, values, or relative importance to those differences is no small task. The difficulty of the analysis required will vary depending on the scope of the project:

- Renovation for Re-use: The existing facility may be otherwise functional or perhaps is relatively old and has experienced significant deterioration or obsolescence.
- Addition to an Existing Facility: The existing facility is otherwise functional and appropriately located.
- New Building Construction: This kind of project starts with a relatively “clean slate.” Aside from the site, there are often no truly fixed features, which need to be analyzed. Review of alternatives is an inherent and integral part of the ordinary design process, which will often be sufficient for this kind of project. Regardless, a Feasibility Analysis may be required when there are fundamentally different design approaches, such as building configurations, number of stories, or energy use concepts which need to be compared and evaluated.
- Construction of New Multi-Building Facilities or Campus: Design of multiple buildings inherently involves multiple options, street layouts, utilities and other infrastructure, significant investment in construction, many complex issues, and will usually require a Feasibility Analysis to evaluate major alternatives.

Site Selection

Whether or not a formal Feasibility Analysis is used, evaluation of alternative parcels of property is a common element of some construction projects, and the principles outlined above for feasibility studies are fully applicable. Issues specific to the selection of sites will be addressed here. The following issues apply to
the evaluation of potential sites, whether they are already owned by the Owner or are candidates for purchase.

Evaluation of alternative parcels for purchase, whether they contain structures or not, is an integral part of the purchasing process. Accordingly, the mechanics of property purchase will be briefly discussed here.

- Property adjoining an existing facility may be available for outright purchase, or may be available for lease or trade through various mechanisms including “land swap”, easement grants, and service sharing arrangements.
- Realtors can provide information on available parcels.
- Other State-owned land may be available. Information on such property can be obtained from the DAS Office of Real Estate and Planning.
- Formal steps in acquisition may include:
  - Appraisal,
  - Phase 1 environmental assessment,
  - Making an offer,
  - Approval of funding,
  - Closing of the sale or transfer,
  - Transfer of property from another State agency, and
  - Transfer of property from another political subdivision.

Related Concepts

Real estate, particularly buildings, is an expensive, long-lived asset, so it is important to make sound decisions with regard to their use. When evaluating structures, whether candidates for use, renovation, addition, or purchase, the following are basic concepts which define differences which must be addressed when comparing facilities, and which define the limits of financially sound decisions:

- Expected Useful Life: Facilities do not last forever. Well-designed, well-built construction or components will produce a service life longer than poorly designed or cheaply built structures or components. The expected useful life of a building is that age at which the increasing expenditures required to maintain and operate the facility are not economically justifiable. While the expected useful life of a facility can be extended by good maintenance and investment in upgrading, most buildings which do not have some unique inherent value (such as irreplaceable historic buildings) eventually reach a point at which they are obsolete and it is not cost-effective to keep them in service.

- Physical Condition: All building components and systems “age”. The expected useful lives of components range from as few as several years for an awning, to perhaps indefinitely for building foundations.

- Effective Age: Although a structure was initially constructed in a certain year, its simple chronological age does not reflect improvements, which have been made, building additions, maintenance performed or not performed, or deterioration which has occurred, and which affects the structure’s remaining expected useful life. A calculation may be made which takes into account the effective ages of the various components of a facility and their share of the area or value of the facility to yield the weighted average age, or “effective age” of the entire structure.

- Functional Obsolescence: In evaluating the suitability of a facility for purchase, renovation, continued use, or abandonment, the Owner must take into account any obsolescence which may have occurred. If the facility in question currently houses the proposed activity, functional obsolescence describes the ways in which the structure physically no longer suits the specific activity it purports to support. If the facility does not currently house the proposed activity, functional obsolescence describes the characteristics of the facility in a more general way, which make it less desirable than new construction custom built to suit the use.
This Section is a general guide to understanding the process of creating a budget for a project for developing and requesting the funds for a project; and for reconciling the project budget after the funds for the project are finally available for use. It itemizes the issues to consider in the creation of the project budget and explains the purpose of the project contingency.

Responsibility

The Owner is responsible for establishing the overall project budget and to obtain the funding for the project.

The Owner must anticipate all potential future costs when creating a budget for the project. Owners with substantial experience in this area may produce budgets using their internal resources whereas others will need expert guidance from others. Many Owners enlist the services of an Estimating Consultant for assistance in estimating construction costs and budget development.

OFCC is available to assist in developing budgets upon request.

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Budget Considerations

Pre-Funding Budget Development (Performed prior to funds request): This is the period in which most Owners prepare the project budget based on the best information available and the best projection of the perceived needs of the users and the program developed to date. The budget is then processed through the State budgeting and legislative process – a period that can be months and even years to complete. Obviously, many elements associated with the project will change during that period: budgeting restrictions placed by other agencies and the legislature, programmatic changes within the Owner or User realm, revenue shortfalls, interest rate changes, and many other very real issues. The bottom line is: the budget rarely, if ever, remains unchanged from conception to implementation.

Post-Funding Budget Reconciliation (Performed after funds entitlement): After the funds are designated for the project, usually through the legislative process for Capital Funding, the Owner must begin the all-too-common shocking process of reconciling the budget to the funds provided and known to be available for the project.

In developing a Project Budget, one should be aware that budget costs are categorized into several cost groupings. The most basic of these will include:

- “Soft” costs, which include items directly related to construction (all fees, permits, quality assurance testing, etc.).
- “Firm” costs, which include related expenses, but not necessary actual construction (land, independent studies, furnishings, equipment, etc.).
- “Hard” costs, which include bricks and mortar (construction contracts, construction contingency, etc.).
- Owner reserves, which include funds for the unexpected (must also include a “bid reserve contingency” of not less than 10 percent of the construction budget).

The Budget, especially a pre-funding budget must include all items relevant to the scope. The Owner must consider that all project costs are borne (certainly most of the time) by the Owner. The following list indicates
many, but not necessarily all, costs for various parties. Not all projects will incur all the cost categories shown. The costs, which are initially paid by entities other than the Owner are identified as such.

Reconciling a Post-Funding Project Budget: After the amount of funds is made available to the project, the diligent Owner must go review the approved pre-funding total project budget and compare it to the funds that are available. In a sense, the exercise becomes a “reverse” analysis. It is done by asking the same questions, but starting at the bottom line and working backwards through the list of project criteria.

After determining the Post-Funding Project Budget, the Owner must consider if the updated Construction Contract Funding is adequate. Some adjustment to the scope of the project may be necessary or the Owner may need to seek budget amendments to meet the Owner’s established project requirements.

Contingency

The construction contingency is an important line item in the Project Budget. Capital funds for a project will not be released by the Controlling Board without this reserve.

The construction contingency is used to pay costs resulting from unanticipated or differing project conditions, to comply with rulings regarding building and other codes, to correct construction due to errors and omissions in Contract Documents, and to pay the cost of settlements and judgments related to the Project. Further, the contingency can be used to benefit the project by paying for selective schedule acceleration due to unseasonable or severe weather so that the construction force can maintain the overall project schedule and momentum.

The contingency amount must reflect the issues unique to the project and generally will be within the following ranges:

- New construction: 5 to 8 percent of construction budget
- Remodeling / renovation: 10 to 20 percent of construction budget
- Monumental or Historical Restoration: 15 to 30 percent

In the initial stages of the project, the Owner established the contingency in its budget. Upon initiating a project with OFCC, the Project Manager will review the budget with the Owner and recommend changes as necessary to any line item in the budget, including a recommending of contingency amount or contingency percentage adjustments.

After the project progresses, the A/E becomes a part of the project management team. As such, their expertise and insight will be an asset to the project and should be used as deemed appropriate for adjusting the budget, including the contingency amounts. The design team considers all aspects of the design and the implications of current construction trends, the season for the construction activities for potential weather issues, the building type, the project site, and other factors. As may be appropriate, the A/E will recommend adjustments to or approval of the contingency amount. The Project Manager must analyze the contingency and accept it or direct the A/E to make the necessary corrections or adjustments.

With each phase completion submittal the A/E should advise the Project Manager and the Owner of the adequacy of the budgeted contingency and advise if any adjustments necessary to the budget.

The contingency is not intended to be used for Owner-requested scope changes during construction until the risks of the project are minimized.
This Section serves as a general guide to the process of approval of a Capital Bill and approval of funding for a specific project.

**Public Capital Funds**

Public Capital Funds may only be used for the construction of buildings and structures, and the remodeling and renovations of buildings and structures and related expenses. See the current Capital Appropriation Bill.

Funding sources for capital projects are generally referred to as “State Funds” and “local funds.”

- **State Funds**, are appropriations made available by the Ohio General Assembly. The funds are identified, initially, in the Capital Appropriation Bill, which is usually passed by the General Assembly in the fall of even numbered years and are available for use 90 days after the Bill is approved. The Bill usually identifies the amount of funds allocated for each project.

- **Local funds** are generally funds from other than State government, such as funds from other political jurisdictions. The Owner is responsible to ensure that appropriated and allocated local funds are used in accordance with the Owner’s policies and procedures, and in accordance with Ohio law.

The Owner must ensure that Capital funds are not used to purchase equipment that is not an integral part of, or that is not directly related to the basic purpose or function of a Project for which moneys have been appropriated. Types of prohibited equipment include, but are not limited to:

- Vehicles
- Normal or routine supplies
- Services for normal maintenance

Certain equipment integrated into the building infrastructure may be allowable under OBM and legislated guidelines.

The Capital Budget is prepared every two years. Owners must submit requests for funding for projects through the Capital Budgeting Process, which is administered by the Office of Budget and Management. The funds requested for a project in the Capital Budgeting Process should be based on the budget developed for the project.

The Office of Budget and Management (“OBM”) and the State Controlling Board (“CB”) are responsible for “releasing” or approving the expenditure of appropriated State funds. State funded contracts must receive Controlling Board approval before the contract can be executed.

The CB generally meets twice monthly. The CB provides a list of meeting dates on its Web site. Owners and representatives of the Owner attend meetings of the Controlling Board at which funding requests for the Owner’s projects are being considered for approval to answer any questions, which may arise. A representative of OFCC also attends the meeting to answer any questions which may arise with regard to OFCC administered Projects. The Owner, or, where appropriate to the nature of the question asked, the OFCC representative, will respond to questions from the Controlling Board. The Owner must answer all Controlling Board questions on its locally administered projects.

Funding Requests for A/E and CM agreements and Contractor contracts are requested and approved by the following process:

- The Owner and OFCC prepare the required documents requesting the release of funds (a “Controlling Board Request”). The Owner makes the request for release or approval of expenditure of appropriated funds on the Controlling Board’s General Request form.

- The Owner may request that the A/E and Construction Manager provide information to the Owner for use in the writing CB request, or determine that the information shown on the request is accurate.
The Owner files the CB request with the CB Secretary 18 days prior to a CB meeting to be considered for placement on the agenda for that meeting. The Owner may initiate the request to the Director of OBM or the CB for release of the particular appropriation, according to language in the Capital Bill.

After the Controlling Board approves the request, the action is considered a release and enables the Owner to write encumbrances against the funds. Allow 30 to 40 days processing time from the submission of the request to approval. Less time may be required if a Director sign-off option is available for the request in question.

Upon receipt of the approved request, OFCC sends the Agreement or Contract to DAS and the Attorney General for signatures. Work can begin once OFCC receives the signed Agreement or Contract and the OBM approved encumbrance.

The following additional procedures apply to higher education projects:

- The Ohio Board of Regents ("OBR") reviews the funding request for all higher education projects prior to submittal to the OBM.
- The Owner files a State-funded college and university request with the OBR. OBR will process the request, and when completed on the acceptable form, OBR will forward the request to the CB.
- No capital appropriation for a State-supported or State-assisted Institution of Higher Education will be expended until the particular appropriation has been recommended for release by the OBR and released by the Director of OBM.

Capital improvement appropriations will be released for planning, renovation, and for projects in construction on real property owned by the Contracting Authority, or for the following circumstances:

- The institution has a long-term (at least 15 year) lease of, or other interest (such as an easement) in, the real property;
- The OBR certifies to the CB that undue delay will occur if planning does not proceed while the property or property interest acquisition process continues. In this case, the CB may approve the release of funds to pay for planning through the development of Schematic Design Drawings only;
- In the case of an appropriation for capital facilities for a State-supported or State-assisted Institution of Higher Education which, because of its unique nature or location, will be owned or will be part of facilities owned by a separate nonprofit organization or public body and made available to the Institution of Higher Education for its use, the nonprofit organization or public body will:
  - Either own or have a long-term (at least 15 year) lease of the real property or other capital facility to be improved, or;
  - Have entered into a joint or cooperative use agreement approved by the OBR, with the Institution of Higher Education for that institution’s use of and right to use the capital facilities being financed and improved, the value of which use or right to use being reasonably related to the amount of the appropriation as determined by the parties.

**Other Funding Sources**

Local funding sources may include:

- Grants
- Bonds
- Certificates of Participation
- Private Funding
070 | Local Administration

This Section discusses procedures that certain Owners may use in requesting authorization to administer a project with its own staff, identifies requirements for Owners which locally administer projects, and outlines the DAS role, through the Ohio Facilities Construction Commission, in processing the application, monitoring, and supporting locally administered projects.

Application of DAS Policy and Procedures

Owners, which locally administer projects, are generally required to comply with the provisions of the Ohio Revised Code (“ORC”) and to follow the procedures outlined in this Manual. The specific job titles and position responsibilities referred to in this Manual may be unique to OFCC and not those position requirements typically used by the Owner. In such cases, the Owner must exercise appropriate judgment to translate the job functions and responsibilities in an appropriate and professional manner.

Application Process

Owners must observe the following procedures to obtain OFCC approval for Local Administration of a project:

- Within 60 days after the effective date of an approved Capital Appropriation Bill, the Owner may informally review with the responsible Program Manager the list and scope of projects it proposes to locally administer. The Owner will, if requested, attend a meeting with the Program Manager to discuss the scope of the proposed project(s), and, if multiple projects are involved, the Owner’s preferred sequence (priorities) for performing them, rationales for combining or subdividing them, and other factors which might suggest performing them in a certain sequence.

- After reviewing the project list with the Program Manager, within 60 days after the effective date of an approved capital appropriation bill, the Owner may make a request in writing to OFCC for the authority to locally administer each project which it intends to administer. The request must be made using the OFCC Local Administration Request form (F070-01). The form includes sheets in which the Owner must provide information on the following subjects:
  - A description of the Project;
  - Project Cost and Budget showing a break-down of the estimated costs, including fees, construction costs, contingency, OFCC fees, constructability review fees, and any other project costs;
  - Identify proposed project personnel, with qualifications, including: Project Designee, Project Manager and Fiscal Officer;
  - Current projects being administered;
  - Proposed time frame; and
  - Management Experience of the staff proposed for the project.

- Name and credentials of the Owner Designee. It is suggested that this individual be a Deputy Director, Department Head or a registered Architect or Engineer (Owner’s employee) with construction or project administration experience. Provide a list of projects which demonstrates the individual’s experience. Indicate the size of the project and the activities accommodated. Document the Owner Designee’s ability to fulfill the Owner’s role in Alternative Dispute Resolution and Article 8 Hearings.

- Proposed staffing for the project. Provide the qualifications and experience of the Project Manager, which must be appropriate for the size and type of project for which approval is being requested.

- The Owner must indicate the amount of the Project Manager’s time which will be dedicated to project management duties in general, and the amount of the Project Manager’s time which will be dedicated to the proposed project.

- The Owner must provide the name and credentials of the Fiscal Officer and other individuals who will perform administrative duties required for the project, such as handling State encumbrances and vouchers. Provide the qualifications for each individual, which demonstrate both accounting and
administrative experience. Each individual must follow State procedures, and be familiar with the policy and procedure of State Accounting, and with the State Auditor’s role in construction payments.

- Each Owner must have a Master Escrow Account, and the Fiscal Officer or Owner Designee must be qualified to administer this Account. Identify who will perform this duty.
- The Owner must provide information and statistics, which document the Owner’s performance in the past 3 to 5 years on construction project administration, particularly administration of projects which are indicative of the Owner’s abilities, or which are comparable to the project for which Local Administration is requested.
- The Owner must provide any other relevant information, which OFCC may request or require.

<table>
<thead>
<tr>
<th>OAKS Capital Improvements Procedure</th>
<th>Traditional Paper-based Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A state agency must submit its application to self administer the Project through the Local Administration Authorization Request business process.</td>
<td>If the Project is not administered using OAKS CI, the Owner must submit its application to self administer the Project using traditional means as directed by OFCC.</td>
</tr>
</tbody>
</table>

Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

The Owner must submit any proposed change to the staff approved by OFCC for the positions listed above to OFCC for approval. The qualifications required of the originally approved staff will also be required of the replacement staff.

Consultants retained to perform other services for the Owner must not perform project management for the Owner on locally administered projects.

Review Process

OFCC will conduct a preliminary review and will request the Owner to supply any additional information required to complete the review.

Within 2 weeks after all the information has been received by OFCC, and any required meeting has taken place, the request will be evaluated and returned to the Owner as approved or rejected. The Owner will be informed by OFCC of any items which are not deemed to be in compliance with OFCC requirements. If the Owner corrects the deficiencies, the project will be re-reviewed.

If Local Administration authority is rejected, the project will be administered by OFCC. Projects initiated by OFCC may be returned to the Owner for Local Administration at the sole discretion of OFCC.

Provide the Local Administration Request form with required information concerning the project administrative duties of each Designee, Project Manager and Fiscal Officer. The information may include descriptions of other locally administered projects administered by the proposed staff, and must demonstrate the adequacy of the proposed staffing.

The Local Administration Request form must indicate if a project will be phased (e.g., with multiple bid dates and award processes) and discuss the phasing in sufficient detail to fully and completely describe the entire project and the entire amount of funds involved. Projects for which total funds are expected to exceed the Local Administration authorization limit must be identified. Information must not be limited to just the initial phase. The information will be deemed incomplete unless the total project amount is identified. Possible future expansion of the project for the same or similar purposes, or on an adjacent site must be identified and disclosed. Subdivision of what is apparently a single project will be considered in the evaluation or in subsequent evaluations.

OFCC policy for Local Administration require the Owner to use OFCC documents, policy and procedures on all projects. If any deviations are proposed, the Owner must obtain prior OFCC approval in writing. The documents which the Owner must use include, without limitation, the Architect/Engineer Agreement, the
Construction Management Agreement and the “State of Ohio Standard Requirements for Public Facility Construction,” other “front end” documents listed in OFCC’s sample Project Manual Table of Contents, and other forms cited as being part of OFCC’s standard procedures.

Failure of the Owner to use OFCC documents or follow OFCC policy and procedures may result in rejection of Local Administration authority on subsequent projects.

**Performance of the Project**

The Owner must follow all of the requirements outlined in ORC Chapters 123 and 153 applicable to a public improvement project.

When Local Administration is granted for a project, the Owner must use the latest edition of the “State of Ohio Standard Requirement for Public Facility Construction,” and “Professional Design Services Agreement” with no revisions. The Owner must submit any proposed changes in writing to OFCC for approval, and must not make any other changes without written approval by OFCC.

The standard OFCC fees for local administration apply to and must be included in the budget for each project. The Owner may charge administrative fees to its operating units for approved Locally Administered projects, but such fees must not exceed the OFCC standard management fees.

The Owner must follow all OFCC procedures for the selection of A/Ers and Consultants, and all ORC requirements for procurement of Professional Design Services.

Where required by statute, the Owner must announce the project, and issue an RFQ for Professional Design Services in the Ohio Register in the form and manner required by OFCC. Such announcements are generally not required when the cost of all services provided by the A/E or Consultant to the Owner in any fiscal year, and which are not acquired through the OFCC administered selection process, does not exceed $25,000.

Owners must answer all Controlling Board questions relative to their locally administered project.

**DAS Support - General**

OFCC will provide Standard Support Services as described below on all Locally Administered projects:

- In the normal course of locally administered projects, the assigned Owner’s Project Manager may have questions or require clarifications regarding OFCC policies and procedures. OFCC will answer questions of a broad and general nature, but will not answer questions predicated on the facts of a specific problem or project. Where the question is complex, OFCC may require that the question and all relevant information be submitted in writing.

- Provide updated “Front End” Documents for insertion into Construction Documents for Bidding.

- In addition to placing general notices in The Ohio Register and on the OFCC internet site, OFCC will inform the Owner of changes in policy and details of administration and procedure.

- Provide access to the Ohio Construction Bid Net Announcement Web Page.

- OFCC will assess a fee based on the total budget of each locally administered project. A fee schedule, which is updated periodically, is available from OFCC.

**OFCC Support - Additional Services**

OFCC can provide additional services, when requested, at an hourly or negotiated rate. Annually updated fee schedules are available on request. The services may be requested by contacting a Project Manager or Program Manager. Approval by a Program Manager is required.

- OFCC will obtain qualified document reviews for Constructability or other aspects of a project. A Constructability Review will identify areas where document clarity should be improved and attempt to
identify areas where scheduling, trade stacking, bid structure or related construction issues may impact project delivery.

- When requested, OFCC can perform an assessment of construction conditions, claim status or other vital issues. Consultants may be assigned when available.
- Detailed claims analysis may be obtained through qualified consultants selected from OFCC’s pre-qualified lists or other Contracts. Use of pre-qualified consultants is annually authorized by the Controlling Board, and such consultants are selected through an additional competitive selection process.
- OFCC can provide access to qualified mediators under Contract with OFCC, and can administer the mediation process.
- OFCC can provide assistance in identification and selection of consultants and can provide historical fee comparisons for scheduling, construction management, claims, environmental issues including architectural and engineering disciplines, site, civil and survey consultants.
- Selected projects may be developed and administered by OFCC staff with the assistance of firms from OFCC’s consultant list. A standard percentage fee schedule or an hourly rate may be used as appropriate.
- Seminars and training programs may be provided by OFCC to benefit agency project management staff.
This Section discusses procedures that public authorities in Ohio may use in selecting the most appropriate method of project delivery for a project. Sections 085, 090, and 095 discuss the advantages and disadvantages each method has to offer. These four Sections include excerpts and graphics from the Construction Specifications Institute’s *Project Delivery Practice Guide* (PDPG). Public projects, from the simplest buildings to the most complex infrastructure work, require a number of specialized individuals, firms, and companies that participate in a vast array of complex activities to design and construct a facility. The size of this group may be large or small, depending on the project type, size, and complexity.

**The Nature of Project Delivery**

Project delivery is the contractual relationships necessary to establish a sequential process of design and construction activities that converts a conceptual idea into a completed and occupied facility. Project delivery for public authorities in Ohio may now be accomplished by any of the following methods:

- Design-bid-build (D-B-B)
  - Multiple-prime contracting (The traditional and default method for Ohio public authorities)
  - General contracting (Single-Prime)
- Construction management (CM)
  - CM as agent/adviser (Used in conjunction with D-B-B multiple-prime)
  - CM at risk (CM holds the construction contracts)
- Design-build (D-B)
  - The owner holds a single contract for design and construction. Ohio law stipulates a bridging type model of D-B delivery with a Criteria A/E to develop the program, early design concepts, and the request for proposal to select the design-build team.
  - Ohio also has a mature program to implement Energy Performance Contracts, which is essentially a Design-Build project with Best Value Selection of an Energy Service Company to perform design and construction services and guarantee energy savings over the term of the financing.

Competitive market forces frequently compel owners to select a project delivery method that will achieve a balance between the following factors to establish the quality of the project, as illustrated in Figure 080.1.

- Extent (scope)
- Cost (budget)
- Time (schedule)
These three factors comprise the essence of any contractual arrangement. How these are defined by the project priorities, as well as the owner’s capacities are necessary for the owner to make an informed decision about which project delivery method to select. Selection of the project delivery method will also directly influence the nature and extent of the work required for the design and construction of the project, including the contracts among the participants.

**Owner’s Capability**

There is a wide variety of experiences and qualifications that owners can have regarding the design and construction of a new project. The success of the delivery of a project depends heavily on the owner having a good understanding of the many decisions required to direct and guide the design and construction process. Many factors determine if the owner has the experience, qualifications, and capability to handle the project, or whether the owner should take another course of action to ensure the owner’s expectations are met. The owner’s capabilities directly influence which project delivery method is selected.

The complexity of a project delivery method requires specialized knowledge. Having an intimate familiarity with the uniqueness of the design and construction process is an important asset for an owner. Since the new facility will be for specific purposes of an owner, the owner is better than anyone for ensuring the project priorities are accomplished and their interests are protected.

Owners experienced with one or more of the project delivery methods will be in a position to effectively direct, administer, and manage the complex delivery process. They will be aware of the importance of timely decisions and will be familiar with the implications and issues of the many process activities. A smooth process depends on managing those activities that are the responsibility of the owner and are necessary for the participants in the process.

For owners that only build a project occasionally, familiarity with the design and construction process will in all likelihood not be an asset. Owners with little or no experience will either place their trust and protection of their interests in the design and construction professionals that participate in the delivery process, or will retain the Ohio Facilities Construction Commission to assist with directing and administering the various stages, phases, and individual activities. Also, an owner with little or no experience will impede the process because of the decisions that are required or how to handle the issues that arise.

**Extent**

The magnitude, form, function, and complexity of a project will have a direct bearing on the project delivery method and the number and role of the participants. Generally, the greater the magnitude of the project, the greater the number of participants, the more the construction process is compounded. Small projects and projects of limited extent of work may involve only the owner, A/E, and contractor. For example, for the construction of a small pedestrian bridge, the owner may rely solely on the services of an A/E and a contractor, or a design-builder, to complete the work. The A/E will probably not require the services of large numbers of consultants, perhaps only a landscape architect and a structural engineer. The contractor may do much of the skilled work using direct-hire employees rather than relying primarily on subcontractors to accomplish the work.

On large projects with a complex scope, large teams will be necessary to complete the design and construction. The A/E will have many consultants on the design team to complete the portion of the design within their area of expertise. The A/E will be required to carefully coordinate the work and the contributions from the different consultants. The contractor will require the services of many different subcontractors and suppliers. For example, a new performing arts facility will require a large, multidiscipline team for design and construction. Such a project will include not only the site and the structure, but also the interior spaces, performance facilities, sound systems, acoustics, lighting, seating, and public facilities. On projects with complex scopes of work or multiple-facility requirements, the services of multiple design and construction professionals may most likely be needed. Examples of such projects are a hospital, a multiple-structure manufacturing/process facility, or a campus-type facility for senior living, education, or business use.
Time

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Sequencing: Not to be confused with scheduling, sequencing means performing one portion of the work prior to another portion in a either a logical order or in a predetermined order. For example, the design of a project is performed in a logical sequence beginning with programming the project, conceptual design, schematic design, design development, procurement documents, construction documents, and ending with construction. The construction of a project also is conducted in a logical sequence beginning with preparing the ground for construction, placing the foundation, erecting the structural frame, enclosing the structure with an exterior envelope, building out the interior spaces, and ending with taking occupancy.

In addition to sequencing normal construction activities, activities within and around existing facilities might require the portions of the work to be sequenced in a particular order. For example, in the case of improvements or additions to existing facilities, business operations and functions may need to be maintained while the new portion is under construction. This might require one portion of the work to be completed prior to another in order to relocate ongoing activities. Another example is for road widening or improvement projects where the entire road cannot be closed for an extended period. Work in and around existing facilities often requires relocation of existing functions to temporary locations and provisions for temporary utilities and support systems. Modifications of existing facilities often require protection of existing construction that will not be demolished, pedestrian protection, detours or other road traffic diversion, and other special sequence considerations. Most sequencing of projects will be accomplished during design, documentation, and construction stages; however, existing facilities might require consideration of project delivery methods.

Scheduling: Not to be confused with sequencing, scheduling involves establishing time frames for activities by establishing starting and finishing dates for each activity. Significant dates are sometimes referred to as milestones. Determining the appropriate scheduling for a project may influence the decision for which method of project delivery should be selected.

If projects are not completed within the time frame designated for the work, the consequences can be onerous for all concerned.

- For the owner, it could mean decreased revenue from business lost because of a delay, additional rental expense to accommodate occupants longer than anticipated, or finding temporary space for occupants who cannot move into a new facility at the appropriate time.
For the contractor, it may affect scheduled new work, the loss of early completion incentive payments, paying liquidated damages to the owner, and damage to the contractor’s business reputation for not completing the project on time (if the contract calls for any of these things).

For the A/E, it may mean additional construction administration work, due to the extended period of time, until the work is completed, which may not be recovered.

In addition to a construction schedule, it is prudent to have a master project schedule which involves all stages of a project from conception through occupancy, and includes the variety of participants and their involvement in the project. This plan of activities illustrates the relationship of design and construction as well as significant decisions that are involved with the project. The project schedule may include program development (owner’s requirements), site acquisition, separate contracts for remedial measures such as hazardous materials removal, different design phases, and construction. Construction is usually separately scheduled, with its many activities, and should coordinate with the master project schedule to ensure completion within the timeframe or by the dates established.

There are several types of schedules, and usually they are illustrated graphically:

- The simplest form of a schedule is a Gantt Chart which is essentially a type of bar chart. A list of sequential activities is developed and listed vertically. Start dates, finish dates, and a duration times are assigned to each activity and shown horizontally. The schedule is then articulated so that there is alignment between the activities so that a continuous path can be traced through all activities and time frames. The simplicity or complexity of a Gantt Chart is determined by the number of activities that are developed and the level of detail of the time that is assigned to each.

- A more sophisticated scheduling technique is known as the critical path method (CPM). A computer based schedule, CPM utilizes mathematically based algorithms to establish various types of relationships between activities and the dates when they start and stop. The goal is to establish the sequence of activities that constitutes the shortest path through all of the activities, which is identified as the critical path. If the work follows the critical path through the schedule, the work will be completed at the earliest possible time.

**Fast Track Scheduling:** Fast-track is not a project delivery method by itself, but instead is a scheduling technique that, while it can be used with any project delivery method, is primarily used with the two construction management project delivery methods. Fast-track often utilizes the technique of separating work into multiple contracts based upon project scheduling to ensure project completion in a condensed period.

![Fast Track Scheduling Technique (PDPG)](image)
Fast-track is the process of overlapping activities to permit portions of construction to start prior to completion of the overall design. The project schedule may require that portions of the design and construction occur concurrently. For example, the lengthy process of site preparation, earthwork, and foundations may be under construction while the balance of the project design is being completed. With fast-track, the overall project cost may be difficult to determine, as certain portions may not be bid or contracted for until later in the project schedule. Adjustments to the contract amounts may be required as each portion of the design work is completed. The preparation of separate bid packages and contract documents for each additional portion of the work requires significant additional work and experience by the A/E.

The nature of fast-track is such that the A/E may be simultaneously involved in design, construction documents, development of contract packages, procurement (bidding/negotiating/purchasing), and contract administration. This multiplicity of activities and required staffing may add considerably to the cost of the A/E services. Figure 080.2 illustrates the overlapping activities of fast-track process.

In addition to preparing numerous contract packages, the A/E may also be required to review the detailed applications for payment from multiple contractors. Each contract package also requires coordination with adjacent or prior construction to ensure nothing required for the complete installation of a product or system is omitted. This requirement of multiple contract packages adds to the responsibilities of the A/E, and a larger portion of construction document time is necessary than for an identical project for which the design is completed prior to obtaining construction contracts. In the design-bid-build project delivery, the combined specification sections define the materials necessary for the entire project while the contractor determines the scope of subcontracts. In a fast-track project the combined specification sections of each separate package describe the total project, and packages represent the individual extent of these intended contracts. The scope of work for each package needs to be determined. In order to monitor costs and keep the owner informed, the A/E, CM, or design builder must periodically prepare and revise estimates of construction costs based on constantly changing design documentation.

When portions of the work are completed, subsequent changes to in-place construction may be unavoidable and, hence, more costly as modifications become necessary. For example, a fast track project with a bid package for precast concrete must clearly indicate whether embedded items to attach to the adjacent construction are included in this or in another contract package. If embedded items are required, it may be necessary to include miscellaneous steel and other specification sections in addition to the precast concrete sections. The size and number of contract packages will vary depending on the size, scope, and type of project.

The construction documents may have to be prepared in bursts of concentrated effort for each package instead of flowing from a natural design sequence. The time necessary to prepare contract packages for a project and to coordinate the interfaces of each is greater than typical preparation of all construction documents at one time. Additional time requirements are necessary for fast-track contracts. Allowances for these time increases should be made by including adequate professional service fees in the owner-A/E contract. Major items with large time impacts include the following:

- Extended contract document preparation due to fast-track multiple contract packages
- Reassembly of the separate packages into one coordinated set of contract documents
- Extensive preparation and coordination time for development of contracts, conditions of the contract, and Division 01 – General Requirements for each separate contract
- Detailed review of multiple monthly applications for payments

The administrative effort required of the A/E and owner for a fast-track project is greater with multiple contractors. However, a design-bid-build project is administratively more complex since simultaneous contract document production, procurement, and contract administration will occur during a large portion of the construction stage. Design development and changes during a fast-track project may affect along-lead-time items that have already been ordered or a part of the construction already in place. Design modifications may also affect multiple design phases. Due to the changing nature of design completion on fast-track projects, it is not unusual to have a greater number of requests for information and change orders than on a similar project where the design was completed prior to construction.
Cost

Contracts record the agreed-upon cost of the work and establishes the basis of payment. A number of
different methods are used for determining and stating amounts of cost or compensation within contracts.
When a contract is bid or negotiated, the basis of payment that will be used in the contract is clearly stated in
the procurement documents. When the contract is executed, the bid or negotiated basis of payment is
included in the contract.

**Stipulated Sum (or Lump Sum):** An agreed amount for a described extent of work, based upon complete or
partially complete construction documents. This is the simplest method of stating the basis of payment
wherein a single amount is agreed upon for completion of the entire contract. The principal advantage to the
parties to the contract is that the amount is clearly established in advance.

**Unit Price:** Payment is made at a stipulated rate multiplied by the quantity completed. Unit prices are used in
cases where the exact extent or quantity of work cannot be calculated accurately or otherwise determined in
advance of actually performing the work. The unit price basis of payment is commonly used for civil
engineering projects where the types of work, such as unsuitable soil or rock excavation, can be identified
during the design of the project but the actual quantities of such work items can only be estimated. The types
of work are divided into specific items with estimated quantities of each type. A cost per unit of work is
established during the procurement (bid/negotiation) process for each identified type of work. The contract
would then contain these established unit prices as the basis of payment. As the work is performed, the
completed work is documented and verified with the contractor compensated only for actual quantities of
completed work.

**Cost Plus a Fee – Fixed Fee – Guaranteed Maximum Price:** The cost-plus-a-fee basis of payment is
usually used only with negotiated contracts. The contract calls for compensation for the actual cost of direct
expenses, plus an additional fee for overhead and profit. The fee is usually a percentage of the direct
expenses but also may be a fixed fee amount. In most cases this type of contract also contains contract
language that establishes a guaranteed maximum price (GMP). A GMP may be negotiated when the project
design is in the early design phase, such as design development, and may be only sufficiently complete to
allow adequate project definition. A contingency amount in the project budget should be included to allow for
the inevitable changes and a resulting increase to the GMP. Schematic design or design development
documents with “preliminary project descriptions” or “outline specifications” are not complete construction
documents, and assumptions and omissions may occur during the negotiating(pricing) stage. The
thoroughness of these suppositions is influenced by the contractor’s prior experience and ability to project
the undocumented items. The types of items that might lead to additional costs are usually details and
specifics that are developed during the final completion of construction documents. Items that may be
overlooked can include scheduled items such as finishes and details such as flashings and connections.
These design refinements, if not considered initially by the contractor, may lead to claims of increased project
costs along with an accompanying change to the GMP.

The cost-plus-fee arrangement provides significant control over such things as scheduling commitments and
flexibility in such things as refinements, but also means that there is risk to the owner for the cost and final
outcome of the project. The cost-plus-fee method also allows the entire team the opportunity to be involved
in preconstruction budget and control of extent (scope). As the design of the project evolves to its final form,
cost estimates can be refined and constructability reviewed. With contractor input, the design may be altered
to maintain the project cost within the owner’s budget.

The owner may try to control costs by negotiating the cost of the work plus a fee as a basis for payment. The
fee maybe a fixed fee or a percentage fee, and the project program may not yet be established. If the
contractor has a percentage fee connected to the cost of construction, there may be little motivation to
control construction costs since to do so will also reduce the fee. The owner may provide an incentive for
cost control by including a shared savings clause in the owner-contractor contract. The owner is partially
protected from excessive costs if the contract includes a shared savings clause. The contractor will usually
establish a GMP that is somewhat higher than the estimated costs of construction in order to cover
contingencies, since the estimated costs might be derived from incomplete construction documents. When
the construction contract is based on a GMP with a fixed fee and a shared savings, the contractor will be
encouraged to find ways to reduce construction costs. If the owner and contractor have a shared savings clause, the A/E can expect to review many product and system substitutions. The submittal review time for these shared savings may exceed the review time normally expected of a conventional construction project. A project with a shared savings clause obligates the A/E to spend more review time and possibly assume more liability, consequently reducing the A/E’s own profit while helping the contractor make money and the owner save money. On most cost-plus contracts, the contractor is required to submit detailed supporting documentation with each application for payment. This may include receipts for materials, labor, equipment rental, and costs associated with administrative and procedural requirements.

Penalties, Bonuses and Incentives: In addition to the basic elements of contracts, provisions are sometimes added to contracts to ensure completion in a timely manner. These provisions are important to emphasize that “time is of the essence” and to avoid compounding financial damage by the owner.

There are a number of different methods to encourage on-time completion. These contract clauses are employed in different ways and with varying results. They may be very effective if properly supported by all members of the project team.

A clause providing a penalty of a daily amount for not completing the work in the allotted time or by the agreed-upon date can be included in the contract. However, if there is a penalty clause in the contract, it is best accompanied by language that pays the contractor a bonus/incentive amount for early completion. Usually the per-day amount for penalty and bonus/incentive are the same amount. The benefit of early completion may save financing charges and allow the owner earlier occupancy and leasing of retail or commercial space.

Shared Savings: A shared savings provision can be utilized to reduce initial costs and may be used with a GMP contract as an incentive for completing the project below the GMP contract price. With this form of “shared savings,” the amount is made based on an agreed-upon portion, usually a percentage, of the difference between the original cost (stated or agreed) and the actual amount spent for the work. The savings are shared on a percentage basis between the parties to the contract. This incentive provision may require additional A/E fees to evaluate the proposed changes to the design and contract requirements.

Liquidated Damages: Liquidated damages are usually a fixed monetary amount per day, deducted from monies due the contractor for failure to substantially complete the work within a stipulated time or by a stated calendar date. Some form of documentation is desirable to substantiate the potential loss from delay of completion. If the amount for liquidated damages is not based upon financial loss and is an excessive arbitrary amount, disproportionate to the value of the performance, it might be considered a penalty and become unenforceable. Penalties may be considered unreasonable if a dispute results from the claim of failure to complete. Other causes, such as unusual weather conditions, may create claims for change in the contract time. Projects constructed under multiple contracts do not lend themselves to the provisions of liquidated damages because of the difficulty in assessing the independent responsibility for time delays of several contracts. Liquidated damage clauses should not be confused with penalty clauses.

Methods of Project Delivery

As indicated at the beginning of this Section, there are several types of project delivery methods, each of which include a different mixture of contractual arrangements and processes that optimize the primary factors indicated previously. Understanding each delivery method requires an understanding of the roles of the stakeholders and participants, as well as their benefits and limitations. The decision to utilize a particular delivery method affects the participant relationships and how they will design and construct a project.

Availability of Contractors with sufficient bonding capacity may influence the decision of selecting a project delivery method. With multiple-prime contracts under D-B-B or CM Adviser, each contractor is responsible for providing a performance and payment bond for the amount of its contract. With general contracting, CM at Risk, and D-B project delivery, a single entity may be required to provide a performance and payment bond for the entire project. As we transition from multiple-prime D-B-B and CM Adviser to other project delivery options, and given a sluggish economy with many contractors experiencing diminished financial resources, it may take time for the Ohio construction community to adapt their business model to the new project delivery
methods. The owner should consider whether sufficient competition exists under the delivery method selected for their project.

Project delivery requires significant decisions early in the facility life cycle. These decisions involve consideration of services, delivery methods, and participants to carry a project from conception to physical reality. Assembling the necessary participants and establishing the basis of contracts along with the elements of extent, time, and cost will determine the type of project delivery method to be utilized to accomplish the project. The project delivery method will define the relationships of the participants and their respective roles and responsibilities.

The owner’s, A/E’s, and contractor’s capabilities and experience along with the type of project will affect the decision for the project delivery method. The selected project delivery method will determine how the project is designed, procured, and constructed. The subsequent stages of the project life cycle can be performed under individual contracts such as design-bid-build or as a part of consolidated project delivery such as design build. The requirements established during project conception can now be given to the project team to execute in a manner that will utilize the efficiencies of the selected project delivery method.
This Section discusses the Design-Bid-Build method of project delivery. As illustrated in Figures 085.1 and 085.2, the design-bid-build project delivery method, abbreviated as D-B-B, is the traditional method of moving a project from its conception to its completion, and has the longest history of use.

For state and local government projects in the state of Ohio, multiple-prime D-B-B (Figure 085.1) was used almost exclusively, with single-prime D-B-B (Figure 085.2) as an option limited to very small projects, from 1877 until 2009, when House Bill 318 authorized three construction reform demonstration projects. In 2011, House Bill 153 added CM at Risk and Design-Build to the permissible project delivery methods available to state agencies, state institutions of higher education, counties, townships, municipal corporations, and special purpose districts.

D-B-B is a linear sequence of activities generally occurring in the following order: project conception, design (including schematic design and design development), construction documents, bidding, and then construction. The basis of D-B-B is twofold:

- The design and the bidding and construction documents are completed prior to bidding and construction
- The contractor is determined by selecting one of several bidders that have bid the work competitively.

The Nature of Competitive Bidding

Competitive bidding is the most effective method of determining the least cost for constructing the work that is described and defined by the bidding documents. Competitive bidding creates an environment where bidders at every level, contractor, subcontractor, and supplier, must carefully and seriously consider every aspect of their bid in the attempt to be awarded the work by providing a lower price than any of the other bidders. A bid states, or stipulates, the price the bidder will charge to perform the work (including overhead and profit) and may, if requested by the bidding documents, include the length of time required to complete the work.
The project design is developed and 100 percent complete bidding documents prepared by the A/E are made available to bidders. There are two categories of bidding procedures, and the method of project delivery will determine which category is used for a project:

- **Open Bidding:** Any interested bidder, that has the experience and qualifications if specified, may submit bids. This is the procedure for selecting Contractors in Ohio’s traditional multiple-prime contracting as well as the general contracting method.

- **Closed Bidding:** Only those bidders that have been pre-qualified may submit bids. This is the procedure for selecting Subcontractors in Ohio’s CM at Risk and Design-Build project delivery methods.

The following discussion will apply primarily to the Open Bidding category, but has elements of Closed or Invited Bidding that will be discussed further in Sections 090 and 095.

In order for the bidding process to be equally fair and openly competitive between the various bidders, the process requires a specific set of rules for preparing and submitting a bid. Also the process includes procedures for proposing and approving or rejecting substitutions.

Bids are confidentially prepared by each respective bidder and are submitted at a specified time, date, and place, after which the bids will be compared and evaluated. Unless there is a compelling reason to do otherwise, such as bid irregularities, the owner selects the responsible bidder and responsive bid with the lowest price and whose bid is in conformance with the requirements of the bidding documents. Bids may be considered irregular or non-responsive for various reasons, including but not limited to, bids containing incomplete information, bids improperly prepared, bids that include alterations to the bid form, bids submitted after the required time and date, or bids with qualifications or other questionable information.

While the initial construction costs are established when the owner contracts with the successful bidder, the total costs cannot be known until all changes in the work are discovered and the contract is almost complete. To manage this risk, prudent owners establish a contingency amount to cover revisions, scope changes, or changed site conditions. Refer to Section 050 – “Budgeting” for recommendations on the amount of contingency for various types of projects.

When the extent of work is contingent upon the funds available, certain provisions may be necessary to obtain costs for specific portions of the work. These portions of the work can be defined as alternates that will
permit separate costs to be determined. After a project is bid, the extent of work can be adjusted based upon
the alternate bids and the owner’s priorities. This process of alternate bids allows the owner to expand or
contract the extent of work in order to align the cost with the funds available.

Roles of the Stakeholders and Participants

The basic relationship between the owner, the A/E, and the contractor is shown in Figure 085.3 and is
described in CSI’s Project Delivery Practice Guide as the tripartite relationship. The tripartite relationship is
first established by the owner-A/E contract and then second by the owner-contractor contract. While there is
no contractual relationship between the A/E and the contractor, a third-party relationship is established by the
contracts with the owner. For example, the owner-A/E agreement specifies certain duties be performed by
the A/E acting on behalf of the owner. The contractor has a right to rely on the proper performance of these
duties. The A/E relies on the contractor to perform certain duties identified in the owner-contractor contract.

Owner: The owner contracts first with an A/E to design the project and to prepare bidding documents. The
owner then obtains bids through the competitive bidding process from bidding contractors. When one of the
bidders is selected by the owner, the owner will either directly enter into the contract or engage the contractor
through the Ohio Facilities Construction Commission as the authorized Contracting Authority.

Architect/Engineer: The A/E usually provides full professional design services the scope of which begins at
project conception and includes schematic design, design development, construction documents, competitive
bidding, construction contract administration, and closeout.

Contractor: The contractor is the bidder that has been selected and awarded the contract by the owner or
Contracting Authority. The contractor provides construction project management to construct the project
according to the contract documents and includes contracting with various specialty subcontractors and
suppliers.

Subcontractors and Material Suppliers: To determine the price to bid, a bidder obtains sub-bids from
specialty subcontractors and material suppliers that are based on respective portions of the bidding
documents. When the owner enters into a contract with the selected bidder, that bidder becomes the
contractor who then enters into individual subcontracts with specialty subcontractors and purchase orders
with material suppliers. Subcontractors and suppliers then provide the required labor and materials to
construct the project according to the contract documents. As there is no contractual relationship between
the A/E and the contractor, there is also no contractual relationship between the A/E and subcontractors and
material suppliers.
**Product Representatives:** Product representatives can be a good resource to the owner, A/E, and contractor by providing accurate technical information about the products they represent. For those materials that benefit from or require the installers to be certified, approved, authorized, or otherwise acceptable, representatives can identify those that are so qualified. They can also assist those specialty subcontractors and material suppliers by ensuring their bids are properly based on their products that are specified and offering technical assistance during installation.

**Benefits of the Design-Bid-Build Method**

The most significant advantage of D-B-B is that all participants in the design professions and construction industries are familiar with this method of delivering a project. Participant roles and responsibilities are well established, contract relationships are well understood, and conditions of the contract are similar from project to project. Familiarity with D-B-B promotes efficiencies in conceiving, designing, and constructing a project.

The owner is entitled to expect the contractor to construct the project for the cost that was bid and made the contract sum. Also, the contractor is entitled to expect the construction documents to be sufficient to accurately bid and construct the project. While this is true of every delivery method, it is especially true for D-B-B projects.

Project schedules are easier to establish because the various stages and phases of the project are easier to estimate since they do not overlap as do other delivery methods.

An owner who does not have staff with construction experience, qualifications, or the ability to bid and negotiate construction contracts might find D-B-B as the most desirable delivery method. Competitive bidding is often required by governmental agencies to ensure the taxpayer is paying a fair price for public facilities.

**Limitations of the Design-Bid-Build Method**

One of the primary disadvantages of D-B-B is “bid-day surprise” which occurs when all of the bids received exceed the owner’s budget for the project. Should the owner decide to not immediately proceed with the project at a higher cost, significant delays and additional costs will occur while the project is being redesigned and rebid. It is also possible that the project may be postponed or cancelled altogether.

The D-B-B delivery method is inherently adversarial. Competitive bidding requires that a contractor bid as low as possible to obtain the work and still make a profit. Unfortunately, on occasions when market conditions are extremely competitive, bidders may be tempted to bid the project with little or no profit in order to survive as a business and maintain profitability by continuing to construct projects. In this scenario, the contractor may be motivated to extract as much profit from the project as possible by constantly seeking change orders.

Unlike the other delivery methods, contractors that bid and construct D-B-B projects cannot rely on the owner carrying a contingency fund for scope of work inconsistencies that develop. Since it is not possible to prepare perfect construction documents or to perfectly bid the work, scope of work inconsistency problems develop when errors, discrepancies, omissions, and/or contradictory information are found in the construction documents or the contractors bids which can lead to change orders, claims, and disputes. Just as competitive bidding provides the lowest cost, it also allows little margin for error. Every scope of work inconsistency can place an A/E firm or contractor in an unfortunate difficult situation, where that firm will need to minimize any potential loss from that error.

Sometimes a bid for a D-B-B project may become a gamble when some unknowns are not considered. Some bidders may be tempted to bid a low price knowing that there are unknowns and then try to capitalize on the unknowns during construction for the purpose of making up the differences between the bid and the actual cost. D-B-B projects can result in a considerable number of requests for information and multiple changes. The shortness of the bid period forces everyone to respond quickly without proper consideration.

Just as the name implies, the competitive bidding process makes everyone an individual competitor, and places participants on opposite sides of the playing field which requires some form of refereeing. In the competitive bidding process the A/E has a duty to administer the construction contract.
Another limitation of D-B-B is that when the owner selects a bidder to be the contractor, the selection also includes accepting whichever subcontractors and material suppliers the contractor intends to use. Also, the owner has little influence on how the contractor buys out the work or if the contractor engages in “bid shopping” among the potential subcontractors and suppliers in the effort to improve the contractors profit. Unlike the other project delivery methods, the owner usually has no influence with how the contractor conducts construction project management.

**Decision to Use the Design-Bid-Build Method**

Public agencies are expected to be effective stewards of taxpayers’ money and to obtain the best possible price for the project. The D-B-B process permits the cost of the project to be known before contracts are executed. To facilitate the competitive bidding process, public agencies are obligated to establish an environment in which bidders can fairly and competitively compete for the work and protect the objectivity of the contract award process.

Historically, D-B-B has been the primary process of fulfilling these requirements and obligations on behalf of the taxpayers. Many projects have been successfully constructed for decades by this method. However, in Ohio D-B-B may now be replaced by one of the other project delivery methods, such as the CM at Risk or Design-Build project delivery methods.

Availability of Contractors with sufficient bonding capacity may influence the decision of selecting multiple-prime or general contracting D-B-B. With multiple-prime contracts, each Contractor is responsible for providing a performance and payment bond for the amount of its contract. With general contracting, a single contractor must provide a performance and payment bond for the entire project. As we transition from multiple-prime D-B-B and CM Adviser to other project delivery options, and given a sluggish economy with many contractors experiencing diminished financial resources, it may take time for the Ohio construction community to adapt their business model to the new project delivery methods. The owner should consider whether sufficient contractors are available to competitively bid for their project.

When D-B-B is used, the A/E represents the owner, provides services throughout the project, and makes design decisions based on the project and the best interests of the owner. The contractor provides a completed project that complies with the contract documents for a stipulated price. The contractor cannot represent the owner because the contractor has interests that are different from owner.
090 | Construction Management

This Section discusses the two types of Construction Management project delivery. One of the influencing factors regarding which project delivery method should be selected for a project is the experience and qualifications that the owner may or may not possess. It is prudent for an owner to be represented by knowledgeable professional expertise before proceeding with a project. One of the most popular project delivery methods is construction management, abbreviated as CM.

The Nature of Construction Management

CM is the process of applying professional management expertise to a construction project for the purposes of managing the project extent, cost, and time. It is most often implemented on projects with complex schedules or budgets, those that require extensive coordination between disciplines, and those where the owner has limited expertise with regard to design and construction. Used appropriately, the additional fees paid by the owner to a CM are offset by removing the burden of oversight of complex projects from the owner or the owner's staff.

A CM is an individual frequently having a background as an architect, engineer, or contractor. CMs are granted differing degrees of authority by the owner, depending on how the project is organized and the contracts arranged.

There are two variations of construction management project delivery:
- Construction manager as agent or adviser, abbreviated in this Section as CM/A
- Construction manager as contractor, abbreviated in this Section as CM/R

Construction Manager as Agent / Adviser

As illustrated in Figure 090.1, one variation of CM is when the CM serves as an agent or adviser to the owner, and is characterized by the following:

- The role of the CM/A is to advise the owner on the management of the design and construction of the project.

![Construction Management Project Delivery (CM as Agent or Adviser with Multiple-Prime Contractors) Figure 090.1](image-url)
- Depending on the contractual arrangement, the CM/A may or may not have the authority to represent
  and act on behalf of the owner. In the Standard Requirements, the CM/A has a limited role related to
  approving changes in the work or other modifications on behalf of the owner.
- The owner maintains direct contractual relationships with the A/E and either a single prime contractor, or
  multiple prime contractors (actually specialty subcontractors and material suppliers) depending on the
  project structure.
- The CM/A does not bear financial risk for the design and construction.
- CM/A may be used for any type of project but is most appropriate for owners who do not have the
  expertise or the time to manage a complex or difficult project.
- CM/A has been the model utilized by the Ohio School Facilities Commission to manage its program at
  each school district. In this scenario, the CM/A is sometimes referred to as a Program Manager.

**Construction Manager at Risk**

As illustrated in Figure 090.2, the other variation of CM is when the CM serves as, and bears the financial
risk in the same manner as a contractor.

The CM/R consults with the A/E and owner, prepares a preliminary project schedule, makes
recommendations for phased construction, prepares preliminary cost estimates, and, when documents are
sufficiently complete, proposes a cost which is usually capped by a guaranteed maximum price (GMP), and
finally executes the construction as a contractor who holds the subcontracts.

![Diagram of roles of stakeholders and participants](image-url)

**Construction Management Project Delivery (CM at Risk holds Subcontracts)**

**Roles of the Stakeholders and Participants**

The CM’s relationship with the owner is different from the relationship with either the A/E or the contractor
and depends on whether the CM is performing the role of agency or adviser, or at risk. The CM may provide
professional management services throughout the project from the conception of design through
postconstruction services, regardless of which type of CM the owner elects to utilize. As an adviser or agent,
the CM is generally acting in that role earlier in the project than the CM would be in the at-risk role. These
services may include cost management, detailed estimating, constructability reviews, milestone and critical
path scheduling, and value engineering.
Owner: Because the owner will contract with each prime contractor, the CM should review these contracts and make recommendations to the owner before the owner executes them.

The owner must establish budget and program requirements and convey this information to the CM.

Architect/Engineer: The A/E is responsible for producing design and construction documents that comply with the owner’s requirements and applicable codes and ordinances. The A/E services under CM are similar to those provided to an owner under D-B-B. These services include review of the owner’s requirements, preparation of alternate designs, schematic design documents, design development documents, and construction documents. The A/E determines the design and selects materials consistent with the cost limitations set by the owner’s requirements and budget. The CM may make recommendations during the design phases that influence the budget and ensure constructability. If the CM has budgetary oversight or control, these decisions may also influence the A/E’s design.

CM may diminish the A/E’s role, especially during construction. The following responsibilities may shift from the A/E to the CM:

- Prequalification/evaluation of bidders
- Evaluating change orders
- Providing full-time on-site representation
- Processing applications for payment
- Providing interpretations of scope issues for each contract
- Preparing change documentation
- Resolving claims and avoiding disputes
- Communicating directly with the owner
- Processing submittals

Some owners consider shifting site representation from the A/E to the CM an advantage because of the CM’s knowledge of construction. This also allows the A/E to concentrate on design issues, not construction issues.

The A/E should recognize and understand the additional time requirements necessary for construction management projects and make allowance for these differences by including adequate professional service fees in the owner-A/E agreement. Major items with lengthy time requirements include the following:

- Extended contract document preparation time due to multiple bid packages
- Reassembly of these separate packages into one complete set of contract documents
- Preparation and coordination for the owner-A/E agreement, the owner-CM agreement, the conditions of the contract, and Division 01 sections
- Extended substitution review time because of value analysis, which may include redesign to accommodate substituted items
- Detailed review of numerous monthly applications for payments on multiple-prime projects
- More complex submittal process

The administrative effort required of the A/E for a fast-track CM project is more complicated than for a conventional D-B-B projects because simultaneous contract document production, procurement, and contract administration will occur for a portion of the project life.

Construction Manager: The CM usually develops a construction management plan, often consisting of the following items:

- Project description
- Milestone schedule
- Project schedule
- Project organization chart and staffing plan
- Explanation of roles, responsibilities, and authority of team members
- Reference to project procedures (i.e., documenting activities throughout the design and construction)
- Bid packaging, contract scoping, and contracting strategy
- Site mobilization, contract scoping, and contracting strategy

The CM will manage quality assurance and quality control activities, including site observation and payment requests, and is responsible for ensuring that the completed project complies with the plan.

When the CM has responsibility for providing services that influence the design process, a conflict of interest may develop. For example, the CM may encourage use of an inexpensive product without the necessary performance characteristics. The relationship between the CM and the A/E is critical to a successful project. Mutual respect and open communication are necessary to allow each party to perform properly without duplicated effort.

**Contractors:** Companies that can be general contractors for D-B-B can be a single prime contractor under CM/R, but can also be one of the multiple prime contractors under CM/A, depending on the contractual arrangements.

**Subcontractors and Material Suppliers:** Companies that can be specialty subcontractors and material suppliers for D-B-B can not only be a subcontractor for a single prime contractor under CM/R, but can also be one of the multiple prime contractors under CM/A, depending on the contractual arrangements.

**Design-Assist Firms:** House Bill 153 allows early engagement of specialty contractors to assist the design team with their construction knowledge and expertise for the CM/R method of project delivery. This concept is known as Design Assist. These subcontractors have much in common with a design-builder except they are not required to provide a licensed design professional, but work with the A/E, who remains responsible to design and seal drawings and specifications submitted to the Department of Commerce or local certified building department for plan approval. Design-assist subcontractors may perform the construction work under certain conditions.

**Product Representatives:** Product representatives can be a valuable resource to the owner, A/E, and the CM by providing accurate technical information about the products they represent. For those materials that benefit from or require the installers to be certified, approved, authorized, or otherwise acceptable, representatives can identify those that are so qualified. And they can assist those specialty subcontractors and material suppliers by ensuring their bids are properly based on their products that are specified.

**Benefits of the Construction Manager Method**

CM projects are usually those involving multiple contracts, fast tracking, or are of such a complex nature that intense professional management is necessary. Such projects usually require services beyond those the A/E generally provides through its basic services, and typically exceed the capability of the owner's staff. The use of CM and the respective contracts will most likely offset additional A/E fees and costs associated with developing bid packages.

The CM's knowledge of construction, systems cost, and scheduling is a good reason to involve the CM during the design phases. This allows the CM to influence product selections by providing information regarding costs, availability, and performance. The CM may also have helpful information regarding design and constructability of project elements, components, and details. Many CM entities are staffed with architects, engineers, contractors, estimators, value analysts, and other professionals knowledgeable about design and construction. CMs usually have particular expertise in the following areas:

- Coordination of construction
Information management
Cost management
Time management
Quality assurance
Job-site safety

A CM can help reduce change orders and cost overruns by aiding communications among the parties, during the design and construction stages.

Assistance given to the A/E during the design is another substantial benefit of CM. The A/E’s design can benefit from information provided by those who will be responsible for construction. Because the CM usually monitors selection of products during the design, the CM may maintain budgetary control by initiating contracts for early purchase of materials and equipment.

When the CM has control of early purchase, construction progress schedules can be prepared with increased accuracy. The CM’s expertise and participation can help achieve an effective design, by avoiding redesign, to meet budget requirements. Usually the A/E is relieved of primary budgetary responsibility when the CM provides cost management. The CM’s responsibility for complying with the budget should give the A/E some assurance that the A/E will not have to perform costly redesign.

CM by its very nature can be tailored to fit the needs of a particular project. CM’s flexibility allows application of selected services required to supplement those already available to the owner through an in-house staff.

Limitations of the Construction Management Method

Projects that are small and simple in scope and contracted under a single stipulated sum are usually not suitable for CM. Also, projects that have little or no time constraints may not be appropriate. If an owner requires single-source responsibility or does not have time to devote to a construction project involving multiple phases or multiple contracts, then another type of project delivery method may be more appropriate.

The owner often pays a greater total amount for professional fees to the CM and A/E than would be paid on the same project where only an A/E and contractor are employed. Also, the selection and hiring process for a CM can increase the overall time frame for the project.

The additional level of authority resulting from the use of a CM requires communication, reporting, and other contract administration paperwork to be passed through the CM for processing and record keeping. An increase in these types of requirements can reduce overall contract administration efficiency and can be time consuming and expensive for the A/E and the contractor(s). These hidden cost increases are typically passed on to the owner through higher fees and prices.

The use of a CM may restrict direct communication between the owner and the A/E or contractor. This may result in the owner having to compromise on some aspect of the design or constructed work. When using construction management, the owner is relying heavily on the expertise and professional integrity of the CM, A/E, and contractor to deliver a project that will meet expectations.

When one party is advising the owner as well as constructing the project, the potential exists for conflicts of interest. The greater the financial stakes that one person has, the greater the potential for conflicts. When a CM/R performs a portion of the work, the CM/R assumes a direct financial interest in producing a profit on that portion of the work, which may not always be in the owner’s best interest. The CM/R may be reluctant to make changes that will directly influence profitability.

Decision to Use the Construction Management Method

No specific rules determine when CM would be more beneficial than another delivery method. However, general factors to consider in the decision include the project's size and complexity, as well as economic considerations, including projected inflation and interest rates, short time schedules, and success of previous
construction projects. When owners have critical needs to achieve project completion on time or have to achieve very ambitious project schedules, CM may be used beneficially. Conditions requiring project leadership not available from within the owner’s staff are another reason for choosing CM.

The following questions and issues should be considered before deciding to use CM:

- Does the project’s complexity necessitate intense professional management?
- Does the owner have capable personnel to assign to the project?
- Are multiple contracts including several parties involved?
- Are long-lead items involved?
- Will using CM be cost-effective or will it add a layer of management that provides no significant value?
- Is there a need to reduce the risk of potential cost and schedule overruns?

Management of construction time is another reason for choosing CM. Events may be sequential; that is, contract documents are completed before construction begins. However, the fast-track scheduling technique is often used. The fast track scheduling technique encourages design decisions to be made and documented earlier in the process through the cooperative efforts of the project team, consisting of the owner, CM, A/E, and contractors/subcontractors. Fast tracking creates an overlap in contract documentation and construction, with construction beginning before all contract documents are complete. Some projects may be divided into several contracts, each of which can be fast tracked.

The decision to use CM should take into consideration the type of project, the owner’s resources for preparing project requirements, the legal requirements in the area of the project, and the availability of CMs. CMs provide benefits that some owners want, including specialized expertise during design, economy in cost and time, and maximized value of the finished project.

When the owner decides to use CM, the owner then must decide which form of CM meets its objectives: CMI/A or CM/R.

The roles of the parties involved in a construction management contract should be carefully defined in their respective contracts. The capability of the owner’s staff to respond to the issues involved should be closely evaluated. When an A/E or a contractor acts in a dual role, the potential for conflict exists and should be evaluated. Construction management firms are usually staffed with personnel from the design professions and the construction industry. This allows the CM to provide management services from project conception through construction stages of a project.

Availability of CMs with sufficient bonding capacity may also influence the decision of selecting CM/R or CM/A project delivery. With multiple-prime contracts under D-B-B or CM/A, each contractor is responsible for providing a performance and payment bond for the amount of its contract, while the CM provides financial assurance only for the amount of its fee, if applicable. With CM/R, a CM is required to provide a performance and payment bond for the entire project. As we transition from multiple-prime D-B-B and CM Adviser to other project delivery options, and given a sluggish economy with many contractors experiencing diminished financial resources, it may take time for the Ohio construction community to adapt their business model to the new project delivery methods. The Owner should consider whether sufficient CMs are available to submit proposals for their project to receive competitive pricing.

CM allows owners to control the project from beginning to end with a higher level of assurance that the project will be on time and within budget.
This Section discusses the Design-Build method of project delivery. Some owners, projects, and circumstances have unique requirements and may need a more simplified contract arrangement or there may be a desire to explore multiple design options. Selection of the design-build project delivery method, abbreviated as D-B, may be preferred because the owner can contract with a single entity to provide all the design and construction services necessary for a project as illustrated in Figure 095.1.

The Nature of Design-Build

Design-build entities exist in a variety of forms, depending on the type of firm that offers the primary services in the design-build entity. In each of the following D-B variations, the principles are similar:

- An owner may contract with an A/E for DB services and the A/E then subcontracts with a contractor for construction services.

- An A/E and a contractor may form a joint venture and contract with an owner to provide design-build services.

- An owner may contract with the contractor and then subcontract with an A/E for architectural and engineering services.

- A design-builder may be a single company capable of providing both design and construction services from the staff.

There are several ways an owner can utilize D-B, however, the process starts by the owner preparing a project description of the performance-based requirements that establishes the required extent (scope), time (schedule), and cost (budget). How the project design is established is the principle difference in the several variations of D-B.

One way is when the owner contracts directly with a design-builder who is then responsible for developing the design, providing the contract documents, and finally constructing the project.

A second way is when the owner wishes to have greater control over the design decisions of the project and engages a Criteria A/E to create the project design and prepare schematic design documents, known as “bridging documents,” that become the basis of the contract with a DB entity. The Criteria A/E is not the “A/E...
of record” and is precluded from also being retained by the design-builder. This is the method recommended by the Ohio Construction Reform Panel and codified in House Bill 153.

Third, some owners may be inclined to request competitive proposals for design and construction services from several DB entities. To reduce the risks involved in competitive bidding, a modified selection process may be used that uses a combination of negotiations and competitive bidding. Initially the owner prepares the project description then requests proposals in two phases:

- **Phase I**: Usually requiring only minimal investment, a proposed project design and cost is submitted to the owner by each participating design-builder. The proposals are evaluated and either one design is selected, or several designs are selected if the process is competitive. The preferred design, or designs, may not always provide the least initial cost, so value decisions may have to be made. The selection process may conclude in negotiations with each of the design-builders or the process may continue to a second phase requiring more developed design and cost for each of the design-build proposals being considered.

- **Phase II**: The second phase can be time consuming and expensive for design-builders since only the selected design-builder will be fully compensated. To encourage participation, the owner may offer to pay a fee to cover all or part of the expenses involved in preparing second phase proposals. Participating design-builders submit more developed versions of the design and cost selected in the first phase. Again the proposals are evaluated and the owner makes a final selection and then negotiates the contract.

An additional feature of D-B is that other professional services can be offered that are in excess of the traditional design and construction services. Such services might include, but not be limited to, purchase and financing of the land, purchase and installation of specialized furnishings and equipment, building commissioning, and facility management. If these services are included in the DB contract, then the contract could be considered a turnkey contract. Turnkey contracts mean that one entity provides all the services an owner needs to accomplish a new facility ready for occupancy and use.

While some public agencies continue to utilize D-B-B, many public and governmental agencies have turned to D-B as a more efficient way of obtaining new facilities. D-B fulfills the need for agencies to be stewards of taxpayers’ money and obtain the best possible price for a project. Even when competitive bidding does not occur between DB’s, it occurs among specialty subcontractors and material suppliers for the purchase of materials and their installation in the project. Selection of firms providing DB services, for design and construction are not subject to the same requirements as for competitively bid D-B-B.
**Energy Performance Contracts:** The Ohio Facilities Construction Commission of Energy Services (“OFCC-ES”) has a long history of administering Energy Performance Contract projects as shown in Figure 095.2. This type of project is conducted in accordance with ORC Chapter 156 and begins with an Energy Specialist conducting an energy audit of an agency’s or institution’s facility or facilities and review of their utility bills to determine potential opportunities to include in a request for proposal (“RFP”). The RFP is published and establishes the criteria for the project and selection. Energy service companies (“ESCO”) submit proposals to OFCC-ES and the Energy Specialist and representatives of the agency or institution score the submissions to determine the best value to the State. Once the ESCO and OFCC-ES execute an agreement, the ESCO designs the energy conservation measures and engages subcontractors to perform the work. Thus, this type of project results in a D-B type project using Best Value Selection.

**Role of the Stakeholders and Participants**

D-B places the DB, including the AOR, in a relationship with the owner that is similar to the relationship of a vendor with a purchaser: the DB agrees to provide a completed project that meets the owner's requirements for an agreed-upon price.

**Owner:** The owner is responsible for preparing a project description that establishes the required extent (scope), time (schedule), and cost (budget) upon which prospective design-builders can base their proposals, or upon which a contract can be negotiated. For large projects, this can be a complex task and the owner may elect to have the project description prepared by a separate entity, usually an architect or engineer. In Ohio public construction law, that entity is known as the Criteria Architect/Engineer or Criteria A/E. Many of the subjects that should be addressed in the project description reflect early design decisions made during the project conception and programming. At a minimum, the project description should include the following items:

- Project overview
- Project timing
- Performance program requirements
- Submittal, testing and inspection, substitution, and warranty requirements
- Environmental requirements and site information
- Proposal requirements
- Proposal evaluation criteria
- Contract type

After the design-build contract is awarded, the owner may be left out of many day-to-day decisions and will have less contact with project activities than in D-B-B. The owner should, however, be actively involved in the process unless an administrative professional, under a separate contract with the owner, provides these services for the owner. The Criteria A/E may be retained by the owner to provide some of these services, such as oversight of quality control/quality assurance activities during design and construction and/or construction contract administration.

**Design-Builder:** The design-builder is responsible for providing a completed project that meets the owner’s project description. Quality assurance and quality control activities, including site observation, and payment requests are all managed by the design-builder with oversight by the owner or the owner’s Criteria A/E. The combined activity of design and construction results in efficient project management since the process inherently ensures cooperation between the designer and the contractor.

**Architect/Engineer:** As previously mentioned, the A/E is not a representative of the owner because the A/E’s services are performed in the interest of the design-builder and there is no contractual obligation or contractual relationship between the A/E and the owner. In Ohio public construction law, that entity is known as the Architect/Engineer of Record. The A/E services provided to the design-builder are similar to those provided to an owner using D-B-B. These services include review of the owner’s project description, preparation of alternative designs, preparation of preliminary design documents, and preparation of
construction documents. The A/E determines the design and selects materials consistent with the cost limitations set by the design-builder and the owner’s project description and budget, and in compliance with applicable codes and ordinances. All communication with the owner is conducted through the design-builder.

The design-builder has final responsibility for the project design, not the A/E as under other project delivery methods.

**Contractor:** The contractor, as a member of the design-build entity, performs the construction work. The construction activities of the project include providing not only materials, labor, and equipment necessary to complete the work, but also control over the means, methods, and techniques necessary to complete the project. This means that the contractor lends the necessary skills to the design-build entity, including project management, subcontractor management, supervisory duties, and superintendence for the work.

Because the design-build entity provides a proposal to the owner for the project before the construction documents are complete, the contractor is heavily involved in the preconstruction activities. This input allows the contractor to provide construction experience, cost estimating, logistics, and other project management expertise to the design as it is developed. The contractor can also make suggestions during the design phases regarding materials and systems selections. Working together as part of the design-build entity, both the contractor and the A/E have an obligation to the owner to meet the project requirements.

The design-builder has final responsibility for the project construction, not the contractor as under other project delivery methods.

**Subcontractors and Material Suppliers:** Companies that can be prime contractors, specialty subcontractors, and material suppliers for D-B-B may be subcontractors under D-B.

**Design-Assist:** House Bill 153 allows early engagement of specialty contractors to assist the design team with their construction knowledge and expertise for the Design-Build method of project delivery. These design assist firms have much in common with a design-builder except they are not required to provide a licensed design professional, but work with the A/E, who remains responsible to design and seal drawings and specifications submitted to the Department of Commerce or local certified building department for plan approval. Design-assist firms may be prequalified and bid to perform portions of the construction.

**Product Representatives:** The design-builder determines the most economical and efficient materials and methods to produce a project complying with established requirements. The product representative should work closely with the design-builder and the A/E to offer products that fit the project description established by the owner.

**Benefits of the Design-Build Method**

The primary benefit to the owner is that a single entity is responsible for design and construction. The single-contract arrangement also offers more control over project timing and costs. Fast-track scheduling is an available option for minimizing construction time and the design-builder is able to maximize the value of the project by fulfilling the project description in the shortest time for the least cost.

Because of the close coordination between the A/E and contractor during the design phases, the contractor can influence product selections by providing information regarding cost, availability, and performance. The design-builder may also have specialized information regarding design and constructability of project elements, components, and details. Examples include:

- Structural systems (e.g., using a precast concrete system may avoid the cold-weather delays of cast-in-place concrete)
- Exterior wall component supports (e.g., panelized components may save expensive field labor)
- Details involving multiple trades

Design-builders usually specialize in particular types of projects, such as institutional facilities, manufacturing facilities, utilities, speculative offices, or warehouses, where their construction experience is a significant
factor. Design-builders provide benefits that some owners desire, including specialized expertise during design, economy in cost and time, and maximized value of the finished project.

Limitations of the Design-Build Method

Preparation of the project description may be a difficult task for the owner. If the project requirements are complex and the owner does not have in-house staff familiar with construction projects, a third party Criteria A/E may be needed to assist the owner.

Because the A/E is working for the design-builder, the owner should not expect the same level of professional service to protect the owner's interest as normally performed during a conventionally delivered project. Some owners will engage the services of a Criteria A/E to act in the owner's interest.

Since the design-builder is creating the project design, the extent of documentation may not be the same (e.g., specifications may be replaced by manufacturer's data sheets). The design-builder usually will not perform any services not required by the owner's project description. Items normally taken for granted, such as shop drawings, product data, samples, testing and inspection, and extended warranties, may not be provided to the owner at all if not required by codes and regulations or by the owner's project description.

If not stated otherwise in the project description, material selections are usually left to the design-builder. If the owner wants to change a material or upgrade the design, a change order will likely be necessary. The owner's project description should clearly indicate necessary submittals, including the design documentation, as well as quality assurance/quality control submittals such as shop drawings, samples, testing and inspection, extended warranties, and product requirements.

Design-build contract administration requires attentive management on the part of the owner. Although the design builder is responsible for site administration and verification that the materials and products are included as specified, the owner may employ a Criteria A/E to monitor the project during the construction stage. The Criteria A/E may perform such activities as submittal review, site observation, payment request assistance, and determination of compliance with the contract.

Dispute resolution may require more of the owner's time. In D-B-B, the A/E, as a representative of the owner, maintains records of project administration, which are valuable in helping to resolve disputes when they arise. The owner in a design-build situation should also maintain such records for use if disputes arise.

The design-builder may have increased risk due to expanded roles in design and construction. In a stipulated sum contract between the owner and design-builder, the design-builder bears the risk of design and construction cost increases. The design-builder has made assurances to the owner that the work will meet the owner's project description, which usually includes limitation on contract sum and time. Any errors, discrepancies, omissions, and/or contradictory information in the contract documents also become a liability of the design-builder.

Decision to Use the Design-Build Method

The most important benefit to the owner is the single point of accountability that a single contract offers. Having a single contract also improves coordination between design and construction. Any type of project may be a candidate for D-B; however, these projects are usually those with reasonably predictable project requirements that the owner is able to describe clearly and completely.

Legal requirements influencing the decision to use D-B include the existence of state licensing laws permitting such entities to be formed. Both the contractor and the A/E may be required to be licensed to perform their respective services. The decision to use D-B should consider the availability of qualified design-builders for the project.

Availability of design-builders with sufficient bonding capacity may influence the decision of selecting D-B project delivery. With multiple-prime contracts under D-B-B or CM Adviser, each contractor is responsible for providing a performance and payment bond for the amount of its contract, while the CM provide financial assurance only for the amount of its fee, if applicable. With D-B project delivery, a design-builder may be
required to provide a performance and payment bond for the entire project. As we transition from multiple-
prime D-B-B and CM Adviser to other project delivery options, and given a sluggish economy with many
contractors experiencing diminished financial resources, it may take time for the Ohio construction
community to adapt their business model to the new project delivery methods. The Owner should consider
whether sufficient design-builders are available to submit proposals for their project.

The roles of the parties involved in a design-build contract should be carefully defined in the contract. The
owner’s loss of a direct relationship with the A/E and reduced contact with construction activities should be
evaluated and possibly offset by employing a Criteria A/E to act as the owner’s representative.
Sections in this Group describe the process of selecting and contracting with various parties to the project process. The Sections consist of the following:

105 | OFCC Procurement
110 | A/E Procurement
120 | CM Adviser Procurement
130 | Consultant Procurement
140 | Contractor Procurement
150 | General Contractor Procurement
160 | Energy Services Procurement
170 | CM at Risk Procurement
180 | Design-Build Procurement
190 | Subcontractor Procurement
This Section describes how OFCC clients or customers initiate a project with OFCC. It also outlines the scope of OFCC services and the mechanics of contracting with and doing business with OFCC.

Initial Contact

Any State agency or State institution of higher education that is not familiar with the capital improvement process for State of Ohio projects should contact OFCC when they recognize a need for a project. OFCC welcomes customers seeking more information about the process.

OFCC staff who receive a call or a letter from such individuals should direct the correspondence to the Program Manager responsible for that customer group or to the Executive Director.

While many Owners are experienced in the State capital improvement process and in working with OFCC, OFCC encourages those Owners to contact OFCC as early as possible in the project, and certainly not later than the date the Owner creates the scope and budget of the proposed project.

Establishing a New Project

After the Owner indicates the existence of a project to OFCC, and the Program Manager agrees that the project is indeed a viable project, the OFCC staff contacted by the Owner will request a project number from the Owner for the project, if one has not already been assigned. The Office of Budget and Management maintains the list of project numbers with the OAKS Financial module.

Owners must include the Project Number on all correspondence and all project documents. The Project Numbering System also is a tool for project management and business operation functions.

The first 10 characters constitute the basic (and typical) Project Number. It should routinely be preceded by the phrase “Project Number”. Use of the suffixes varies by context. Use the suffixes to indicate the overall project Phase number and Contractor number. The suffixes, when used with the basic project number, constitute the “contract number”. It is used primarily on internal OFCC documents, and on documents utilized
during the performance of a specific Contract in a specific phase. These suffixes are not generally used on
documents issued prior to award, such as design phase documents or the Solicitation.

Based on a number of factors, such as the project scope, size, and estimated project value, OFCC will
recommend to the Owner, the appropriate process for the project.

**OFCC Services**

OFCC provides *project management* and *contract administration* upon request for State-funded capital
projects for any State agency or institution of higher education. A/E and CM firms, perform professional
services for the project, under contracts managed by OFCC. Construction contractors build the facilities and
improvements under contracts managed by OFCC. Basic Services provided by OFCC include:

- Assist Owner in creating a Professional Services RFQ
- Advertise RFQ on the OAKS Capital Improvements website
- Receive / Review / Rate A/E Responses
- Create and send interview notices
- Conduct A/E interviews and create the Short List
- Create and send A/E Short List notification letter
- Produce and manage RFP
- Analyze Proposals from A/E
- Negotiate Professional Service Fees and Contracts
- Prepare Recommendation Letter for the Owner to Fund A/E Agreement
- Prepare Controlling Board Criteria
- Distribute A/E Agreement
- Process A/E Payments from design through construction
- Obtain and manage Constructability Review Consultants
- Produce Constructability Contracts and Payments
- Manage Constructability Review Process
- Conduct Design Stage Organizational Meeting
- Manage and participate in Design process
- Manage and participate in Advertising, Bidding and Award process
- Manage Preconstruction, Construction, and Closeout
- Promote, Manage and Participate in Dispute Avoidance and Dispute Resolution
- Provide and Manage CM Contracts and Amendments

**OFCC Additional Services:** OFCC provides additional services for its customers on an as-needed basis, an
as-requested basis, or both. At the onset of a project, or at the time the need or desire for the additional
services becomes known, the Project Manager reviews the additional services with the Owner. The Project
Manager then evaluates the special circumstances and specific needs of the project, prepares the fee, and
reviews it with the Program Manager.

After the Program Manager approves the Scope of Additional Services, the related OFCC fee is discussed
with the Owner for potential adjustment. When all adjustments are finalized, the fees are delineated in a
service agreement between OFCC and the Owner. OFCC requires payment for all Additional Services in
addition to the payment for Basic Services.
Examples of Additional Services are listed below. The list is not intended to be all-inclusive or restrictive.

- Manage Contractor default takeover process
- Litigation beyond Article 8
- Project Programming and Budgeting
- Site Evaluation and Selection Analysis
- Constructability Services
- Space Planning
- Building Commissioning
- Warranty Resolution
- Forensic Analysis
- Post Occupancy Evaluation
- Equipment Purchases Coordination
- Exigency Services

**OFCC Extra Services:** These types of services are generally described as any service not related to a current project, and those services or the projects typically are of a nature not normally associated with State-funded capital improvements.

**OFCC Fees and Payment**

OFCC is partially funded using a rotary account system and must assess fees for its services. OFCC fees are calculated on the project construction cost. OFCC fees for additional services and extra services are based on specific services required, and Local Administration fees are calculated on the total project cost.

On typical OFCC-administered projects, OFCC invoices for payments at the following predetermined points in the life of the project:

- 40 percent of the fee (based on the estimated construction cost) at the execution of the A/E Agreement. The Owner must encumber funding for OFCC on the same Controlling Board request for as the release of A/E fees.
- The balance of the fee (nominally 60 percent of the estimated fee) as adjusted to the actual construction cost which was determined by bidding and which was stated in the Construction contract recommendation letter.
- Change Order fees are calculated upon execution of each Change Order and are invoiced by OFCC shortly thereafter.

On Projects on which OFCC acts as the A/E, OFCC calculates its fees based on the fees of any Consultants, plus a mark-up. The Consultant fees and mark-up are confirmed in the **Agreement for Services: OFCC and Agency** (C105-01). The fees are usually billed on a monthly basis.
This Section identifies the requirements and process for the selection of and contracting with professional design services firms. Selection of design professionals is based on the Qualifications Based Selection (“QBS”) process outlined in the Federal Brooks Act. These firms, after entering into an agreement with the OFCC, are known as the “Architect/Engineer” or “A/E.”

Professional Design services, typically architectural, engineering and other professional firms, are contracted according to the requirements of ORC 153.65 through 153.73 et. seq. These requirements do not apply to any project with an estimated Professional Design fee of less than $50,000 or any project determined by the Executive Director of OFCC to be a Public Exigency under ORC 123.23.

Selection Process

“Professional Design Services” refers to services within the scope of practice of an Architect or Landscape Architect registered under ORC Chapter 4703, or a Professional Engineer or Surveyor registered under ORC Chapter 4733. Due to the complex nature of current design needs, OFCC has adopted the term for other providers of professional services as well.

OFCC will recommend start of the selection process once the program planning is complete and funding is available.

The process is summarized in the following Table:

<table>
<thead>
<tr>
<th>Tasks Required to Select an Architect/Engineer</th>
<th>Approximate Calendar Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFCC review/approve Owner’s Program of Requirements, OFCC accepts project</td>
<td>7</td>
</tr>
<tr>
<td>Owner delivers draft Announcement for Ohio Register; OFCC reviews / comments / revises</td>
<td>7</td>
</tr>
<tr>
<td>Ohio Register announcement based on the Request for Qualifications (RFQ)</td>
<td>5</td>
</tr>
<tr>
<td>Receive responses and A/E Statement of Qualifications (SOQ) forms</td>
<td>30</td>
</tr>
<tr>
<td>Review SOQs and create shortlist</td>
<td>21</td>
</tr>
<tr>
<td>Notify shortlisted firms, schedule and conduct interviews, make selection</td>
<td>21</td>
</tr>
<tr>
<td>Request a technical proposal from the selected firm; receive, review and obtain modifications; negotiate fee</td>
<td>21</td>
</tr>
<tr>
<td>OFCC sends recommendation letter to Owner</td>
<td>3</td>
</tr>
<tr>
<td>Owner prepares Controlling Board request, OFCC provides Owner with Controlling Board Criteria, Owner submits to C.B., gets on agenda, obtains approval</td>
<td>28</td>
</tr>
<tr>
<td>Funding approval appears in OAKS FIN, purchase order generated by Owner</td>
<td>10</td>
</tr>
<tr>
<td>Obtain signature of Attorney General</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total (days)</strong></td>
<td><strong>156</strong></td>
</tr>
<tr>
<td><strong>Total (weeks)</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>
There are six major processes, procedures and requirements which must be followed in the selection of an Architect/Engineer. The process is based on Qualifications Based Selection. The six steps are:

- **Advertisement:** OFCC publishes an announcement of the project, which includes a Request for Qualifications (RFQ) prepared by the Owner, in the Ohio Register on the OAKS Capital Improvements website: [http://ci.oaks.ohio.gov](http://ci.oaks.ohio.gov).
  - In addition to the announcement in the Ohio Register, the advertisement may be sent to:
    - Architect, landscape architect, engineer, and surveyor associations;
    - The news media;
    - Any publications or other public media, including electronic media.

- **Receive Responses:** Interested design firms submit a response to the RFQ (e.g., “Statement of Qualifications”, or “SOQ”; “Response to the RFQ” or “Response”), in the format identified or approved by OFCC.

- **Evaluate Responses and Create Short List:** The qualifications are reviewed by representatives of the Ohio Facilities Construction Commission and the Owner, who evaluate and score the response to the RFQ submitted by each firm. The scores are compiled to become the basis of creating a “short list” comprised of 3 or more qualified firms.

- **Interview and Selection:** The representatives of OFCC and the Owner interview the short-listed firms to determine selection of firms ranked in order, based on the results of the interviews.

- **Proposal:** Soon after determining the short list, OFCC will issue a Request for Technical Proposal (RFP) to the most preferred firm. The selected firm must submit a Technical Proposal to indicate the firm’s understanding of and proposed approach to the project, the budget and proposed fees for the project, and to serve as a reference during the negotiation process. The RFP and the Technical Proposal are referenced by the Agreement.

- **Fee Negotiation and Contract Award:** The selected firm and OFCC will negotiate the fees necessary to perform the required services, which, with the concurrence of the Owner, will result in a formal agreement between the firm and OFCC.

**Request for Qualifications:** The Owner must submit a request to the respective Program Manager of its intent to have OFCC publish a project announcement for a project. The Owner will include in its request a draft of the project announcement and submit it in the sample format provided by OFCC. The Program Manager or Project Manager will, in consultation with the Owner, review and, if necessary, modify the Owner-provided project announcement and score sheet information.

**Response to the Announcement:** A/E’s interested in submitting their qualifications on a particular project should respond to the announcement as instructed in the Ohio Register, by using an A/E Statement of Qualifications (F110-330) for each specific project.

**Review and Selection Team:** Within a week of publication of the announcement in the Ohio Register, OFCC will request the Owner appoint persons for the evaluation team and the interview panel. The representatives of the Owner and OFCC will independently evaluate the qualifications of the responding firms to establish the short list. The interview panel may consist of the Program Manager, Project Manager, or other OFCC personnel, and the Owner’s Representatives. The number of OFCC representatives on the team will match the number of Owner representative on the teams, usually two each.

**Required Content of the Statement of Qualifications:** Each block should be filled in completely, with special attention to the blocks requiring information, experiences, or qualifications relevant to the proposed project or services requested. The F110-330 form has two parts:

- Part I may be used in the evaluation process to develop the short list of firms to interview. Part I is similar to the previous ADM-0255 form. Both parts must be submitted for a specific project RFQ.
- Part II is used to define the organization and past experience of the prime and consultants that make up the team. Part II is similar to the previous ADM-0254 form.
Evaluating the Responses: Reviewers should review the submitted SOQ forms and judge the submittals based on the following characteristics:

- Overall presentation
- Firm experience and qualifications
- Understanding of and suitability for the project
- Staff Qualifications and Experience
- Relationship between applicant and proposed consultants

Architect/Engineer Short Listing Procedures:

- **Initial scoring:** OFCC and the Owner each assign two representatives to evaluate and score the responses. Each representative will review and score the proposals independently, but generally concurrently with other reviewers. All reviewers will use the same standard Architect/Engineer Selection Rating form, as provided with the project in the RFQ announcement. All four reviewers review each response and insert a score for each responding firm. Upon receipt, all proposals are given to the Project Manager for scoring of the Technical Parameters using the Consultant Selection Rating Form.

- **Scoring Consolidation by OFCC:** After all reviewers have completed their review and scoring of all responses, they will each forward their score sheets to OFCC where they will be compiled into a scoring summary sheet.

- A Program Manager will review the scoring summary sheet and establish, based on the scores, a short list of no fewer than 3 firms. Based on the scores, or the size of the project, the short list may be comprised of more than 3 firms. Preferably, no more than 5 firms will be short listed.

- The Chief of Projects or designee approves the short list and interviews are scheduled. The summary of the short list will remain in the Ohio Register until the Architect/Engineer Agreement is executed.

- **Short List Notification Letters:** All firms not included on the short list will be notified in writing. All short listed firms are notified of the date and time of the interview, by letter, signed by the Chief of Projects or designee.

Architect/Engineer Interview and Selection Process:

- The interviews may occur either at the offices of OFCC or, when possible, at a location established by the Owner. Interviews may include discussion of A/E’s Statement of Qualifications, scope and nature of the services the A/E would provide, and various technical approaches the A/E may use for the project.

- Interviewing firms should visit the proposed project site, especially for renovation work, have the primary firm and consultant staff who were proposed for the project attend the interview, not bring proposed designs to the interview, unless requested by OFCC, notify OFCC and the Owner of any substitutions of the members proposed in their SOQ. This should be done as soon as possible and must be done prior to the interview. Significant changes in key personnel or consultants may be cause for OFCC to rescind the invitation to participate in the selection process.

- **Interview Voting Structure:** OFCC and the Owner will have equal numbers of evaluators with scoring authority on the interview team. Another individual will be present to observe the interview and be available to vote in the event of a tie. This individual may be furnished by either OFCC or the Owner. The Owner may bring additional people to the interview. However, they will not submit interviewing scores, unless one individual is the designated tie-breaker. Each interviewing team member will submit one score sheet, ranking the firms as first, second, third, etc. While eliciting the independent view of each team member is an essential part of this process, the team will make every effort to reconcile differences of opinion so that the final interview scoring does not result in a tie. A round-table discussion of each team member’s assessment of the firms, before the final scores are recorded may help achieve consensus. If two or more firms receive top ranking, the designated tie-breaker will submit their rankings to break the tie. All firms interviewed will be notified of the selection in writing by the Program Manager.
Technical Proposal Requirements

Upon selection and approval of the preferred firm, OFCC will issue a Request for Technical Proposal (RFP) from the selected firm. The RFP will stipulate the time frame in which to submit the Technical Proposal, and will direct the A/E to simultaneously send a copy to both OFCC and the Owner. The primary purpose of the Technical Proposal is to indicate the firm’s understanding of the project and to serve as reference document in the negotiation process.

The RFP will require and the Proposal must include:

- A statement of the firm’s understanding of the project and the Program of Requirements (POR) to demonstrate that it understands the scope of work and services required. Some RFPs may require that the A/E meet with the Owner, visit the site, etc., to ensure a thorough understanding of the POR.
- Firm’s management approach to perform the project
- Firm’s approach to project delivery to ensure the best cost and time effectiveness
- Preliminary project schedule and other information which indicates that the firm understands and can provide the necessary services and complete the project in the time-frame required by the Owner.
- Proposed basic services, additional services, consultant fees, and projected reimbursable expenses necessary for the project
- Summary of the project budget including proposed fees, estimated reimbursable expenses, etc.
- Professional project liability insurance parameters (when requested)
- A statement of the A/E’s understanding of project security requirements and concerns.
- EEO Certificate Statements
- A list of contracts with State Agencies for the previous 24 months.
- Other relevant information

OFCC and the Owner will review the Proposal. The A/E and OFCC will review the project requirements and negotiate compensation which is fair and reasonable for the project. The compensation will reflect the following:

- Basic services and fees
- Appropriate additional services and fees
- Reimbursables and allowances for the project
- Change order fee allowance
- Any contract language revisions, such as modification to Basic Services

Fee Negotiation

The Project Manager will negotiate fees which reflect the scope of services required, based on the technical proposal, and in accordance with standard practices and fee parameters for basic and additional services, reimbursables, and allowances utilized by OFCC.

OFCC will determine, in consultation with the Owner, the budgeted construction contingency, which will be based on the size and complexity of the project.

Negotiation Failure

If the A/E which is ranked most qualified and OFCC do not successfully negotiate an Agreement, OFCC will notify the firm, in writing, of the termination of negotiations.
OFCC may then enter into negotiations with the firm ranked next most qualified by the short listing process. If negotiations again fail, the same procedure may be followed with each firm, in order of ranking until a contract is negotiated, or the State chooses to end the selection and award process.

If negotiation fails with all selected firms, additional firms may be considered from the short listing process, or the project may be re-announced.

**Award Process**

Following the completion of successful negotiations, OFCC will forward the Architect/Engineer recommendation letter and Controlling Board (CB) criteria to the Owner to secure the release of funding. OFCC will send a copy of the recommendation letter to the A/E.

OFCC will send the Architect/Engineer Agreement to the A/E for signature with a copy of the transmittal letter to the Owner. The transmittal will direct the A/E to sign the agreement and forward all four copies to the Owner for signature. The Owner signs and returns the Architect/Engineer Agreement to OFCC for further processing and execution.

At the same time, the Owner uses the OFCC Architect/Engineer Recommendation Letter (L110-01) and Controlling Board Criteria information provided by OFCC to request release of funding from the Office of Budget and Management/Controlling Board (“CB”).

The Owner initiates the Contract Encumbrance Form following approval of the CB, and sends it to OFCC for the approval and processing by the Office of Budget and Management (“OBM”).

Following encumbrance approval by OBM, OFCC forwards the Architect/Engineer Agreement, a copy of the A/E’s Workers Compensation Certificate, and proof of funding to the Attorney General for review and signature. Upon approval of the Attorney General, OFCC will distribute the executed Architect/Engineer Agreement to the A/E and the Owner.

**Agreement**

The Architect/Engineer Agreement (C110-01) and its variations are used by OFCC for contracting with the A/E. Similar Standard Forms of Agreement are used when a CM is involved in the project, when the Owner is pursuing certification under the Leadership in Energy and Environmental Design (“LEED”) green building rating system for the project, or both.

The A/E should be familiar with the Agreement and all supplemental documents. The Agreement itemizes fees in the following categories:

- **Basic Services**
- **Additional Services**
- **Reimbursable Expenses**

The A/E’s Technical Proposal is an attachment to and supplements the Agreement. It provides additional information on how the A/E will complete the agreement. The contents of the Proposal do not supersede any provisions of the Agreement unless specifically stated and included in Exhibit #1 - Scope of Architect/Engineer Agreement.

**OAKS Capital Improvements Procedure**

The A/E must submit its Technical Proposal using the the **Agreements** business process.

An Agreement will be issued which is based on the negotiated fee and which incorporates the Request for Proposal and the Proposal by reference.

**Traditional Paper-based Procedure**

If the Project is not administered using OAKS CI, the A/E may submit its Technical Proposal using traditional means as directed by the Contracting Authority.
Actions to correct discrepancies in the estimated Construction Budget:

- If for any reason the A/E’s estimate exceeds the Construction Budget during the Design Stage, the A/E must notify the Project Manager and the Owner of the cause of differences in writing.
- The A/E will be requested to analyze the program requirements in relation to the budget and make recommendations to the Owner to correct the budget differences. The A/E may be required to redesign the project to comply with the Construction Budget.

**A/E’s Construction Stage representation:**

- The Architect/Engineer Agreement will specify the number of hours per week the A/E must be represented on-site during the Construction Stage.
- The number of hours will exclude travel, any time expended performing contract administration at the A/E's place of business, and time expended performing contract administration activities at the site which could be easily performed in the A/E’s place of business.
- The A/E will be responsible to have any consultant attend the project at such intervals required by the Agreement, or as may be deemed necessary by OFCC to review the work and to achieve the results intended by the Contract Documents.

**Amendment**

If a change to the Agreement is required, the A/E begins the process by sending a request in writing to OFCC and the Owner outlining the scope of work revisions and any applicable adjustments in fee or reimbursables.

The A/E’s request is reviewed and validated by OFCC after discussions with the Owner.

The proposed fee is negotiated if necessary. If the request is approved, and funds are provided and encumbered by the Owner, OFCC prepares an Amendment to the Agreement.

OFCC sends the Amendment to the A/E for signature.

The A/E returns the signed Amendment to OFCC for further processing. The Amendment is executed by OFCC upon receipt of the appropriate proof of funding from the Owner.

Without exceeding the total compensation for the agreement, the allocation of costs may be adjusted upon request of the A/E and approval by the Contracting Authority without a formal signed amendment.

**OAKS Capital Improvements Procedure**

The A/E must submit its request for an Amendment or allocation adjustment using the OAKS CI business process.

**Traditional Paper-based Procedure**

If the Project is not administered using OAKS CI, the A/E may submit its request for an Amendment or allocation adjustment using traditional means as directed by the Contracting Authority.
This Section identifies the requirements and process for the selection and contracting of Construction Management Firms for capital funded construction projects. Construction Management services are contracted according to the requirements of ORC 9.33 through 9.335 et.seq.

**CM Adviser Services**

A Construction Manager ("CM") is a firm with substantial experience and knowledge to schedule, plan, estimate, coordinate and manage all phases of a project for the construction, demolition, alteration, repair or reconstruction of any public building, structure or other improvement.

Construction management services are specialized services and are utilized only for specific projects. Generally, construction management services are utilized for projects with budget in excess of $25 million or are of a difficult or complicated nature, as a project in a dense urban environment with significant site limitations or one requiring an expedited fast-tracked completion. Owners must request concurrence of OFCC to use construction management.

For many years, public authorities in the state of Ohio were limited to using CM services as their agent under multiple-prime Design-Bid-Build and were prohibited from using CM at Risk services. House Bill 153 passed in June 2011 permitted the use of General Contracting, CM at Risk, and Design-Build as additional project delivery methods.

**Request for Qualifications**

On projects on which the Owner desires to retain a CM, at the start of a project, the Owner must provide OFCC with written justification to utilize a CM.

Upon agreement to employ a CM, OFCC will publish a notice of its intent to employ a CM by placing a Request for Qualifications ("RFQ"), one time in a newspaper of general circulation in the county where the contract is to be performed. The advertisement will include a general description of the Project, a statement of the specific services required, and a description of the minimum qualifications required to be considered for the Project. Depending on the location of the project, the announcement may be placed in other newspapers.

In addition to the newspaper advertisement, OFCC will publish the RFQ for CM services on the OAKS Capital Improvements website at [http://ci.oaks.ohio.gov](http://ci.oaks.ohio.gov) in accordance with OAC Section 153:1-5-01. The RFQ may also be published on the State’s public notification website when it becomes available. The electronic notification will be distributed to EDGE-certified CM and construction firms, or other members of diversity and inclusion programs required by OFCC or applicable law. OFCC maintains a list of Minority Business Assistance Centers (MBAC) and Procurement Technical Assistance Centers (PTAC) that have agreed to receive solicitations from State agencies and institutions of higher education. The electronic notification should indicate where a potential CM/R may find a full description of the Project and how to submit a proposal.

**Application Procedures**

Applicants for CM services must respond to the RFQ by submitting qualifications responsive to the RFQ and representative of the services necessary to perform Construction Management services for the Project, including, as a minimum:

- A general overview of their firm's organization and structure
- Resumes of the key personnel proposed for the project, identifying their competence and experience in performing the required management services required by the Project. Prospective applicants must identify their key in-house personnel and consultants proposed for the project. Applicants must identify technical training, education and experience of the CM’s personnel and consultants who will be assigned to the Project.
A statement of the availability in terms of workload of the specific personnel, who are proposed to perform the services, and which identifies any associated equipment and facilities to be utilized

A statement identifying its past performance, as reflected by the evaluations of previous clients with respect to factors such as quality control processes and procedures, scheduling, packaging, cost development and control processes, quality of work and meeting deadlines

Audited financial statements for the reporting period most recently completed

Other additional information relevant to the Project

Short Listing Procedure

OFCC and the Owner will concurrently review and score responses to the RFQ. The Owner will submit their scores to OFCC who will consolidate the scores and rank the submittals. Based on the ranking, OFCC and the Owner will short list no fewer than 3 firms for interviews. Short listed firms will be notified by OFCC with the interview details. All non-short listed firms will be notified in writing by OFCC.

Interview and Selection Process

When possible, interviews will be held in the Owner’s location. Interview format and time frame will be determined on a project by project basis. OFCC and the Owner will rate each CM on the CM Selection Rating Form. CM's will be notified in writing with the results of the evaluation.

Negotiation

Following the interview process, the top ranked firm will be requested to submit an Implementation Plan and a Fee Proposal. OFCC and the Owner will review the Implementation Plan and Fee Proposal and may require revisions, corrections or it may reject the proposal and require the firm to revise and resubmit. The Implementation Plan should include:

- Statement of firm's understanding of the project
- Firms management and project approach
- A preliminary Project Schedule
- Proposed fee and reimbursables
- Project budget summary
- Insurance parameters
- EEO Certificate information
- Staffing Plan
- Compensation Plan outlining:
  - Direct personnel expense and benefits
  - Overhead expenses
  - General Conditions items and costs
  - Reimbursable expenses

Negotiation Failure

If the CM ranked most qualified fails to successfully negotiate an Agreement, the firm will be informed, in writing, of the termination of negotiations. Negotiations will begin with the firm ranked next most qualified. If negotiations again fail, the same procedure will be followed with each firm, in order of ranking, until a contract is negotiated. If negotiation fails with all selected firms, additional firms from the short listing process will be
identified and ranked for interviewing and follow the process above, or the advertisement may be re-announced.

**Agreement**

Following successful negotiations, OFCC will send copies of the CM recommendation letter to the Owner and CM, and OFCC will provide Controlling Board criteria for the Controlling Board Request as required.

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The Owner will submit requests for release of capital funding from the Office of Budget and Management/Controlling Board (“CB”).

The Owner will initiate a Contract Encumbrance Form following approval of the CB and send it to OFCC for signature and the approval of OBM.

Following encumbrance approval by OBM, OFCC will attach the copies of the Agreement and certification of funding and forward the packet to the Director of DAS or his/her designee for execution.

**Amendment**

Material changes or revisions of the scope of work after execution of the Agreement, through no fault of the CM, may result in an adjustment of the CM’s compensation.

Without exceeding the total compensation for the agreement, the allocation of costs may be adjusted upon request of the CM and approval by the Contracting Authority without a formal signed amendment.

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This Section identifies the availability of Consultants for capital funded construction projects.

Consultant List

OFCC uses the term “Consultant” to denote firms retained through a process which is independent of and less complex than the A/E selection process. OFCC maintains a list of Consultants who are available to provide design and other services to any of its customers.

Listed Consultants are utilized for small projects or specialized tasks in which the A/E selection process would be unnecessarily cumbersome. The use of Consultants from the list enables the Consultant, in most cases, to begin work within two weeks of selection, resulting in significant time and administrative cost savings.

When Listed Consultants are utilized, they perform their services under a limited personal services contract with OFCC, and therefore can only be utilized on OFCC-administered projects.

To utilize a Listed Consultant, the Owner should contact a Program Manager or Project Manager, who will provide assistance. The Owner should provide a budget and scope of work and an acceptable Program of Requirements to OFCC at that time. Professional services may be utilized as the project requires. Consultants are available to perform services in the following disciplines:

- Architecture
- Asbestos and Other Hazardous Material Abatement
- Landscape Architecture
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Geotechnical Testing and Engineering
- Energy Auditing Services
- Energy Conservation Design Services
- Environmental Engineering
- Civil Engineering
- Concrete/Structural/Materials Testing Services
- Partnering Services
- Scheduling/Claims Analysis
- Surveyors
- Construction Management
- Interior Design Services
- Relocation Management Service
This Section identifies the documents, which are ordinarily required to be submitted as a Bid, and the documents, forms and submittals involved in creating and processing the Contractor's Contract.

Procurement Information

Complete descriptions of the process of procurement of A/Es, CMs and Consultants are contained in Sections 110, 120, and 130 respectively in the “Procurement” (100) series sections. However, the description of the process and requirements involved in selecting a Contractor and preparing and issuing the Contractor's Contract are contained in Section 250 – Bid & Award (D-B-B).

The content of this Section is primarily limited to presentation of the documents involved in the Contractor procurement process. The Contractor procurement process is presented in this way for the following reasons.

- OFCC's filing/coding system was designed to follow the flow of a typical project chronologically. Whereas the A/E, CM and Consultant are typically acquired early in a project, the Contractor is acquired at a much later point in the process, so the filing/coding system was structured to include the bulk of the Contractor procurement information in the number series for the Bid and Award process in Section 250.
- Whereas agreements for professional services have unique content which actually defines the scope of services required, the Contractor's Contract itself is a standard, relatively straightforward document which contains little specific information about the project. The Contract Documents in their entirety contain the unique information which constitutes the Contract. Accordingly, the design of the coding system was based on the premise that the documents associated with the Contractor contract could be separated from the description of the procurement process with little loss of continuity.
- The forms and submittals associated with Contractor procurement constitute a substantial list of documents. This Section provides a convenient place in which to present them in one concise area.

Contract-Related Documents

The following documents are issued and processed as a component of Contractor procurement. Many of the documents are issued within the Procurement Documents.

- Documents submitted by the Bidder with its Bid:
  - **Bid Form**: This is the form on which the Bidder submits his Bid and is included in the Contract Documents issued to all Bidders.
  - **Bid Security Form**: This form, upon which the Bidder submits its Bid and Performance Bond, is included in the Contract Documents issued to all Bidders.
  - **Power of Attorney**: This form is issued by the Bidder's surety and certifies that the issuer of the bond is authorized to do so on behalf of the surety.
  - **Bank check, certified check, or letter of credit**: This serves as the Bid Bond if the Bidder does not submit the standard Bid Guaranty and Contract Bond.

- Documents issued by OFCC:
  - **Bid Rejection Notice**: This form is issued by OFCC to the Bidder if it is necessary to notify the Bidder that the Bidder's Bid is not being accepted because it was found to be non-responsive or the Bidder was found to be not responsible.
  - **Contractor Recommendation Letter**: This letter is sent to the Owner and is used as the basis for the Owner's Controlling Board request.
  - **Subcontractor and Material Supplier Declaration**: This form is used by Contractors to identify and provide information on their Subcontractors and Material Suppliers. It must be submitted to the A/E. After the A/E approves it, the A/E will forward it to OFCC. It must be approved by OFCC before OFCC can process the Contractor's first Contractor Payment Request.
- **Payment Release Affidavit**: This form is used by the Contractor to certify that all Subcontractors and Material Suppliers on the project have complied with prevailing wage regulations and have been paid in full.

- **Payroll Schedule**: This form is used by the Contractor and Subcontractors to indicate the dates on which their payroll periods terminate, as a means to assist OFCC in monitoring the Contractor’s payroll reports.

- **Contractor Payment Request**: This form provides pages for cost breakdown information, including the Schedule of Values, and is used for very large contracts where the extra detail sheets are required. It must be completed by the Contractor, and submitted and approved before payments may be made.

- **Escrow Agreement Transmittal and Escrow Agreement**: These forms are used by the Contractor to indicate the Contractor's consent to the establishment of an escrow account to receive retainage on the Contract.

- **Certified Payroll Report**: This form is used by the Contractor to provide payroll reports.

- **IRS W-9 Form**: This form is used by the Contractor to formally notify OFCC of its company name and tax I.D. number so that they can be entered into OFCC's and State Accounting's databases.

- **Electronic Funds Transfer Authorization**: This form is used by the Contractor to indicate the Contractor's consent to receive payment by direct deposit.

- **Tax Exempt Certificate**: This form is issued to the Contractor to documentation that the materials incorporated into the project are exempt from State sales tax. The Contractor is free to reproduce this form and give a copy to its suppliers and Subcontractors.

- **Notice of Commencement of Public Improvement**: This form is issued to the Contractor to identify the Contracting Authority, the Contactors, their sureties, and to provide other information of interest to Subcontractors and Material Suppliers.

- **Bid Extension Request Letter**: This letter is issued to the Contractor in the event that OFCC needs to request that the Contractor extend the period during which the Contractor’s bid is valid beyond the 60 days required in the Contract Documents.

- **Certification of Contractor’s Signature**: This form is used by the Contractor to notify OFCC which officials have signature authority for the firm.

- **Notice of Intent to Award**: This form is issued to the Contractor to indicate OFCC's intent to award the Contractor a Contract, to request that the Contractor submit requested information, and to enable the Contractor to proceed with preparation of shop drawings and other preliminary work to expedite the performance of the Contract.

- **Notice to Proceed**: This form is issued to the Contractor to establish the start date for the performance of the Contract.

- **Contract Form**: This form is the same form as the sample included in the Procurement Documents except that it has been completed to identify the project, the name of the Contactor, the contract amount, and other information, and has been signed by all parties to evidence the existence of an agreement between the Contracting Authority and the Contractor.

- **Documents submitted to OFCC or others by an apparent low Bidder or Contractor:**
  - All documents listed above which are required to be returned to OFCC, and
  - **Bid Information Escrow Agreement**: This information is submitted to the bonded storage facility designated by OFCC and may be used as a record of the Bidder’s bid calculations in the event of dispute.
  - **Performance and Payment Bond Form**: This form serves as a Contract Bond. It is only required if the Bidder submitted a bank check, certified check or letter of credit as a Bid Bond in lieu of a standard Bid Guaranty and Contract Bond.
  - **Power of Attorney**: This form is issued by the Bidder’s surety and certifies that the issuer of the bond is authorized to do so on behalf of the surety, and is usually submitted with the Bid. The Power of Attorney is required to be submitted after bidding only if the Bidder submitted a bank
check, certified check or letter of credit as a Bid Bond instead of the standard Bid Guaranty and Contract Bond.

- **Certificate of Compliance:** This certificate is issued by the Department of Insurance, to certify that the Surety for the Contractor’s bond(s) is licensed to do business in Ohio.

- **Certificate of Good Standing:** This form is issued by the Secretary of State to certify that the Contractor is registered to do business in the State of Ohio. This form is only required from Contractors which are incorporated outside the State of Ohio.

- **Ohio Workers’ Compensation Certificate:** This certificate is issued by the Ohio Bureau of Workers Compensation to indicate that the Contractor is in compliance with its regulations.

- **Certificate of Compliance with Affirmative Action Programs:** This certificate is issued by DAS, Equal Opportunity Division to indicate that the Contractor is in compliance with its regulations.

- **Certificate of Insurance (ACORD form):** This form is issued by the Contractor’s insurer to document the limits of insurance under which the Contractor is covered.

- **Proof of licensing:** This form is issued by the Department of Commerce, Industrial Compliance Division, Ohio Contractors Industry Licensing Board (OCILB) pursuant to ORC Chapter 4740, for Contractors performing plumbing, electrical, hydronics, refrigeration; or heating, ventilating and air conditioning (HVAC).

- **Other Documents:**
  - **Certification of Contractor Contract Requirements:** This certification is issued by the Contracting Authority to the Office of the Attorney General (OAG) to certify that certain legal requirements have been met prior to the OAG’s signing of the Contractor’s Contract. The OAG has variations of this form available on its website for agencies, universities, and two-year colleges.
Energy Services Procurement

This Section discusses the procurement of energy services companies (“ESCO”) for energy performance contract projects.

Procurement Information

The Ohio Facilities Construction Commission of Energy Services (“OFCC-ES”) has a long history of administering Energy Performance Contract projects as shown in Figure 095.2. This type of project is conducted in accordance with ORC Chapter 156 and begins with an Energy Specialist conducting an energy audit of an agency’s or institution’s facility or facilities and review of their utility bills to determine potential opportunities to include in a request for proposal (“RFP”).

The RFP is published and establishes the criteria for the project and selection. Energy service companies (“ESCO”) submit proposals to OFCC-ES and the Energy Specialist and representatives of the agency or institution score the submissions to determine the best value to the State. Once the ESCO and OFCC-ES execute an agreement, the ESCO designs the energy conservation measures and engages subcontractors to perform the work.
160 | General Contractor Procurement

This Section discusses the procurement of a General Contracting firm in a manner that is very similar to bidding multiple-prime contracts.

Procurement Information

Complete descriptions of the process of procurement of A/Ems, CMs and Consultants are contained in Sections 110, 120, and 130 respectively in the “Procurement” (100) series sections. However, the description of the process and requirements involved in selecting a General Contractor and preparing and issuing the Contractor's Contract are contained in Section 250 – Bid & Award (D-B-B).

General contracting means constructing and managing an entire public improvement project, including the plumbing, fire protection, HVAC, and electrical trades, under the award of a single aggregate lump sum contract.
170 | CM at Risk Procurement

This Section identifies the requirements and process for the selection and contracting of Construction Management Firms for capital funded construction projects. Construction Management at Risk services are contracted according to the requirements of ORC 9.33 through 9.335 et.seq.

CM at Risk Services

A Construction Manager at Risk ("CM/R") is a firm with substantial discretion and authority to plan, coordinate, manage, direct, and construct all phases of a project for the construction, demolition, alteration, repair, or reconstruction of any public building, structure, or other improvement and who provides the public authority a guaranteed maximum price as determined in ORC Section 9.334.

Construction management services are specialized services and are utilized only for specific projects. Generally, construction management services are utilized for projects with budget in excess of $25 million or are of a difficult or complicated nature, as a project in a dense urban environment with significant site limitations or one requiring an expedited fast-tracked completion. Owners must request concurrence of OFCC to use construction management at risk project delivery.

The process for acquiring CM/R services is known as Best Value Selection. This is a two-step process, consisting of a qualifications phase and a request for proposal phase, in which proposals contain both pricing and performance components, and award is based upon a combination of pricing and performance considerations to determine the offer deemed most advantageous and of the greatest value to the State.

Qualifications Phase

The intent of the Qualifications Phase is to determine a short list of 3 to 5 CM/R firms that will advance to the Request for Proposal Phase for the Project. Before announcing the contract for CM/R services, OFCC in consultation with the Owner will establish criteria and the scoring method for evaluating a CM/R firm’s qualifications. At a minimum, the following criteria must be included:

- Competence to perform the required CM/R services as indicated by the technical training, education, and experience of the CM/R’s personnel, especially the employees who it proposes to staff the Project;
- Ability in terms of workload and availability of qualified personnel, equipment, and facilities to perform the required CM/R services competently and expeditiously, and experience working on similar projects;
- Past performance reflected by the evaluation of previous clients with respect to factors such as control of costs, quality of work, dispute resolution, administration of subcontractors, and meeting deadlines;
- Financial responsibility, including evidence of the capability to provide the performance bond and payment bond in accordance with OAC Section 153:1-4-02(A);
- History of performance meeting the goals of any required diversity and inclusion programs including, but not limited to the EDGE program, and compliance with affirmative action programs; and
- Other qualifications consistent with the scope and needs of the Project including, but not limited to, knowledge of the local area and working relationships with local Subcontractors and Material Suppliers.

Upon agreement to employ a CM/R, OFCC will publish a notice of its intent to employ a CM/R by placing a Request for Qualifications ("RFQ"), one time in a newspaper of general circulation in the county where the contract is to be performed in accordance with ORC Section 9.331. The advertisement will include a general description of the Project, a statement of the specific services required, and a description of the minimum qualifications required to be considered for the Project. Depending on the location of the project, the announcement may be placed in other newspapers.

In addition to the newspaper advertisement, OFCC will publish the RFQ for CM/R services on the OAKS Capital Improvements website at http://ci.oaks.ohio.gov in accordance with OAC Section 153:1-5-01. The RFQ may also be published on the State’s public notification website when it becomes available. The electronic notification will be distributed to EDGE-certified CM and construction firms, or other members of diversity and inclusion programs required by OFCC or applicable law. OFCC maintains a list of Minority
Business Assistance Centers (MBAC) and Procurement Technical Assistance Centers (PTAC) that have agreed to receive solicitations from State agencies and institutions of higher education. The electronic notification should indicate where a potential CM/R may find a full description of the Project and how to submit a proposal.

The RFQ must include the following:

- The qualifications criteria required for the Project
- The performance and pricing criteria required for the Project and how they will be evaluated and weighted in the request for proposal phase of the selection;
- Any minimum or mandatory technical requirements for the Project.

Records of decisions made at all stages of the selection process will be maintained and made public upon request after the announcement of the selected firm.

Applicants for CM/R services must respond to the RFQ by submitting qualifications responsive to the RFQ and representative of the services necessary to perform CM/R services for the Project, including, as a minimum:

- A general overview of their firm’s organization and structure
- Resumes of the key personnel proposed for the project, identifying their competence and experience in performing the required management services required by the Project. Prospective applicants must identify their key in-house personnel and consultants proposed for the project. Applicants must identify technical training, education and experience of the CM/R’s personnel and consultants who will be assigned to the Project.
- A statement of the availability in terms of workload of the specific personnel, who are proposed to perform the services, and which identifies any associated equipment and facilities to be utilized
- A statement identifying its past performance, as reflected by the evaluations of previous clients with respect to factors such as quality control processes and procedures, scheduling, packaging, cost development and control processes, quality of work and meeting deadlines
- Audited financial statements for the reporting period most recently completed
- Other additional information relevant to the Project

Evaluation committee: OFCC will convene an evaluation committee consisting of OFCC and the Owner’s staff. If an A/E has been selected for the Project, employees of the A/E may support the evaluation process and advise on technical and pricing issues, but will not be permitted to score the responses. OFCC and the Owner will concurrently review and score responses to the RFQ. The Owner will submit their scores to OFCC’s selection coordinator, who will consolidate the scores and rank the submittals. Based on the ranking, OFCC and the Owner will short list no fewer than 3 CM/R firms to receive a Request for Proposal (“RFP”). Short-listed firms will be notified by OFCC with the RFP and interview details. All firms that are not short listed will be notified in writing by OFCC.

Request for Proposal Phase

OFCC will provide each selected firm with a description of the project, including a statement of available design detail, a description of how the guaranteed maximum price for the project shall be determined, including the estimated level of design detail upon which the guaranteed maximum price shall be based, the form of the CM contract, and the RFP.

Pricing criteria: In preparation for the pricing component of the RFP, OFCC in consultation with the Owner, will establish pricing criteria, which shall contain the following components:

- A fee proposal divided into a preconstruction fee, a construction fee, and the portion of the construction fee to be at risk in a guaranteed maximum price;
- A statement of the general conditions and contingency requirements; and
If applicable at the time proposals are requested, a guaranteed maximum price proposal.

**Performance criteria:** In preparation for the technical component of the RFP, OFCC in consultation with the Owner, will establish performance criteria, which may include evaluation of the CM/R’s proposed:

- Schedule;
- Approach to the Work, including any anticipated self-performed Work;
- Sequencing of the Work;
- Performance history;
- Approaches to performance specifications when used;
- Plan for anticipated procurement difficulties;
- Plan for meeting the published EDGE participation goals for the Project, or other diversity and inclusion goals required by the Owner or applicable law; and
- Plan for additional considerations, which may include technical approach, quality of its proposed list of key personnel for the Project, and its management plan.

**Request for pricing and technical proposal:** Once the evaluation committee has determined the short-listed firms, OFCC will release the request for pricing and technical proposals (“RFP”) to the short-listed CM/R firms. The RFP will include the following:

- A description of the Project, including a statement of available design detail;
- A description of the required preconstruction services;
- The form of CM/R contract;
- A description of how the guaranteed maximum price for the Project will be determined, including the estimated level of design detail upon which the guaranteed maximum price will be based, if not otherwise set forth in the CM/R contract; and
- A request for a pricing proposal, including the estimated cost of construction for the Project, for the purpose of calculating the fees proposed by a CM/R.

**Pricing proposal:** A proposer for CM/R services must include the following in its pricing proposal:

- A list of key personnel for the Project;
- A statement of the general conditions and contingency requirements; and
- A fee proposal divided into a preconstruction fee, a construction fee, and the portion of the construction fee to be at risk in a guaranteed maximum price.

**Technical proposal:** A proposer for CM/R services must include the following in its technical proposal:

- A Project-specific plan;
- The identity of its proposed team;
- The Project-specific approach to deliver the expected services; and
- The performance criteria components identified above.

**Pre-proposal submission meetings:** Prior to the submission of pricing and technical proposals, OFCC and the Owner may meet with each short-listed firm individually to permit the firm to ask questions regarding the proposal requirements.
Determination of Best Value

The evaluation committee will interview each short-listed firm that submits a pricing and technical proposal. The purpose of the interview is to allow each firm an opportunity to clarify and respond to questions related to its proposal. OFCC may provide a list of questions to the firms prior to the interview. The interview will not be scored or included in the scoring of the proposal. If OFCC finds a major discrepancy or irregularity in a pricing proposal, OFCC will notify the affected firm in writing to address the concerns at the interview and require that the firm provide a response in writing no later than the date of the interview.

The committee will evaluate each pricing and technical proposal utilizing the established pricing and performance criteria. The committee will evaluate the pricing criteria separately from the performance criteria, then combine the evaluations to reach a final evaluation. The committee will rank the firms based on the final evaluation of each proposal to determine the best value.

Negotiation

Once the committee has completed ranking the CM/R firms, OFCC will announce the firm determined to be the best value and enter into negotiations for a CM/R contract. Contract negotiations shall be directed toward:

- Ensuring that OFCC and the firm mutually understand the essential requirements involved in providing the required CM/R services, including the provisions for the use of contingency funds and the possible distribution of savings in the final costs of the project;
- Ensuring that the firm will be able to provide the necessary personnel, equipment, and facilities to perform the CM/R services within the time required by the contract;
- Agreeing upon a procedure and schedule for determining a guaranteed maximum price using an open book pricing method that shall represent the total maximum amount to be paid by the Owner to the CM/R for the project and that shall include the costs of all the work, the cost of its general conditions, the contingency, and the fee payable to the CM/R.

If the CM/R ranked the best value fails to successfully negotiate a contract, the firm will be informed in writing of termination of negotiations. Negotiations may begin with the firm ranked next best value. If negotiations again fail, the same procedure may be followed with each firm, in order of ranking, until a contract is negotiated. If negotiation fails with all selected firms, additional firms from the short listing process may be identified and ranked for interviewing and follow the process above, or the contract may be re-announced.

Agreement

Following successful negotiations, OFCC will send copies of the CM/R recommendation letter to the Owner and CM/R, and OFCC will provide Controlling Board criteria for the Controlling Board Request as required.

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Amendment

Material changes or revisions of the scope of work after execution of the agreement, through no fault of the CM/R, may result in an adjustment of the guaranteed maximum price.

Without exceeding the guaranteed maximum price, the allocation of costs may be adjusted upon request of the CM/R and approval by the Contracting Authority without a formal signed amendment.

OAKS Capital Improvements Procedure

The CM/R must submit its request for an Amendment or allocation adjustment using the Amendments business process.

Traditional Paper-based Procedure

If the Project is not administered using OAKS CI, the CM/R may submit its request for an Amendment or allocation adjustment using traditional means as directed by the Contracting Authority.
Design-Build Procurement

This Section identifies the requirements and process for the selection and contracting of Design-Build Firms for capital funded construction projects. Design-Build services are contracted according to the requirements of ORC 153.65 through 153.73 et.seq.

Refer to Section 110 for the requirements for selecting a Criteria Architect/Engineer.

Design-Build Services

A **Design-Builder ("DB")** is a firm or team qualified to provide services that form an integrated delivery system for which a person is responsible for both the design and construction, demolition, alteration, repair, or reconstruction of a public improvement.

Design-build services are specialized services and are utilized only for specific projects. Generally, design-build services are utilized for projects with budget in excess of $5 million or would benefit from having a single contract for improved coordination between design and construction. Any type of project may be a candidate for D-B; however, these projects are usually those with reasonably predictable project requirements that the Owner is able to describe clearly and completely. Owners must request concurrence of OFCC to use Design-Build project delivery.

The process for acquiring DB services is known as Best Value Selection. This is a two-step process, consisting of a qualifications phase and a request for proposal phase, in which proposals contain both pricing and performance components, and award is based upon a combination of pricing and performance considerations to determine the offer deemed most advantageous and of the greatest value to the State.

Qualifications Phase

The intent of the Qualifications Phase is to determine a short list of 3 to 5 DB firms that will advance to the Request for Proposal Phase for the Project. Before announcing the contract for DB services, OFCC in consultation with the Owner will establish criteria and the scoring method for evaluating a DB firm's qualifications. At a minimum, the following criteria must be included:

- Competence to perform the required DB services as indicated by the technical training, education, and experience of the DB's personnel, especially the employees who it proposes to staff the Project, including the proposed A/E of record;
- Ability in terms of workload and availability of qualified personnel, equipment, and facilities to perform the required DB services competently and expeditiously, and experience working on similar projects;
- Past performance reflected by the evaluation of previous clients with respect to factors such as control of costs, quality of work, dispute resolution, administration of subcontractors, and meeting deadlines, and the past performance of the proposed A/E of record;
- Compliance with ORC Sections 4703.182, 4703.332, and 4733.16, including the use of a licensed design professional for all design services;
- Financial responsibility, including evidence of the capability to provide the performance bond and payment bond in accordance with OAC Section 153:1-4-02(A);
- History of performance meeting the goals of any required diversity and inclusion programs including, but not limited to the EDGE program, and compliance with affirmative action programs; and
- Other qualifications consistent with the scope and needs of the Project including, but not limited to, knowledge of the local area and working relationships with local Subcontractors and Material Suppliers.

Upon agreement to employ a DB, OFCC will publish the RFQ for DB services on the OAKS Capital Improvements website at [http://ci.oaks.ohio.gov](http://ci.oaks.ohio.gov) in accordance with OAC Section 153:1-1-01. The RFQ may also be published on the State’s public notification website when it becomes available. The electronic notification will be distributed to EDGE-certified CM and construction firms, or other members of diversity and inclusion programs required by OFCC or applicable law. OFCC maintains a list of Minority Business Assistance Centers (MBAC) and Procurement Technical Assistance Centers (PTAC) that have agreed to
receive solicitations from State agencies and institutions of higher education. The electronic notification should indicate where a potential DB may find a full description of the Project and how to submit a proposal.

The RFQ must include the following:

- The qualifications criteria required for the Project
- The performance and pricing criteria required for the Project and how they will be evaluated and weighted in the request for proposal phase of the selection;
- Any minimum or mandatory technical requirements for the Project.

Records of decisions made at all stages of the selection process will be maintained and made public upon request after the announcement of the selected firm.

Applicants for DB services must respond to the RFQ by submitting qualifications responsive to the RFQ and representative of the services necessary to perform DB services for the Project, including, as a minimum:

- A general overview of their firm’s organization and structure
- Resumes of the key personnel proposed for the project, identifying their competence and experience in performing the required design and management services required by the Project. Prospective applicants must identify their key in-house personnel and consultants proposed for the project. Applicants must identify technical training, education and experience of the DB’s personnel and consultants who will be assigned to the Project.
- A statement of the availability in terms of workload of the specific personnel, who are proposed to perform the services, and which identifies any associated equipment and facilities to be utilized
- A statement identifying its past performance, as reflected by the evaluations of previous clients with respect to factors such as quality control processes and procedures, scheduling, packaging, cost development and control processes, quality of work and meeting deadlines
- Audited financial statements for the reporting period most recently completed
- Other additional information relevant to the Project

**Evaluation committee**: OFCC will convene an evaluation committee consisting of OFCC and the Owner’s staff. If a Criteria A/E has been selected for the Project, the Criteria A/E may support the evaluation process and advise on technical and pricing issues, but will not be permitted to score the responses. OFCC and the Owner will concurrently review and score responses to the RFQ. The Owner will submit their scores to OFCC’s selection coordinator, who will consolidate the scores and rank the submittals. Based on the ranking, OFCC and the Owner will short list no fewer than 3 DB firms to receive a Request for Proposal (“RFP”). Short-listed firms will be notified by OFCC with the RFP and interview details. All firms that are not short listed will be notified in writing by OFCC.

**Request for Proposal Phase**

OFCC will provide each selected firm with a description of the project, including a statement of available design detail, a description of how the guaranteed maximum price for the project shall be determined, including the estimated level of design detail upon which the guaranteed maximum price shall be based, the form of the CM contract, and the RFP.

**Pricing criteria**: In preparation for the pricing component of the RFP, OFCC in consultation with the Owner, will establish pricing criteria, which shall contain the following components:

- A fee proposal divided into a design services fee, a preconstruction fee, a DB services fee, and the portion of the DB services fee to be at risk in a guaranteed maximum price;
- A statement of the general conditions and contingency requirements; and
- If applicable at the time proposals are requested, a guaranteed maximum price proposal.
Performance criteria: In preparation for the technical component of the RFP, OFCC in consultation with the Owner, will establish performance criteria, which may include evaluation of the DB’s proposed:

- Schedule;
- Approach to the Work, including any anticipated self-performed Work;
- Sequencing of the Work;
- Performance history;
- Approaches to performance specifications when used;
- Plan for anticipated procurement difficulties;
- Plan for meeting the published EDGE participation goals for the Project, or other diversity and inclusion goals required by the Owner or applicable law; and
- Plan for additional considerations, which may include technical approach, quality of its proposed list of key personnel for the Project, and its management plan.

Request for pricing and technical proposal: Once the evaluation committee has determined the short-listed firms, OFCC will release the request for pricing and technical proposals (“RFP”) to the short-listed DB firms. The RFP will include the following:

- A description of the Project and project delivery,
- The design criteria produced by the Criteria A/E;
- A description of the required preconstruction services;
- A description of the proposed design services;
- The form of DB services contract;
- A description of how the guaranteed maximum price for the Project will be determined, including the estimated level of design detail upon which the guaranteed maximum price will be based, if not otherwise set forth in the DB contract; and
- A request for a pricing proposal, including the estimated cost of construction for the Project, for the purpose of calculating the fees proposed by a DB.

Pricing proposal: A proposer for DB services must include the following in its pricing proposal:

- A list of key personnel for the Project;
- A statement of the general conditions and contingency requirements;
- A preliminary Project schedule; and
- A fee proposal divided into a design fee, a preconstruction fee, a construction fee, and the portion of the construction fee to be at risk in a guaranteed maximum price.

Technical proposal: A proposer for DB services must include the following in its technical proposal:

- A Project-specific plan;
- The identity of its proposed team;
- The Project-specific approach to deliver the expected services; and
- The performance criteria components identified above.

Pre-proposal submission meetings: Prior to the submission of pricing and technical proposals, OFCC and the Owner may meet with each short-listed firm individually to permit the firm to ask questions regarding the proposal requirements.
Determination of Best Value

The evaluation committee will interview each short-listed firm that submits a pricing and technical proposal. The purpose of the interview is to allow each firm an opportunity to clarify and respond to questions related to its proposal. OFCC may provide a list of questions to the firms prior to the interview. The interview will not be scored or included in the scoring of the proposal. If OFCC finds a major discrepancy or irregularity in a pricing proposal, OFCC will notify the affected firm in writing to address the concerns at the interview and require that the firm provide a response in writing no later than the date of the interview.

The committee will evaluate each pricing and technical proposal utilizing the established pricing and performance criteria. The committee will evaluate the pricing criteria separately from the performance criteria, then combine the evaluations to reach a final evaluation. The committee will rank the firms based on the final evaluation of each proposal to determine the best value.

Negotiation

Once the committee has completed ranking the DB firms, OFCC will announce the firm determined to be the be the best value and enter into negotiations for a DB contract. Contract negotiations shall be directed toward:

- Ensuring that OFCC and the firm mutually understand the essential requirements involved in providing the required DB services, including the provisions for the use of contingency funds and the possible distribution of savings in the final costs of the project;
- Ensuring that the firm will be able to provide the necessary personnel, equipment, and facilities to perform the DB services within the time required by the contract;
- Agreeing upon a procedure and schedule for determining a guaranteed maximum price using an open book pricing method that shall represent the total maximum amount to be paid by the Owner to the DB for the project and that shall include the costs of all the work, the cost of its general conditions, the contingency, and the fee payable to the DB.

If the DB ranked the best value fails to successfully negotiate a contract, the firm will be informed in writing of termination of negotiations. Negotiations may begin with the firm ranked next best value. If negotiations again fail, the same procedure may be followed with each firm, in order of ranking, until a contract is negotiated. If negotiation fails with all selected firms, additional firms from the short listing process may be identified and ranked for interviewing and follow the process above, or the contract may be re-announced.

Stipend

The Owner may provide a stipend for a responsive pricing and technical proposal received for the non-selected short-listed firms. The decision to award a stipend will be determined by the Owner in consultation with OFCC.

The amount of the stipend will be determined by OFCC in consultation with the Owner and may be a lump sum amount or a percentage based on the level of effort anticipated to be expended to meet the proposal requirements.

After the award of the DB contract and submission of complete and acceptable documentation of all actual costs of preparing the response, the remaining eligible DB firms may receive payment up to the amount specified in the paragraph above, or the DB firm's actual costs of preparing the proposal, whichever is less.
Agreement

Following successful negotiations, OFCC will send copies of the DB recommendation letter to the Owner and DB, and OFCC will provide Controlling Board criteria for the Controlling Board Request as required.

<table>
<thead>
<tr>
<th>OAKS Capital Improvements Procedure</th>
<th>Traditional Paper-based Procedure</th>
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</thead>
<tbody>
<tr>
<td>The DB must prepare and submit the terms of its agreement using the Agreements business process.</td>
<td>If the Project is not administered using OAKS CI, the DB may submit the terms of its agreement using traditional means as directed by the Contracting Authority.</td>
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</table>

The Owner will submit requests for release of capital funding from the Office of Budget and Management/Controlling Board (“CB”).

The Owner will initiate a Contract Encumbrance Form following approval of the CB and send it to OFCC for signature and the approval of OBM.

Following encumbrance approval by OBM, OFCC will attach the copies of the agreement and certification of funding and forward the packet to the Director of DAS or his/her designee for execution.

Amendment

Material changes or revisions of the scope of work after execution of the agreement, through no fault of the DB, may result in an adjustment of the DB’s compensation.

Without exceeding the total compensation for the agreement, the allocation of costs may be adjusted upon request of the DB and approval by the Contracting Authority without a formal signed amendment.

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<tr>
<th>OAKS Capital Improvements Procedure</th>
<th>Traditional Paper-based Procedure</th>
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<tbody>
<tr>
<td>The DB must submit its request for an Amendment or allocation adjustment using the Amendments business process.</td>
<td>If the Project is not administered using OAKS CI, the DB may submit its request for an Amendment or allocation adjustment using traditional means as directed by the Contracting Authority.</td>
</tr>
</tbody>
</table>
This Section identifies the requirements and process for the prequalification and selection of Subcontractors for CM at Risk and Design-Build projects. In this Section, the term Subcontractor includes Material Suppliers.

Applicability of Bidding Requirements

The following Subcontractor procurement requirements apply to all Work during the Construction Stage (including the CM's procurement of long-lead-time items before the Date of Commencement) except:

- The CM/R's or DB's management and administration of the entire Work, including the administration of subcontracts;
- The Work identified in the General Conditions Costs Description attached to the Agreement;
- Non-specialty Work valued in the aggregate for the Project at less than the below threshold if the CM obtains OFCC's written approval before the commencement of that Work; and

<table>
<thead>
<tr>
<th>Contract Sum</th>
<th>Bid threshold for non-specialty Work</th>
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<tr>
<td>Less than $5,000,000</td>
<td>$50,000</td>
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<tr>
<td>From $5,000,000.01 to $10,000,000</td>
<td>$100,000</td>
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<tr>
<td>From $10,000,000.01 to $50,000,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>More than $50,000,000</td>
<td>$200,000</td>
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- The balance of the Work under a subcontract where the CM/R or DB terminated the subcontract for cause and the CM/R or DB obtains OFCC's written approval before the commencement of that portion of the subcontracted Work.

Design-Assist Firms

If the CM/R or DB engages a “design-assist firm” as described under ORC Section 153.50, that entity (1) will be considered a consultant under the contract during the Preconstruction Stage and (2) before that entity performs any Work during the Construction Stage, it shall be subject to all applicable law and contract provisions concerning the prequalification, bidding, selection, and engagement of subcontractors and shall enter into a subcontract with the CM/R or DB. Subject to the foregoing requirements, the CM/R or DB may engage a design-assist firm at any point in the Project that is appropriate or necessary to facilitate the Project’s design and construction.

- **Example:** The CM/R or DB may engage a design-assist firm as a consultant immediately after the CM/R or DB enters into the contract or at another appropriate time. That design-assist firm may thereafter (1) participate in the development of one or more bid packages, (2) proceed through the below-described bidder prequalification process, and (3) if prequalified, submit a bid for that Work along with other bidders to ultimately become a subcontractor as also described below. Under this example, the CM/R or DB would not be obligated to engage the design-assist firm to provide the associated Work as a subcontractor, but could under applicable law award the subcontract to the design-assist firm even if the design-assist firm does not submit the lowest bid.

- **Example:** Immediately after the CM/R or DB enters into the contract or at another appropriate time, the CM/R or DB may prepare a bid package which includes both design-assist services and construction services. Under this example, design-assist firms would be prequalified and submit bids for that bid package.

- The above examples are intended to illustrate sequences that may be followed when engaging a design-assist firm but are not intended (1) to illustrate all permitted sequences or (2) to indicate that the CM/R or DB would be prohibited from self-performing design-assist services or associated Work.

- Under both of the above examples and all other cases, in order to facilitate compensation of the design-assist firm and the establishment of the contract sum through the GMP Amendment, the selected design-assist firm shall be a consultant under the contract during the Preconstruction Stage and a subcontractor during the Construction Stage.
Prequalification Criteria

A Construction Manager at Risk (“CM/R”) or Design-Builder (“DB”) is required to establish criteria for prequalification of prospective bidders on subcontracts. The prequalification criteria must be developed in accordance with standards established by OAC Section 153:1-7-01 and at a minimum must:

- Include the experience of the bidder, the bidder’s financial condition, conduct and performance on previous contracts, facilities, management skills, and ability to execute the associated subcontract properly;
- Further the published EDGE participation goals for the Project, or other diversity and inclusion goals required by the Owner or applicable law;
- Require a prospective Bidder to submit a valid certificate of compliance issued by the EOC under ORC Section 9.47 to establish it has not been found in violation any affirmative action program during the last 5 years preceding the date of the prequalification application; and
- Require a prospective bidder to submit proof of current licenses to perform the associated Work as required by OFCC or applicable law.

OFCC may require the CM/R or DB to include additional criteria for specific subcontracts that are consistent with the scope and needs of the Project including, but not limited to, knowledge of the local area and working relationships with local Material Suppliers.

The prequalification criteria established by the CM/R or DB are subject to the approval of OFCC, who may approve or reject the criteria, in whole or in part. OFCC will also use the approved prequalification criteria for analysis of any bidder’s responsibility to perform a subcontract.

The same criteria established for a subcontract, as approved by OFCC, shall apply to any self-performed Work by the CM/R or DB, if such self-performed Work is allowed by OFCC.

Prequalification Process

The CM/R or DB must complete the prequalification process 10 days before it intends to solicit bids for that subcontract, unless otherwise agreed to by OFCC.

During the prequalification process, the CM/R or DB must:

- Develop bidder’s interest in the Projects; and
- Invite at least 3 prospective bidders to submit qualifications for evaluation.
  - OFCC may require the CM/R or DB to invite more than 3 prospective bidders, including any prospective bidders identified by the Owner or OFCC, if any.

To reach prospective bidders, the CM/R or DB may place a notice on the OAKS Capital Improvements website at [http://ci.oaks.ohio.gov](http://ci.oaks.ohio.gov) or the Owner’s or other websites such as appropriate trade associations.

Unless OFCC agrees in writing, the CM/R or DB will evaluate the qualifications of each solicited prospective bidder that timely submits its qualifications, and identify at least 3 prospective bidders that are qualified to bid on the Subcontract. The CM/R or DB will submit the names and qualifications of the qualified prospective bidders to OFCC. The CM/R or DB may submit the names of fewer than 3 qualified prospective bidders if it submits satisfactory documentation to OFCC that fewer than 3 qualified prospective bidders are available. OFCC, the Owner, the A/E, and the CM/R or DB may meet to review the qualifications of the prospective bidders on the list the CM/R or DB submits to OFCC.

OFCC will verify that the prospective bidders, on the list the CM/R or DB submits, meet the prequalification criteria. OFCC may eliminate any prospective bidder it determines is not qualified and notify the CM/R or DB. The CM/R or DB must promptly notify the prospective bidder in writing of OFCC’s decision to eliminate the bidder. If the CM/R or DB receives a written objection from the eliminated prospective bidder within 5 days after the eliminated prospective bidder receives notice of OFCC’s decision, the CM/R or DB must promptly
deliver the eliminated prospective bidder’s written objection to OFCC. OFCC may respond to the objection in writing through the CM/R or DB.

Subcontractor Bidding Process

The CM/R or DB must create a bid package for each subcontract and solicit bids from the qualified prospective bidders identified for that bid package in accordance with the construction schedule.

During the subcontract bidding process, the CM/R or DB will:

- Issue bidding documents to prospective bidders;
- Conduct prebid conferences with prospective bidders;
- As appropriate, forward questions from bidders to the A/E (A/E of record in a D-B project);
- As appropriate, assist the A/E with the preparation of addenda for issuance to the CM/R or DB; and
- Receive all bids, prepare bid analyses, conduct pre-award conferences, and report that information to the Owner and the A/E.

At the completion of the bidding process for each subcontract and no later than 15 days before the Work is scheduled to begin under that subcontract, the CM/R or DB and OFCC will meet to review the bids of the qualified prospective bidders for that subcontract and to determine to which bidder the CM/R or DB will award the subcontract. During the review meeting, the CM/R or DB will identify the bidder to whom the CM/R or DB proposes to award the subcontract. OFCC may reject the proposed bidder as non-responsible.

- If OFCC does not reject the proposed bidder as non-responsible, the CM/R or DB must enter into the subcontract with that bidder.
- If OFCC rejects the proposed bidder as non-responsible, the CM/R or DB must identify another bidder to whom the CM/R or DB proposes to award the subcontract. The CM/R or DB will not be entitled to any adjustment of the Contract Sum, the Contract Times, or both on account of OFCC’s rejection of a proposed bidder as non-responsible.
- Each bidder to whom the CM/R or DB proposes to award the subcontract shall be qualified to perform the applicable portion of the Work and have submitted a bid conforming to the requirements of the Contract Documents without reservations or exceptions.

The CM/R or DB will prepare all subcontracts. All subcontracts must at a minimum incorporate the General Conditions of the CM/R or DB contract and shall be on the subcontract form prescribed in OAC Section 153:1-03-02. All subcontracts will be between CM/R or DB and the respective subcontractors.

The CM/R or DB may not replace any subcontractor after execution of the subcontract without the prior written approval of OFCC.

Self-Performed Work

Neither the CM/R or DB, nor an entity affiliated with the CM/R or DB, shall directly perform with its own employees or other resources any Work on the Project during the Construction Stage except:

- Work not subject to bidding as described under the Applicability of Bidding Requirements paragraph above; or
- As otherwise provided in this Section.

If the CM or a CM Affiliated Entity intends to Bid on any Work subject to Bidding:

- During the preparation of the Subcontracting Plan, the CM/R or DB shall notify OFCC that the CM/R or DB, or an entity affiliated with the CM/R or DB, may bid on a portion of the Work. OFCC, the CM/R or DB, and the A/E (Criteria A/E in a D-B project) shall review that Work in detail and agree on its scope before the CM/R or DB finalizes the Subcontracting Plan.
- At least 14 days before issuing bidding documents for the scope of Work the CM/R or DB, or an entity affiliated with the CM/R or DB, intends to Bid on, the CM/R or DB must, in writing, seek OFCC’s permission for the CM/R or DB, or an entity affiliated with the CM/R or DB, on that particular Work.

If OFCC permits the CM/R or DB, or an entity affiliated with the CM/R or DB, to submit a bid:

- The CM/R or DB, or an entity affiliated with the CM/R or DB, (as applicable) shall meet in all respects the bidder prequalification criteria approved by OFCC.
- The bidding documents shall specifically state that the CM/R or DB, or an entity affiliated with the CM/R or DB, may submit a bid for that Work.
- The CM/R or DB must ensure strict separation of the personnel of the CM/R or DB, or an entity affiliated with the CM/R or DB, involved with bidding on the Work from the personnel of the CM/R or DB, or an entity affiliated with the CM/R or DB, otherwise involved in the Project. That separation includes, without limitation, prohibiting any communication (other than communication that is permitted by all bidders) between those two groups before OFCC opens the associated bids.
- The CM/R or DB, or an entity affiliated with the CM/R or DB, (as applicable) will be subject to all requirements applicable to the other bidders for that Work.
- The CM/R or DB, or an entity affiliated with the CM/R or DB, (as applicable) and all other bidders for that Work shall submit their sealed bids to OFCC no less than 4 hours before the deadline for bidders' submission of bids for that scope of Work.

If the CM/R or DB, or an entity affiliated with the CM/R or DB, (as applicable) submits a bid as described and less than 2 other bidders submit bids for the same Work, OFCC may require that Work to be rebid.

If OFCC awards to the CM/R or DB, or an entity affiliated with the CM/R or DB, the right to self-perform a particular scope of Work, the CM/R or DB may not use Contingency for that Work. The foregoing prohibition applies specifically but not exclusively to using Contingency to make up for the CM/R’s or DB’s underestimation of that scope of Work in the detailed estimate of the Cost of the Work.
The Sections in this Group describe the design process and related issues. Penalties of non-compliance may potentially result in litigation and/or losing authority to locally administer projects. These Sections are based on the Design-Bid-Build project delivery method and may be used with appropriate variations in the CM at Risk and Design-Build project delivery. The Sections consist of the following:

200 | General Design Requirements
205 | Professional Services Payment
210 | Program Verification
220 | Schematic Design
230 | Design Development
240 | Construction Documents
250 | Bid & Award
General Design Requirements

The Design Stage is the portion of the process in which the project is transformed from ideas, concepts, and broad-brush thoughts to specific materials, details, and contractual instructions to implement the competitive bidding and construction of physical facilities. Design is subdivided into four Stages: Program Verification, Schematic Design, Design Development, and Construction Documents. This Section contains requirements which apply to all four stages of Design.

General Design Responsibilities

Design activities make up a significant portion of the A/E's services for the project. Design represents the portion of the project in which the A/E transforms the Owner's functional priorities and goals into the specific detailed instructions on which Contractors base their bids and construct facilities. The development of the documents requires an interactive process between the Owner and the design professionals.

The A/E is not only the lead professional who interprets these abstract concepts, but also the facilitator responsible to seek and obtain all information relevant to the project. The A/E must also present written and graphic information to record, analyze, interpret, synthesize and illustrate the Owner's conceptual ideas in physical form. The design process is organized into several Stages to give the Owner several opportunities to review and approve the A/E's work as it progresses, to verify that the cost and physical form meet expectations, and to verify that the conceptual information provided by the Owner has not been misinterpreted by the A/E.

Procedures

The following guidelines must be utilized in the development of each of the Stages of Design:

- The A/E must follow OFCC policy and procedures to develop the Contract Documents for all capital construction projects.
- The Owner will indicate its acceptance in writing of each of the Stages of Design by completion of the Design Service Acceptance Form and sending a copy to OFCC and the A/E. This approval will authorize the A/E to proceed to the next Stage, or Bidding if Design is completed. Agencies may modify the form to conform to names and location of the Local Administration Contracting Authority.
- OFCC will ensure that the A/E is using the most current edition of the "State of Ohio Standard Requirements for Public Facility Construction" as the design is developed.
- OFCC will ensure that a Constructability Review is performed prior to the final acceptance of the Construction Documents Stage.
- Throughout the Design stages the A/E must provide a Meeting Record that documents the participants, the meeting objective(s), the significant points of the meeting, and the action required prior to the next meeting. Meeting Record responsibilities start with the Organizational Meeting.
- The A/E must perform all stages of Design unless OFCC combines or deletes specific stages in the A/E's agreement.
- At the end of each stage of Design, the A/E must submit a Statement of Probable Construction Cost, an update of the entire Project Budget, an update of the approved POR, an update of the project schedule, along with backup information for all above, plus the specific drawings and specification information required. The Owner and OFCC will review the submittal and provide to the A/E all review comments no later than 21 days after the A/E's submittal of documents. The A/E must prepare a written response to the Owner's, OFCC's, and any Constructability Consultant's comments.
- The A/E must prepare all documents to conform to all State of Ohio Statues, Laws and Acts in effect during the “Bid Period” of the project, or for multiple phase projects, for the Bid Period of each phase.
- The A/E must submit documents and obtain a Certificate of Plan Approval from the appropriate building authority prior to bidding. It is the A/E’s responsibility to monitor all follow-up plan review submittals to ensure that there is a “final plan approval” of the documents prior to bidding.
It is the A/E's responsibility to seek from the Owner all Owner-originated design criteria or design standards required to be used on the project.

The A/E may benefit from input from the Constructability Consultant as early as the Program Verification or Schematic Design stages, particularly if complicated scheduling issues are involved. On large projects, a second opinion from the Constructability Consultant at Schematic Design and Design Development stages may be useful before the A/E makes any major design decisions. The A/E should consult with OFCC as to at what point in the Project the Constructability Consultant should begin to be involved.

**Life Cycle Cost Analysis**

Unless it is specifically excluded in Exhibit #1 - Scope of Architect/Engineer Agreement, the A/E must conduct a preliminary Life Cycle Cost Analysis (LCCA) during the Schematic Design Stage for every public improvement project. The analysis must actually be a number of independent studies of various building elements, and must take into account the following:

- Initial cost of construction ("first cost")
- Maintenance cost
- Operational costs
- Management cost
- Expected useful life
- Replacement cost


**Energy Consumption:**

- Pursuant to ORC 153.01(F) and 123.011, the A/E must conduct a Life Cycle Cost Analysis ("LCCA") for energy consuming systems and equipment. The LCCA will be a primary consideration in the selection of the final design.
- The benchmark for energy consumption is the version of ASHRAE/IES 90.1 referenced in the Ohio Building Code currently in effect.
- The purpose of the LCCA is to define the energy consumption for the facility by determining the reasonable expected energy cost, including the required investment, maintenance and replacement cost adjusted to present values over the life of the facility. The LCCA is a method of evaluating energy conservation ideas by comparing the present and future cost of each proposal using a discounting technique to adjust future cost to present values.
- The analysis must include the cost for illumination, power, heating, cooling, ventilation and control of energy consuming equipment, and may include consideration of architectural features such as building orientation and fenestration. OFCC will endeavor to see that energy conservation goals are observed in the design, construction, renovation and utilization of State facilities in a manner that will minimize the consumption of energy used in the operation and maintenance of such facilities.
- The A/E can receive a waiver of the LCCA for projects in which the construction or renovation area is less than 5,000 square feet. A waiver can also be requested for renovation projects greater than 5,000 square feet, if the renovation is not intended to substantially change the energy consumption of the building. A waiver may also be obtained for leased space less than 20,000 square feet. However, should the scope of the project change, or the conditions for the waiver be altered, a LCCA may be required.
Performance of Other Building Components and Systems:

- The A/E must identify other building materials, components and systems which merit study and perform Life Cycle Cost Analyses on each to evaluate alternative designs for cost-effectiveness over the life of the material, component or system. This portion of the analysis is often referred to as “value engineering”. The A/E must use professional judgment and experience to determine how many and which components or systems to study. The A/E must select components and systems for study which have characteristics which include, without limitation, the following:
  - Have benefited from analysis in the A/E’s previous experience
  - Are high-cost items, where the benefit might be substantial
  - May have a positive synergistic impact on other components or systems
  - Involve high maintenance or operating cost
  - Have a relatively short expected useful life

Final Life Cycle Cost Analysis:

- The A/E must also conduct a final LCCA in the Design Development Stage, for both HVAC systems and equipment, as well as other building components and systems to confirm that the assumptions, choices and criteria used in the LCCA performed in the Schematic Stage are still valid.

Codes and Regulations

The A/E is responsible for designing the project to meet or exceed the requirements of all Local, State and Federal codes, statutes, ordinances and regulations pertaining to the construction, renovation and occupancy of buildings.

Document Content

The A/E must utilize OFCC policy and procedures to develop the bidding documents for all capital construction projects. The following information is provided to guide the A/E in the preparation of the required deliverables.

Meeting Minutes: The A/E is responsible to record and issue all conference and meeting minutes of meetings attended by the A/E.

Schedules: During the Design Stage the A/E must produce, periodically update and submit three types of schedules, each of which serves different objectives. The three types of schedules are:

Project Schedule:

- The Project Schedule is developed at the onset of the project as a “broad brush” tool by the Owner to establish a start and anticipated finish point for the life of the project. Once the A/E is participating on the project, the A/E refines the schedule elements into events and milestones based on the Owner’s definition of the project’s priorities and goals.

- The A/E must update the Project Schedule at each of the four stages of Design. The Project Schedule will become more definitive as the A/E refines and develops the design and the documents.

Design Schedule:

- The Design Schedule is actually a small portion of the Project Schedule. It is the A/E’s work plan and shows the anticipated scheduled submittal dates for each of the event milestones during the stages of Design. The A/E must update the Design Schedule at the end of each stage of Design.

- The schedule must identify the review meetings, milestone dates for anticipated and required deliverables, and other discrete activities of each Stage of Design.
Diagrammatic Construction Sequence Schedule:

- The Diagrammatic Construction Sequence Schedule is a graphical indication to the Bidders of specific milestones events, or sequences of construction work that the Contractor(s) must incorporate within the final construction schedule.
- The schedule also informs Bidders of the construction phases, planned Owner disruptions, closeout period to perform corrective punch list activities, equipment start-ups, demonstration and training periods which must be completed prior to the Contract Completion Date.
- The A/E, Construction Manager if applicable, the Owner, and OFCC will provide input regarding a required sequence of events to be included in the schedule.
- The simplest Diagrammatic Construction Sequence Schedule shows the anticipated start of construction, the major milestones, and the anticipated construction completion date noting the number of calendar days between the start of construction and completion.
- Reconciliation of schedules is required when two or more are prepared.
- More complex schedules will be required to identify phased construction, owner-required disruption periods in construction, and required closeout procedures.

Management of the Budget

Once the Project is identified and a budget is established, the Project Manager is responsible for managing the cost of the Project. The Project Manager will establish a meeting with the Owner to review the Project budget and scope. The objective of this meeting is to ensure that any activities and services not performed by the Owner’s work forces are included in the Scope of Work and are accounted for in the budget.

The Project Manager will notify the Owner in writing of discrepancies between the project budget and estimated actual costs. When the Project Manager anticipates a shortfall in the funds budgeted, the Project Manager will recommend a scope in project change, a shift in funds from one line item to another or that the Owner encumber additional funds to reconcile the discrepancy.

- It is imperative that the Owner and the Project Manager establish real line-item budget funds, monitor the actual cost, and anticipate cost issues before those issues become a crisis for the project.
- Since the capital budget for the cost of construction is established early during the conceptual planning stages, it is important for the design team, including the Project Manager, to evaluate the various budget line items to verify they are consistent with anticipated current cost. During the Design Stage of the project as the design becomes more detailed, the associated cost information should be updated to reflect that detailed information.
- At each Stage of the Design Stage the A/E, and CM if applicable, must provide a “Statement of Probable Construction Cost” that is based on the most recent detailed information available. Upon acceptance of the Statement of Probable Construction Cost from the A/E, the Project Manager will update the Budget Management Form and make a recommendation for proceeding.
- Early in the design process the A/E, and CM if applicable, must confer with the Owner to begin to identify Alternates which can be used to adjust the award amount to deal with any variances between the A/E’s estimate and the low bids. It is good practice to create alternates which total approximately 10 percent of the construction estimate.

Actions to Correct Discrepancies in the Estimated Construction Budget:

- If for any reason, the Construction Budget is exceeded during the Design Stages, the A/E, and CM if applicable, must notify OFCC and the Owner in writing.
- The A/E, and CM if applicable, will be required to evaluate the reasons for the discrepancies and make recommendations to the Owner and OFCC for revisions in the project to comply with the Budget. The Owner will decide whether to reduce the scope of work, require redesign of the Work or provide additional funding, or some combination of the above to reconcile the Project and the Budget.
General Design / Specification Guidelines

The A/E must give appropriate consideration to products of Ohio manufacturers wherever possible and in accordance with ORC 153.012.

The A/E must specify the use of steel products made in the United States in accordance with ORC 153.011.

Materials specified must be institutional grade, of the highest quality within available funds and suitable for their intended purpose.

In addition to aesthetic considerations, on remodeling projects, the A/E must strive to standardize and match the existing materials and building components. The A/E may obtain, from the Owner, a list of commonly used finish materials, hardware, equipment and other stocked items regularly utilized by the Owner. When specifying components, the A/E must make an effort to minimize the number of items that the Owner must maintain in stock.

The A/E must verify the scope of the work on remodeling projects. If asbestos-containing materials or other hazardous materials are expected to be encountered, and design of abatement is not included in the A/E’s Agreement, the A/E must recommend to OFCC that a Design Consultant which specializes in the removal of the hazardous material to meet Occupational Safety and Health Administration (“OSHA”) and Ohio Environmental Protection Agency (“OEPA”) guidelines be retained.

General Standards:

- The Procurement Documents must allow for unrestricted competition among interested suppliers and manufacturers to the extent that it is feasible. Specifications for public projects cannot unreasonably restrict sources of products, materials or equipment.

- With regard to the selection of equipment or materials, there are four basic methods of specifying: descriptive, performance, reference standard and proprietary. Of these methods, performance and proprietary have the potential to limit competition. Performance specifications do not refer to any particular brand or product. Instead, the specifications state certain performance capabilities which the equipment or material must meet. The A/E is required to develop performance-based specifications such that a minimum of three products are capable of meeting the requirements for the equipment or material. Each of the three products will be functionally and qualitatively equivalent to the others.

- The performance requirements of a given product cannot be so narrow as to restrict competition. Any component of other manufacturers’ or vendors’ product which meets the performance requirements of the Procurement Documents may be considered equally acceptable provided the component is submitted to the A/E as a substitution request prior to bid opening with sufficient time for the design professional to review, approve and notify all bidders by issuing an addendum.

- Proprietary specifications call for a particular brand and model to be used. Whenever any product is specified by brand name (e.g. manufacturers’ or suppliers’ name or trade name and catalog or model number or name), the intent is to establish a standard of quality which the A/E has determined is necessary. In order to foster competition, the A/E is required to develop specifications such that a minimum of three manufacturers are named. If less than three manufacturers are named, the A/E must submit a waiver request as detailed below. When the A/E lists components produced by specific manufacturers to denote kind, quality, or performance requirements, the component listed first in the specifications is the Basis of Design Component.

- During the bidding period, the Bidder may propose another manufacturer or competing product giving the same or superior function, performance and quality level. The Bidder is to indicate precisely why and how the proposed material or item meets or exceeds all function, performance and quality criteria of the specified item. The A/E is obligated to evaluate a Bidder’s submittal requesting approval of a proposed Substitution, in accordance with the requirements of the Instructions to Bidders (IB 2.5).

- Components must be, in the opinion of the A/E, of equivalent substance and function. If a proposed substitution possesses all the “salient characteristics” of the specified brand, it may be considered acceptable. The salient characteristics are the physical properties and performance capabilities that
reasonably meet the needs for the Project. Obviously, opinions frequently differ as to whether or not a proposed alternate product is equivalent to the proprietary product listed in the specifications; however, the A/E’s decision is final and binding.

Use of Sole Source Specifications:

- Sole source specifications have the effect of eliminating competitive bidding and the instances in which its use is permitted have been limited. Under some circumstances, the specifications may call for patented materials, articles, or items which may not be offered by two or three manufacturers. An owner has the ability to include a sole source specification only when it is clearly in the public interest to do so, after carefully considering the serviceability and cost of the material or article for which the contract is made.

- Instances that may support an exception are cases where a specified material must match an existing material in appearance or a system or component must match an existing system or components for functional reasons (e.g. hardware keying systems). The specification of a limited number of manufacturers may in some cases be justified in order to achieve a specific design intent provided that the value of the specified goods is insignificant in relation to the overall project. In all cases, the scope of work that is covered by a sole source specification should be as small as necessary to achieve the intended benefit (e.g. lock cylinders instead of door hardware).

Waiver of Three Manufacturer Requirement:

- If the A/E should name less than three manufacturers in a proprietary specification or stipulated performance specifications, which cannot be satisfied by three or more manufacturers, then the A/E shall specifically identify such specifications at the time of submitting the drawings and specifications to the Contracting Authority for review, along with a written justification for such specification. The Project Manager/Administrator will review such justifications and will approve or deny a requested variance from the requirements of this policy.

Vendor Assistance with Specification Writing:

- During the development of a Project’s specifications, the A/E may find it helpful or even necessary to seek technical assistance from vendors (e.g. manufacturers’ representatives and suppliers) to better understand and evaluate alternative products or systems for incorporation into the specifications. While this practice allows design professionals to gain technical expertise in the various components to be included within a project, it does not transfer or substitute the design and specification writing responsibility of the A/E to the vendor. Vendor assistance in directly writing a project’s specifications should be limited. The A/E should carefully review drafted specifications from vendors to ensure they are open, competitive and at least three manufacturers are capable of meeting the specified requirements.

- In the event a vendor has provided direct assistance to the A/E by producing the specifications that are used for a project, and intends to bid the work or perform as a Subcontractor for the same project, the A/E shall inform the Contracting Authority of the circumstances. The Contracting Authority reserves the right to not approve a contract or subcontract based upon a determination that a conflict of interest or competitive advantage exists. An exception is when a product or system that is being sole sourced has been justified and approved by the Contracting Authority prior to bidding.

Project Manual Development

The A/E must develop the Project Manual from the current version of the “State of Ohio Standard Requirements for Public Facility Construction” (“Standard Requirements”), the Owner’s Supplementary Conditions, the prevailing wage rate information, and the A/E’s specification sections. As the project progresses through the various Stages of Design, the Project Manual will have an increasing level of completeness.
The Program Verification Stage does not require submission of a Project Manual. The Schematic Design, Design Development, and Construction Document Stages each require differing levels of completeness. See the section for each Design Stage for minimum submission requirements.

The Project Manager will ensure that the A/E utilizes the current version of the “State of Ohio Standard Requirements for Public Facility Construction.” The Owner’s Representative will ensure that the A/E is using the current version of the Owner’s Supplementary Conditions, if any. The A/E will review these documents early in the Program Verification stage to identify phasing or other construction issues that may affect the project.

Contracting Authorities performing locally administered projects shall follow instructions to adapt Owner-specific requirements as Owner’s Supplementary Instructions and Conditions. All modifications to the “State of Ohio Standard Requirements for Public Facility Construction” require written authorization from OFCC.

Project Manuals must be organized according to the latest edition of MasterFormat published by the Construction Specifications Institute (“CSI”). Additional numbers and titles shall be assigned in accordance with the MasterFormat Applications Guide and coordinated with revisions approved by CSI and posted to www.masterformat.com. Specification sections should be organized in general conformance with CSI SectionFormat, and PageFormat.

The A/E may modify OFCC documents as indicated in Table 200.1 as follows:

<table>
<thead>
<tr>
<th>Forms the A/E must not modify</th>
<th>Forms the A/E may modify</th>
<th>Forms the A/E must modify</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OFCC Forms</strong> (Note 1)</td>
<td><strong>OFCC Forms</strong></td>
<td><strong>OFCC Forms</strong></td>
</tr>
<tr>
<td>Instruction to Bidders</td>
<td>Division 01 Specifications, e.g., Section 01 32 16 – “Construction Progress Schedule” (Modify to reduce scope of services for small, less complex projects, e.g. the requirement for cost and manpower loading may be deleted in projects under approx. $2 million.)</td>
<td>Table of Contents</td>
</tr>
<tr>
<td>Bid Security Form</td>
<td></td>
<td>Solicitation</td>
</tr>
<tr>
<td>Bidder’s Qualifications</td>
<td></td>
<td>Bid Form</td>
</tr>
<tr>
<td>EDGE Affidavit</td>
<td></td>
<td>Contract Form</td>
</tr>
<tr>
<td>Contracting Definitions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage Rate Requirements</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Owner Forms</strong> (Note 2)</th>
<th><strong>Facility Forms</strong></th>
<th><strong>A/E must create:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner’s Supplementary</td>
<td>Section 01 14 00 – “Work Conditions and Supplementary Restrictions” may be created by the Owner to stipulate facility-specific requirements.</td>
<td>Specifications including Division 01 – “General Requirements”</td>
</tr>
<tr>
<td>Instructions and Supplementary Conditions (if any have been approved by OFCC)</td>
<td></td>
<td>Sections applicable to the Project</td>
</tr>
</tbody>
</table>

Notes to Table 200.1:

- These OFCC documents may not be modified directly. They may be modified by reference only in the Owner’s Supplementary Conditions, which must be reviewed and approved by OFCC. Common violations of this principle include:
  - Provisions in Division 01 which conflict with the General Conditions
  - Provisions in mechanical and electrical specifications which conflict with the General Conditions

- Owner’s Supplementary Conditions may amend the State’s Standard General Conditions where there is sufficient justification. Supplementary Conditions may be submitted by the Owner to OFCC no more than once annually for review and approval of proposed changes. Approval is valid for two years.
Project Manual Contents:

- OFCC currently uses 3 versions of the “State of Ohio Standard Requirements for Public Facility Construction” for Design-Bid-Build project delivery: “Multiple-Prime Contract,” “Multiple-Prime / CM Adviser,” and “General Contract” versions.
  - The Multiple Prime Contract version assigns work to multiple prime Contractors and assigns the management and coordination of all prime Contractors to one Contractor, known as the Lead Contractor. The Standard Requirements outline specific responsibilities for the Lead Contractor.
  - The Multiple-Prime / CM Adviser version must be used for Design-Bid-Build projects that include a Construction Manager.
  - Single prime Contracts may use the General Contract version. Management and coordination responsibilities are assigned to the General Contractor.

The Project Manual for every project must include the following items:

- “State of Ohio Standard Requirements for Public Facility Construction”
- Owner’s Supplementary Instructions (written by the Owner and approved by OFCC)
- Owner Supplementary Conditions (written by the Owner and approved by OFCC)
- Other Project-specific items:
  - Dated wage rates
  - Geotechnical Data or Reports (if any)
  - Environmental Data or Reports (if any)
  - Specifications

The A/E must follow the Instructions to the Architect/Engineer and incorporate the above items into the Contract Documents in the order listed on the Table of Contents.

The specifications must be organized according to the latest edition of the CSI’s MasterFormat.
This Section identifies the requirements and process for the payment of Architectural/Engineering firms, Construction Management firms, and other professional services vendors.

**A/E Payment**

Payments for basic services are made in accordance with the percentage of fee stipulated in the Agreement for the respective Stage. Typical percentages for a project produced with Computer Aided Design (CAD) tools are as follows:

- Program Verification ..................... 5.0%
- Schematic Design ......................... 15.0%
- Design Development ..................... 15.0%
- Construction Documents ............... 30.0%
- Bid & Award .................................. 5.0%
- Conformed Documents ................. 2.0%
- Construction Administration .......... 25.0%
- Contract Closeout ....................... 3.0%

OFCC understands that projects produced with Building Information Modeling (BIM) tools require investment of more time at the beginning of a project and less during Construction Documents. OFCC has published the following percentages for projects produced with BIM authoring software:

- Program Verification ..................... 5.0%
- Schematic Design ......................... 20.0%
- Design Development ..................... 20.0%
- Construction Documents ............... 20.0%
- Bid & Award .................................. 5.0%
- Conformed Documents ................. 2.0%
- Construction Administration .......... 25.0%
- Contract Closeout ....................... 3.0%

Any modifications to these standard percentages must be stipulated in Exhibit #1 - Scope of Architect/Engineer Agreement for the project.

Payments for Additional Services will be made commensurate with the service performed.

Allowances and reimbursements will be paid when the expenses are incurred. A Request for Payment, which includes such items must be accompanied by appropriate invoice(s).

**A/E Payment Routing and Approval**

<table>
<thead>
<tr>
<th>OAKS Capital Improvements Procedure</th>
<th>Traditional Paper-based Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/E payments are processed using the</td>
<td>If the Project is not administered using</td>
</tr>
<tr>
<td>Professional Services Pay Requests</td>
<td>OAKS CI, the A/E must use the Professional</td>
</tr>
<tr>
<td>business process. EDGE participation</td>
<td>Services Payment Request form (F110-01).</td>
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<tr>
<td>is also reported through this business</td>
<td>This form has tabs to allow the A/E to report its</td>
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<tr>
<td>process.</td>
<td>EDGE participation to the Contracting Authority.</td>
</tr>
<tr>
<td>The A/E completes the Pay Request</td>
<td>The A/E completes and signs the form, then</td>
</tr>
<tr>
<td>record, attaches scanned receipts</td>
<td>sends it to the Contracting Authority for</td>
</tr>
<tr>
<td>of reimbursable expenses, and</td>
<td>processing.</td>
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<tr>
<td>forwards it to the Contracting</td>
<td>The Contracting Authority verifies and signs the</td>
</tr>
<tr>
<td>Authority for processing.</td>
<td>request, vouchers and processes the payment.</td>
</tr>
<tr>
<td>The PM and PC verify the request,</td>
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<tr>
<td>and on approval forward it to the</td>
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<tr>
<td>Owner for vouchering and processing</td>
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<tr>
<td>through State Accounting.</td>
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</tbody>
</table>
Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

The A/E may access the Ohio Shared Services website (http://ohiosharedservices.ohio.gov/Home.aspx) to determine when Electronic Funding Transfer (EFT) payments will be made to its named financial institution.

**Interim A/E Payments**

Payment will be made on a monthly basis not to exceed the percentage of the Basic Fee for the respective Stage stipulated in the Agreement.

Payments may not exceed 95 percent of each stage until the stage is satisfactorily completed and accepted by OFCC and the Owner.

Payments for phased projects should be apportioned to the value of each phase.

Final payment will be made only when all record and project close out documents have been accepted by OFCC as complete.

**Changes in the A/E Agreement**

Substantive changes or revisions to the scope of work after execution of the Agreement, through no fault of the A/E, may result in an adjustment of the A/E's compensation. Such changes must be effected by an Amendment to the A/E's Agreement.

Without exceeding the total compensation for the agreement, the allocation of costs may be adjusted upon request of the A/E and approval by the Contracting Authority without a formal signed amendment.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>The A/E must submit its request for an Amendment or allocation adjustment using the Amendments business process.</td>
<td>If the Project is not administered using OAKS CI, the A/E may submit its request for an Amendment or allocation adjustment using traditional means as directed by the Contracting Authority.</td>
</tr>
</tbody>
</table>

The A/E must indicate the Amendments on the Payment Request form and will be paid accordingly.

**A/E Payments for Change Orders**

The A/E will not receive a fee for deduct Change Orders, unless the A/E can document that a significant amount of the A/E's time was expended in the change. Fees for deductive Change Orders require the prior written consent of OFCC.

Change Orders that include "add" and "deduct" components must be evaluated to determine the appropriate payment for "add" items of work. Change Order fees are typically paid at a fixed percentage rate specified in the Agreement.

Work involved in creating and administering Change Orders may be paid at an hourly rate only on an exception basis, when justified in writing by the A/E and approved by OFCC prior to the occurrence.

Change Orders resulting from Errors/Omissions (E/O):

- The A/E will not receive compensation for work performed by the A/E to correct errors or omissions in the Contract Documents.
- Change Orders resulting from errors or omissions (E/O) must not be combined with other Change Orders. If a specific Change Order results from a combination of E/O and non-E/O issues, the A/E must specify on the Change Order the percentage of the cost which results from the error/omission.
If a Project Manager determines that a Change Order resulted from an error or omission and the A/E disputes the determination, the A/E may dispute the determination in accordance with Article 7 of the Architect/Engineer Agreement.

The A/E will not receive a fee for claim resolutions through the General Conditions Article 8 process executed as change orders, unless additional services are authorized by OFCC. Compensation should be at a negotiated amount.

CM Payment

Payments for Direct Personnel Expense will be made as the expense is incurred.

Payments of the Basic Fee are made in accordance with the Agreement and are generally made by Stage as indicated by a percentage of the total fee:

- Program Verification: 5.0%
- Schematic Design: 7.5%
- Design Development: 12.5%
- Construction Documents: 20.0%
- Bid & Award: 10.0%
- Construction Administration: 40.0%
- Contract Closeout: 5.0%

Any variations in the standard Agreement percentages will be included in the executed Agreement for the project. Allowances and reimbursements will be paid when incurred.

CM Payment Routing and Approval

### OAKS Capital Improvements Procedure

CM payments are processed using the Professional Services Pay Requests business process. EDGE participation is also reported through this business process.

The CM completes the Pay Request record, attaches scanned receipts of reimbursable expenses, and forwards it to the Contracting Authority for processing.

The PM and PC verify the request, and on approval forwards it to the Owner for vouchering and processing through State Accounting.

The CM may access the Ohio Shared Services website (http://ohiosharedservices.ohio.gov/Home.aspx) to determine when Electronic Funding Transfer (EFT) payments will be made to its named financial institution.

### Traditional Paper-based Procedure

If the Project is not administered using OAKS CI, the CM must use the Professional Services Payment Request form (F110-01). This form has tabs to allow the CM to report its EDGE participation to the Contracting Authority.

The CM completes and signs the form, then sends it to the Contracting Authority for processing.

The Contracting Authority verifies and signs the request, vouchers and processes the payment.

Interim CM Payments

Payment may be requested at intervals during each Stage. Payments will be made only once a month.

Payments for phased projects must be apportioned to the value of each phase.

Final payment will be made only when all punch list items and corrections are satisfactorily completed by the Contractors.
Changes in the CM Agreement

Substantial changes or revisions of the scope of work after execution of the Agreement, through no fault of the CM, may result in an adjustment of the CM’s compensation.

Without exceeding the total compensation for the agreement, the allocation of costs may be adjusted upon request of the CM and approval by the Contracting Authority without a formal signed amendment.

<table>
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<tr>
<td>The CM must submit its request for an Amendment or allocation adjustment using the Amendments business process.</td>
<td>If the Project is not administered using OAKS CI, the CM may submit its request for an Amendment or allocation adjustment using traditional means as directed by the Contracting Authority.</td>
</tr>
</tbody>
</table>

The CM’s Payment Request form will be adjusted appropriately to reflect the amended Agreement amounts paid according to the payment process.
Program Verification

Program Verification, formerly known as Predesign, is the first stage described in the Basic Services of the Architect/Engineer Agreement and is the point in which the A/E begins active involvement in the project, establishes basic project procedures, and verifies that the Program of Requirements presented by the Owner is valid and feasible in relationship to the budget. If it is not valid or feasible, the A/E works with the Owner to establish a plan to reshape the scope or budget to bring them into agreement. Rework or creation of the Program of Requirements is considered Additional Services and the A/E may require an amendment to the Architect/Engineer Agreement. The CM may also begin its involvement in the Project before or during the Program Verification stage. The CM will assist the A/E to determine the validity of the Owner's budget and schedule.

Organizational Meeting

The initial step in the design process once the A/E’s agreement is approved is a pre-design conference, or Organizational Meeting, with the design team and the Owner. This meeting is to establish the distribution of deliverables and correspondence, specific formats for information, the contact person(s), and the person(s) who has the final approval. OFCC recommends that the following parties attend the Organizational Meeting:

- The Owner – “User Group” Representative(s)
- The Owner – Project Manager
- OFCC – Project Manager
- The A/E:
  - Principal-In-Charge
  - Project Manager
  - Project Designer
  - Project Engineer
  - Other Design Consultants (if any)

Organizational Meeting Agenda:

- The Owner delivers the following items to the A/E:
  - Program (See Section 030)
  - Project budget (See Section 050)
  - Project objectives and priorities
  - Project design process time constraints (See Section 030)
  - Supplementary Conditions (See Section 200)
  - Owner Policies and Standards (See Section 200)
  - Existing drawings, surveys, geotechnical reports or other documentation
- Owner target events and milestone dates
- Standard format for all submittal information
- Lines of communication and distribution of information
- Review and approval authorities
- Define probable and anticipated deliverables
- Determine the type of Standard General Conditions (See Section 200)
- Establish the day of the week and frequency for standing design process meetings
- Establish issues and events concerning the design process schedule
- Establish the agenda and goals for the next meeting
If the Project is administered using OAKS CI, the A/E will distribute the agenda and minutes for the Kickoff Meeting and subsequent meetings through the Meeting Minutes business process. Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

If the Project is not administered using OAKS CI, the A/E may transmit the agenda and minutes for the Kickoff Meeting and subsequent meetings using traditional means as directed by the Contracting Authority.

Objectives

The first objective of this stage is to verify that the A/E has a complete understanding of the total scope of the project. This includes:

- The Owner's priorities and objectives
- Functional needs
- Code and zoning restrictions
- Space and equipment requirements and relationships
- Milestone and schedule constraints
- Owner budget and funding constraints

The second objective is for the A/E to verify that all of the information and assumptions contained in the Program of Requirements (POR) is still valid and, in the A/E's view, achievable within the budget and proposed timeframe.

Program Verification

The A/E will review the entire POR, including program technology, site constraints, space allocation and adjacencies, operational issues, time constraints and monetary constraints. The A/E must retrace some of the steps performed to create the POR, and verify that it still expresses the Owner's needs and is up-to-date in every aspect. Following are some reasons why this step is necessary:

- The A/E needs to agree that the Owner has given the A/E a complete and valid program, or if it has not, identify the problematic elements.
- The A/E needs to view the entire project with fresh eyes, begin to take ownership of the “facts” and requirements with which the A/E is presented in the program, and make an independent determination as whether the program is sound and can be achieved with the budget provided and within the timeframe allowed.
- The funding, which was approved may bear little relationship to the funding which was requested. The scope in which the project was conceived and which is defined in the POR may not be feasible. Additional services fees should be reviewed and qualified as required.
- If the project languished for a significant time before funding was obtained:
  - The funding may not reflect inflation, which occurred between the request and the approval.
  - The Owner's needs may have been clarified or changed.
  - The Owner's staff may have changed and have new perspectives on the project.
  - Codes or regulations may have changed.
  - Existing facilities or a site, which was intended to be used in the project may no longer be available, which may invalidate the assumption used in the budget.
  - LEED or sustainable design requirements or objectives for the project.
If the A/E does not concur that the POR is valid and achievable within the budget and proposed timeframe, the A/E will assist the Owner in prioritizing the various work items so that consensus is achieved on what the project will ultimately include, and the A/E will modify the POR accordingly and the changes must be approved in writing by the Owner.

**Statement of Probable Construction Cost**

The Statement of Probable Construction Cost, which the A/E, or the CM if applicable, submits at the conclusion of the Program Verification Stage must be based upon its experience, professional judgment, and appropriate back-up information, such as cost per square foot. Current industry market conditions for the proposed types of construction, site development, infrastructure, code, and phasing issues must be anticipated and incorporated into the proposed Statement of Probable Construction Cost.

Contingencies for design and bidding within the Statement of Probable Construction Cost.

- The contingencies carried within the Statement of Probable Construction Cost are not the same contingency within the Project Budget for the Construction Administration portion of the project.

**Deliverables**

<table>
<thead>
<tr>
<th>OAKS Capital Improvements Procedure</th>
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</tr>
</thead>
<tbody>
<tr>
<td>The A/E, and the CM if applicable, must submit any changes or revisions of the POR and related Program Verification Stage deliverables to the Contracting Authority and the Owner for approval through the Program of Requirements business process.</td>
<td></td>
</tr>
<tr>
<td>If the Project is not administered using OAKS CI, the A/E may transmit any changes or revisions of the POR and related Program Verification Stage deliverables using traditional means as directed by the Contracting Authority.</td>
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</table>

Program Verification deliverables include the following:

- Project directory and distribution list of key individuals on project team (See Section 200)
- Minutes of program interview meetings
- A separate listing of modifications to the Program of Requirements, with a narrative identifying and justifying the modifications
- An updated Space and Functional Program, with any changes highlighted
- Design and construction approach narrative including approach to phasing (if required)
- Statement of construction challenges for the project
- Narrative of anticipated building character or special features
- Analysis of site conditions, attributes and constraints
- Analysis of any available existing geotechnical and other information about the site, including information, which may be determined or inferred from existing projects on the same site or adjacent sites. This may include information about previous use of the site, which may have involved hazardous materials, and related EPA documentation. Such information will be used to verify the feasibility of use of the proposed site and must be reflected in the Statement of Probable Construction Cost.
- Any cost impacts related to required phasing of construction
- A/E recommendation for a final space and functional Program and corresponding construction budget (See Section 030)
- Preliminary detailed Design Process Schedule (See Section 200)
- Preliminary milestone dates of major project events
- Preliminary Construction Schedule (See Section 200)
- Narrative of code review and associated issues:
  - The A/E will review the requirements of all applicable codes and referenced standards as part of the Program Verification Stage. The A/E is expected to inform and consult with the Owner regarding applicable codes and referenced standards which may relate to the program and design. The A/E is responsible for designing the project to meet or exceed the requirements of all Local, State and Federal codes and regulations pertaining to the construction, renovation and occupancy of buildings. There are some circumstances in which a local building authority may take precedence over the State jurisdiction.

The Program Verification Stage concludes with the Owner's acceptance, in writing, of the deliverables noted above.
The Schematic Design Stage is the portion of Design in which the Program of Requirements is first expressed in graphic form. The Stage begins after completion of the Program Verification and ends with the Owner’s approval of, and the A/E’s submission to OFCC, of the Design Service Acceptance form for this Stage.

Preliminary and Final Concept Design

The Schematic Design Stage is divided into 2 distinct portions; the preliminary concept design and the final concept design.

- The preliminary concept design portion investigates:
  - Multiple design concepts to test functional program relationships
  - Building massing related to concepts
  - The preliminary life cycle cost impacts of each concept
  - Construction feasibility and impacts related to each concept
  - LEED and sustainable design and construction considerations
- The final conceptual design addresses more detailed analysis and presentation of the preliminary concept design. Analysis of the concepts and resulting studies usually leads to the development of the final concept and establishes a single solution for the development of character, project scope, and cost information that satisfies the Owner’s budget and programmatic needs.

Objectives

Preliminary Concept Design

- The primary objective is to assure the Owner that several options have been reviewed and analyzed before the Owner accepts a final scheme for development. This requires the A/E to present different scenarios and concepts to the Owner for consideration including relationship to Owner’s site master plan, contextual relationships to the Owner’s site, and environmental sustainability application. The A/E will compare each concept in the following terms:
  - Advantages
  - Disadvantages
- The advantages and disadvantages must address each scheme’s ability to satisfy the Owners objectives and priorities within the budget and operational constraints. The preliminary concept design portion investigates:
  - Multiple design concepts to test functional program relationships
  - Building massing related to concepts
  - Life cycle cost impacts of each concept
  - Construction feasibility and impacts related to each concept
- Different approaches for new projects might investigate building shape and massing. Renovation projects might examine different functional approaches to solving the program’s space requirements. Building systems, site flow, facility character, number of floors, code issues are all conceptual design attributes for early examination and comparison.
- Analysis of the concepts and resulting studies leads to the advancement of a specific scheme into a final concept for development.
- To advance from Preliminary Schematic Design to the Final Concept Documents the A/E must obtain written acceptance of the Preliminary Schematic Design from the Owner and OFCC.
Final Concept Design

- The primary objective is to better define site and building relationships and character. The final concept documents must define site flow, construction phasing, building shape, and massing and floor plan room layouts to meet the Program of Requirements.
- An important element of the process is the Life Cycle Cost Analysis which is utilized to identify possible savings in first cost construction verses long term operating and replacement cost.
- The A/E must define all mechanical systems and building systems anticipated in the design.
- The A/E must report the concept's ability to meet program objectives and goals as well as budget and code constraints.
- To advance from Final Concept Documents and the Schematic Design Stage to the Design Development Stage the A/E must obtain written acceptance of the Schematic Design Stage from the Owner and OFCC.

Deliverables

Preliminary Concept Design

- The Preliminary concept deliverables must be appropriate to the project scope. Preliminary concept deliverables for a new building or substantial addition include, at a minimum, the following:
  - Site plans
  - Floor plans
  - Elevations
  - Cost information
  - Preliminary scheme evaluations

Final Concept Design

- At the conclusion of the Preliminary Concept portion, a final concept is selected for further development.
- Final concept deliverables must be appropriate to the project scope. Final concept deliverables for a new building or substantial addition include, at a minimum, the following:
  - Site drawings – Show adjacent buildings, existing and proposed elevation contours, existing and new site utilities, vehicular and pedestrian flow, parking, service access and special construction required.
  - Floor plans – Illustrate proposed structural bays with room layouts that include door swings, program room numbers, names and areas. Identify mechanical, electrical and equipment rooms with fire walls, stairs and elevators. Show roof plans and proposed screen and parapet walls. Partial plans will include key plans.
  - Fire Resistance Floor Plans – Illustrate all fire walls and means of egress for all phases of construction. Each phase of construction will comply with life safety and means of egress during the construction period. The Drawings must illustrate temporary measures for means of egress during any sequence or phase of construction.
  - Elevations – Develop all elevations and exterior canopies. Define anticipated grade, floor and bearing elevations.
  - Building Sections – develop a section through the entire building illustrating relationships of architectural and structural features and elements. Show all anticipated floor, ceiling, roof and exterior grade elevations.
  - Equipment and Furniture – Illustrate furniture and equipment defined in the Program.
  - Massing studies – Study models and computer generated graphics of the building, illustrating mass relationships and entrances of the facility.
- Geotechnical and survey drawings – Services acquired, and reports received which justify and support the final location of the construction, which is established in this stage.
- Specifications - An outline specification indicating materials, types of construction, proposed mechanical systems, plumbing systems, fire protection, security systems and proposed electrical and life cycle analysis investigations.
- A written narrative of the energy and life cycle analysis investigation
- An updated Project Schedule
- An updated detailed Design Process Schedule
- A Statement of Probable Construction Cost. Construction cost estimates will be within available budget constraints and will give appropriate mention of and respect for seasonal construction constraints. Scope change elements in the design process or current state of design affecting the original budget requirements will be identified and defined.
- An updated Space and Functional Program specifically identifying any modifications
- Life Cycle Cost Analysis

**OAKS Capital Improvements Procedure**

The A/E, and the CM if applicable, must submit the Schematic Design Stage deliverables and any changes or revisions of the POR to the Contracting Authority and the Owner for approval through the Design Review business process.

Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

**Traditional Paper-based Procedure**

If the Project is not administered using OAKS CI, the A/E may transmit the Schematic Design Stage deliverables and any changes or revisions of the POR using traditional means as directed by the Contracting Authority.

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**Review Meeting**

A review meeting should be held 2 weeks after the above requirements are received from the A/E.

The Owner will provide written comments on the submittal to be issued to the A/E at the review meeting. The A/E will document and provide a written response to each comment or question.

**OAKS Capital Improvements Procedure**

The A/E will distribute the agenda and minutes for the Schematic Design Stage Review Meeting through the **Meeting Minutes** business process.

**Traditional Paper-based Procedure**

If the Project is not administered using OAKS CI, the A/E may transmit the agenda and minutes for the Schematic Design Stage Review Meeting using traditional means as directed by the Contracting Authority.

Once the Owner and OFCC accept the comments, the Schematic Design stage is complete.

Upon OFCC’s receipt of the Design Service Acceptance form approved by the Owner, and upon written authorization by OFCC, the A/E may proceed to the Design Development stage.
The Design Development Stage is the portion of Design in which the project is transformed from ideas, concepts, and broad-brush thoughts to specific materials, details and contractual instructions to implement the competitive bidding and construction of physical facilities. This stage begins after the completion of the Schematic Design stage and ends with the Owner’s approval of, and the A/E’s submission to OFCC, of the Design Service Acceptance form for this Stage.

Objectives

The primary objective of the Design Development is to complete all design required for the project. This requires interaction between the Owner and the A/E’s team of professionals to verify all the pieces and parts of the design. A formal internal review or external constructability consultation must investigate costs of elements, Owner’s standards, and prior assessments potentially missed or compromised.

The Design Development Stage must define all products and manufacturers necessary to implement the design. Each and every item specified must be defined within the technical specification with a design standard with equal manufacturers unless the Contracting Authority provides specific written authorization to use a proprietary manufacturer or product for the project.

The A/E must graphically illustrate the design to address all exterior and interior architectural and environmental elements as well as site design to communicate the total concept. The drawings must be complete enough to prepare detail quantities of elements, systems and construction sequencing to determine a detailed cost estimate for the various prime contractors.

The A/E identifies modifications, if any, from the original program of requirements and the budget constraints. The Owner approves that the design meets the goals and objectives, the program of requirements and the budget and funding constraints. Final design approval from Owner.

Deliverables

Based on the approved Schematic Design Documents, the updated Program, approved Statement of Probable Construction Cost and the approved Project Schedule, the A/E must prepare Design Development Documents appropriate to the scope of the project. Design Development Documents deliverables for a new building or substantial addition include, at a minimum, the following:

- **Architectural & Civil Disciplines:**
  - Site Layout and Materials Plan – Illustrate the design forms and materials to be used. Major dimensions will be indicated. All appearance-related design issues should be addressed, resolved and shown. LEED and sustainable design and construction should be considered.
  - Site Grading and Drainage Plan – Show developed drainage concepts, include existing and new contours, drainage structures (numbered for general reference), and spot grade elevations.
  - Site Utilities Plan – Indicate the plan relationships of existing and proposed utilities. Vertical relationship of the utilities will be noted by plan notations and profiles. Site plan including grading and site utilities, utility connection points and a stormwater management design.
  - Planting Plan – Illustrate the centerpoints at desired spacing of major plantings. A key will explain the proposed form and design characteristics of the plants (large shade tree, flowering ornamental tree, low evergreen shrub, etc.). Existing trees to remain will have “o’s” for centerpoints. Proposed trees will have “x’s” for centerpoints or appropriate legend indicators.
  - Design Details – Show the design or detailing to be used in the site development. These details will clarify the relationship of vertical and horizontal surfaces, steps, walls and pavements, etc., including edge conditions at adjacent surfaces.
  - Dimensioned floor plans indicating structural bay sizes and overall building dimensions. Floor Plan should show dimensions of major elements, and final partition locations, including all openings.
  - Exterior and core wall sections showing final dimensional relationships, materials and component relationships.
- Floor Plan showing all fixed and loose equipment
- Large scale plans and sections
- Room finish schedule identifying all finishes
- Building sections
- Door and hardware schedule showing door, frame and hardware type, and fire ratings, if any
- Window schedule showing types and sizes
- Preliminary development of details
- Reflected ceiling plan including ceiling grid, light fixtures and all devices that penetrate or are mounted upon finished ceiling
- Interior movable furniture, office equipment, demountable partitions and system furniture, layouts for all departments and floors including proposed building signage system
- Gross and net area calculations by department to determine compliance with Program of Requirements
- A thorough outline technical specification including selected acceptable manufacturers

**Structural Discipline:**
- Foundation drawings
- Floor plan with all structural members located and sized
- Footing, beam, column and connection schedules
- Final floor elevations

**Plumbing & Mechanical Disciplines:**
- Heating and cooling load calculations for each individual space, including cooling requirements for heat loads generated by office equipment, personal computers, etc.
- Mechanical equipment schedule indicating size and capacity
- Plumbing Fixtures Schedule
- Floor plans showing mechanical equipment and plumbing fixtures. All equipment and fixtures should be shown and located.
- Floor plans showing main ductwork distribution, branch ductwork and plumbing piping. All ductwork and piping should be located and sized to coordinate with structural framing system
- All ceiling mounted devices should be located
- Legend showing all symbols used on drawings

**Electrical Disciplines:**
- Floor plan locating all power consuming equipment with a description of the equipment load characteristics
- Estimate total electric load, confirm Design Manual required excess capacity
- Floor plan showing all major electrical equipment (switchgear, distribution panels, emergency generator, transfer switches, UPS system, etc.) which will be dimensioned and drawn to scale
- Site plan showing preliminary site lighting design with pole and fixture type designations
- Floor plan showing lighting layout, power, telecommunications and office automation devices and switches with preliminary circuiting
- Light fixture schedule should be finalized
- Estimate interior electrical loads for systems furniture, receptacles, lighting, food service equipment and any other special use areas, etc.
- Preliminary Distribution Panel Schedule
Other Deliverables:

- Schedule of Spaces – Provide a comparative schedule of spaces arranged in tabular form, listing the building’s various spaces and showing the original square footage allotted in the approved Program for each space. Any deviations from the approved Space and Functional Program, involving square footages or otherwise, must be clearly indicated.
- Survey and geotechnical information are required as part of the Design Development.
- Project Manual complete with all Division 01 – “General Requirements” sections and technical sections. General Requirements sections unique to the project, such as including temporary facilities, and Supplementary Conditions, must be fully developed. (OFCC standard documents, which will be included unmodified in the final Project Manual may be represented by the first sheet of each such document.) With each technical specification section, for each product or material specified, include a photocopy of a cut sheet of the basis of design components and at least two acceptable components specified.
- Final Life Cycle Cost Analysis
- Information provided outside the initial scope of services and based on subsequent written authorization must be clearly noted.

OAKS Capital Improvements Procedure

The A/E, and the CM if applicable, must submit the Design Development Stage deliverables and any changes or revisions of the POR to the Contracting Authority and the Owner for approval through the Design Review business process.

Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

Traditional Paper-based Procedure

If the Project is not administered using OAKS CI, the A/E may transmit the Design Development Stage deliverables and any changes or revisions of the POR using traditional means as directed by the Contracting Authority.

Statement of Probable Construction Cost

The cost information reported by the A/E at the conclusion of the Design Development Stage is based on detailed information from the drawings and specifications. It is anticipated that all major building components, systems and design aspects are defined during the design development stage. The type, quantity, quality, and difficulty of construction should be identifiable at the conclusion of this stage.

The Statement of Probable Construction Cost is based upon supportive information derived from a detailed cost estimate. The estimate must be prepared to parallel and cross-reference the numbers and titles from the Project Manual.

Group the estimate by each anticipated bid trade for the base bid separately from the proposed alternates. Each item must list the material and labor to illustrate the quantity, unit, cost per quantity, and expanded sum of the total.

Review Meetings

The A/E must conduct a meeting or series of meetings, as appropriate, to review the design with the Owner and to review proposed product manufacturers and equipment. The following is a list of suggested topics:

- Product and equipment selections
- Interior room elevations
- Hardware type and function
- Security, data and communication systems
- Elevator capacity function, speed and finishes
• Exterior materials and finishes
• Mechanical system (HVAC)
• Plumbing fixtures and accessories
• Communication and data systems
• Lighting and power requirements
• Signage – interior and exterior*
  • *The A/E will assist in coordinating furniture, art, graphics and signage if these services are not part of the A/E’s scope of work. The A/E will provide electronic drawing files to the Owner to facilitate the performance of these services by others.

A document review meeting with the Owner and the Contracting Authority is required no more than 2 weeks after the Design Development Documents are issued to discuss the Owner and Contracting Authority’s review comments. The A/E must respond, in writing, to each comment.

### OAKS Capital Improvements Procedure
The A/E will distribute the agenda and minutes for the Design Development Stage Review Meeting through the **Meeting Minutes** business process.

### Traditional Paper-based Procedure
If the Project is not administered using OAKS CI, the A/E may transmit the agenda and minutes for the Design Development Stage Review Meeting using traditional means as directed by the Contracting Authority.

To advance from the Design Development Stage to the Construction Document Stage the A/E must obtain written acceptance of the Design Development Stage from the Owner, which the A/E must submit to OFCC. At this point the design of the project should be complete and fixed.

The A/E may proceed with the Construction Document Stage upon written direction from OFCC.
The Construction Documents stage is the portion of Design, which identifies the specific materials, details, and contractual instructions to implement the competitive bidding and construction of physical facilities. The Stage begins after completion of the Design Development stage and ends with the Owner's approval of, and the A/E's submission to OFCC of, the Design Service Acceptance form for this Stage.

Objectives

The primary objective of the Construction Documents Stage is to produce the Procurement Documents for the various work trade contractors. The A/E must complete the coordination and the details of drawings and written instructions for obtaining public bids from contractors to implement the project design. The documents will also be used to obtain plan approval for construction from the appropriate building authorities and agencies.

In this stage, the final notes, tables, and instructions for execution of the construction for the project are specifically defined into contract packages for prime contractor trades. The design should not be substantially changed from the approved Design Development Stage documents.

The detailed cost estimate at the completion of the Construction Document Stage must update the current market place cost and final quantities of the Design Development Stage detailed estimate to verify that the construction cost are within the Owners budget constraints.

The A/E must verify that the design is responsive to the approved project program and priorities.

The A/E must verify that the Owners schedule of Milestones and sequences are identified for the bidders.

The Contracting Authority's objective is to assure that the Documents represent the design in enough detail and clarity that the Bidders can provide bids that represent the design intent and anticipated duration scheduled for construction.

At the conclusion of this stage, Contract Documents will be 100 percent complete and in final form and suitable for construction.

The A/E will not significantly change the scope, scheme, major design features, or specifications from the approved Design Development submission except for changes authorized by OFCC and the Owner.

During this stage of document development, the A/E will verify all Owner furnished equipment or materials of work to be performed by the Owner.

The A/E will meet with the Contracting Authority to verify the Supplementary Conditions and Owner work requirements. Supplementary Conditions must have written authorization by the Ohio Facilities Construction Commission.

The A/E will submit progress drawings and specifications for review at a level of completeness of 50 percent and between 85 to 95 percent.

The A/E will obtain plan approval prior to advertisement for bids.

The A/E will conduct a full constructability review to identify any and all missing pieces, parts, or items as to remedy latent error and ambiguity in the construction documents. These errors and ambiguities add risk to projects and may lead to confusion in bidding or later risk in the form of disputes, conflict, and/or additional costs as change orders.
Deliverables

Based on the Approved Design Development Documents, the updated Program, Approved Statement of Probable Construction Costs and the Approved Schedule, the A/E will prepare Construction Documents appropriate to the scope of the project. Construction Documents deliverables for a new building or substantial addition include, at a minimum, the following:

- **Cover Sheet:**
  - Name, address of Owner, Construction Manager (if applicable), Architect, Consultants, Project Number
  - Vicinity map
  - Location map
  - Index to all drawings
  - Site Plan (optional)
  - Code Analysis Information such as: Fire resistance plans and building code construction type and occupancy information
  - Gross and net area calculations of all departments and floors
  - Abbreviation and symbol glossary

- **Site Plan(s):**
  - A certified plot plan, (sealed by an Ohio licensed Land Surveyor)
  - A grading plan 1'-0" or 2'-0" increments with appropriate sections
  - Sedimentation Control and Storm Water Management Plans and profiles
  - Local governing utility standards included in all utility details
  - Standard details must be modified to suit project conditions. All non-applicable information must be deleted.
  - Existing and proposed electrical, gas, sewer, water, storm drainage, telephone and TV cable utilities must be identified.
  - Utility designs must show plan, profile and all fittings and details required by code and local government standards.

- **Landscape:**
  - An overall site plan showing plantings, irrigation and drainage system, site lighting and all site development features.
  - Details and sections of all site development features, sidewalks, curbs, paving stones, bollards, ramps, exterior stairs, lawn areas showing seeding methods, etc.
  - All landscape conditions should be thoroughly detailed.
  - A symbol glossary
  - Planting schedule
  - Seeding schedule
  - Modify standard details to suit project conditions. Delete all non-applicable information.

- **Architectural:**
  - A basic floor plan of the entire facility showing minimal detail with a grid or column reference system showing overall building layout dimensions, core spaces, Owner numbered or named rooms, room square footage, floor opening penetrations, etc. Fire ratings of all partitions, fire doors, etc. should be clearly denoted.
- A dimensioned floor plan locating all interior partitions and exterior wall partitions from the grid or column reference system. Floor plan should include room and workstation designations, interior and exterior door and window designations.
- A dimensioned floor plan showing wire management system with openings located for voice, data, video and electrical and outlet locations.
- Room wall elevations for all non-typical walls
- Casework floor plan complete with schedule, details and elevations
- Interior and exterior window, door and frame schedule, complete with elevations and details for all head, jamb and sill conditions
- Interior and exterior finish and color schedule (exposed finished mechanical and electrical items will be clearly addressed).
- A reflected ceiling plan showing all grid, access doors, drapery tracks, light fixtures, grills, diffusers, sprinkler heads, security devices, fire alarm devices, intercom system, exit devices and acoustic treatment. Ceiling heights and type should be indicated on the reflected ceiling plan.
- Details to illustrate transitions between finish materials and construction types. Major building sections in at least two directions. A sufficient number of details to clearly indicate the method of construction for all building components and include, but not be limited to: walls, floors, roofing assemblies, waterproofing systems, insulating systems, interior and exterior finishes, architectural details, interior stairs and elevators.
- Interior signage locations must be shown on the floor plan complete with details and schedules.
- Final locations must be shown on the floor plan with associated floor loadings being shown on the structural drawings.
- Partition type schedule and section details for all interior, exterior and floor wall conditions
- Roof plan showing all roofing material, roof drains, overflows, access hatches, roof walk pads, roof drainage slopes and elevations, scuppers, skylights and mechanical and plumbing penetrations. Details must be provided for all edge, parapet and flashing conditions.
- All exterior building elevations showing finish materials, exterior door and window openings and designations, lights, louvers, grilles, signage, speakers and other devices
- All structural members included in, or enclosed by the architectural details must be closely coordinated, with the size verified by the structural engineer. Details must indicate the framing and furring method wherever possible.
- All mechanical/electrical elements included in, or enclosed by the architectural details must be closely coordinated with and the size verified by the design engineer. Details must indicate the framing and furring method wherever appropriate.

**Structural:**
- A dimensioned foundation plan showing and locating in plan and in elevation all footing, foundations, foundation piers, caissons, grade beams, reinforcement with all layouts for masonry and anchor bolts.
- A dimensioned floor plan for each floor, showing all beams, beam sizes, duct and piping penetrations, construction joints, expansion joints, edge conditions, imbedded anchors and frames thickened slabs, recessed slabs stair penetrations, elevator shafts, floor loading, top of structure elevation and reinforcement.
- Footing, column, grade beam, caissons, piers, reinforcement, and beam schedules
- Dimensioned to scale details showing all conditions, connections, and structural sizes
- Shear walls clearly shown on plan and schedule if symbol code is used
- Abbreviation and symbol glossary
- Fastener/connection schedule
- Elevations of all footings, elevations to top of all beams, columns, recesses and floors
- Roof beam plan, elevator hoist beams
- **Mechanical:**
  - Abbreviation and symbol glossary
  - Mechanical equipment schedule
  - Exterior louver schedule, as coordinated with architectural louvers
  - Floor plans indicating ductwork with sizes, ductwork mechanical devices, beams for floor above with ductwork penetrations
  - Reflected ceiling plan showing final location of all ceiling mounted mechanical devices which include but are not limited to: diffusers, return air grilles and thermostats
  - Floor plan indicating the sprinkler and standpipe riser systems including all required pumps and control devices
  - Fire damper schedule and location of dampers on each floor
  - Ductwork sound attenuation schedule
  - Vibration isolation schedule
  - Terminal control box schedule, with electrical and air volume requirements
  - Chilled water, condenser, refrigerant, fuel oil, steam and gas riser piping floor plans and riser diagrams and schematics including pipe sizes. Piping schematics must be in large enough scale to clearly indicate all control devices, valves, unions and miscellaneous appurtenances.
  - Areas of concentrated mechanical equipment must be enlarged from the basic floor plan to not less than 1/4"=1'-0" illustrating detailed ductwork and equipment within the mechanical room in both plan and section views; coil access and filter access are to be shown to scale as verification of clearance.
  - Access doors both wall and ceiling, must be called out at each applicable location as coordinated with the architectural drawings (rated where applicable).
  - Floor plans should indicate housekeeping pads and weight of concentrated loads.
  - Duct/piping penetrations of all walls, floors, roofs, beams, columns and foundations must be coordinated with and verified by the structural engineer. Code complying firestopping must be detailed for penetrations through fire rated assemblies.
  - Locate on the floor plans all controls system equipment and provide a panel and device schedule, indicator and panel graphics complete with sequence of operation and control system program diagram.
- **Plumbing:**
  - Fixture/connection schedule
  - Abbreviations/symbol glossary
  - Floor plans indicating domestic hot and cold water, storm, waste, vent and gas piping plans, including all valves, unions, fixtures, pipe sizes, and risers diagrams, etc.
  - Piping and insulation jacket dimensions are to be coordinated with architectural finishes and casework; all exposed piping is to be verified with the Architect.
  - Plan drawing of all water and sanitary branch piping for installation of interior equipment and fixtures.
  - Typical piping riser schematics for all gravity flow piping systems
  - Areas of concentrated plumbing equipment (hot water heaters, circulating pumps, etc.) must be enlarged from the basic floor plan to not less than 1/4"=1'-0" detail in both plan and section views.
  - Access panels, doors and provisions in both walls and ceilings are to be shown on floor plans for all valves, cleanouts and caps, etc.
Connections to existing and new building utilities must be clearly shown. Requirements of governing utilities must be determined and clearly detailed and shown. Connection details and elevations must be checked and coordinated with applicable civil drawings.

Design details

Piping penetrations of all walls, floors, roofs, beams, columns and foundations must be coordinated with and verified by the structural engineer. Code complying fire-stopping must be detailed for penetrations through fire rated assemblies.

Electrical:

- Lighting fixture schedule
- Lighting control schedule, switches, emergency lighting
- Power riser diagram for interior lighting systems
- Abbreviations and symbol glossary
- Panel schedules with panel locations shown on the floor plan
- Fan/motor control schedule/diagram
- Floor plan showing location of all fire alarm device/panel schedule, indicator graphics, riser diagram including activated hardware and pull stations. Confirm activated hardware with hardware schedule.
- Floor plan showing location of all intercom devices, panel schedule and location and program riser diagram
- Floor plan showing location of all security devices, panel schedule and locations and riser diagram
- Floor plan showing location of all intercom and TV outlets and devices
- Power riser diagram and main distribution panel layout in large enough scale so each run can be clearly seen.
- Telephone board schedule and riser diagram coordinated to equipment size requirements and connection provisions with the governing telephone utility and Owner requirements.
- TV terminal/splitter and riser diagram coordinated as to equipment size requirements and connection provisions to antenna and cable TV system.
- Floor plan indicating wire management wiring for power, receptacles, voice, video and data communications including circuiting, and connections to systems furniture, etc.
- Separate plans for power, voice and data must be provided.
- Floor plan indicating power connections to all mechanical equipment
- Reflected ceiling plan indicating above ceiling wiring and circuits for lighting/electrical switches, security, fire alarm, emergency exit lighting and intercom controls, etc.
- Main service entrance connection diagram as verified and coordinated with the governing power utility; locations of services entrances and transformers must be verified with the Architect.
- Areas of concentrated electrical equipment, and electric vault rooms in particular, must be enlarged from the basic floor plan to not less than 1/4”=1’0” and must be shown in plan and elevation.
- Sheet notes must be applicable to each sheet. Standard notes and details must be modified to specific conditions.
- Access to systems must be verified. Doors, panels or other provisions must be called out in all wall and ceiling locations for junction boxes, controls or any other device requiring access.
- Raceway penetrations of all walls, floors, roofs, beams, columns and foundations must be coordinated with and verified by the structural engineer. Code complying fire-stopping must be detailed for penetrations through fire rated assemblies.
The A/E, and the CM if applicable, must submit the Construction Documents Stage deliverables and any changes or revisions of the POR to the Contracting Authority and the Owner for approval through the Design Review business process.

Refer to Appendix C | Guide to OAKS CI and the associated Help File for additional information.

**Statement of Probable Construction Cost**

The cost information reported by the A/E at the conclusion of the Construction Document Stage must be based upon supportive cost information from the updated detailed cost estimate prepared from the Design Development Stage. The detailed estimate must account for the refined information of quantity or product information adjustments required in the development of the details to construct the design and incorporate the Constructability Review comments.

**Review Meeting**

A document review meeting with the Owner and OFCC is required two weeks after the Construction Documents are submitted for review to discuss the Owner’s and OFCC’s review comments. The A/E must respond in writing to each comment.

**Activities to Prepare for Bidding**

The following issues must be properly addressed and completed in the project development process prior to advertising for Bids:

- **Prevailing Wages**: A Contractor performing construction services for a public improvement project, except for public schools K – 12, is required to pay Prevailing Wage Rates of the project locality to laborers and mechanics performing work on the project. Construction is defined in ORC 4115.03(B) to mean the following:
  - Construction of any public improvement, the total overall project cost of which is fairly estimated to be more than the Prevailing Wage Threshold Level, which is adjusted biennially by the Ohio Department of Commerce (“DOC”) pursuant to ORC 4115.034, (no active link) and performed by other than full-time employees who have completed their probationary periods in the classified service of a public authority.
  - As of September 29, 2011, the Prevailing Wage Threshold Level for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of any public improvement that does not involve roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction is $38,000, and the threshold for new construction is $125,000. On September 29, 2012, these thresholds increase to $60,000 and $200,000 respectively. On September 29, 2013, the thresholds will increase to $75,000 and $250,000 respectively.
For any public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction, as of January 1, 2012 the Prevailing Wage Threshold Level for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of any public improvement is $24,609, and the threshold for new construction is $82,137.

For the current Prevailing Wage thresholds, visit http://www.com.ohio.gov/laws/PrevailingWageThresholdLevels.aspx. A public authority shall not defeat the intent of the Prevailing Wage law by subdividing a project into component parts or projects, the cost of which is fairly estimated to be less than the threshold levels set forth in divisions (B)(1) and (2) of ORC 4115.03, unless the resulting projects are conceptually separate and unrelated, or encompass independent and unrelated needs of the public authority, per ORC 4115.033.

OFCC will access the Department of Commerce, Wage and Hour Bureau, internet site www.com.state.oh.us and provide the wage rates to the A/E for the Procurement Documents. The A/E must coordinate the timing and means of delivery with OFCC. If the wage rates expire on or before the bid date, OFCC will provide new wage rates to the A/E, who will issue them by Addendum to all plan holders. (With the consent of the Project Coordinator, the A/E may download the wage rates directly, and provide any updates if necessary.)

The Contractor must monitor the Prevailing Wage website for changes in the wage rates during the construction period and update, post and pay the new rates when changes become effective. A more complete discussion of this matter is contained in Section 310 of this Manual.

See the prevailing wage rates for apprentice requirements regarding payroll. A Contractor employing an apprentice on the project, must attach a copy of the Apprenticeship Agreement to the Contractor’s certified payroll at the first involvement by an apprentice. The Contractor must maintain the proper ratio of apprentices to journeymen as required in the Wage Rate Schedule.

Plan Approval: The A/E is responsible for obtaining the basic State plan approval(s) (structural, plumbing and electrical) for the project from the Department of Commerce, Division of Industrial Compliance (or other body having jurisdiction if the project does not occur on State-owned property.) This may include obtaining pre-submittal reviews, submitting plans and specifications, paying fees, responding to questions and correction letters, and making any design changes required to obtain plan approval.

The A/E must request that 4 sets of “approved” Contract Documents be returned for distribution. The original approval stamps of these authorities must be visible on the drawings and the specifications. Non-original copies are not acceptable. One set of these documents will be distributed to each of the following:

- OFCC
- Owner
- General Contractor, Lead Contractor, or CM, as applicable
- A/E

The A/E is required to secure the National Pollutant Discharge Elimination System (“NPDES”) general permit from the Ohio EPA and prepare a stormwater pollution prevention plan, if required.

The A/E is required to secure zoning approval (if the project does not occur on State-owned property and is within the jurisdiction of a local zoning ordinance.)

Any other required permit is to be secured by the Contractor. Such permits may include, without limitation:

- Permit for abatement of hazardous materials
- Demolition permit
- Permit to install a sewer
- Permit to install or remove a fuel storage tank
- Permit and inspection of boilers
The Contractor is responsible for scheduling all inspections required by all permits, and for scheduling the required State Fire Marshal and local fire official inspections required as part of obtaining approval for occupancy.

**EDGE Business Enterprise Program Participation Goal:** Ensure that the Public Bid Advertisement (e.g., the newspaper legal advertisement) includes the Encouraging Diversity, Growth, and Equity ("EDGE") Business Development Program Participation Goal.

Ensure that the Procurement Documents and the Contract Documents include appropriate and required information about the EDGE Program in text throughout the documents in areas such as, but not limited to:
- Solicitation
- Instructions to Bidders
- Bid Form
- Bidder’s Qualifications form
- EDGE Affidavit
- Good Faith Effort form

**EDGE Participation Goal:**
- The Director has assigned a goal of 5 percent for all construction projects with Bid Openings on and after October 15, 2005.
- The Director may authorize a different goal from time to time. Prior to publishing the Public Bid Advertisement (PBA) and before issuing the Procurement Documents, verify the current goal percentage with the ODAS Equal Opportunity Division (the “EDGE Office”) and use the most current goal in the PBA and the Procurement Documents.

**Public Bid Advertisement:** Public Improvements that exceed $200,000 in aggregate cost must be competitively bid per ORC Chapter 153 and, as such, a Public Bid Advertisement is required. Prior to publication, the A/E must submit the following documents to the Project Coordinator (PC):
- One set of Contract Documents, approved by the Division of Industrial Compliance
- One copy each of the Solicitation, the Bid Form and the Detailed Cost Estimate. For any alternate bid item, a cost estimate of each alternate, by trade contractor, must be included in the Detailed Cost Estimate.

The Project Coordinator, with the assistance of the A/E and Project Manager, determines the advertisement and bid due dates, and prepares the legal advertisement to be placed in the local newspaper(s) in the county of the project to be bid. The Project Coordinator contacts the newspaper and arranges for the Ad to be placed and billed to the A/E.

The legal advertisement must be published once a week for 3 consecutive weeks, with the bid opening no sooner than 8 days following the last bid advertisement. Additional bid advertisements may be placed in other newspapers to solicit Bidder participation, as determined by the A/E, Project Manager and Owner.

The Advertisement is generally based on information contained in the Solicitation. The Ad must include the following items:
- Location, date and time when bids will be opened
- Project name and number
- A/E contact information
- Estimates for each Base Bid and the total of the alternates for each Contract
- Location, date and time of Pre-Bid Meeting
- Domestic Steel Notice per ORC 153.011
- Bid document purchase information
- Locations where Procurement Documents are available
- The A/E must provide Proof of Publication to OFCC to document compliance with the statute. Proof of publication is a notarized statement and a copy of the Ad provided by the newspaper.
- Although bids are generally opened at OFCC, the Owner may request that they be opened near the project site. The criteria, which OFCC uses to consider such a request, are the location of the facility, and the experience of the Owner, the A/E or CM, in construction contract bid openings.
- If any or all bids are rejected by OFCC, and the work is to be rebid, the advertisement for bids must be published once, not less than 5 business days preceding the date of the bid opening. The A/E must coordinate rebidding with OFCC.
- Public Improvements that do not exceed $200,000 in aggregate cost may be awarded in a manner other than competitive bidding or competitive selection. The Project Manager will use the following contract award process:
  - Identify at least 3 Contractors, when possible, who can perform the work and seek proposals from those entities.
  - The Project Manager will document the process for award using the letterhead bid format, and provide a summary. This record will be retained in the project file.

**Acceptance:** When the Owner signs and the A/E submits to OFCC a Design Service Acceptance form for this stage, the A/E and the project may proceed to the Bid and Award Stage.
This Section identifies the procedures for bidding and contract award. The activities that are necessary to perform before the project will be released for bidding as discussed in Section 240 – Construction Documents, including the preparation for bidding, bidding, the evaluation of bids, and award and funding of construction contracts. It begins with steps prior to advertising and ends with issuance of the Notice to Proceed.

**Bidding Process**

The bidding process involves the follow elements:

**Distribution of Procurement Documents**

- The A/E or CM may contract with a printing company, known as a reprographer, to print and distribute the Procurement Documents (proposed Contract Documents, Procurement Requirements, and Available Information) to prospective bidders and plan rooms. The A/E, or CM must require the printing company to maintain an accurate accounting of all entities to whom documents are issued and all associated costs for the services rendered. In some cases the A/E or Owner may distribute documents, in which case the Plan Holder list must be coordinated among the various issuers.
- A Bidder may obtain the Procurement Documents in whole or in part from a printing company designated by the A/E, or other issuer if applicable. The prospective Bidder must make payment in a form acceptable to the reprographer in the amount of the actual cost of reproducing the documents, plus shipping charges when the prospective Bidder requests delivery. The payment for the Procurement Documents is not refundable. The Bidder must dispose of the documents after bidding is completed.
- The A/E must direct the reprographer to furnish a complete set of the Procurement Documents to each of the Public Plan Rooms listed in the Solicitation and other appropriate plan rooms approved by OFCC for review by prospective Bidders, free of charge. The A/E will be reimbursed for the cost of reproduction and shipping of documents to plan rooms and OFCC from the printing allowance included in the A/E agreement.

**Pre-Bid Meeting**

- OFCC, in conjunction with the A/E, and CM if applicable, will set a time and place for a pre-bid meeting, which will be indicated in the Solicitation. The Project Coordinator may attend the pre-bid meeting, review bidding requirements for those present, and answers any related questions. All Bidders are strongly encouraged to attend the pre-bid meeting. Pre-bid meeting attendance cannot be mandatory.
- The pre-bid meeting is an opportunity for prospective Bidders to examine the site, and identify and ask questions, and to attain a more complete understanding of the Procurement Documents. The A/E should also familiarize prospective Bidders with requirements of equal employment opportunity, prevailing wage, the EDGE program, the OBWC Drug Free Safety Program, campaign contribution limits, ethics compliance, Sustainability Requirements, an overview of OAKS CI, and other requirements, as necessary.
- At the pre-bid meeting the A/E must make no verbal interpretations of the Procurement documents, and will state that any statements made by the A/E, the Owner, or its representatives are not binding, and that any and all changes to the Procurement Documents will be made by written addendum. If substantive questions are raised at the pre-bid meeting which are not addressed in the Procurement Documents, the A/E will prepare an Addendum clarifying, expanding, or correcting the Procurement Documents in response to any issues identified at the pre-bid meeting and furnish it to all plan holders of record. If subsequent to the award of any Contract, there is a need to interpret, enforce or otherwise resolve any ambiguity, inconsistency, error or omission in the Contract Documents or between the Contract Documents and applicable laws, such interpretation, enforcement or resolution will be made with a preference to accomplishment of the purpose of the Contract, without additional cost to the Owner, if by any reasonable inference, the basis for such action could have been raised and resolved at the pre-bid meeting.
Addendum to Procurement Documents

- If a Bidder perceives any conflict, error, omission or discrepancy on or between any of the Procurement Documents, or between the Procurement Documents and any applicable law, the Bidder may submit a request to the A/E for an interpretation or clarification. An Addendum will be used as the means to respond to any and all parties who request an interpretation or clarification.

- In response to any request for interpretation or clarification, the A/E will prepare an Addendum, which clarifies, expands, or corrects the Procurement Documents. The A/E will provide with the Addendum any drawings necessary and will identify any issued drawings within the written body of Addendum. Before issuing the Addendum, the A/E will submit the Addendum by facsimile transmission or other means to OFCC, and review the proposed content with OFCC. OFCC is primarily concerned with changes to General and Supplementary Conditions, the Bid Form, the Instructions to Bidders or any additions/deletions of Alternates. Changes to any of these items must be brought to OFCC's attention on the facsimile transmission cover sheet and will require confirmation that OFCC does not take exception to any item before the Addendum can be issued to Bidders.

- The A/E will send a copy of each addendum to each plan holder of record, OFCC, the Owner, the CM if applicable, and to the plan rooms identified in the Solicitation. The A/E may direct a printer to print and distribute Addenda, or the A/E may perform this task. The cost of printing and distributing Addenda will be estimated by the A/E and included in the price for the Procurement Documents.

- The A/E will issue no Addendum later than 72 hours prior to bid opening, excluding Saturdays, Sundays and legal holidays without OFCC approval. In order to prevent an extension of the bid opening, the Bidder is encouraged to make all requests for interpretation or clarification a minimum of 7 days before the bid opening. If a Bidder makes a request for interpretation or clarification at a time which is close to the 72 hour deadline before the bid opening, the A/E must consult with OFCC before proceeding. OFCC will determine if the significance of the issue(s) warrant issuing an Addendum and extending the bid date. If any Addendum is issued within 72 hours prior to the published time for the bid opening, excluding Saturdays, Sundays and legal holidays, the bid opening will be extended at least 7 days. The A/E, and CM if applicable, are required to coordinate any bid opening extension with OFCC and the Owner. See ORC 133.12.

- Any interpretation or clarification of the Procurement Documents made in any manner other than a written Addendum will not be binding and the Bidder is not to rely upon any such interpretation or clarification. The A/E must not give verbal interpretations or clarifications during the bidding process. While professional judgment must be exercised in determining whether every answer should be distributed to each Bidder, the Instructions to Bidders requires a written response to each request for information or clarification.

- If no request for interpretation or clarification is made by the Bidder prior to the bid opening, the Instructions to Bidders provides that a Bidder will not be compensated for a claim alleging insufficient data, incomplete Procurement Documents, or incorrectly assumed conditions regarding the nature or character of the work. The intent of this provision is that the Bidder is obligated to notify the State of any apparent ambiguity in the Procurement Documents or inconsistency between the Procurement Documents and applicable law during the bidding period.

Public Bid Opening

- The Project Coordinator conducts the bid opening. The Project Manager or the assigned Program Manager must be available at all times by telephone or in person.

- The Project Coordinator must obtain from the A/E, prior to the bid date, a list of plan holders, including the presumed trade of each, and prepare the bid tabulation sheet prior to the Bid Opening.

- Prior to the bid opening, the Project Coordinator distributes to Bidders in attendance a Bid Tabulation form on which the Bidders may record the Bid Results.

- At the location indicated in the Notice to Bidders, and immediately after the time indicated, the Bids will be opened and read aloud. Any Bid which arrives after the time set for the bid opening will be returned to the Bidder unopened. The Project Coordinator opens and reads the Bids, and the A/E, Owner or
other person authorized by OFCC records the Bids on the Bid Tabulation form. The Project Coordinator reads the following information from each Bid:

- Base Bid for each item bid
- Alternates (if any)
- Combined Base Bid
- Alternates (if any)

The Project Coordinator will also announce whether a bond and power of attorney are included with the bid.

Following the bid opening, the Project Coordinator and another person who officiated in the bid opening sign the Bid Tabulation form. The Project Coordinator makes a copy of the completed Bid Tabulation form available to all Bidders present. The Project Coordinator provides the completed the Bid Tabulation to the Communications Specialist for posting on the OFCC website.

The Bid Tabulation form and the contents of all bid envelopes become public records and may be inspected at the bid opening or at any appointed time after the bid opening.

**Low Bid Determination / Preliminary Responsiveness Review**

- The A/E, the Project Manager, the Project Coordinator and the Owner conduct an informal review of the apparent low Bidder(s) for Bidder responsiveness. They will address the following issues:
  - There are no apparent defects or omissions on each apparent low Bidder’s Bid Form, including:
    - Bid Guaranty and Power of Attorney are provided
    - All Addenda are acknowledged
    - Bid Form is signed
    - Responsible Bidder Information is attached (If not, the PC asks the Bidder to provide it to OFCC within 3 business days)
    - EDGE Goal Participation response indicated (Bidder met or exceeded advertised EDGE Goal or will request a waiver)
  - Evaluate which Contractor(s) are the apparent low Bidders and in what amounts. To make this determination, the Total Base Bid will be added to the total of the Alternates proposed to be accepted. Alternates may be accepted in any order. A blank entry, or an entry of “No Bid”, “N/A”, or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is accepted.
  - If any Combined Bids are submitted, all combinations of Bids will be considered to determine which combination of bids results in the lowest cost.
  - The total of the proposed award(s) to the apparent low Bidder(s) is within the Owner’s project budget.
  - The proposed award amount is not more that 10 percent over the A/E’s estimate for that combination of items.
  - The Project Coordinator checks the following components of the apparent low Bidder’s bid:
    - Verifies that the Bidder is enrolled in an OBWC-approved Drug-Free Safety Program
    - Checks the State Auditor’s website to determine whether the Bidder has any Unresolved Findings for Recovery as required by **ORC 9.24**
    - Checks the financial rating of the bonding company to verify that it is not lower than “A-”
    - Verifies that the Bidder included an **EDGE Commitment To Participate** form (M140-01-07) and that one of the Options is marked
  - The project team establishes assignments for completing the responsiveness/responsibility review.
  - If the bid opening is at the Owner’s facility and a representative of OFCC is not present, the Owner will provide a copy of the completed **Bid Tabulation** form showing the bid results to OFCC by e-
Mail immediately following the bid opening. The Owner will make a copy of the Bidder’s Qualifications forms for the apparent low Bidders and furnish them to the A/E for further evaluation. All original bids, including envelopes, will be delivered to OFCC the next business day.

- The Project Coordinator verifies that the certified EDGE business or businesses that are listed by the on the apparent low Bidder’s bid are actually indicated on the EDGE website as being certified; or, if appropriate, confirms that the Demonstration of Good Faith is acceptable. This may require OFCC to request that the Bidder deliver its Demonstration of Good Faith effort within the period required.

- If the lowest Bidder indicates with its Bid that it meets or exceeds the EDGE participation goal and provides acceptable documentation on the form provided for such purpose by OFCC which is signed by both the Bidder and the EDGE-certified business(es) indicating their intent to contract and perform on the project if the contract is awarded to the Bidder, the Project Coordinator will include the form with other required documentation to determine responsiveness and responsibility of the Apparent Low Bidder.

- If the lowest Bidder indicates with its bid that it does not meet the advertised EDGE-participation goal, the bidder must submit its Demonstration of Good Faith within the time period required by OFCC. The bidder must provide a complete Demonstration of Good Faith form and sufficient documentation of the Bidder’s good faith effort to meet the advertised EDGE participation goal (refer to OAC 123:2-16-09) for requirements to demonstrate a good-faith effort. Upon receipt of a completed form and the supporting documentation, the Project Manager will forward the form and the supporting good-faith documentation to the Executive Director for review.

- The Executive Director will review, and if appropriate, investigate the good-faith documentation provided by an apparent low-bidder on the construction project contract. The Executive Director will evaluate each of the 7 areas of good-faith effort outlined in OAC 123:2-16-09 (D)(1-7). The Executive Director will provide an evaluation of each of the seven areas in writing and maintain such evaluations in the project file.

- If the Executive Director finds that the Bidder met each of the seven areas of good-faith effort required in the Administrative Rule, the Executive Director will consider the bidder responsive and responsible relative to the EDGE participation goal for the contract.

- If the Executive Director determines that the bidder did not demonstrate sufficient good-faith effort in each of the seven areas required in the Administrative Rule to include the advertised level of EDGE participation in its bid, the Executive Director will indicate such in a written report to the Director or the Director’s delegated authority, who may determine that the Bidder is not responsive or responsible relative to the EDGE participation goal for the contract and therefore will not qualify for award of the contract.

Bid Evaluation and Recommendation

Bid Withdrawal, Bid Rejection and Appeal, and Re-bid

- Contractors may withdraw bids within 48 hours of the bid opening per Instructions to Bidders, Article 4.
- OFCC will determine whether any or all bids are rejected. If all bids are rejected, the PC will issue a Notice of All Bids Rejected (L250-01). The Bidder may file a written protest of the bid rejection within 5 days of the bid rejection.
- OFCC will determine if a re-bid is required by statute in accordance with Article 3 through Article 6 in the Instructions to Bidders.

Responsible Bidder Evaluation

- The Contracting Authority will determine whether any Bidder is rejected as not responsible, in which case a Bid Rejection Notice is required. The Bidder may file a written protest of the bid rejection within 5 days of the bid rejection.
Recommendations for the Award of Construction Contracts

- After the bid opening, the Project Coordinator (PC) makes a copy of the Bid Form and other bid enclosures of the apparent low Bidder(s) for the A/E. The A/E conducts an evaluation of those bid(s) for responsiveness and responsibility and consults with the Owner as to which Alternates should be accepted. The A/E must confer with OFCC if it believes that the Bidder is non-responsive or not responsible. The A/E submits a Letter of Recommendation to the Project Coordinator. The letter must include language that states that the recommendation is being made with the concurrence of the Owner or after consultation with the Owner, and the following:
  - Each recommended Contractor’s name, base bid, accepted Alternate(s), and total contract amount
  - A subtotal of the amount of construction contracts
  - The recommended amount of the Owner’s construction contingency, also stated as a percentage of the construction contracts

- The PC contacts the Owner to confirm the availability of funds needed for the recommended contracts and contingency. The PC prepares OFCC’s letter of recommendation and faxes and mails it to the Owner for use in its Controlling Board request. The PC also faxes and mails a copy of the letter of recommendation to the A/E. OFCC requires the Owner to send a copy of the Controlling Board request to OFCC.

- The Owner prepares the purchase order and sends to the PC for OFCC approval. The PC secures the appropriate OFCC Program Manager’s signature and forwards the encumbrance to State Accounting. The PC monitors the OAKS Financial system for the purchase order approval date.

- The PC requests that the Contractor provide a bid extension letter if it appears that the 60 day period during which the Bid is valid may expire before the contract is executed. If the Contractor does not provide such letter within the 60 day period, and the period elapses before the contract is signed, the Bid is invalid. In the event that the Contractor is not willing to provide an extension letter, the PC may ask the next low Bidder who is found to be responsive and responsible to do so. If that Bidder provides an extension letter within the 60 day period, that Contractor may be awarded the Contract after the 60 day period has elapsed.