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7 December 2005

To: Senator Elizabeth Mitchell, Chair, Joint Standing Committee on Education and Cultural Affairs
Representative Jacqueline Norton, Chair, Joint Standing Committee on Education and Cultural Affairs
Members of the Joint Standing Committee on Education and Cultural Affairs

From: Alternative Delivery Assessment Team

Attached please find portions of the Report of the Assessment Team on the 5 year Pilot Program on Alternative Delivery Methods for School Construction.

What we are providing at this time includes:
An explanation of the statutory charge to the Assessment Team
An outline of Findings and Recommendations
History of the creation of this program
Copies of the 1999 "Alternative Project Delivery Methods for School Construction"

As noted in the Findings and Recommendations, the 100+ pages of returned survey questionnaires will be available on the Bureau of General Services web site this Friday and proposed legislation will be forwarded at the end of the month. Additional elaboration on the Findings and Recommendations will also be delivered to you at the end of the month.

We look forward to working with you during the upcoming session. Please contact Janet McLaughlin at the Bureau of General Services (624-7351, janet.mclaughlin@maine.gov) with any questions or concerns.

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Alternative Delivery Methods for School Construction
5-Year Pilot Program, 2000-2005
Assessment Report

Here is the statutory charge to the Assessment Team, per Chapter 54 of the Private & Special Laws of the 120th Legislature:

Section 12. ***Policies and procedures; pilot project assessment.***

2. The purpose of the assessment is to evaluate the relative advantages and disadvantages of the alternative delivery methods employed under the terms and conditions of this Act, including, but not limited to, an analysis of the comparative costs and benefits of these methods for school construction projects to those found using the traditional competitive design-bid-build method set forth in the Maine Revised Statutes, Title 5, section 1743-A and Title 20-A, chapter 609.

3. In analyzing the relative merits of the traditional method and the alternative methods employed for school construction under this 5-year pilot program, the assessment team shall consider the following factors:

A. The technical complexities of the projects;
B. The time or schedule savings or delays;
C. The project cost control;
D. The implications for the health and safety of educators, students and community members;
E. The capacity of state and local officials to plan and manage the selected alternative project delivery method of construction;
F. The consistency and fairness in the procurement process;
G. The appropriateness of the major subtrades designated by the Department of Administrative and Financial Services, Bureau of General Services that were subject to the provisions of the subcontractor prequalification panel process established for the construction-manager-at-risk projects;
H. The assurance of competition; and
I. The advancement of the public interest.

4. The assessment team must be convened no later than September 1, 2004 and must report the findings and recommendations from its assessment, including any recommended legislation, to the joint standing committee of the Legislature having jurisdiction over education and cultural affairs no later than December 7, 2005. The joint standing committee of the Legislature having jurisdiction over education and cultural affairs may report out a bill to the Second Regular Session of the 122nd Legislature to implement the recommendations of the assessment team.

Please see the attached Álternative Project Delivery Methods for School Construction" Report, January 1999, for background information and a brief explanation of the alternative delivery methods.

History

Two private and special laws, Chapter 79 of the 119th Legislature and Chapter 54 of the 120th Legislature, established a 5-year pilot program to enable school administrative units to use alternative delivery methods of construction. Chapter 54 calls for an assessment of the pilot program, with findings, recommendations, and any recommended legislation to come to the Legislature's Education and Cultural Affairs Committee – hence this report.

The 1999 *Alternative Project Delivery Methods for School Construction* report explains that the 118th Legislature asked the Department of Education and the Bureau of General Services to establish a stakeholder group to "review and discuss alternative delivery systems for school construction." The work of the resulting stakeholder group, which was chaired by Jim Rier, who was then chairman of the State Board of Education, included 6 recommendations. (see Appendix A)

Chapter 54 added 11 opportunities to those already provided through Chapter 79, bringing the total to 22, with the opportunities categorized by project cost and delivery method type. They were as follows:

> Three design-build projects and 3 construction-manager-advisor projects or construction-manager-at-risk projects for school construction may be employed provided that the total project cost does not exceed $2,500,000. In these 6 slots, the Yarmouth Elementary School and the Freeport High School Science Wing were developed.
>
> Four projects that exceed $2,500,000 in total project cost but do not exceed $20,000,000 in total project cost may utilize the design-build method. In these 4 slots, the addition to Bangor High School was developed.
>
> Two projects that exceed $2,500,000 in total project cost but do not exceed $10,000,000 in total project cost may utilize the construction-manager-advisor method or the construction-manager-at-risk method. The Freeport Middle School and Bean/Belgrade Elementary School, MSAD 46, filled these two slots.
>
> Five projects that exceed $2,500,000 in total project cost but do not exceed $10,000,000 may utilize the construction-manager-at-risk method. Four of these 5 slots were filled: Freeport High School Performing Arts addition, Wells-Ogunquit Junior High School, SAD 51 Middle School, and Cape Elizabeth High School renovations.
>
> Five projects that exceed $10,000,000 in total project cost may employ the construction-manager-at-risk method. Scarborough High School took one of these openings.

In addition, emergency legislation was passed which allowed the expansion of the Yarmouth High School and the new Yarmouth Rowe Elementary School to come under the alternative delivery methods. These were both done with the construction-manager-at-risk approach.

	Original # slots	Slots added per Ch. 54	Emergency legislation slots	Total # slots allotted	# slots filled
Design Build < $2.5M	3	0		3	0
CM @ Risk; CM Advisor < $2.5M	3	0		3	2
Design Build $2.5-$20M	2	2		4	1
CM @ Risk, CM Advisor $2.5-$10M	2	0		2	2
CM @ Risk $2.5-$10M	0	5	1	6	5
CM @ Risk > $10M	1	4	1	6	2
Totals	**11**	**11**	**2**	**24**	**12**

Design Build (under $2.5 million)

1. **Open**
2. **Open**
3. **Open**

CM at Risk or CM Advisor (under $2.5 million)

1. Yarmouth Elementary School, A/E-SMRT, CM at Risk-Macmillan, Contract Amount-$500,000
2. Freeport High School Science Wing, A/E- Stephen Blatt Architects, CM-Wright-Ryan, Contract Amount-$1.2 million
3. **Open**

Design Build ($2.5 -$20 million)

1. Bangor High School, Design/Build Firm-H.E.Sargent /WBRC, Contract Amount-$4,500,000
2. **Open**
3. **Open** (LD 1864 expansion)
4. **Open** (LD 1864 expansion)

CM at Risk or CM Advisor (2.5-$10 million)

1. Freeport Middle School, A/E-Stephen Blatt Architects, CM at Risk-Wright Ryan, Contract Amount-$2,500,000
2. Bean/Belgrade Elementary Schools –MSAD 47, A/E-Stephen Blatt, CM at Risk-E.W. Littlefield, Contract Amount-$2,900,452

CM at Risk (2.5-$10 million)

1. Freeport High School Perform Arts, A/E-Stephen Blatt, CM at Risk-Wright Ryan, Contract Amount-$2,600,000, (LD 1864 program expansion) the 3 Freeport projects: approx. $7M
2. Wells-Ogunquit Community School District-Junior High School, A/E Ellen Belknap-SMRT, CM at Risk-Wright Ryan, Contract Amount $8,240,100 (LD 1864 program expansion)
3. SAD 51-Cumberland North Yarmouth-Middle School to Performing Arts Center, A/E Ellen Belknap-SMRT, CM at Risk-Wright Ryan, Contract Amount (estimated) $5,000,000+ (LD 1864 program expansion)
4. Cape Elizabeth School Department-High School Renovations, A/E: Bob Howe-HTKA Architects, Inc., CM at Risk – Payton Construction, contract amount $7,930,000, (LD 1864 program expansion)
5. **Open** (LD 1864 program expansion)

CM at Risk (greater than $10 million)

1. Scarborough High School, A/E-Rob Klinedinst- Harriman Associates, CM at Risk-Pizzagalli, Contract amount (estimated) $21,329,901, Project cost-$26,831,174
2. **Open** (LD 1864 program expansion)
3. **Open** (LD 1864 program expansion)
4. **Open** (LD 1864 program expansion)
5. **Open** (LD 1864 program expansion)

Emergency Legislation

1. Yarmouth HS, CM at Risk, A/E-SMRT, CM at Risk-Macmillan, Contract Amount-$11,200,000
2. Yarmouth Rowe Elementary , CM at Risk, A/E-SMRT, CM at Risk-Macmillan, Contract Amount-$6,000,000

Findings

The Findings are based on the Assessment Team's review of the projects in the pilot program; responses to the questionnaire survey developed by the Assessment Team and distributed to all Owners, Design and Construction Team members – both of teams that were chosen to do the project and to other teams that applied; and comments from members of the Alternative Delivery Review Panel.

Project funding

- Only locally-funded projects and projects approved to use the State's Revolving Renovation Fund applied to use any of the alternative delivery approaches.
- A number of projects under the DOE's Major Capital Improvement Program made initial inquiries about using an alternative delivery approach. The most recent one to do so would not have been scheduled for completion within the timeframe of the pilot program.

Technical complexities

- These included scheduling and sequencing in a fully occupied building; hidden conditions observable only upon demolition of the work area; reuse and dependency on the infrastructure of a 35-year old building; extensive renovation work involving phasing and maximization of the existing physical plant; site conditions; schedule constraints and impacts with owner furnishing and installing some items.
- Forensic demolition work found many problems prior to going to a GMP. If this had been a traditional design-bid-build project, there would have been a significant change order for these unknown conditions.

Time and schedule

- Reduced amount of time that the trades were on site.
- Project completed 2-3 months ahead of schedule.
- The severe time constraints of the D/B project could not have been met with the traditional design-bid-build approach. This project had an extensive amount of "overtime" work on multiple shifts and started construction prior to completion of the design.
- Delays in meeting the original schedule were encountered as a result of changes in phasing and change proposals.
- With a very aggressive schedule and an optimistic CM, each phase was occupied on time, usually with a long punch list. With a traditional approach we would have incurred cost overruns.
- There is a common misconception that D/B will save money. It will not and most likely should not.
- The CM approach allowed the owner some flexibility with the schedule. The schedule was changed to meet the owner's programming and still maintain the established completion date.

Cost control

- The RFP for the D/B project did not permit the project to be over budget. If time had not been the controlling factor, and thus no "overtime" shifts, the cost would have been less.

- This project resulted in the CM giving back 100% of the CM contingency plus any savings for labor and materials. The net result was $55,000 credit issued to the owner. With the traditional approach, the general contractor would get to keep and realize all savings.
- All decisions affecting cost were reviewed as a team, with the Owner having the final say.
- Negotiated through the CM with the trades to reduce costs.
- Worked with CM to change project design for economies.
- Resulted in a better product for the money.
- Value engineering and review of change proposals during the construction process gave cost control.
- Relationship between CM, architect and owner was critical to cost control.
- The CM began providing estimates on alternate design proposals very early in the process. The owner was able to make design decisions and determine trade offs that resulted in a GMP that was within the budget.
- If this had been a traditional project, the owner would not have realized the savings.
- Savings from CM allowed owner to include several add alternates not anticipated possible in early stages of the project.
- CM constantly monitored costs on a weekly basis for review by Owner. By reviewing specific line item costs, the CM was able to demonstrate unused funds for project upgrades or changes.
- Final selection of materials by owner and contractor.
- This is a value proposition. It enables the owner to obtain more exactly what it wants/needs through evaluating and prioritizing components, schedule impacts, etc.

Implications for health and safety

- Security during construction and in the completed facility was included in the Performance Specifications that were a part of the D/B RFP.
- One of the major problems that had to be addressed was improving circulation while complying with fire codes and improving accessibility for disabled.
- Some blasting was required. The high school did not have available space for any existing areas to be vacated to during the regular school day, forcing some work to be done during off hours or within a very short time window.

Capacity of state and local officials

- State did not participate in funding and were not involved in the management.
- Review Panel should be available when owner needs guidance.
- Need for improved, standard contract documents from BGS.
- Owners want guidelines for working through the process, guidelines for dealing with architects' fees and change proposals, BGS review of plans (not necessarily with D/B), guidelines for Owner's Rep responsibilities; process of hiring CM.
- There were code interpretation and coordination issues at the local level.
- There were some problems because this was the first, and only, D/B project, and the various state agencies had to be educated on the process as well as the specific project.
- Most state and local officials had unrealistic expectations based on their experience with traditional methods.
- Projects that came forward to the Alternative Delivery Review Panel seemed to already have decided on approach to take.

- Each project is unique, which makes it difficult to establish generic "Rules for Approval" for the Review Panel to use.
- There are potential conflict of interest issues with members of the Review Panel subsequently being chosen by the Owner as a CM or member of a D/B team.
- Schools were coming to the Alternative Delivery Review Panel with pre-determined delivery teams.
- There is concern about the best time to bring the Review Panel into the process.

Consistency and fairness in the procurement process

- Overall agreement from design teams that selection process was fair and open, competitive and usually provided appropriate feedback.
- Comments that applicants did not receive adequate selection criteria for the selection process.
- Believe the alternative delivery system is a better system than open public bidding in many cases
- Current work load is not being appropriately presented by competing firms.
- One design team not chosen commented that they felt the selection had been predetermined. The scope of work was poorly defined and, as a result, the selection process was not a level field.
- The pre-qualification of contractors eliminates questionable contractors.

Appropriateness of the major subtrades subject to subcontractor prequalification

- When this question was answered, there were no subcontractors filed.

The assurance of competition

- One design team not chosen commented that they felt the selection had been predetermined. The scope of work was poorly defined and, as a result, the selection process was not a level field.
- If the Owner has the architect on board before contractor is selected, it is at least perceived to be unfair competition for contractors when architect advising owner about choice of contractor.

Advancement of the public interest

- All respondents to the question "Overall, did the chosen approach best serve the interest of the public?" answered affirmatively.

	Owners (6)	Design Team (3)	Construction Team (3)
Project cost savings	6	3	3
Project cost control	6	3	3
Short-term or long-term value for $ spent	5	3	2
Meeting an aggressive time schedule	6	3	1
Time or schedule savings or delays	6	3	3
Including all desired components of the building	5	2	1
Inclusion of desired quality of building materials and equipment	6	2	1
Improved warranty service	2	1	1
Ease of project administration	4	3	1

Individual comments for each of these specific queries are included in the above categories and can be seen on the individual questionnaires returned to BGS. The latter are accessible on the BGS website under "Reports" http://www.maine.gov/bgs/reports/index.htm *We'll have these approximately 100 pages ready on the web site by the end of this week.*

- The State Board of Education Construction Committee and the DOE School Facilities Team have raised concerns about carte blanche offering alternative delivery methods for the Major Capital Construction Projects. The specific concerns include the challenge of having these methods align with the sequence and timing of the State Board of Education review and approval process, the timing of the availability of funding, whether the durability of materials used is comparable to those on a state-funded project, and whether the budget information presented to the state is comparable to that seen for a state-funded project. The chairwoman of the State Board Construction Committee states, "There are still too many questions about the state's ability to assure the necessary features of a school under such approaches and there are some aspects of school construction for which trade-offs in speed or dollars are not appropriate."

Recommendations

Project funding

- Does the ED Committee want DOE and BGS to pursue establishing a process for the Major Capital Improvement Program projects to accommodate the alternative delivery approach?

Technical complexities

- The ability to deal well with complicated renovation projects through alternative delivery methods suggests that such methods are valuable for school districts dealing with these kinds of projects.

Time and schedule

- With the majority of the projects in the pilot program having time and/or schedule savings, we can use those experiences to support continued use of the alternative delivery methods.
- Need to emphasize realistic timeframes and need Owner to be aware of trade-offs when they have aggressive schedules.

Cost control

- Examples of savings and the on-going cooperative relationship between owner, D/B team, CM, and architect that are more representative of alternative delivery methods than the traditional design-bid-build method support continued use of alternative delivery methods.

Implications for health and safety

- There appears to be no discernable difference with attention to health and safety of educators, students, and community members between alternative delivery projects and traditional design-bid-build projects.

Capacity of state and local officials

- The Review Panel needs to have a sufficient number of qualified members in attendance at every meeting.
- Review Panel members should not be seen as endorsed by BGS for consideration by the Owner on a specific project. Consider appropriate membership on this Panel – i.e., DOE, BGS, directors of membership associations, i.e. Associated Constructors of Maine, American Institute of Architects Maine, Associated Builders and Contractors, American Council of Engineering Consultants Maine.
- This needs to include people who not only are knowledgeable of but also who are seen as unbiased as to the various methods.
- The Review Panel should be able to evaluate the circumstances of a particular project to determine the most appropriate approach without being held to generic rules for approval. Develop general criteria areas to use in evaluation.
- Have 2 meetings of the Owner with the Review Panel. The first will be an Educational Meeting to discuss the pros and cons of and specific information about alternative delivery methods for the proposed project and an opportunity to ascertain the applicant's level of understanding of alternative delivery methods. The second would be an Application Meeting.
- Require the Owner to participate in both the Educational Meeting and the Application Meeting before selecting its design professional, builder, CM, or D/B team.

- Review Panel can be available as a resource to the Owner as the project proceeds.
- Review Panel needs to be an integral part of developing and presenting educational information for all stakeholders.
- BGS will need to have standard contract documents for alternative delivery methods ready by the time legislation enabling the continued use of these methods is effective.
- Need to include both local and state reviewers in educational outreach.

Consistency and fairness in the procurement process

- BGS to work with owners to ensure more consistency and fairness in procurement process.

Appropriateness of the major subtrades subject to subcontractor prequalification

- BGS needs to participate in these projects to the extent of its statutory responsibility and advise on prequalifying subcontractors.

The assurance of competition

- BGS and the Review Panel need to develop a process that is genuinely competitive through which the owners proceed with procuring design/build teams, construction managers, and architects.

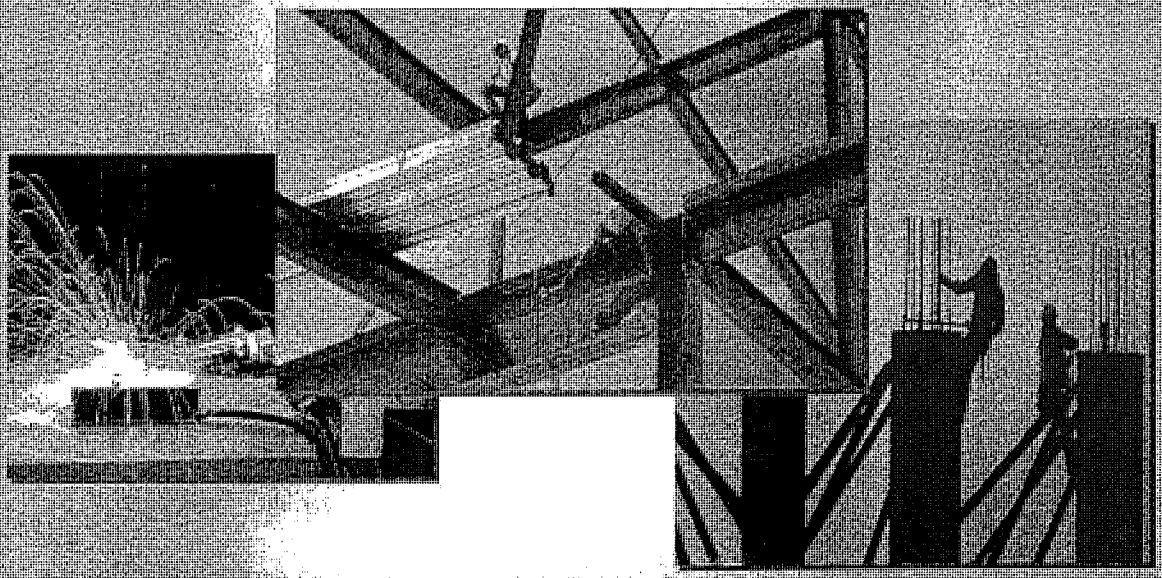
Advancement of the public interest

- Based on the cumulative responses, we recommend that the Construction Manager at Risk and Construction Manager Advisor alternative delivery methods be made a standard option for public school construction and renovation projects that are totally locally funded and for those that are approved under the DOE's Revolving Renovation Fund program. *We will have proposed legislation language available by the end of December.*
- With only one design/build project having been completed under the pilot program, there is not enough information to make a recommendation about its suitability for use on school construction projects. We do recommend that this alternative delivery method be continued as a pilot program for locally-funded school projects for 5 years, until the end of 2011.

Appendix A

ALTERNATIVE PROJECT DELIVERY METHODS

for School Construction



A Report Submitted to

The Joint Standing Committee on Education and Cultural Affairs

Pursuant to Public Law 787 entitled "An Act to Implement the Recommendations of the Governor's Commission on School Facilities"

January 30, 1999

PREFACE

The design and construction industry is changing at a rapid pace, driven over the past ten years by the owners' desire for lower costs, faster schedules, and greater innovation. As a result, the options for project delivery have multiplied and overlapped, adjusting to the needs of clients and the ability of project teams to deliver changes in a building. The search for economy, the needs for specialized service, the need for accountability, liability issues and the complexity of buildings themselves have further accelerated the evolution of new project delivery methods.

Maine law, as it relates to project delivery methods for tax-supported projects, essentially restricts projects to the traditional design-bid-build approach. This is true of all state supported school construction, and this traditional approach is an integral part of the school construction approval process as carried out by the State Department of Education and the State Board of Education.

An awareness of the changing context within the building industry, recommendations included in the 1998 *Report of the Governor's Commission on School Facilities,* an interest in different approaches to construction on the part of some Maine school administrative units and the lack of reliable information about project delivery systems led the 118th Legislature to call upon the Department of Education and the Bureau of General Services to review the issue of alternative delivery systems as related to school construction. The work was to be accomplished through a stakeholder group with representation from the Department of Education and the Bureau of General Services, and individuals with expertise in education, architecture, construction, and engineering. This report, based on a study by the stakeholders group, is in response to that call.

BACKGROUND

Chapter 787, an Act to Implement the Recommendations of the Governor's Commission on School Facilities, enacted by the 118th Legislature, instructed the Department of Education and the Department of Financial and Administrative Services, Bureau of General Services to establish a stakeholder group to "review and discuss alternative delivery systems for school construction." Discussion was to include, but not be limited to:

1. Defining the circumstances under which alternative delivery systems would be applicable to school construction projects with clear definitions of each circumstance;

2. Establishing clear rules for each of the circumstances described in 1, above;

3. Ensuring adequate oversight of the alternative delivery system process from appropriate state agencies and;

4. Reviewing all issues surrounding appropriate errors and insurance levels.

In accordance with this legislation, the stakeholders group was composed of representatives from the Department of Education, the State Board of Education, the Maine Education Association, and the Bureau of General Services, as well as legislators, a school superintendent, a school principal, a school business manager, a school board member, architects, contractors, and engineers. The Chair of the State Board of Education, James E. Rier, Jr., chaired the group.

STAKEHOLDERS GROUP

James E. Rier, Jr., Chair
Chair, State Board of Education
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Machias

James Banks
Maine School Boards Association
21 Chesley Avenue
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Allen Bancroft
Contractor
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Principal
Auburn School Department
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Deputy Commissioner
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Chief Engineer
Bureau of General Services
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ALTERNATIVE PROJECT DELIVERY METHODS
FOR SCHOOL CONSTRUCTION

EXECUTIVE SUMMARY

OVERVIEW

Today, there are several ways of approaching the design and construction of such publicly owned facilities as schools, government buildings, bridges, etc. Whatever approach is selected for the project, it will include the following three major phases of a construction project:

PROJECT DEFINITION– Encompasses identifying and analyzing the project and its requirements, describing the project and the plan, and estimating costs and time lines.

DESIGN – Includes all the aspects of design from schematics through the development of construction drawings and specifications.

CONSTRUCTION - Includes shop drawings, delivery and assembly of all components and site construction and installation.

There are three general types of project delivery methods now in common use: traditional or design-bid-build, design-build, and construction management. These three types vary in the ways in which the owner, designer, and builder relate to each other and in the ways in which they organize their participation and responsibilities during the three phases of a construction project described above. A brief description of each method, as outlined by the American Institute of Architects, is presented below. An organizational schematic of each method is attached as Appendix A.

TRADITIONAL

This is the most common form of project delivery known as design-bid-build. It is characterized by its three phases and by independent contracts between the architect and owner/client, and between the contractor and owner/client and also by the linear sequencing of the work. The typical process involves three stages: First, the owner engages an architect to design and prepare construction documents for the project. Second, those documents are used for construction bidding. Third, the owner hires a contractor to complete the project.

DESIGN-BUILD

Design-build is a form of project delivery in which the owner contracts with a single entity, the designer-builder, to provide both design and construction services. The designer-builder may be a single firm or a consortium of experts. A design-build team typically consists of an architect and a contractor who may be equal partners in the project, or one may be a subcontractor to the other. Principal advantages of design-build are the single point of responsibility and the saving of time for the project completion by combining certain phases of the work. Other advantages include the clearly defined role of each party, and the high level of coordination between the designer and builder.

CONSTRUCTION MANAGEMENT

Construction management is a term used to cover a variety of construction delivery scenarios. A construction manager is part of the building team with oversight for such elements as schedule, cost, construction, technology, or project management. A construction manager may be someone specially trained in that field, or it could be an architect, an engineer or contractor. Construction management is appropriate for projects that are relatively complex and those requiring extensive coordination of subcontractors and consultants. The construction manager may act as an advisor or agent for the owner. The authority of the construction manager may vary, from serving as an advisor on a single phase of a project to acting as an agent of the owner in all matters relating to project completion. Construction managers are generally paid on a fee basis. The project designer and contractor generally maintain their conventional roles. The advantage for the owner is a single point of contact, encompassing both design and construction concerns, during completion of the project.

RECOMMENDATIONS

The stakeholders group issues the following recommendations:

A. Alternative delivery methods should be made available for school construction projects but should be initially limited to projects of a well-defined size and scope and should occur in a controlled atmosphere that will provide guidance, expertise, and an opportunity for all players to learn. The option should be available to any small project that does not exceed $2.5 Million in estimated total project cost. The option should be available for a limited evaluation or pilot period of up to five years. Additionally, in order to promote a broad and meaningful experience, up to four projects (two design-build and two construction management) should be allowed, each of which do not exceed $10 Million in estimated total project cost. By the end of the five-year pilot period, an evaluation should be conducted to determine the effectiveness to date as well as the appropriateness of the recommended process and whether its availability should be expanded and/or extended.

B. A school administrative unit seeking to employ an alternative delivery method for a school construction project must make an application to the Department of Education and the Bureau of General Services and receive approval from an alternative delivery Review Panel prior to commencing the project. The Review Panel would define the required elements for the delivery method and include guidelines for liability and indemnity insurance. The Department of Education should create the Review Panel composed of representatives of the Department of Education and Bureau of General Services, and other individuals with expertise in education, architecture, construction, and engineering.

C. Current Maine law, as it relates to school construction, should be revised to provide that the project delivery method therein is the traditional design-bid-build method and that the use of other delivery methods would be limited to and only available as defined in recommendations A and B.

D. The traditional design-bid-build delivery method for state supported school construction projects should be restructured to require a construction project manager on projects with an estimated total cost greater than $10 Million. The manager would be employed from concept design through the completion of construction. The role of the project manager would be to oversee value, schedule, and costs as well as to conserve and protect the interests of the State of Maine and school administrative unit. Funds for the employment of the project manager should be included in the state-supported line of the project budget.

E. A stakeholders group under the direction of the Department of Education should continue to study the use of alternative delivery methods and monitor the process and initial projects that are approved during the pilot period. This group should also facilitate appropriate opportunities for educating the school and design / construction communities about alternative delivery methods, how they are administered and when it might be appropriate to use them.

F. The stakeholders group called for in recommendation E. should also examine the State's existing bidding and qualifications process for administering school construction projects and make recommendations for greater clarity and other improvements.

DISCUSSION

RECOMMENDATION A. Alternative delivery methods should be made available for school construction projects but should be initially limited to projects of a well-defined size and scope, and should occur in a controlled atmosphere that will provide guidance, expertise, and an opportunity for all players to learn. The option should be available to any small project that does not exceed $2.5 Million in estimated total project cost. The option should be available for a limited evaluation or pilot period of up to five years. Additionally, in order to promote a broad and meaningful experience, up to four projects (two design-build and two construction management) should be allowed, each of which does not exceed $10 Million in estimated total project cost. By the end of the five-year pilot period an evaluation should be conducted to determine the effectiveness to date, as well as the appropriateness of the recommended process and whether its availability should be expanded and/or extended.

The stakeholders group studied the history and use of alternative delivery methods across the nation and worldwide. The use of alternative delivery systems has grown significantly in the last ten years especially in the private sector. In public supported construction projects owners/clients, architects, engineers, and constructors have grown accustomed to the traditional design-bid-build process of designing and constructing projects because it has been able to align itself most clearly with the competitive bidding process necessary when expending public funds. In recent years, however, there is growing dissatisfaction with the results achieved through the traditional process. Given their dissatisfaction owners have turned to alternative delivery methods in search of a better process. Other states have begun to allow alternative delivery methods for some public supported projects. The availability is not widespread nor consistent and in most cases is allowed only in very controlled or specific situations. In Maine recently special legislation is allowing the design and construction of the Bath – Woolwich bridge project to be accomplished through a design-build delivery method. Florida is one of only a few states that allows alternative delivery methods for school construction projects, and then only with a very detailed process and strict guidelines to insure a competitive process. It was with a keen sense of this progress in other states that the stakeholders began to structure a process for Maine.

It was decided that the most effective way to provide for alternative delivery methods would be through a trial or pilot period of up to five years, and for a limited number of projects, relatively small in size and scope, to gain experience. The process would need to provide a background for change

and a methodology that could be closely monitored and conducive to good management decisions. The process must be able to provide guidance, expertise, and an opportunity for all players to learn.

During the trial period any small project with a total estimated project cost of $2.5 Million or less would be eligible to apply for the use of an alternative delivery method. While the size is somewhat arbitrary it is intended to define a manageable number of projects from which to learn and provide guidance. Since research indicated that our experience might be limited without some larger projects, especially with the design-build delivery method, it was decided to allow a very limited number of projects during the pilot period with total estimated project costs that do not exceed $10 Million. The recommended process would allow up to four (two design-build and two construction management) each of which does not exceed $10 million in estimated total project cost.

RECOMMENDATION B: A school administrative unit seeking to employ an alternative delivery method for a school construction project must make an application to the Department of Education and the Bureau of General Services and receive approval from an alternative delivery Review Panel prior to commencing the project. The Review Panel would define the required elements for the delivery method and include guidelines for liability and indemnity insurance. The Department of Education should create the Review Panel composed of representatives of the Department of Education and the Bureau of General Services, and other individuals with expertise in education, architecture, construction, and engineering.

The stakeholders group sought to develop an application process that would allow the use of alternative delivery methods that would be responsive to the needs of a school administrative unit, can be integrated effectively into the traditional construction approval process, and will provide expertise and guidance for a successful project completion.

A school administrative unit seeking to employ an alternative project delivery method would prepare an application with an overview of the proposed project and how it would be served through the use of the requested delivery process. In order to be eligible the project would have to meet the criteria defined in recommendation A and provide the details required on the application. For a state supported school construction project the alternative delivery application would be prepared concurrently with the application for a new construction/renovation project. For a locally funded school construction project, the alternate delivery application would be submitted during the project definition phase of the proposed project.

The application for an alternative delivery method would be submitted to the Department of Education and the Bureau of General Services where it would be jointly reviewed for eligibility and completeness. The application would then be forwarded to an alternative delivery Review Panel for review and approval. See attached Appendix B "Integration of an alternate delivery process with the traditional process" for details. The Panel would provide guidance and the required elements for the approved method. The required elements would include but not be limited to pre-qualification and selection criteria as well as guidelines for liability and indemnity insurance. See attached Appendix C for details of the required elements.

The alternative delivery Review Panel would be created jointly by the Department of Education and the Bureau of General Services and would be composed of individuals representing the Department of Education and Bureau of General

Services and others with expertise in education, architecture, construction, and engineering.

The Review Panel would be responsible for the review and approval of an alternative delivery process, but should also be charged with supporting a process that educates, informs, and facilitates rather that obstructs. Their role will be critical to our ability to continue and expand the availability of alternative delivery methods beyond the initial pilot period.

Once an approval for an alternative delivery method has been granted, the Department of Education in collaboration with the Bureau of General Services, would monitor the elements spelled out by the Review Panel to insure a successful project completion and to provide feedback to inform and improve future projects.

RECOMMENDATION C: Current Maine law, as it relates to school construction, should be revised to provide that the project delivery method therein is the traditional "design-bid-build" method and that the use of other delivery methods would be limited to and only available as defined in recommendation A and B.

The stakeholders group attempted to clarify whether current Maine law allows or prohibits any or all alternative delivery methods for school construction. That study included both an analysis of at least two recent locally funded school projects which were delivered using variations of the construction management method and an analysis of the state statute by representatives of the Maine Attorney General's Office. The analysis was not conclusive. Assuming that alternative methods of project delivery might be allowed under current law, certain requirements still need to be met. Those requirements, however, are not clear or consistent when specifically applied to various delivery methods.

Although there are a number of issues in the statute that require clarification, insuring a "competitive bidding" process is the most critical. Because there is no specific guidance in the statute or regulations on the elements of competitive bidding for construction of a school building, school administrative units have been very cautious about using any non-traditional delivery methods. To date, the approval process for state supported school construction projects has not allowed any non-traditional delivery methods. Arguably the statute does not expressly restrict the competitive bid process to only the traditional "design-bid-build" method or prohibit alternative delivery methods such as "design-build" or "construction management". The Bureau of General Services, moreover, does not have regulations that further describe the process for competitive bidding. Given that the term "competitive bidding" is not specifically defined for school construction purposes under 5 M.R.S.A. § 1743-A, and that the school construction rules do not explicitly require the traditional design-bid-build method; other alternative delivery methods may not necessarily be unlawful.

To clearly meet the requirements and intent for competitive bidding, however, the stakeholders group determined that a specific process should be implemented for alternative delivery methods that would provide attributes usually associated with competitive bidding such as notice to potential bidders, specifications for bids sought, announced criteria for ranking projects, rationale for selection, etc., and meet the other specific requirements under § 1743-A. The pilot process outlined in recommendations A and B would create a controlled atmosphere to insure current statute intent and requirements are met and will provide guidance and expertise to maximize the opportunity for a successful project.

RECOMMENDATION D The traditional design-bid-build delivery method for state-supported school construction projects should be restructured to require a construction project manager on projects with an estimated total cost greater than $10 Million. The manager would be employed from concept design through the completion of construction. The role of the project manager would be to oversee value, schedule, and costs and to conserve and protect the interests of the State of Maine and the school administrative unit. Funds for the employment of the project manager should be included in the state-supported line of the project budget.

In the process of researching alternative project delivery systems, the group studied every aspect of the design and construction of a building project. That analysis included a detailed look at a number of recent traditional (design-bid-build) delivered school construction projects in order to assess the effectiveness of alternative delivery methods. Many of the elements and players involved in alternative delivery methods are and must be specific to those non-traditional systems. One player, the construction manager (advisor), provides a very much needed high level of expertise integral with that process that might be able to be integrated effectively into the traditional delivery method. This is especially true on larger projects.

The burden of managing a school construction usually falls on the school superintendent or business manager both of whom have many other responsibilities, and neither of whom may have any expertise in construction project management. Overseeing a large construction project is demanding and requires extensive knowledge and experience with the design and construction industry. The stakes are high, from the financial implications and issues of timing, to the quality of the finished product; a safe, durable, and effective learning environment for students and staff.

The addition of a project manager to the traditional design-bid-build delivery method would enhance the process with a minimal of other changes. The Department of Education and the Bureau of General Services should define the role of a project manager that should include guidance and oversight from concept design through the completion of construction. The responsibilities of the project manager should include value engineering, constructibility, bid document details, submitted bid analysis, etc. The cost of the project manager should be included in the state-supported line of the project budget. The role of the "clerk of the works" and the "owners representative" should be assessed and redefined as appropriate when a project manager is part of the process.

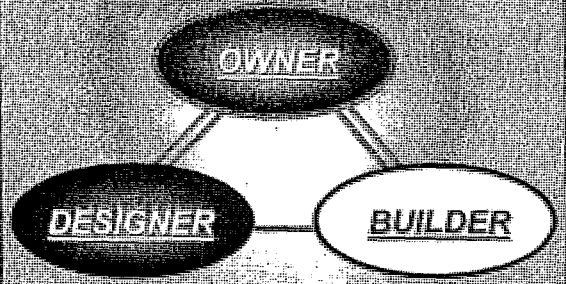
Setting the level of project cost which should include a project manager was again somewhat arbitrary but came from a consensus of the group based on their experience. A project manager would be cost effective and enhance a project of greater than $10 Million.

RECOMMENDATION E: A stakeholders group under the direction of the Department of Education should continue to study the use of alternative project delivery methods and monitor the process and the initial projects that are approved during the pilot period. This group should also facilitate appropriate opportunities for educating the school and design / construction communities about alternative delivery methods, how they are administered and when it might be appropriate to use them.

RECOMMENDATION F: The Stakeholders Group called for in recommendation E should also examine the State's existing bidding and qualifications process for administering school construction projects and make recommendations for clarity and other improvements.

PROJECT DELIVERY METHODS

TRADITIONAL DESIGN-BID-BUILD



CHARACTERISTICS

THREE Prime Players:
OWNER, DESIGNER, BUILDER

TWO Separate Contracts:
OWNER TO DESIGNER AND
OWNER TO BUILDER

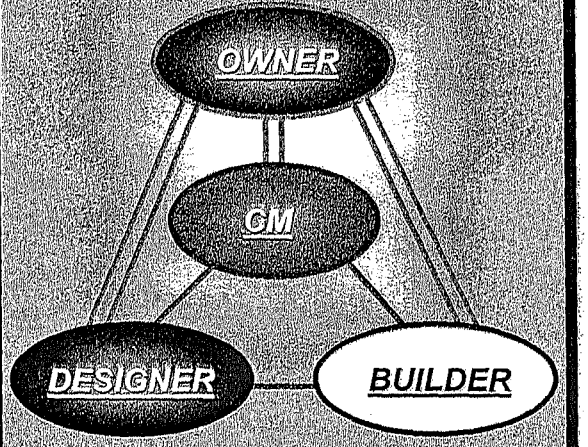
RESPONSIBILITIES

- **Owner:** PROGRAM & FINANCE
- **Designer:** ALL DESIGN SERVICES
- **Builder:** PRIME & SUB CONSTRUCTION

SELECTION PROCESS

- **Manager:** N/A
- **Designer:** QUALIFICATIONS
- **Builder:** LOWEST RESPONSIBLE BID

CONSTRUCTION MANAGEMENT



CHARACTERISTICS

FOUR Prime Players:
OWNER, CM-AGENT, DESIGNER, BUILDER

THREE Separate Contracts:
OWNER TO CM, OWNER TO
DESIGNER & OWNER TO BUILDER

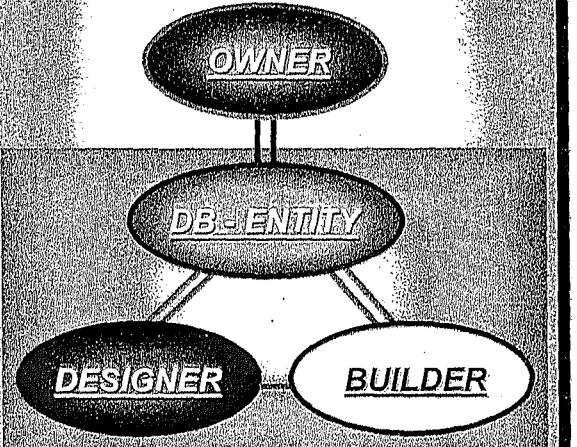
RESPONSIBILITIES

- **Owner:** PROGRAM & FINANCE
- **CM-Mgr:** COORD. DESIGNER & BUILDER
- **Designer:** ALL DESIGN SERVICES
- **Builder:** PRIME & SUB CONSTRUCTION

SELECTION PROCESS

- **CM-Manager:** QUALIFICATIONS
- **Designer:** QUALIFICATIONS
- **Builder:** LOWEST RESPONSIBLE BID

DESIGN - BUILD



CHARACTERISTICS

TWO Prime Players:
OWNER AND DESIGN-BUILD ENTITY

ONE Separate Contract:
OWNER TO DESIGN-BUILD ENTITY

RESPONSIBILITIES

- **Owner:** PROGRAM & FINANCE
- **DB Entity** DESIGN & CONSTRUCTION
- **Designer:** D-B SPECIAL SERVICES
- **Builder:** D-B PRIME & SUB CONSTR

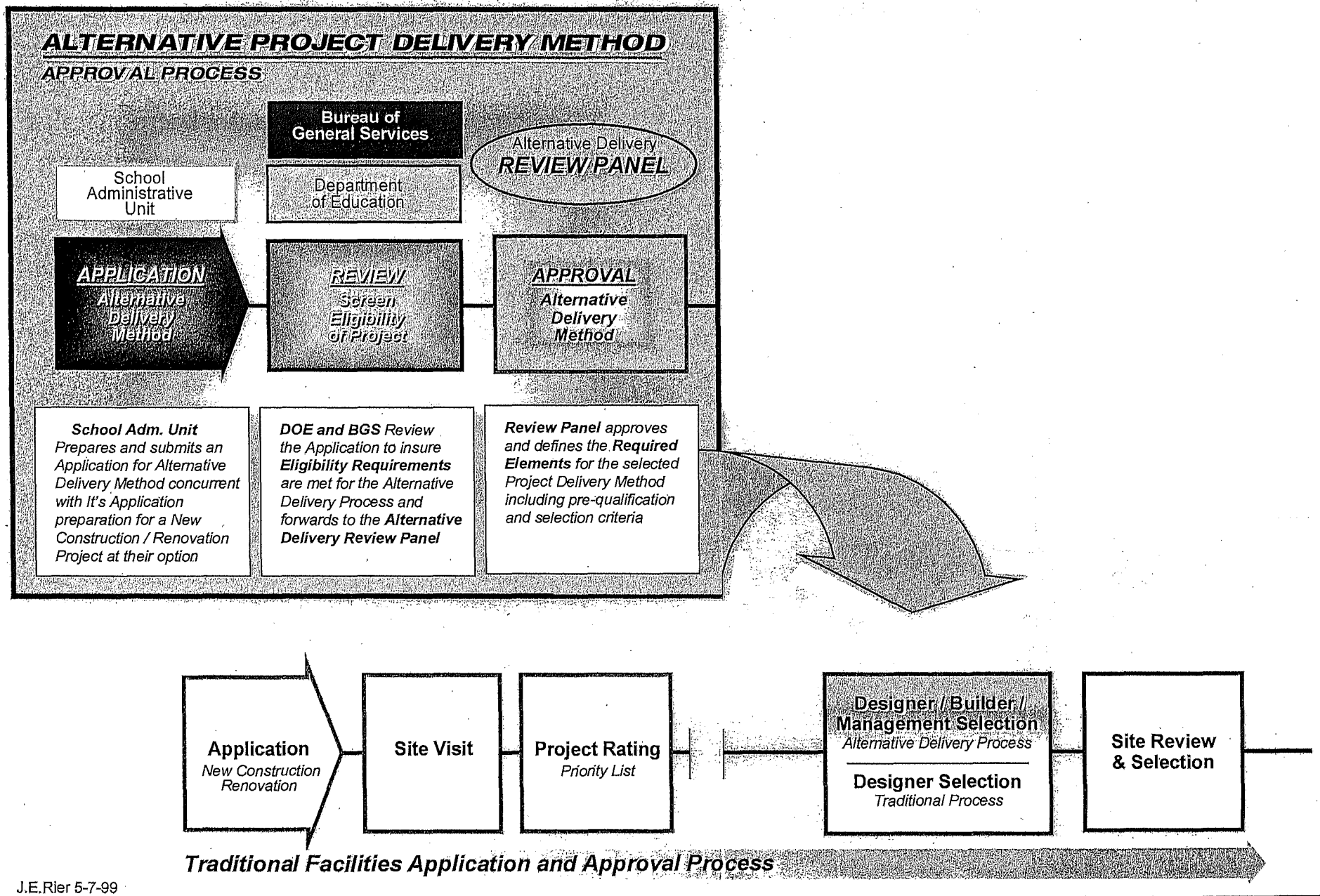
SELECTION PROCESS

- **DB Entity:** QUALIFICATIONS
- **Designer:** QUALIF / NEGOTIATIONS
- **Builder:** LOW BID OR NEGOTIATIONS

Appendix A

MAINE'S SCHOOL CONSTRUCTION PROCESS

Integration of an Alternative Delivery Process With the Traditional Process



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REVIEW PANEL REQUIREMENTS

DESIGN- BUILD

PROJECT DEFINITION

- Program
- Scope of Work

PRE-QUALIFICATION OF APPLICANTS

- Ability to perform
- Past performance
- Financial capability
- Interview

SELECTION PROCESS

- Basis for design-build selection (Qualifications, low-bid, or design competition)
- Compensation / stipend (where applicable)
- Elements of evaluation
- Insurance provisions
- Jury panel
- Builder selection process
- Oversight of selection by D.O.E. and B.G.S.

CONSTRUCTION MANAGEMENT

PROJECT DEFINITION

- Program
- Scope of Work

PRE-QUALIFICATION OF APPLICANTS

- Ability to Perform
- Past Performance
- Financial capacity
- Interview

SELECTION PROCESS

- Qualifications of construction manager
- Compensation
- Elements of evaluation
- Qualifications of designer
- Insurance provisions
- Jury Panel
- Low-bid selection process for builder
- Oversight of selection by D.O.E.and B.G.S.

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