

Bond Reimbursement and Grant Review Committee Meeting Agenda

October 17, 2018

2:30pm - 4:00pm

Teleconference – School Finance Conf. Room
801 W. 10th Street, Juneau, Alaska

Audio Teleconference: Call Toll-Free 1-855-244-8681 (US/Canada); Meeting Number 809 552 060

Chair: Heidi Teshner

Wednesday, October 17, 2018 **Agenda Topics**

2:30 – 2:35 PM

Committee Preparation

- Call-in, Roll Call, Introductions
- Chair’s Opening Remarks
- Agenda Review/Approval

2:35 – 3:35 PM

Regulation Projects Update

Construction Standards for Cost-effective Construction

- Subcommittee Reports
- Commissioning
 - Commissioning agent standards
 - 5-system minimum criteria
- Design Ratios
 - BEES authority & BEES vs ASHRAE
 - O:EW modeling statement of services
- Model School
 - Cost Model enhancements statement of services
 - Outline of model school system standards

BR&GR Calendar and Work Plan Review & Update

3:35 – 3:50 PM

Publication Update

- *Swimming Pool Guidelines*

3:50 – 4:00 PM

Committee Member Comments

4:00 PM

Adjourn

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4 AAC 31.013(a) is amended to read:

(a) For a district to be eligible for state aid under AS 14.11.011 **or AS 14.11.100**, the district must have a facility management program that addresses the following five elements of facility and maintenance management:

(1) a formal maintenance management program that records maintenance activities on a work order basis, and tracks the timing and cost, including labor and materials, of maintenance activities in sufficient detail to produce reports of planned and completed work;

(2) an energy management plan that includes

(A) the recording of energy consumption for all utilities on a monthly basis for each building; for facilities constructed before December 15, 2004, a district may record energy consumption for utilities on a monthly basis when multiple buildings are served by one utility plant; **and**

(B) regular evaluation of the effectiveness of and need for commissioning existing buildings;

(3) a custodial program that includes a schedule of custodial activities for each building based on type of work and scope of effort;

(4) a maintenance training program that specifies training for custodial and maintenance staff and records training received by each person; and

(5) a renewal and replacement schedule that, for each school facility of permanent construction over 1,000 gross square feet, identifies the construction cost of major building systems, including electrical, mechanical, structural and other components; evaluates and

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establishes the life-expectancy of those systems; compares life-expectancy to the age and condition of the systems; and uses the data to forecast a renewal and replacement year and cost for each system.

(Eff. 7/13/2000, Register 155; am 12/19/2002, Register 164; am __/__/__, Register _____)

Authority:	AS 14.07.060	AS 14.11.015	AS 14.11.100
	AS 14.11.011	AS 14.11.017	AS 14.11.132
	AS 14.11.013		

4 AAC 31.065(a) is amended to read:

(a) If a school district determines that it is necessary to engage the services of a private consultant to **provide** design, [OR PROVIDE] **commissioning, or** construction management **services** for an educational facility with money provided under AS 14.11.011 - AS 14.11.020, or for a project approved for reimbursement of costs under AS 14.11.100, and the estimated cost of the contract is more than \$50,000, the selection of the consultant shall be accomplished by soliciting written proposals by advertising in a newspaper of general circulation at least 21 days before the proposals are due. The contract shall be awarded to the most qualified offeror, after evaluating the proposals submitted.

(Eff. 12/2/83, Register 88; am 8/31/90, Register 115; am __/__/__, Register _____)

Authority:	AS 14.11.017	AS 14.11.020	AS 14.11.132
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4 AAC 31.080 is amended by adding a new subsection to read:

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(i) A school district shall perform commissioning of the systems included in a school capital project if the school capital project is an addition of over 5000 square feet or new construction of an education-related facility that is over 5,000 square feet. If the school capital project is a rehabilitation of an education-related facility over 10,000 square feet, a school district shall perform commissioning of each system substantially upgraded in the school capital project. A school district may perform commissioning for a rehabilitation of an education-related facility for each system impacted by the project but not substantially upgraded in the rehabilitation. Commissioning required under this subsection must include the services of a commissioning agent. Commissioning permitted under this subsection for a system that is impacted by a rehabilitation project but not substantially upgraded in the rehabilitation may use the services of a commissioning agent or may use a qualified facility professional, including a school district employee. The cost of commissioning, including the cost of a commissioning agent, required or permitted under this subsection is an allowable cost of school construction. (Eff. 12/2/83, Register 88; am 8/31/90, Register 115; am 4/17/98, Register 146; am 11/20/2005, Register 176; am __/__/__, Register __)

Authority: AS 14.07.060 AS 14.11.020 AS 14.11.132

4 AAC 31.900 is amended by adding new paragraphs to read:

(31) “commissioning” means functional testing activities for a mechanical, electrical, fuel oil, controls, and building envelope system to ensure that a facility or a system operates as the owner and designers intended and that prepares an owner to efficiently operate its systems and equipment;

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(32) “commissioning agent” means an individual who is certified with a recognized standards organization approved by the department to provide commissioning services, who may be an employee of the school district or an independent design consultant hired on behalf of the school district to

(A) create a commissioning plan, checklists, and functional performance tests for each commissioned system;

(B) coordinate the commissioning team for the mechanical, electrical, fuel oil, controls, and building envelope systems;

(C) coordinate the work of the construction contractor, school district, and design team as it pertains to the commissioning process;

(D) witness the functional performance testing;

(E) assist in resolution of issues found during commissioning; and

(F) verify the training of owner maintenance personnel on commissioned systems; (Eff. 3/1/78, Register 65; am 6/9/83, Register 86; am 12/2/83, Register 88; am 9/12/85, Register 96; am 8/31/90, Register 115; am 9/29/90, Register 115; am 10/7/95, Register 136; am 4/17/98, Register 146; am 2/18/99, Register 149; am 7/13/2000, Register 155; am 8/23/2001, Register 159; am 12/19/2002, Register 164; am 12/20/2002, Register 164; am 6/17/2010, Register 194; am ___/___/___, Register ___)

Authority:	AS 14.07.020	AS 14.11.020	AS 14.11.102
	AS 14.07.060	AS 14.11.100	AS 14.11.132
	AS 14.11.011		

2018 Summary of Changes: 4 AAC 31 Regulations

Prepared by Department of Education and Early Development
Finance & Support Services / Facilities

[August 28, 2018]

Regulation	Summary of Change	Reason for Change
4 AAC 31.013(e)	Reorganize section and refine language to parallel flow of process.	Reorganized language provides more clarity to the timeline of the determination process.
4 AAC 31.013(f)	Provide method for department and a district to postpone on-site inspections if district does not seek a compliant PM program.	Current language does not provide the dept. or a district a way to ‘opt-out’ of the on-site inspection process on the occasion of a district that does not desire to qualify for CIP funding. This will potentially save the department operational costs.
4 AAC 31.013(h) (new)	Add language defining department’s current practice of “provisional compliance”.	In the past 10 years, the department has issued determinations of “provisional compliance” to districts that have the capacity to meet PM standards but lack documentation of maintaining the program (e.g., being able to provide a full 12 months of reporting data).
4 AAC 31.016(i) (new)	Provide guidance on when to include or exclude attendance area enrollment when housed in leased facilities.	Formalize dept. practice of excluding enrollment of leased-facility schools in attendance areas when determining space eligibility, unless single-site, and include clause for termination of leased space creating unhoused students.
4 AAC 31.020(a)	Update publication titles and editions.	Conform to new dept. publication editions; update publication title formatting.
4 AAC 31.020(d)	Provide department flexibility to reduce or not reduce a project budget before the end of the design phase.	Current regulation reads to require a budget reduction if enrollment declines during design process; however, fluctuations can cause significant design changes and incur additional design costs. Dept. practice typically holds a project harmless once a grant agreement is signed and design is underway; however, there could be circumstances where a later adjustment is appropriate.
4 AAC 31.021(e)	Allow “completed projects” to reuse priority ranking for 5 years after original application.	Enable districts to save costs of re-submitting a new application for projects that were completed and do not have any new information to present.

Regulation	Summary of Change	Reason for Change
4 AAC 31.021(f)	Remove requirement to provide inflation/escalation to elements of the project that will be completed prior to a grant being issued.	Adding the required escalation to projects with previously completed scope unnecessarily increases ranked project costs, resulting in lapsing balances in appropriations and tying up resources that could be used to fund additional projects.
4 AAC 31.021(g)	Adds language on how to treat appeals on projects reused in years 2-6.	Required to conform existing language to the additional years of reuse beyond year one.
4 AAC 31.022(b)	Changes primary purpose type “E” projects from school construction to major maintenance.	Conforms to 2010 statute change.
4 AAC 31.023(c)	Specify that application costs are allowable project costs. Define that the 36/120 month limit for reimbursable costs begins with initial application.	More clarity is need for when the “36 months” and “120 months” begin for reimbursable allowable project and land costs in a AS 14.11 grant or reimbursement.
4 AAC 31.023(c)	Adds language limiting amount of grant that can be used for district indirect administrative costs to specified percentage.	Provide more uniformity in treatment of indirect costs; reduces the obligation of the department to fund administrative costs not closely tied to a project with state aid.
4 AAC 31.023(e)	Provides definitions to support changes regarding indirect administrative costs.	Provide clarity for new terms “indirect administrative costs” and “construction costs” used in subsection.
4 AAC 31.026(d)	Changes who appoints a hearing officer for CIP process appeals.	Conforms to 2004 statute change.
4 AAC 31.030(a)	Changes statute reference from AS 14.11.020 to more common “grant funded under” AS 14.11.011. Specify that elements of a plan for DEED review must be submitted prior to solicitation of a construction contract.	Conform statute reference to statute providing grant funding. Language reinforces that plan must be provided for dept. review prior to construction contract solicitation, as some projects have been being submitted after contract award.

Regulation	Summary of Change	Reason for Change
4 AAC 31.040(a)	Change statute reference from AS 14.11.020 to more common AS 14.11.011. Specify that DEED review and approval must be submitted prior to solicitation of a construction contract, as inferred from timeline requirements in (a)(1)-(3).	Conform statute reference to statute providing grant funding. Language reinforces that project documents must be provided for dept. review prior to construction contract solicitation, as some projects have been being submitted after contract award.
4 AAC 31.060(i)	Change dollar value of reimbursement project costs \$200,000.	Conform value to statute. Current \$25,000 value is reflective of grant minimum project cost, not debt reimbursement.
4 AAC 31.061(b)(2)	Repeal language related to applications submitted before 1/1/1996.	Removal of non-applicable language.
4 AAC 31.064	Clarify when remaining bond proceeds can be redirected.	Clarity is needed for when “construction” of a project is considered complete: when design, construction, and equipment contracts are terminated.
4 AAC 31.065(a)	Allow solicitation of contracts for design and construction management consultants using qualifying Internet websites in lieu of newspapers.	Online publishing of solicitations via the world wide web has become equal or more effective than traditional newspaper publishing. (Note: State procurement regulations now allow these types of solicitation options.)
4 AAC 31.065 (new)	Allow DEED discretion to deny/limit participation in costs of design and construction management for grants and debt reimbursement projects that did not comply with this section	Provide consistency in department treatment of participation in construction and consultant contracts.
4 AAC 31.080(b)	Allow solicitation of construction contracts using qualifying Internet websites in lieu of newspapers.	Online publishing of solicitations via the world wide web has become equal or more effective than traditional newspaper publishing. (Note: State procurement regulations now allow these types of solicitation options.)
4 AAC 31.080(e)	Allow DEED discretion to deny/limit participation in costs of construction for grants that did not comply with this section; currently DEED may not allow payment for construction contract costs.	Provide consistency between grant and debt programs in dept. discretion to deny construction funding.

Regulation	Summary of Change	Reason for Change
4 AAC 31.080(f)	Update publication edition reference.	Conform to new dept. publication edition and update publication title formatting.
4 AAC 31.080(g)	Add “lease” and “donated” to methods a school district may acquire facilities with prior department approval.	Expand methods of school district acquisition of property that require dept. approval; works in conjunction with new subsection (j) to potentially limit AS 14.11 funding for property that was not in the best interest of the state for a district to acquire [note -- most leased facilities are already not eligible for AS 14.11 funding]
4 AAC 31.080(i) (new)	Allow denial or limiting of participation cost of school construction for facilities acquired under specific circumstances.	Provide dept. process for overview of district acquisition of land or facilities in instances where the dept. may be asked to provide financial support for major maintenance or restoration.
4 AAC 31.085(a)	Specify that a school district is still responsible for liabilities caused by its use of the property.	Reinforce that district liabilities and responsibilities that are the result of the district’s use and operation of the property continue beyond the use permit and one-year wind-down period (see also 4 AAC 31.090(h)).
4 AAC 31.220	Change date districts shall provide a certificate of insurance to DEED from July 1 to July 15.	Date extension requested by districts and insurance carriers. Certificates not always issued before July 1.
4 AAC 31.900(2)	Update publication edition reference.	Conform to new dept. publication edition and update publication title formatting.
4 AAC 31.900(21)	Change minimum value of “school capital project” to \$50,000.	Adjust dollar value in line with inflation to maintain intent of original regulation that projects are “capital” expenses and not “operational”. This value is consistent with inflation.

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4 AAC 31.013(e) is amended to read:

(e) [ON AN ANNUAL BASIS, THE] **The** department **will make a determination of a district's** [SHALL PROVIDE A PRELIMINARY NOTICE TO EACH DISTRICT REGARDING ITS] compliance with each element required in (a) of this section, based on evidence of a program [PREVIOUSLY PROVIDED TO] **acquired by** the department, [OR THAT WAS] **including information** gathered by the department during an on-site visit conducted under (f) of this section. **The department may change a determination at any time during the year based on new evidence. For purposes of eligibility for an application submitted under AS 14.11.011, on** [ON] or before June 1, the department will provide [ITS] preliminary notice **of its determination.** [THE DEPARTMENT MAY CHANGE A DETERMINATION OF NON-COMPLIANCE AT ANY TIME DURING THE YEAR BASED ON NEW EVIDENCE.] Districts that are not in full compliance must provide evidence of compliance to the department by August 1. On or before August 15, the department will notify districts of its final determination regarding compliance. The department will deny a grant application submitted under AS 14.11.011 by a district that has received a final determination from the department that the district is out of compliance with this section.

4 AAC 31.013(f) is amended to read:

(f) The department **will** [SHALL] conduct **an** on-site **inspection** [INSPECTIONS] of a school district preventive maintenance and facility management **program** [PROGRAMS] at least once every five years; **however, if the department issues a finding of noncompliance under (e) of this section and the district does not provide adequate evidence of compliance, the department may postpone an onsite visit beyond the five-year period.** The department

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may make additional inspections as it deems necessary. The department may change its determination of compliance based on information obtained during **an** [THE] on-site **inspection** [INSPECTIONS].

4 AAC 31.013 is amended by adding a new subsection to read:

(h) Notwithstanding (e) and (f) of this section, the department may make a determination of provisional compliance for a district that provides evidence of a plan that meets all required elements identified in (a) of this section but does not provide documentation of adherence to that plan. A determination of provisional compliance will allow a district to be eligible for state aid until a final determination of compliance or non-compliance is provided.

(Eff. 5/24/2001, Register 158; am 12/19/2002, Register 164; am 12/15/2004, Register 172; am 6/17/2010, Register 194; am ___/___/___, Register ____)

Authority: AS 14.07.020 AS 14.11.011 AS 14.11.132
AS 14.07.060

4 AAC 31.016 is amended by adding a new subsection to read:

(i) The enrollment calculated for students in leased space will be excluded from use in calculating eligibility for additional square footage for facilities unless

- (A) that enrollment is in an attendance area comprised of a single school, or
- (B) the lease is due to terminate within two years and district submits an

application for a capital improvement project under AS 14.11 for new school construction to house the student population of the terminating lease space. (Eff. 7/13/2000, Register 155; am 12/19/2002, Register 164; am ___/___/___, Register ____)

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Authority: AS 14.07.060 AS 14.11.015 AS 14.11.100
AS 14.11.011 AS 14.11.017 AS 14.11.132
AS 14.11.013

4 AAC 31.020(a) is amended to read:

(a) The following are the basic guides for educational facility planning **adopted by reference:**

(1) for a school capital project application submitted to the department, **Creating Connections: The CEFPI Guide for Educational Facility Planning** [CREATING CONNECTIONS: THE CEFPI GUIDE FOR EDUCATIONAL FACILITY PLANNING], 2004 Edition, as published by the Council of Educational Facilities Planners International;

(2) repealed 4/17/98;

(3) repealed 4/17/98;

(4) **Guidelines for School Equipment Purchases** [GUIDELINES FOR SCHOOL EQUIPMENT PURCHASES], as published by the Alaska Department of Education and Early Development, **2016 edition** [1997 EDITION];

(5) deleted 8/31/90;

(6) repealed 4/17/98;

(7) **Swimming Pool Guidelines** [SWIMMING POOL GUIDELINES], as published by the Alaska Department of Education and Early Development, 1997 edition; and

(8) **Site Selection Criteria and Evaluation Handbook** [SITE SELECTION CRITERIA AND EVALUATION GUIDELINE], as published by the Alaska Department of Education and Early Development, **2011 edition** [1997 EDITION].

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4 AAC 31.020(d) is amended to read:

(d) The department **will** [SHALL] reduce a project budget in proportion to the amount that the project's design exceeds the square feet allowable as determined under (c) of this section[.THIS SUBSECTION APPLIES TO A PROJECT], **until an agreement, as described in 4 AAC 31.023(c), is fully executed** [THAT HAS NOT RECEIVED A GRANT UNDER AS 14.11, A PROJECT THAT HAS RECEIVED MONEY FROM THE DEPARTMENT FOR PLANNING]. **The department may proportionally reduce the project budget under this subsection if** [, AND] a project [THAT] has not secured the approval of the commissioner under 4 AAC 31.040 [THIS SUBSECTION DOES NOT APPLY TO A PROJECT THAT HAS SECURED THE APPROVAL OF THE COMMISSIONER UNDER 4 AAC 31.040].

(Eff. 3/1/78, Register 65; am 6/9/83, Register 86; am 12/2/83, Register 88; am 8/31/90, Register 115; am 10/7/95, Register 136; am 4/17/98, Register 146; am 2/18/99, Register 149; am 7/13/2000, Register 155; am 8/23/2001, Register 159; am 12/20/2002, Register 164; am 6/17/2010, Register 194; am ___/___/___, Register ___)

Authority:	AS 14.07.020	AS 14.11.011	AS 14.11.100
	AS 14.07.060	AS 14.11.020	AS 14.11.132

4 AAC 31.021(e) is repealed and readopted to read:

(e) Using the criteria set out in 4 AAC 31.022(b), the department will score each application and use the score to assign a priority ranking to the projects approved for eligibility. The department may annually approve a school district's request to reuse an original application

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and its score for up to five additional years after the year the original application is submitted, if, for a school capital project listed in the district's six-year capital improvement plan,

(1) the school district identifies, in a letter accompanying the six-year plan, the specific application for which the district requests consideration beyond the initial application period;

(2) the chief school administrator certifies in writing that the district's eligibility for any additional square footage associated with the project has not decreased; and

(3) for requests to reuse the application and score for the first additional year;

(A) the physical condition of a facility included in the project has not deteriorated so as to increase the project's cost to exceed the amount determined by application of the inflation factor under (f) of this section; and

(B) health and life safety conditions and code conditions have not changed so as to affect the project's score under 4 AAC 31.022(b); or

(4) for requests to reuse the application and its score in years two through five after the year of the original application, the project construction must be substantially complete at the time of the original application. An inflation factor under (f) of this section will not be added to the project cost when an application is reused under this paragraph.

4 AAC 31.021(f) is repealed and readopted to read:

(f) If, under (e) of this section, the department approves a district's reuse of its previous year's application and score for one additional year after the year the original application is filed, the department will add an inflation factor based on an industry-accepted method to costs anticipated to occur after the award of the grant.

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4 AAC 31.021 is amended by adding new sections to read:

(g) If, under (e) of this section, a district reuses its original application and score for one or more additional years after the year the original application is filed, the district may not appeal its priority ranking in any of the additional years.

(h) A grant application must include certification that insurance or a program of self-insurance exists under 4 AAC 31.200 – 4 AAC 31.225 and will be revised, if necessary, to include the proposed facility. (Eff. 8/31/90, Register 115; am 8/12/93, Register 127; am 3/10/96, Register 137; am 4/17/98, Register 146; am 7/13/2000, Register 155; am 12/19/2002, Register 164; am 6/17/2010, Register 194; am __/__/__, Register __)

Authority: AS 14.07.060 AS 14.11.011 AS 14.11.132
AS 14.11.008 AS 14.11.013

4 AAC 31.022(b) is amended to read:

(b) When reviewing the six-year capital improvement plans and the grant applications submitted by school districts, department staff shall separately rank projects in the following classifications in the first year of the plan, in descending order of priority, as serves the state's best interests, where:

(1) school construction projects are those projects the primary purpose of which is to accomplish work under the categories established in **AS 14.11.013(a)(1)(A), (B), (F), and (G)** [AS 14.11.013(a)(1)(A), (a)(1)(B), AND (a)(1)(E) - (a)(1)(G)]; and

(2) major maintenance projects are those projects the primary purpose of which is to accomplish work under the categories established in **AS 14.11.013(a)(1)(C)-(E)**

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[AS 14.11.013(a)(1)(C) AND (D)], except that a major maintenance project may not include additional or replacement square footage.

4 AAC 31.023(c) is amended to read:

(c) The department will, before the disbursement of grant or allocations of other financial assistance [MONEY] to a school district, require the execution of a grant or other financial assistance agreement, on a form prescribed by the commissioner, that contains the following conditions:

(1) the project will be constructed and equipped under the requirements of 4 AAC 31.020(a), within the project budget determined under 4 AAC 31.022(e);

(2) money will be disbursed as the parties agree to allow the accomplishment of stages in the project, such as site acquisition; design and construction; and to reimburse the district for money actually and necessarily spent, before the award of the grant or allocation of other financial assistance,

(A) for **application costs**, planning costs, design costs, and construction costs incurred not more than 36 months before the **initial** submission of the grant **or other financial assistance** application **with a substantially identical scope**; and

(B) site acquisition costs incurred not more than 120 months before the **initial submission of the** grant or other financial assistance application **with a substantially identical scope** for which the department has given its approval under 4 AAC 31.025;

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(3) the district's performance under the grant or other financial assistance is subject to financial audit at any time; the cost of an audit required by the state is an allowable cost of school construction;

(4) the site for the school facility is approved under 4 AAC 31.025;

(5) designers, **commissioning agents, and construction managers** of the facility shall be selected under 4 AAC 31.065; [AND]

(6) construction shall be performed by contracts awarded under 4 AAC 31.080;

and

(7) unless a district provides documented evidence of project-specific indirect administrative costs in excess of these limits, indirect administrative costs may not exceed

(A) three percent of construction costs, if construction costs are \$500,000 or less;

(B) the greater of \$15,000 or two percent of construction costs, if construction costs are over \$500,000 but less than \$5,000,000;

(C) the greater of \$100,000 or one percent of construction costs, if construction costs are \$5,000,000 or more.

4 AAC 31.023 is amended by adding a new subsection to read:

(e) In (c) of this section,

(1) “indirect administrative costs” means an allocable portion of administrative and operating expenses; and

(2) “construction costs” means the cost of contracted work as well as force account for facility construction, site preparation, site improvements, and utilities.

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(Eff. 8/31/90, Register 115; am 8/12/93, Register 127; am 4/17/98, Register 146; am 2/18/99, Register 149; am __/__/__, Register ____)

Authority: AS 14.11.013 AS 14.11.017 AS 14.11.132
AS 14.11.015 AS 14.11.100

4 AAC 31.026(d) is amended to read:

(d) Within 10 working days after the filing of an appeal under (c) of this section, the **chief administrative law judge of the office of administrative hearings** [COMMISSIONER] shall appoint a hearing officer to hear the case. The hearing officer shall consider the issues raised in the appeal on the basis of

(1) the school district's updated capital improvement plan submitted under 4 AAC 31.011;

(2) the grant application, and supporting documentation submitted by the school district under 4 AAC 31.020(c);

(3) the comments received at the public hearing conducted under (a) of this section;

(4) the decision rendered by the department on the request for reconsideration under (b) of this section; and

(5) the appeal filed by the school district under (c) of this section.

(Eff. 8/31/90, Register 115; am 8/12/93, Register 127; am 4/17/98, Register 146; am __/__/__, Register ____)

Authority: AS 14.11.013 **AS 14.11.016** AS 14.11.132
AS 14.11.015

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4 AAC 31.030(a) is amended to read:

(a) A school district shall submit the elements of a plan for **a school capital project**, **including** new construction, additions, demolitions, and rehabilitations, to be undertaken by the school district that are to be funded under **AS 14.11.011** [AS 14.11.020] or for which reimbursement is to be sought under AS 14.11.100. The elements of the plan must be submitted to the commissioner for the commissioner's review and approval as the elements are developed and before any **construction contract solicitation or** construction activity is initiated.

(Eff. 3/1/78, Register 65; am 12/2/83, Register 88; am 10/7/95, Register 136; am 4/17/98, Register 146; am __/__/__, Register __)

Authority:	AS 14.07.020	AS 14.11.011	AS 14.11.020
	AS 14.07.060	AS 14.11.013	AS 14.11.100

4 AAC 31.040(a) is amended to read:

(a) Before commencing **construction contract solicitation or** construction activity under **AS 14.11.011** [AS 14.11.020] or **construction contract solicitation or** construction activity for which reimbursement will be sought under AS 14.11.100, a school district or a regional school board shall secure the approval of the commissioner of the documents for the project as follows:

(1) the school district or regional school board shall submit to the commissioner 95 percent construction documents at least 20 work days before a bid invitation is made;

(2) if construction contract bids are to be invited for the project, the school district or regional school board shall submit the construction bid documents, excluding the construction plans and specifications if the 95 percent construction documents submitted under (1) of this

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subsection were stamped and signed by the professionals in responsible charge, to the commissioner at least five work days before the bid invitation is made;

(3) if the project will not be advertised for bids, the school district or regional school board shall submit the final stamped and signed construction documents to the commissioner no later than 15 work days before commencing each construction phase; and

(4) a municipality or a school district may request, in writing, a waiver to the construction document approval process set out in (1) - (3) of this subsection for a project based on the ability of the municipality or school district to provide a thorough and complete independent review.

(Eff. 3/1/78, Register 65; am 12/2/83, Register 88; am 4/17/98, Register 146; am ___/___/___, Register ___)

Authority:	AS 14.07.020	<u>AS 14.11.011</u>	AS 14.11.100
	AS 14.07.060	AS 14.11.020	

4 AAC 31.060(i) is amended to read:

(i) Reimbursement for rehabilitation costs under AS 14.11.100 is limited to projects exceeding **\$200,000** [\$25,000].

(Eff. 3/1/78, Register 65; am 2/24/83, Register 85; am 12/2/83, Register 88; am 9/12/85, Register 96; am 2/8/86, Register 97; am 5/30/90, Register 114; am 4/17/98, Register 146; am 7/13/2000, Register 155; am 6/17/2010, Register 194; am ___/___/___, Register ___)

Authority:	AS 14.07.020	AS 14.11.020	AS 14.11.102
	AS 14.07.060	AS 14.11.100	AS 14.11.132
	AS 14.11.011		

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4 AAC 31.061(b)(2) is repealed:

(2) repealed __/__/__; [FOR A CAPITAL IMPROVEMENT PROJECT GRANT APPLICATION SUBMITTED TO THE DEPARTMENT BEFORE JANUARY 1, 1996, NONASSIGNABLE SPACE MAY NOT EXCEED 25 PERCENT OF THE TOTAL SPACE, EXCEPT THAT THE DEPARTMENT WILL, IN ITS DISCRETION, GRANT A VARIANCE OF UP TO 35 PERCENT OF TOTAL SPACE IN SMALL SCHOOLS IN REMOTE AREAS IF IT CAN BE DEMONSTRATED THAT THE VARIANCE IS IN THE BEST INTEREST OF THE STATE AND THE DISTRICT; AND]

(Eff. 9/12/85, Register 96; am 2/8/86, Register 97; am 5/30/90, Register 114; am 9/29/90, Register 115; am 10/7/95, Register 136; am 4/17/98, Register 146; am __/__/__, Register ____)

Authority:	AS 14.07.020	AS 14.11.020	AS 14.11.102
	AS 14.07.060	AS 14.11.100	AS 14.11.103

4 AAC 31.064 is amended to read:

4 AAC 31.064. Redirection of bond proceeds. If a municipality has bond proceeds remaining after termination of all design, construction, and equipment contracts for [THE CONSTRUCTION OF] a project approved by the department for debt retirement under 4 AAC 31.060 and by local voters under AS 14.11.100(j), and the municipality seeks to construct a project different from the one approved by the department, the municipality may only receive reimbursement for the project if the new project is approved by the department and

(1) the bond proposition originally approved by the local voters authorized the use of any excess money for school capital projects such as the new project; or

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(2) the municipality meets the requirements of AS 14.11.100(j), including the requirement for a municipal election to approve the new use of the money. (Eff. 5/30/90, Register 114; am __/__/__, Register ____)

Authority: AS 14.07.060 AS 14.11.100 AS 14.11.132

4 AAC 31.065(a) is amended to read:

(a) If a school district determines that it is necessary to engage the services of a private consultant to **provide design, commissioning,** or [PROVIDE] construction management **services** for an educational facility with money provided under AS 14.11.011 - AS 14.11.020, or for a project approved for reimbursement of costs under AS 14.11.100, and the estimated cost of the contract is more than \$50,000, **the contract shall be awarded to the most qualified proposer after evaluating proposals submitted in response to an approved solicitation.** The selection of the consultant shall be accomplished by soliciting written proposals by advertising **at least 21 days before the proposals are due by providing notice through publication** in a newspaper of general circulation. **The department may approve an alternate means of notice through publication on the Internet if the website has the express purpose of advertising similar solicitations, has unrestricted public access, and is equally likely to reach prospective proposers** [AT LEAST 21 DAYS BEFORE THE PROPOSALS ARE DUE. THE CONTRACT SHALL BE AWARDED TO THE MOST QUALIFIED OFFEROR, AFTER EVALUATING THE PROPOSALS SUBMITTED].

4 AAC 31.065 is amended by adding a new subsection to read:

(d) The department may deny or limit its participation in the costs of design,

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commissioning, or construction management for a project eligible for grant funding under AS 14.11.011 or for reimbursement under AS 14.11.100 if the school district does not comply with the requirements of this section. (Eff. 12/2/83, Register 88; am 8/31/90, Register 115; am ___/___/___, Register ___)

Authority: AS 14.11.017 AS 14.11.020 AS 14.11.132

4 AAC 31.080(b) is amended to read:

(b) The school district shall **publish** [PROVIDE] **the first** notice of its solicitation **at least 21 days** [BY ADVERTISEMENT IN A NEWSPAPER OF GENERAL CIRCULATION IN THIS STATE AT LEAST THREE TIMES] before the opening of the offers. [THE FIRST PRINTING OF THE ADVERTISEMENT MUST OCCUR AT LEAST 21 DAYS BEFORE OPENING THE OFFERS.] The department may approve a solicitation period shorter than 21 days when written justification submitted by the school district demonstrates that a shorter solicitation period is advantageous for a particular **project** [offer] and will result in an adequate number of responses. A school district may provide additional notice by mailing its solicitation to contractors on any list it maintains, and any other means reasonably calculated to provide notice to prospective offerors. **The district shall provide notice of its solicitation by publication at least three times in a newspaper of general circulation in the state. The department may approve an alternate means of notice through publication on the Internet if the website has the express purpose of advertising similar solicitations, has unrestricted public access, and is equally likely to reach prospective offerors.**

4 AAC 31.080(e) is amended to read:

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(e) The department may deny or limit its participation in the costs of construction for a project eligible **for grant funding under AS 14.11.011 or** for reimbursement under AS 14.11.100 if the school district does not comply with the requirements of this section. [A SCHOOL DISTRICT THAT ENTERS INTO A CONSTRUCTION CONTRACT FOR A PROJECT AUTHORIZED FOR CONSTRUCTION UNDER AS 14.11.020 THAT WAS AWARDED WITHOUT COMPETITIVE SELECTION UNDER THIS SECTION MAY NOT RECEIVE MONEY UNDER ITS PROJECT AGREEMENT FOR THE CONSTRUCTION PHASE OF THE PROJECT.]

4 AAC 31.080(f) is amended to read:

(f) Nothing in this section precludes a school district from using an alternative construction delivery method as defined and described in the **Project Delivery Method Handbook** [PROJECT DELIVERY METHOD HANDBOOK], **2017 edition** [NOVEMBER, 2004], adopted by reference, if the department approves the method in advance of any solicitation, the proposed method is in the state's best interest, and the school district concurs in any directives the department makes concerning the type of selection and award of the contract. The department may deny or suspend use of an alternative construction delivery method by a school district if the department concludes, based on substantial evidence, that use or repeated use of a delivery method by the school district has resulted or will result in limited competition or higher costs.

4 AAC 31.080(g) is amended to read:

(g) A school district may, with prior approval by the department, **enter into a lease or**

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purchase **agreement for, or accept a donation of**, an existing facility **or land** for use as an education-related facility if

(1) **for the purchase, lease or accepted donation of an existing facility**, a cost saving over new construction is achieved;

(2) the purchase **or lease** price is arrived at through impartial negotiation and is supported by a real estate appraisal that meets accepted standards; and

(3) the purchase, **lease, or donation** is in the best interests of the state and the school district.

4 AAC 31.080 is amended by adding a new subsection to read:

(i) The department may deny or limit its participation in the costs of a school capital project if the real property for the project is acquired by a school district through purchase, lease, or donation without the approval of the department under (g) of this section. (Eff. 12/2/83, Register 88; am 8/31/90, Register 115; am 4/17/98, Register 146; am 11/20/2005, Register 176; am __/__/__, Register __)

Authority: AS 14.07.060 AS 14.11.020 AS 14.11.132

4 AAC 31.085(a) is amended to read:

(a) The department may dispose of state-owned school buildings and other facilities under this section if it determines that the buildings or facilities are no longer needed to provide the educational program in the community in which they are located. The determination will be made in writing after consultation with the regional educational attendance area (REAA) in which the property is located, and the reasons for the determination will be documented. The

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department will not make a determination under this section unless the regional school board that was given a use permit under 4 AAC 31.090 for the property provides, in support of the determination, a resolution requesting termination of the use permit and declaring that the property, both land and buildings, is no longer needed for the purpose of providing education services. In addition, the regional school board must give notice of its excess property on a form provided by the department, and must agree that the conditions and responsibilities contained under 4 AAC 31.090 in the use permit will remain valid for a one-year period after the date of the notice or the date of last occupancy, whichever is later, unless the department, in writing, relieves the regional school board of responsibility in whole or in part. **Nothing in the section relieves a regional school board of its ongoing responsibilities or liabilities arising out of its interest in or use or operation of the property.**

(Eff. 10/4/90, Register 115; am 4/17/98, Register 146; am 12/19/2002, Register 164; am 6/17/2010, Register 194; am __/__/__, Register: __)

Authority: AS 14.07.030 AS 14.07.060

4 AAC 31.220 is amended to read:

4 AAC 31.220. Proof of insurance. Except for a district that has an authorized self-insurance program under 4 AAC 31.205, each school district shall provide to the department a certificate of insurance, by **July 15** [JULY 1] of each year, that provides notice of the per occurrence and aggregate limits of coverage, and shall provide for 45 days' notice to the department of cancellation, termination, or any material change in policy conditions. (Eff. 8/31/90, Register 115; am __/__/__, Register __)

Authority: AS 14.03.150 AS 14.07.060

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4 AAC 31.900(2) is amended to read:

(2) "capital equipment" means built-in and movable equipment used to furnish a newly constructed or rehabilitated space; it includes first-time purchase of library books, reference material, and media to furnish a new or renovated library; it does not include supply items such as textbooks and expendable commodities; the term is further defined in the *Guidelines for School Equipment Purchases* [GUIDELINES FOR SCHOOL EQUIPMENT PURCHASES], 2016 edition [1997 EDITION];

4 AAC 31.900(21) is amended to read:

(21) "school capital project" means a school construction or major maintenance project for which state aid is requested or provided when the costs of the construction or major maintenance exceed \$50,000 [\$25,000];

4 AAC 31.900 is amended by adding a new subsection to read:

(33) "construction manager" means a private consultant contracted by the school district during any phase of a school capital project to manage the project's scope, quality, and budget. (Eff. 3/1/78, Register 65; am 6/9/83, Register 86; am 12/2/83, Register 88; am 9/12/85, Register 96; am 8/31/90, Register 115; am 9/29/90, Register 115; am 10/7/95, Register 136; am 4/17/98, Register 146; am 2/18/99, Register 149; am 7/13/2000, Register 155; am 8/23/2001, Register 159; am 12/19/2002, Register 164; am 12/20/2002, Register 164; am 6/17/2010, Register 194; am __/__/__, Register: __)

Authority: AS 14.07.020 AS 14.11.020 AS 14.11.102

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AS 14.07.060

AS 14.11.100

AS 14.11.132

AS 14.11.011



STATE OF ALASKA
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DIVISION OF EDUCATION SUPPORT SERVICES
801 W. 10TH ST. STE 200
PO Box 110500
JUNEAU, AK 99811-0500

Informal Request For Proposals

IRFP 190000026

Date of Issue: Friday, September 28, 2018

Closing Date and Time: 4:00 PM Friday, October 12, 2018

Geographic Cost Factors Update to the DEED Cost Model

[Rob Roys](#)

Procurement Officer

Department of Education and Early Development

Phone (907) 465-8654

robert.roys@alaska.gov

Note: unless specified otherwise all times referenced in this IRFP are Alaska Time

SECTION 1. INTRODUCTION AND INSTRUCTIONS

1.01 INTRODUCTION

The Alaska Department of Education and Early Development (DEED), Division of Finance and Administrative Support Services, School Finance and Facilities (SFF) is seeking a contractor or team of contractors to update the DEED Cost Model-Geographic Cost Factors. This project requires consulting services from experienced cost professionals. Qualified consultants must have experience accurately estimating construction costs in various regions and locations in Alaska. They must have an understanding of cost variables that are impacted by geographic locations.

1.02 TERM OF CONTRACT

The term of the contract will be from date of award through December 14, 2018.

Unless otherwise provided in this IRFP, the State and the successful offeror/contractor agree: (1) that any holding over of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions shall remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.

1.03 CONTRACT BUDGET

The total budget to complete this project is estimated to not exceed \$55,000. Per AS 36.30.270 cost will not be a factor in evaluation. The estimate is provided for informational purposes only.

1.04 DEADLINE FOR RECEIPT OF PROPOSALS AND ADDRESSES

Offerors must submit one proposal either via email or by mail. Proposals must reference in the address or email subject line the IRFP number and project name. Proposals must be received no later than 4:00 P.M. on Friday October 12, 2018 or the proposal will be considered non-responsive and be rejected. The sealed proposal package(s) must be addressed as follows:

DEPARTMENT OF EDUCATION AND EARLY DEVELOPMENT
DIVISION OF FINANCE AND ADMINISTRATIVE SUPPORT SERVICES
ATTENTION: ROB ROYS
IRFP 19000026
GEOGRAPHIC COST FACTORS UPDATE TO THE DEED COST MODEL

If using U.S. mail, please use the following address:

PO BOX 110500
JUNEAU AK 99811-0500

If using a delivery service, please use the following address:

801 W 10th Street
JUNEAU AK 99801

Faxed proposals are not allowed.

If submitting a proposal via email, the technical proposal must be saved as a PDF document and emailed to DEED.procurement@alaska.gov as a clearly labeled attachment, such as "Vendor A - Technical Proposal.pdf" (Vendor A is the name of the offeror). The email must contain the IRFP number in the subject line.

The maximum size of a single email (including all text and attachments) that can be received by the state is 20mb (megabytes). If the email containing the proposal exceeds this size, the proposal must be sent in multiple emails that are each less than 20 megabytes and each email must comply with the requirements described above. It is the offeror's responsibility to contact the issuing agency at (907) 465-8654 to confirm that the proposal has been received. Note: the only thing that can be confirmed is whether or not an email from a specific email address has been received. The state is not responsible for unreadable, corrupt, or missing attachments.

1.05 CONTACT PERSON

Any technical or procedural questions regarding this IRFP should be addressed to the Procurement Officer using the contact information listed on page 1 and 2 of this document. All questions shall be received in writing and must be received by 5:00 pm on Tuesday, October 9, 2018.

No further questions will be allowed after this date.

1.06 PRE-PROPOSAL TELECONFERENCE

A pre-proposal teleconference will be held at 8:30 AM on Friday, October 5, 2018. The purpose of the teleconference is to discuss the work to be performed with the prospective offerors and allow them to ask questions concerning the IRFP. The meeting will be recorded and that recording will be available to prospective offerors upon request.

The teleconference will be held via WebEx. To join on-line, use this link:

<https://stateofalaska.webex.com/stateofalaska/j.php?MTID=mc2bb77afb9bf647b0add9f592d16199c> .

To join by phone call (855) 244-8681 Follow the instructions that you hear on the phone. The Cisco Unified MeetingPlace meeting ID is 808 135 198.

Offerors with a disability needing accommodation should contact the procurement officer prior to the date set for the pre-proposal conference so that reasonable accommodation can be made.

SECTION 2. STANDARD PROPOSAL INFORMATION

2.01 REQUIRED REVIEW

Offerors shall carefully review this solicitation without delay, for defects and questionable or objectionable matter. Questions, objections, or comments must be brought to the attention of the Procurement Officer. A protest filed based upon any omission, error, or the context of the solicitation will be disallowed if not brought to the attention of the Procurement Officer prior to the scheduled IRFP closing date. Verbal contact must be followed up with written notification.

2.02 CONFLICT OF INTEREST

Each proposal shall include a statement indicating whether or not the firm or any individuals working on the contract has a possible conflict of interest (e.g., employed by the State of Alaska) and, if so, the nature of that conflict. The Commissioner, Department of Education and Early Development, reserves the right to cancel the award if any interest disclosed from any source could either give the appearance of a conflict or cause speculation as to the objectivity of the program to be developed by the offeror. The Commissioner's determination regarding any questions of conflict of interest shall be final.

2.03 AUTHORIZED SIGNATURE

An individual authorized to bind the offeror to the provisions of the IRFP must sign the proposal. By signing their proposal, the offeror certifies that the proposal remains valid for at least ninety (90) days from the proposal receipt deadline.

By signing the proposal, the offeror certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States. Failure to comply with this requirement may cause the state to reject the bid or proposal as non-responsive, or cancel the contract.

2.04 AGGRIEVED RESPONDENTS

An interested party shall attempt to informally resolve a dispute with the Procurement Officer. If the attempt is unsuccessful, the interested party may protest the solicitation or the award of a small procurement in accordance with Title 2 of the Alaska Administrative Code (AAC) 12.695.

2.05 ADA CERTIFICATION

The State of Alaska complies with Title II of the Americans with Disabilities Act (ADA) of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications to submit a proposal should call the Procurement Officer named above to make necessary arrangements.

By signing their proposal, the offeror certifies compliance with the ADA of 1990 and that program; services and activities provided to the general public on behalf of the state under a contract resulting from this solicitation comply with the ADA of 1990, CFR, Part 35, Subpart B 35.130 of the federal government.

2.06 BUSINESS LICENSE

Prior to the award of a contract, an offeror must hold a valid Alaska business license. However, in order to receive the Alaska Bidder Preference and other related preferences, such as the Alaska Veteran and Alaska Offeror Preference, an offeror must hold a valid Alaska business license prior to the deadline for receipt of proposals. Offerors should contact the Department of Commerce, Community and Economic Development, Division of Corporations, Business, and Professional Licensing, P. O. Box 110806, Juneau, Alaska 99811-0806, for information on these licenses. Acceptable evidence that the offeror possesses a valid Alaska business license may consist of any one of the following:

- 1) copy of an Alaska business license;
- 2) certification on the proposal that the offeror has a valid Alaska business license and has included the license number in the proposal;
- 3) a canceled check for the Alaska business license fee;
- 4) a copy of the Alaska business license application with a receipt stamp from the state's occupational licensing office; or
- 5) a sworn and notarized affidavit that the offeror has applied and paid for the Alaska business license.

You are not required to hold a valid Alaska business license at the time proposals are opened if you possess one of the following licenses and are offering services or supplies under that specific line of business:

- fisheries business licenses issued by Alaska Department of Revenue or Alaska Department of Fish and Game,
- liquor licenses issued by Alaska Department of Revenue for alcohol sales only,
- insurance licenses issued by Alaska Department of Commerce, Community and Economic Development, Division of Insurance, or
- Mining licenses issued by Alaska Department of Revenue.

Prior the deadline for receipt of proposals, all offerors must hold any other necessary applicable professional licenses required by Alaska Statute.

Note: The Alaska Business License is not required if the vendor is located out of state and performs a service outside the State of Alaska.

2.07 APPLICATION OF PREFERENCES

Certain preferences apply to all contracts for professional services, regardless of their dollar value. The Alaska Bidder, Alaska Veteran, and Alaska Offeror preferences are the most common preferences involved in the IRFP process. Additional preferences that may apply to this procurement are listed below. Guides that contain excerpts from the relevant statutes and codes, explain when the preferences apply and provide examples of how to calculate the preferences are available at the Department of Administration, Division of General Service's web site:

<http://doa.alaska.gov/dgs/policy.html> .

Alaska Products Preference - AS 36.30.332

Recycled Products Preference - AS 36.30.337

Local Agriculture and Fisheries Products Preference - AS 36.15.050

Employment Program Preference - AS 36.30.321(b)

Alaskans with Disabilities Preference - AS 36.30.321(d)

Alaska Veteran's Preference - AS 36.30.321(f)

The Division of Vocational Rehabilitation in the Department of Labor and Workforce Development keeps a list of qualified employment programs and individuals who qualify as persons with a disability. As evidence of a business' or an individual's right to the Employment Program or Alaskans with Disabilities preferences, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of these preferences, a business or individual must be on the appropriate Division of Vocational Rehabilitation list prior to the time designated for receipt of proposals. Offerors must attach a copy of their certification letter to the proposal. An offeror's failure to provide this certification letter with their proposal will cause the state to disallow the preference.

2.08 5 PERCENT ALASKA BIDDER PREFERENCE

AS 36.30.321(a), AS 36.30.990(2), & 2 AAC 12.260

An Alaska Bidder Preference of five percent will be applied to the price in the proposal. The preference will be given to an offeror who:

- 1) holds a current Alaska business license prior to the deadline for receipt of proposals;
- 2) submits a proposal for goods or services under the name appearing on the offeror's current Alaska business license;
- 3) has maintained a place of business within the state staffed by the offeror, or an employee of the offeror, for a period of six months immediately preceding the date of the proposal;
- 4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company (LLC) organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.06 or AS 32.11 and all partners are residents of the state; and
- 5) if a joint venture, is composed entirely of ventures that qualify under (1)-(4) of this subsection.

Alaska Bidder Preference Affidavit

In order to receive the Alaska Bidder Preference, the proposal must include a statement certifying that the offeror is eligible to receive the Alaska Bidder Preference.

If the offeror is a LLC or partnership as identified in (4) of this subsection, the affidavit must also identify each member or partner and include a statement certifying that all members or partners are residents of the state.

If the offeror is a joint venture which includes a LLC or partnership as identified in (4) of this subsection, the affidavit must also identify each member or partner of each LLC or partnership that is included in the joint venture and include a statement certifying that all of those members or partners are residents of the state.

2.09 5 PERCENT ALASKA VETERAN PREFERENCE
AS 36.30.321(f)

An Alaska Veteran Preference of five percent, not to exceed \$5,000, will be applied to the price in the proposal. The preference will be given to an offeror who qualifies under AS 36.30.990(2) as an Alaska bidder and is a:

- 1) sole proprietorship owned by an Alaska veteran;
- 2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans;
- 3) limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or
- 4) corporation that is wholly owned by individuals, and a majority of the individuals are Alaska veterans.

Alaska Veteran Preference Affidavit

In order to receive the Alaska Veteran Preference, the proposal must include a statement certifying that the offeror is eligible to receive the Alaska Veteran Preference.

2.10 FEDERAL DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

Expenditures from this contract may involve federal funds. The U.S. Department of Labor requires all state agencies that are expending federal funds to have a certification filed in the bid (by the bidder) that they have not been debarred or suspended from doing business with the federal government. Certification regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions (Attachment 3) must be completed and submitted with your bid.

SECTION 3. STANDARD CONTRACT INFORMATION

3.01 CONTRACT APPROVAL

This IRFP does not obligate the state until a contract is signed and approved by both parties. If approved, it is effective from the date of approval by DEED. The state shall not be responsible for work done, even in good faith, prior to DEED approval of the contract.

3.02 CONTRACT ADDITIONS, ANTICIPATED AMENDMENTS

At the State's sole option and contingent upon available funding, DEED may invoke a second phase of this contract for additional professional services that fall within the general scope of the original contract. If opted for, work under this phase may not progress until the Procurement Officer of record determines in writing that the additional phase is necessary and in the State's best interest.

3.03 NONDISCLOSURE AND CONFIDENTIALITY

Contractor agrees that all confidential information shall be used only for purposes of providing the deliverables and performing the services specified herein and shall not disseminate or allow dissemination of confidential information except as provided for in this section. The contractor shall hold as confidential and will use reasonable care (including both facility physical security and electronic security) to prevent unauthorized access by, storage, disclosure, publication, dissemination to and/or use by third parties of, the confidential information. "Reasonable care" means compliance by the contractor with all applicable federal and state law, including the Social Security Act and HIPAA. The contractor must promptly notify the state in writing if it becomes aware of any storage, disclosure, loss, unauthorized access to or use of the confidential information.

Confidential information, as used herein, means any data, files, software, information or materials (whether prepared by the state or its agents or advisors) in oral, electronic, tangible or intangible form and however stored, compiled or memorialized that is classified confidential as defined by State of Alaska classification and categorization guidelines (i) provided by the state to the contractor or a contractor agent or otherwise made available to the contractor or a contractor agent in connection with this contract, or (ii) acquired, obtained or learned by the contractor or a contractor agent in the performance of this contract. Examples of confidential information include, but are not limited to: technology infrastructure, architecture, financial data, trade secrets, equipment specifications, user lists, passwords, research data, and technology data (infrastructure, architecture, operating systems, security tools, IP addresses, etc).

Additional information that the contractor shall hold as confidential during the performance of services under this contract include:

- Student names;
- Students' state school identification numbers;
- Students' test scores or grades;
- Any other student personal information, such as address, birth date, school name, health or disciplinary information; and
- Library records described in AS 40.25.140.

If confidential information is requested to be disclosed by the contractor pursuant to a request received by a third party and such disclosure of the confidential information is required under applicable state or federal law, regulation, governmental or regulatory authority, the contractor may disclose the confidential information after providing the state with written notice of the requested disclosure (to the extent such notice to the state is permitted by applicable law) and giving the state opportunity to review the request. If the contractor receives no objection from the state, it may release the confidential information within 30 days. Notice of the requested disclosure of confidential information by the contractor must be provided to the state within a reasonable time after the contractor's receipt of notice of the requested disclosure and, upon request of the state, shall seek to obtain legal protection from the release of the confidential information.

The following information shall not be considered confidential information: information previously known to be public information when received from the other party; information freely available to the general public; information which now is or hereafter becomes publicly known by other than a breach of confidentiality hereof; or information which is disclosed by a party pursuant to subpoena or other legal process and which as a result becomes lawfully obtainable by the general public.

3.04 PAYMENT OF INVOICES

Invoices are to be mailed directly to the Contract Administrator at the address on the Standard Agreement Form (contract document). The state will pay all invoices within thirty (30) days of payment approval by the Project Director.

3.05 INSURANCE REQUIREMENTS

The successful offeror must provide proof of workers' compensation insurance prior to contract approval.

The successful offeror must secure the insurance coverage required by the state. The coverage must be satisfactory to the Department of Administration Division of Risk Management. An offeror's failure to provide evidence of such insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

Offerors must review form APPENDIX B², (Attachment 2), for details on required coverage. No alteration of these requirements will be permitted without prior written approval from the Department of Administration, Division of Risk Management. Objections to any of the requirements in APPENDIX B² must be set out in the offeror's proposal.

SECTION 4. BACKGROUND, SCOPE AND LOCATION OF WORK

4.01 BACKGROUND INFORMATION

The State of Alaska, Department of Education and Early Development has used the Program Demand Cost Model, developed by HMS Inc., to verify and bench-mark costs of new and existing school construction projects. For the development of the Program Demand Cost Model, the geographic cost factor was designed to modify the overall cost of the project to provide a more accurate analysis of cost within the state of Alaska. The original geographic cost factors were developed by Cliff Hitchins of HMS Inc., for the Department of Education and Early Development in 1978 and were most recently updated in 2008. The exact makeup of the geographic cost factors has not been sufficiently documented over the years to provide absolute clarity of its components. A study was completed by HMS in November 2017 to codify a basis of the factors and to test the process in two locations.

4.02 SCOPE OF WORK

The scope of work for the contractor will be to assess the cost factors listed in the DEED Geographic Factors Matrix for every district/region currently listed in Table 1 of the 17th Edition Program Demand Cost Model for Alaskan Schools. Using Anchorage as the base, calculate the cost increase/decrease of each factor for every district/region.

4.03 DELIVERABLES

The contractor will produce the following deliverables by December 14, 2018.

1. An updated Table 1 for use in the 18th Edition Demand Cost Model for Alaskan Schools.
2. A matrix showing the component percentage increase/decrease for each factor in each geographic location.
3. A report with all backup showing calculations for every factor.

4.04 LOCATION OF WORK

The state will not provide workspace for the contractor. The contractor must provide its own workspace.

The contractor should include in their price proposal: transportation, lodging, and per diem costs sufficient to pay for all travel requested to complete the project.

By signature on their proposal, the offeror certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States. If the offeror cannot certify that all work will be performed in the United States, the offeror must contact the procurement officer in writing to request a waiver at least 10 days prior to the deadline for receipt of proposals. The request must include a detailed description of the portion of work that will be performed outside the United States, where, by whom, and the reason the waiver is necessary.

Failure to comply with this requirement or to obtain a waiver may cause the state to reject the proposal as non-responsive, or cancel the contract.

4.05 MINIMUM QUALIFICATIONS

In order to be deemed responsive, offerors must demonstrate:

- 1) A minimum of 5 years experience estimating construction costs for new construction and renovation of schools in Alaska
- 2) Experience with the DEED Demand Cost Model for Alaskan Schools.

Offerors must use the form provided in the attachments to describe how their proposal meets the minimum qualifications. The attachment may reference where to find the information within the offeror's proposal or it may be a separate listing of how the offeror meets the minimum qualifications. The attachment will only be used to establish that the offeror has met the minimum qualifications, it will not be scored during proposal evaluation.

An offeror's failure to meet these minimum prior experience requirements will cause their proposal to be considered non-responsive and their proposal will be rejected.

SECTION 5. PROPOSAL FORMAT AND CONTENT

DEED discourages overly lengthy and costly proposals, however, in order for the state to evaluate proposals fairly and completely, offerors must follow the format set out in this IRFP and provide all information requested.

All pages must be consecutively numbered.

A successful proposal will demonstrate the following:

- 1) The offeror's breadth of experience (geographic locations) estimating the construction cost of school across Alaska.
- 2) The offeror's understanding of the DEED Geographic Cost Factors Matrix and the offeror's recommended inclusion or exclusion of the factors listed.
- 3) The offeror's general and specific experience developing and using the DEED Demand Cost Model for Alaskan Schools.

5.01 COVER LETTER

Proposals must include the complete name and address of offeror's firm and the name, mailing address, and telephone number of the person the state should contact regarding the proposal.

Proposals must confirm that the offeror will comply with all provisions in this IRFP; and, if applicable, provide notice that the firm qualifies as an Alaskan bidder; a statement confirming that the proposal is valid for ninety (90) days from the closing date for receipt of proposals; a statement confirming that the offeror will comply with all provisions of the IRFP; and a statement relating to any perceived or potential conflict of interest. Proposals must be signed by a company officer empowered to bind the company. An offeror's failure to include these items in the proposals may cause the proposal to be determined to be non-responsive and the proposal may be rejected.

5.02 UNDERSTANDING OF THE PROJECT

Offerors should provide a concise narrative statement that illustrates their understanding of the requirements of the project and the project schedule and the offeror's understanding of the DEED Geographic Cost Factors Matrix (Attachment 8) and the offeror's recommended inclusion or exclusion of the factors listed.

5.03 METHODOLOGY USED FOR THE PROJECT

Offerors must provide comprehensive narrative statements that set out the methodology they intend to employ and illustrate how the methodology will serve to accomplish the work and meet the state's project schedule.

5.04 MANAGEMENT PLAN FOR THE PROJECT

Offerors must provide comprehensive narrative statements that set out the management plan they intend to follow and illustrate how the plan will serve to accomplish the work and meet the state's project schedule.

5.05 EXPERIENCE AND QUALIFICATIONS

Offerors must provide an organizational chart specific to the personnel assigned to accomplish the work called for in this IRFP; illustrate the lines of authority; designate the individual responsible and accountable for the completion of each component and deliverable of the IRFP.

Offerors must provide a narrative description of the organization of the project team and a personnel roster that identifies each person who will actually work on the contract and provide the following information about each person listed:

- (a) title,
- (b) resume,
- (c) location(s) where work will be performed,
- (d) itemize the total cost and the number of estimated hours for each individual named above.

Offerors must provide reference names and phone numbers for at least one but no more than three similar projects the offeror's firm has completed.

SECTION 6. EVALUATION CRITERIA

The total number of points used to score proposals is 100. All proposals will be reviewed to determine if they are responsive. They will then be evaluated using the criteria set out below.

6.01 UNDERSTANDING OF THE PROJECT

Understanding will be a ten percent (20%) evaluation factor. Offerors should provide a concise narrative statement that illustrates their understanding of the requirements of the project and the project schedule and the offeror's understanding of the DEED Geographic Cost Factors Matrix (Attachment 8) and the offeror's recommended inclusion or exclusion of the factors listed.

6.02 METHODOLOGY USED FOR THE PROJECT

Methodology will be a fifteen percent (20%) evaluation factor. Offerors should provide a concise narrative statement that sets out the methodology they intend to employ if awarded the contract, illustrating how this methodology will serve to accomplish the work and meet the state's project schedule.

6.03 MANAGEMENT PLAN FOR THE PROJECT

Management Plan will be a ten percent (20%) evaluation factor. Offerors should provide a concise narrative statement that sets out the management plan they intend to follow, illustrating how this plan will serve to accomplish the work and meet the state's project schedule.

6.04 EXPERIENCE AND QUALIFICATIONS

Experience and qualifications will be a fifteen percent (30%) evaluation factor. Proposals should demonstrate the applicable education and experience of the personnel designated to work on the project.

6.05 COST PROPOSAL

Per AS 36.30.270 cost will not be a factor in evaluation

6.06 ALASKA OFFEROR'S PREFERENCE

If an offeror qualifies for the Alaska Bidder Preference, the offeror will receive the Alaska Offeror's Preference. The preference will be ten percent (10%) of the total available points. This amount will be added to the overall score of each Alaska offeror after evaluation of proposals.

SECTION 7. ATTACHMENTS

7.01 ATTACHMENTS

- Attachment 1. Proposal Evaluation Form
- Attachment 2. Appendix B² Standard Insurance Requirements
- Attachment 3. Federal Debarment Certification Form
- Attachment 4. Experience and Qualifications
- Attachment 5. Intro Instructions and Tables 17th Edition - Final
- Attachment 6. Program Demand Cost Model 17th Edition - Final
- Attachment 7. DEED Geographic Cost Factors Study_DEED 11-15-17
- Attachment 8. DEED Geographic Factors Matrix_RFP

Department of Education and Early Development

Geographic Cost Factors

Kent Gamble, Alexander Mannion



HMS Inc. Construction Cost Consultants

November 15, 2017

Abstract

This document provided by HMS Inc. is comprised of 65 unique geographic area cost factors for cities, towns, villages, and regions throughout Alaska. Using both the *Program Demand Cost Model* and the *Model School Bldg. Escalation Study*, along with consultation from local architects, engineers and contractors, HMS Inc. has developed a methodology to apply these cost drivers in a consistent fashion with the goal being accurate results and an auditable process easily understood by the user. Tasked by the Alaska Department of Education and Early Development to revise the cost factors last updated in 2008, 3 sites were chosen for this study. Anchorage was used as the baseline cost with Fairbanks and the Bering Strait region being used as the trial cost studies.

DEED GEOGRAPHIC COST FACTORS

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DEED GEOGRAPHIC COST FACTORS

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Department of Education and Early Development
Geographic Cost Factors

The State of Alaska, Department of Education and Early Development has used the *Program Demand Cost Model*, developed by HMS Inc., to verify and bench-mark costs of new and existing school construction projects. For the development of the *Program Demand Cost Model*, the geographic cost factor was designed to modify the overall cost of the project to provide a more accurate analysis of cost within the state of Alaska. The cost factor was originally developed utilizing approximately 20 criteria to incorporate averages of material, freight, equipment costs, and Title 36 labor rates among many other factors. HMS Inc. was tasked to create a clearly defined methodology and more accurate estimate of the costs associated with the varied locations within the state.

Alaska has a land area of 570,380 square miles, with widely variable terrain including over 188,000 square miles of permafrost covered terrain. Annual temperatures for individual locations also vary greatly, with low average annual temperatures of 9.3°F in the north, to averages close to 40°F in the south and along the coast. (NOAA) In addition, there are large climate and weather variations throughout the state, and differing levels of development in infrastructure. To account for this, HMS Inc. has developed 65 geographic cost factors for the many locations throughout the state with very different conditions affecting the cost of construction.

The original geographic cost factors were developed by Cliff Hitchins of HMS Inc., for the Department of Education and Early Development in 1978 and were most recently updated in 2008. The utilization of these factors is critical when developing programmatic costs in the challenging landscape that is Alaska construction. There are design criteria to consider for

structural and thermal reasons, shortages of skilled labor throughout Alaska, high costs of freight and travel, high equipment rental rates, complicated logistics, and increased risks anticipated by contractors. When designing a project in rural Alaska, it is necessary to consider support for imported labor, additional material to cover loss and damage. Scheduling delays in resources or funding by a matter of weeks can delay construction an entire year in some locations throughout Alaska.

This document contains the methodology for developing geographic cost factors, a breakdown of the components of the overall factor, and the updated 2017 geographic cost factors for three locations; Anchorage, Fairbanks, and the Bering Strait.

Methodology

A number of key factors were recognized by local construction and design professionals as affecting the cost of construction an appreciable amount in direct relation to the location of a construction project. General requirements vary from site to site, as well as local costs, and labor productivity. Climate may also affect requirements for structural, architectural, and mechanical design. The cost model allows the incorporation of structural, architectural, and mechanical factors based on requirements for any given location. It was important to analyze rate and factor data for geographic location and makeup of workforce incorporated into the geographic cost factor. (Accountability, 2009)

Costs reviewed but omitted from the development of the geographic cost factor included those associated directly with seismic zone, site preparation, site earthwork, site improvements, and site structure. In the design of the *Program Demand Cost Model* these costs are entered into the model by the user, and also include anticipated dewatering, shoring, excavating, grading, landscaping, support structures and storm drainage. (HMS Inc., 2017)

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To develop the individual components of the geographic cost factor, contractors, architects, and engineers were contacted to provide their expertise and experience in Alaska construction. Other sources including publications, reports, and websites were used to further define the cost and percentages associated with factors. To develop the conceptual cost of a school, these factors and considerations were all applied to the model school developed by HMS Inc., as well as the *Program Demand Cost Model*.

General Requirements

For the purpose of developing the geographic cost factors, general requirements also include on site general conditions. General requirements and conditions include the cost requirements and facility costs associated with a specific project. Administrative requirements can include submittal, scheduling, inspection, and project documentation. Facility costs can include site management, safety, utilities, project engineers, and other management. **Methods:** General requirements were modified based upon location and include Mobilization, Demobilization, Bonds, and Insurances. Throughout the state of Alaska, highly variable general requirements include freight, travel, utilities, and fuel. In estimating rural costs, HMS Inc. modified the general requirements of the Model School Bldg. Escalation Study to adjust for location. Freight was the largest increase, followed by travel and per diem for crew, which factored round trip tickets, three week rotations, and man days on site. Fuel was also locally costed. Fuel for equipment and temporary heating was then priced and added to the general requirements. Rural locations also have increased scheduling, management, logistical, and site office requirements.

Freight. To determine the average potential freight costs for a given location, the cost of shipping 2,000 lbs. of lumber, a typical construction commodity, from Auburn, Washington to

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Alaska was used as the base. Example costs for freight were provided by Span Alaska Transportation Inc.

To Anchorage: $\$19.40/\text{cwt} \times 2000 \text{ lbs.} = \$388.00 + 19.5\% \text{ fuel} = \463.66 total

To Fairbanks: $\$24.25/\text{cwt} \times 2,000 \text{ lbs.} = \$485.00 + 19.5\% \text{ fuel} = \579.58

Determining freight costs to the Bering Strait is more complicated, as shipping to Unalakleet is via seasonal barge or via air out of Anchorage if the material size warrants. Air freight is only suitable for small items, not structural members.

To Unalakleet: $\$115.40/\text{cwt} \times 2,000 \text{ lbs.} = \$2308.00 + 7.5\% \text{ fuel} = \2481.10

Local Costs

Local costs include Title 36 wage rates for the two regions of the state with different rates, illustrated in [Figure 1]. Additionally, local costs of concrete, and disposal were taken into consideration where appropriate.

Method. With Anchorage as a baseline, the corresponding S1201-S1206 region of the state was set as the base cost for labor. Additionally, the local cost of concrete and disposal were set as base factors. To adjust the local costs an overall weight factor was used to adjust the Model School Bldg. Escalation Study. The weight factors took into account the total percentage of the job each component of local cost affected, and then adjusted the differences from locations.

Labor. Title 36 labor rates are modified within the Model School Bldg. Escalation Study spreadsheet to include FICA and Medicare, FUTA, ESC, Workers' Comp, Taxes and Insurance, and Fringe benefits along with the published Base Hourly rates. Comparing the rates from two regions it was determined that labor cost would increase 1.3% for the N1201-N1206 region of the state based on the standard time wage rate. This along with a weighted factor of 0.422

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adjusted the overall project cost 0.55% at any location within the N1201-N1206 region of the state.

Labor Productivity

A large consideration for estimating labor productivity was taking into consideration the cost impacts of cold or inclement weather and job site conditions. Reduced production will result from severe working conditions and winter darkness.

Method. Using published rates for modifying the labor productivity for temperature below 40 degrees or above 85 degrees Fahrenheit, an equation was developed to adjust the cost factor. To determine the variables, data needed to be collected on average annual temperature for the region and on the estimated cost of labor to the overall job. Labor composes 42.2% of the project cost for the model school developed, and average temperature was collected from U.S. climate data. (Climate Alaska - Anchorage, 2017)

Job site condition is also another driving factor in estimating the effectiveness of labor time. To determine whether the site should be categorized as good, average, or poor, several factors were considered. These factors include annual precipitation, weather, land and soil types, and urban versus rural locations. (J. Kent Holland, 2000)

Temperature Productivity Adjustment. The equation below, was used to adjust the baseline to factor productivity loss due to cold weather.

$$[((40 - T) * L) * 100] + 100$$

T – average temperature

L – labor adjustment percentage

The average temperature for the Bering Strait region (24.30°F) was determined by averaging the temperatures recorded in both Unalakleet and Wales with L = 0.422. With this

information, it can be estimated that labor productivity affected by temperature needs to be adjusted 6.63%. (Dr. Makarand Hastak, 2015)

Without specific knowledge of potential job site conditions, it is difficult to apply a categorical factor. In order to simplify this, it was proposed to rate all sites as average with the exception of those located in the Yukon-Kuskokwim Delta, as these sites tend to be low lying with less access to pad development fill sources.

Structural Requirements

With snow or wind loads driving the structural strength requirements there was a need to determine the most stringent design criteria (lateral seismic or snow load) and develop a relationship between the anticipated weight of steel, and the geographic area for construction.

Method. With consultation, a linear factor was developed in relation to the Model School Bldg. Escalation Study. Research was required for each location to determine the snow and wind load factors, and then the larger of the two determines how robust the design will be and consequently the cost of construction. [Figure 2]

Fairbanks. In Fairbanks, the factors for wind and snow are 0.88 and 1.48 respectively. Choosing the greatest [1.48] as the driving design consideration, the weight of the steel was adjusted by the load factor and the construction cost prior to general requirements, profit and contingencies being taken into account compared to the original baseline cost. The equation below demonstrates the linear relationship between the construction cost and the structural factor.

$$y = 1,168,229.00x + 9,133,110.00$$

y = cost of materials and labor for overall project

x = structural factor

Comparing the adjusted cost with the original it was determined for Fairbanks to increase the structural cost due to snow loading by 5.44%.

Architectural Requirements

Exterior enclosures and roof systems are typically designed differently in far north regions, or rural regions as opposed to urban settings. Not just for added insulation and durability but to create a simpler system for construction workers to build.

Method. The model school was developed using a standard model for exterior walls and roof design in Anchorage, Alaska. For each geographic location, a similar project was chosen or an enclosure and roof design recommended by an Architect was costed to develop a percentage increase or decrease from the base factor of Anchorage. Besides the wall and roof system, several other factors were considered such as arctic entries for interior design, and access protection requirements for thermally protected soffits, along with access stairs and ramps.

Mechanical Requirements

Depending on the region in the state the main water and sewer lines will vary in cost. Due to availability plumbing and fire protection storage needs to be considered in rural areas, as well HVAC will have increased size and cost in arctic regions. Other costs considered were testing and commissioning the mechanical systems, as well as training and education requirements.

Method. The Program Demand Cost Model provided includes cost for a typical water and sewer main, to adjust this for cold weather locations costs for arctic pipe were incorporated using typical requirements for the region studied for HVAC and other mechanical systems, comparable systems previously designed and estimated were used to compare overall project cost of mechanical with similar designs and loads located in Anchorage and costs adjusted accordingly. Rural locations also require engineers and professionals be flown in for testing and

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commissioning purposes and this cost was factored in, as well as the cost for training local maintainers.

Risk Factor

To develop realistic cost associated by location it is also important to factor in experience with work in a given region. HMS Inc. has worked on over 6,000 construction estimates in Alaska alone. In estimating the total construction cost it is essential to include an estimate of the contractor's consideration of increased risks for remote projects, which raise mark-ups on all costs.

Method. Through experience and using historical data from HMS Inc. estimate databases, several risk factors were determined to be added dependent upon the region within the state. Regions studied were the Cook Inlet, Central Interior, North Slope, West Coast, Bristol Bay, Aleutians, North East, South East, and the Panhandle. While difficult to attribute to any specific or quantifiable quality of the site, the cost is necessary in the determination of an overall geographic cost factor and impact the construction cost total. To determine the factors, square footage costs and general requirement costs, as well as contingencies were analyzed and separated into risk and logistical components.

Developed Geographic Cost Factors

For the purpose of demonstrating the methodology three geographic cost factors were tasked to be developed. Anchorage as the base cost factor, Fairbanks, and the Bering Strait. To estimate the local costs of the Bering Strait the towns/villages of Unalakleet, Wales and Shishmaref were primarily used as a standard for estimation purposes. To date, HMS Inc. has worked on 1,830 estimates for construction in Anchorage, 288 in Fairbanks and 66 in the Bering Strait region, most notable Unalakleet (14) and Shishmaref (6).

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Factors that were originally considered included the labor rates, freight, equipment, housing, per diem, travel, and supervision. Variables that affected labor productivity were also considered, and special requirements such as foundation type were omitted. It was with these same principles that the new geographic cost factors were also developed.

As of August 2017, three cost factors have been updated and are tabulated in Table 1. Anchorage remains the same, as the base, with a cost factor of 100.00. Fairbanks has new factor of 111.83 this is a significant increase of 6.83 points on the geographic factor of 105.00 developed in 2008. The major driver of this increase is likely due to updated building code design seismic considerations for snow load. The Bering Strait has been update to 177.53, a drop of 3.67 points.

Location	2008	Percent Change	2017
Anchorage	100.00	0.00%	100.00
Fairbanks	105.00	+ 136.60%	111.83
Bering Strait	181.20	- (4.52%)	177.53

Note: The percentage change highlighted here is directly related to the differences in percentages from 2008 to 2017, not overall job cost increase or decrease.

Summary

Using both the *Program Demand Cost Model* and the *Model School Bldg. Escalation Study* along with consultation from local architects, engineers and contractors, HMS Inc. has developed a methodology to factor in over 65 unique cost factors to adjust the geographic area cost factors from 2008 to 2017. Foundations and certain unique site concerns are omitted from the overall factor and are considered and accounted for when using the *Program Demand Cost Model*. For more information, please refer to the foundation and site options presented in the latest *Program Demand Cost Model*.

Design and costs associated with areas throughout the state are changing rapidly. Temperature in Alaska is rising at twice the rate as the rest of country, and permafrost conditions are changing dramatically in the North Slope and Yukon River delta. Travel, freight and fuel costs vary year-to-year along with the rest of the logistical and general requirement costs for construction throughout the state. With this it is recommended that the geographic cost factors are updated every two years to more accurately estimate the construction cost of school projects in Alaska.

References

Accountability, U. G. (2009). *GAO Cost Estimating and Assessment Guide*. Retrieved from

<http://www.gao.gov/new.items/d093sp.pdf>

Climate Alaska - Anchorage. (2017). Retrieved from U.S. climate data:

<http://www.usclimatedata.com/climate/alaska/united-states/3171>

Development, S. o. (2006). *Laborers' & Mechanics' Minimum Rates of Pay*.

Dr. Makarand Hastak, P. C. (2015). *Skills & Knowledge of Cost Engineering*. AACE

International.

HMS Inc. (2017). Model School Bldg. Escalation Study. Alaska.

HMS Inc. (2017, April 5). Program Demand Cost Model - 16th Edition. Alaska.

J. Kent Holland, J. (2000). *Differing Site Conditions and Lost Productivity Entitle Contractor to*

Additional Compensation. Retrieved from Construction Risk:

<http://www.constructionrisk.com/2011/02/differing-site-conditions-and-lost-productivity-entitle-contractor-to-additional-compensation/>

NOAA. (n.d.). *Alaska Region HQ*. Retrieved from National Weather Service :

<http://www.weather.gov/arh/>

Tables

	General Requirements	Local Costs	Productivity Factor	Structural Factor	Architectural Factor	Mechanical Factor	Risk Factors	Cost Adjustment Factor
Anchorage	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Bering St	138.64	103.05	106.69	105.67	102.50	105.24	115.75	177.53
Fairbanks	100.20	100.55	102.84	105.44	101.00	100.80	101.00	111.83

Table 1. 2017 Geographical Cost Factors.

Note: This is an estimate of geographic area cost factors based several component factors. The cost factors are based on an institutional building in Alaska using a standard AIA contract or similar contract. This is merely a guide; actual costs will vary. This table represents only a collection of costs normally found on some construction projects, rather than the custom requirements of a particular project. This is not an index. This is a geographic area cost factor which includes not merely cost changes and logistical consideration, but also design criteria and how it is applied in different locations. The calculation used in developing these cost factors are based on reasonable assumptions. Village-to-village costs will vary plus or minus 5%. When using this geographic cost factor, consider how the location for which the estimate is being prepared is different from other surrounding places. Regional cost factors are based on general and approximate calculations for anticipated conditions generally found in the area and logistic considerations.

Figures

LABORER CLASSIFICATION CLARIFICATION

The laborer rates categorized in class code S1201-S1206 apply in one area of Alaska; the area that is south of N63 latitude and west of W138 Longitude. The laborer rates categorized in class code N1201-N1206 apply in two areas of Alaska; the Alaska areas north of N63 latitude and east of W138 longitude. The following graphic representations should assist with clarifying the applicable wage rate categories:

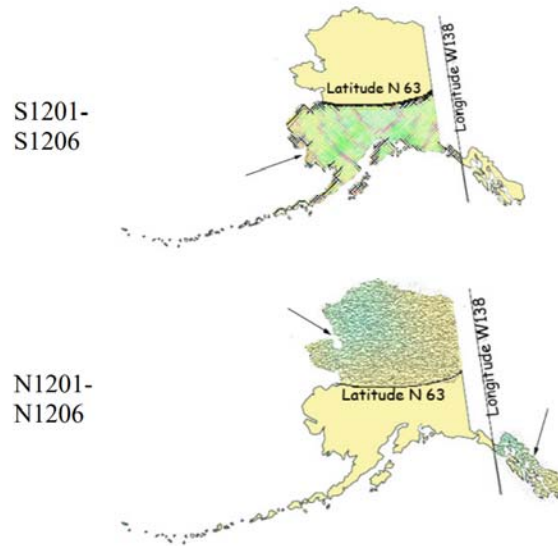


Figure 1. Labor Classification Clarification. This figure shows the regions separating the two Title 36 labor rates used within the state of Alaska. (Development, 2006)

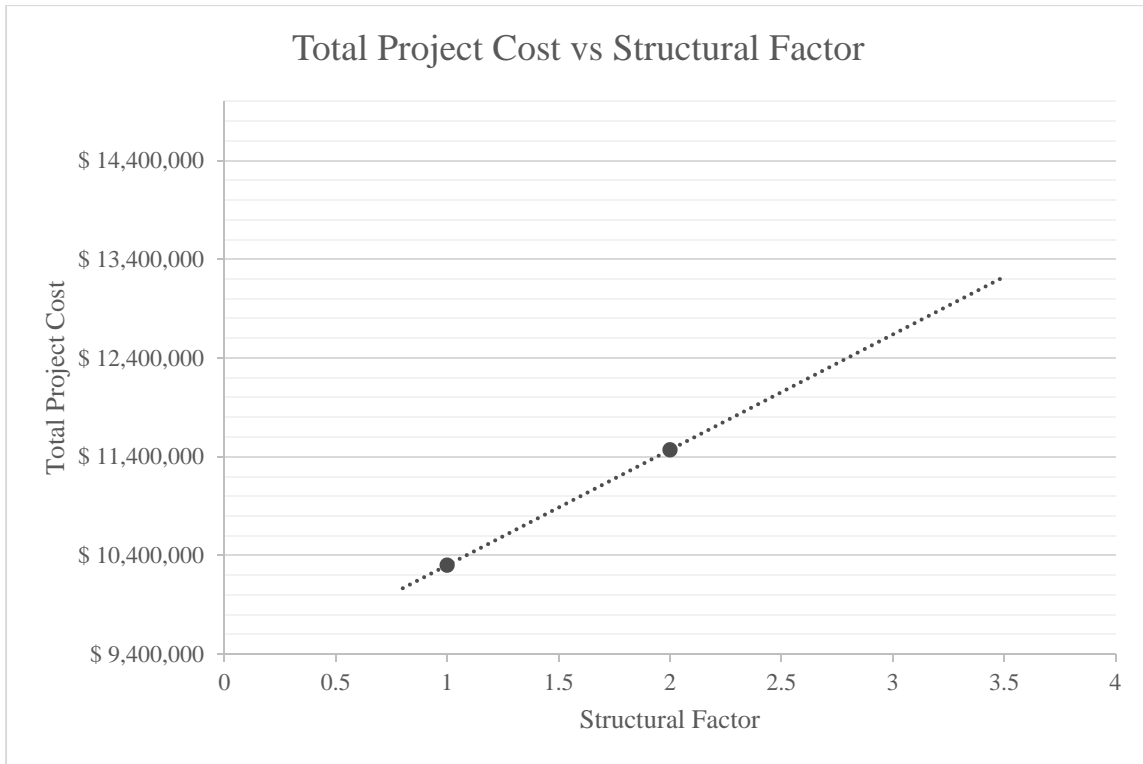


Figure 2. Total Project Cost vs Structural Factor. The graph demonstrates the linear relationship between the structural factor developed per region, in relation to Snow and Wind factors, as well as the model school originally developed for the DEED program.

DEED Geographic Cost Factors Matrix

General Requirements

Freight (base)
Freight (air)
Equipment
Utilities
Fuel
Site Administration
Bonds/insurance

Labor Cost

Per Diem
Crew Rotation
Title 36 Wages
Labor Productivity (temp)
Labor Productivity (site cond.)

- urban/rural: directness of air service compared to ANC
- soil type: tundra/peat, sand, or gravel
- annual precip: bracket percent compared to ANC
- annual snow: bracket percent compared to ANC

Building Design

Structural Loading
Architectural (envelope)
Architectural (elevated floor)
Mechanical (utilities to 5ft)
Mechanical (design loads)

Risks

Risk Factors

- weather events: frequency of weather events resulting in job shut-down
- crime/vandalism: crime events per capita
- shipping damage: total number of freight loads/transloads
- labor shortage/turnover: skilled labor statistics



PROCUREMENT PROJECT QUESTIONNAIRE

A. GENERAL PROJECT INFORMATION

Title of the Project:	DEED Cost Model – Detail Enhancement
Project Owner:	Bond Reimbursement & Grant Review Committee
Project Manager:	Tim Mearig
Desired Work Start Date:	Friday, November 09, 2018
Desired Work End Date:	2/28/2019
Total Anticipated Budget:	\$65,000

Stakeholders

List anyone with a vested interest in the outcome of the project, one name/role per line.

<u>Name</u>	<u>Role</u>
School Districts	Users; CIP Applications

Primary Project Objectives

Describe the main outcomes, deliverables, and/or results this project should result in.

The Bond Reimbursement & Grant Review Committee has recommended using the DEED Cost Model as a cost-control tool. In order to meet this objective, several sections of the current cost model will need additional detail on project cost element. This work will analyze shortfalls, identify possible additional cost elements and develop the detailed costs for those elements within the model. The final deliverable will be revised DEED Cost Model electronic files with the enhanced cost elements, plus detailed back up. These will be incorporated into the 18th Edition.

Major Project Risks

Any risk or potential risk that you believe would have a major impact to time or cost should be listed here with an associated mitigation strategy or “N/A” if unknown. One risk/strategy per line.

<u>Risk</u>	<u>Mitigation Strategy</u>
Proposed fees exceed budget	Provide a clear scope of work; adjust as needed to meet budget requirements.

Project Description

Please provide a 2-3 sentence high level summary of the services being requested.

This project is to add additional detail to the department’s existing Program Demand Cost Model for Alaskan Schools. The additional/updated line items will primarily occur in the Site and Renovation sections. This project requires consulting services from experienced cost professionals. Qualified consultants must have experience accurately estimating construction costs in various regions and locations in Alaska. They must have an understanding of cost variable that are impacted by geographic locations.

B. VENDOR POOL INFORMATION

1. Will the contractor work primarily from their own location and workspace? YES
 If NO, please describe the state-provided location and workspace: NO

Click here to enter text.

2. **Do you anticipate receiving responses from foreign vendors?** YES
If YES, please describe why it is in the state's best interests to accept responses from foreign vendors: NO
 Click here to enter text.

3. **Do we want to allow SUBCONTRACTORS to perform work?** YES
 NO

4. **Do we want to accept responses from JOINT VENTURES?** YES
 NO

5. **What minimum prior experience should the successful contractor have?**
Usually some number of years experience successfully performing similar work. May also include certain certifications or specific education/experience.
 Minimum 5 years experience estimating new construction and renovation costs for schools in Alaska. Knowledge of, and experience with the DEED Demand Cost Model for Alaskan Schools.

C. COST & PAYMENT INFORMATION

1. **What cost type should be used for this contract?**
The most common is firm fixed price. Cost + Percentage of Cost is prohibited.
- Firm Fixed Price**
We will pay a fixed price to the contractor for the work.
 - Firm Fixed Price + Incentive**
We can add an incentive clause such that if work is completed per a specified goal, such as a certain date, the incentive payment will be made.
 - Cost or Cost Plus Fixed Fee**
These cost types reimburse the contractor for their actual costs and may add a fixed fee as profit.
 - Time and Materials**
Contractor bills the state for a fixed labor rate and material costs up to a specified not-to-exceed amount.

2. **How would you like payment to be structured?**
Final payment details will be negotiated and finalized prior to contract award.
- Single payment** upon completion and acceptance of work.
 - Negotiated payment schedule** upon receipt of invoices or achievement of milestones.
 - Regular schedule** upon regular receipt and acceptance of deliverables.

3. **Do we want to include a liquidated damages clause?** YES
This is to be used only when failure to complete a project will cause damages to the state. The damages must be reasonably quantified and disclosed. This is not a punitive clause. NO

4. **Does this work require a bid bond, performance bond, or surety deposit required?** YES
These are rare and should be used sparingly as they add cost to the project. NO

D. PROJECT DETAILS

1. **Will this be a single term or multiple term contract?**
A single term contract is typically used for a project with a defined start and end, like developing and delivering a report by a certain date. A multiple term contract is usually used for as-needed purchases or when there is no defined end for a service, such as purchasing supplies, and starts with an initial term for a set length followed by optional renewals.

Single Term

Multiple Term

Complete Below:

Click here to enter text. Total # of Terms
 Click here to enter text. Length of Initial Term
 Click here to enter text. Length of Each Renewal

2. Are there specific pieces of information the contractor will have access to that must be held confidential?

If YES, please list the information below:

Click here to enter text.

3. Are there any informational documents, reports, etc. that should be included?

YES

NO

If YES, please provide these documents to your procurement officer.

1. 17th Edition Demand Cost Model for Alaskan Schools (4 .xlsx files)
2. 17th Edition Demand Cost Model Desired Enhancements (.pdf file)

E. BACKGROUND INFORMATION

Any and all information that would be helpful to potential contractors. Include information about why the service is needed, whether it was done in the past and how, the current conditions the contractor will encounter, and anything else that may be relevant. The more information that can be provided will assist offerors as they draft their proposals and may result in fewer questions/amendments and reduce the risk of protest.

The State of Alaska, Department of Education and Early Development has used the Program Demand Cost Model, developed by HMS Inc., to verify and bench-mark costs of new and existing school construction projects. In the 6th Ed., a Renovation section was added to the Cost Model to allow estimating of a broader range of capital projects. This section has been routinely updated in subsequent additions. However, a substantial increase in detail is needed if the Cost Model tool is used to set allowable costs for all projects.

F. SCOPE OF WORK

1. Provide a detailed description of what the work should accomplish in terms of the specific problems, challenges, or needs of the state. This should be much more about what we are seeking as an end result and less about specifically how the contractor will perform the work.

Task 1 – After reviewing the Demand Cost Model Desired Enhancements document, provide an assessment of opportunity and options for achieving the added elements. Meet with the department’s project team to discuss and finalize cost elements and scope.

Task 2 – Based on review comments, develop the structure of the cost elements and their support (unit pricing is not part of this task). The DEED project team will provide review comments to these drafts within 5 work days.

Task 3 – Based on review comments, complete the revised/expanded structure and complete all unit pricing.

2. What specific end product(s) are to be delivered to the state?

For professional services, these are typically reports. Deliverables described here should be referenced in the work schedule.

1. Task 1 – A written assessment of desired work items and recommendations for any changes and refinements.
2. Task 2 – Updated DEED Cost Model files (4 ea) showing the structure of the updated model.
3. Task 3 – Updated DEED Cost Model files (4 ea) with structure and pricing elements complete.

3. What is the deliverable/milestone timeline for the work to be done?

If a deliverable is driven by a hard deadline, disclose that here, i.e. Report X must be done by this date due to statutory requirement.

Task 1 – NTP + 14 calendar days.

Task 2 – January 20, 2019

Task 3 – February 28, 2019 for all deliverables.

G. EVALUATION

1. Would you like interviews and/or system demonstrations to be part of the evaluation process?

YES

NO

2. Do you have specific criteria you would like the proposals to be evaluated against?

These must be objective criteria tied to something we are asking offerors to address in their proposal.

For example, we cannot include a criteria related to delivery of Report X if we don't ask for Report X as part of the scope of work.

YES

NO

If YES, please describe the criteria below:

1. General and specific experience developing and using the DEED Program Demand Cost Model for Alaskan Schools.
2. General and specific experience with other cost models and construction cost tools based on building types, and building systems.
3. The offeror's ability to meet the DEED Geographic Cost Factors Matrix and the offeror's recommended inclusion or exclusion of the factors listed.
4. The offeror's ability to meet the desired schedule.

Cost Model Enhancements

Proposed additions and changes by the BR&GR Model School Subcommittee to the DEED Program Demand Cost Model (17th Edition), as of October 9, 2018.

New Construction

Section 1.00 Instructional Resource/Support Teaching Areas

- 1.07 Change “Home Economics” to “Consumer Science [SF]”; add associated note “Includes Home Ed, Bilingual/Bicultural [SF]”
- 1.08 Change “Industrial Arts [SF]” to “Career Tech [SF]”; revise associated note to include “maker space, simulation lab”

Section 2.00 General Support/Supplementary Areas

- 2.10 Add new line “Custodial [SF]”

Section 3.00 Special Requirements

- 3.01 Change “Emergency Standby Generator (Day Tank Included) [KW]” to “Emergency Standby Generator (within building) [KW]”
Add additional lines “Emergency Standby Generator (Prepackaged) [KW]”; “Generator - Prime Power [KW]”
- 3.03 Change “Fire Protection – Pump [EA]” to three lines: “Fire Protection - Diesel Pump [EA]”; “Fire Protection - Electric Pump [EA]”; “Fire Protection - Mist System [SF]”
- 3.10 Add new line “Sewage Lagoon Closeout”

Section 4.00 Site Work (Technical Assistance Required)

- 4.01 After “Site Preparation [LS]”, add new lines “Soil Remediation [CY]”; “Relocation of Existing Structure (onsite only) [SF]”
- 4.02 After “Site Earthwork [LS]”, add new lines “Remove Organics/Overburden [SF]”; “Fill [SF]”; “Site Grading [SF]”
- 4.03 After “Site Improvements [LS]”, add new lines “Construct Parking Area - Paved [SF]”; “Construct Parking Area - Unpaved [SF]”; “Boardwalk - At Grade [LF]”; “Boardwalk - Elevated [LF]”; “Play Equipment w/ Fall Protection [EA]”; “Playdeck - Wood [SF]”; “Concrete Play Court [SF]”; “Playground [SF]”; “Sports field/track (Turf) [EA]”; “Landscaping [SF]”
- 4.04 After “Site Structures (Estimate) [LS]”, add new line “Covered Play Area [SF]”
- 4.05 After “Site Utilities (Estimate) [LS]”, add new lines “Water Treatment System [USERS]”; “Wastewater Treatment Plant [USERS]”; “Utilidor - Below Ground [LF]”; “Utilidor - Above Ground [LF]”
- 4.051 After “Water Main [LF]” add new line “Water Main – Arctic Pipe [LF]”

- 4.052 After “Sewer Main [LF]” add new line “Sewer Main – Arctic Pipe [LF]”
- 4.06 After “Bulk Fuel Storage [GAL]”, add new line “Remove bulk fuel storage tanks [GAL]”
- 4.07 After “Site Electrical, add new lines “Electrical Service to Building (transformer(s), poles, etc) [EA]”; “Fiber Optic to Building [EA]”; “Satellite Communications [EA]”
- 4.10 Add new line “Construct Sewage Lagoon [EA]”

Renovation

11.00 Renovation

11.XX Site

Add new section “SITE” with lines “Paving [SF]”; “Replace Pavement [SF]”; “Fencing (6' chainlink) [LF]”; “Replace Septic System [EA]”; “Site grading / drainage [SF]”; “Replace Playground Equipment / Fall Protection [EA]”

11.01 Foundation and Substructure

Add new lines “Restore Thermopile System (repair, recharge, paint) [EA]”; “Repair Concrete Foundation (stem wall) [LF]”; “Replace Concrete Slab [SF]”

11.20 Exterior Closure

Add new lines “Exterior Skin Insulated Metal Panels [SF]”; “Additional Exterior Insulation R-10 (with siding replacement) [SF]”; “Exterior Closure (Replace Overhead Doors) [EA]”; “Exterior Closure (Curtainwall) [SF]”

11.30 Roofing (Area of Roof)

Add new lines “Replace Metal Insulated Panels [SF]”; “Roof Restoration (Coating) [SF]”; “Increase Insulation (R10) [SF]”; “Replace Roof Drain/Rain Leader [EA]”

11.31 Change “Replace Metal Roofing” to “Replace Metal Roofing - include gutters/downspouts”

11.33 Change “Replace Asphalt Shingle Roofing” to “Replace Asphalt Shingle Roofing - include gutters/downspouts”

11.40 Interior Construction

Add new lines “Replace Wall Finishes Only⁵ [SF]”; “Carpet Tile [SF]”; “Replace Gym Flooring – Wood [SF]”; “Refinish/Stripe Existing Wood Gym Floor [SF]”

11.50 Specialties/Furnishings And Equipment

Add new lines “Replace Bleachers [SEATS]”; “Replace Window Coverings [SF]”

11.60 Conveying (Elevators, Etc.)

Add new line “New Wheel Chair Lift [EA]”

11.70 Mechanical

Add new lines “Replace Plumbing - Domestic Water [SF]”; “Replace Plumbing – Waste [SF]”; “Replace Boiler(s) includes partial repiping boiler room [BTU]”; “Replace Cabinet Unit Heaters [EA]”; “Replace hot water generator(s) [GAL]”; “Replace Air Handler (# units or sq footage?) [SF]”; “New DDC Controls [SF]”; “New Electric Controls [SF]”; “New mist fire suppression system [SF]”; “Replace Fire Pump – Diesel [EA]”; “Replace Fire Pump – Electric [EA]”; “Replace bulk water storage tank [GAL]”

11.80 Electrical

Add new lines “Replace Exterior Light Fixtures [EA]”; “New Standby Power and Fuel Oil (Prepackaged) [KW]”; “Generator - Prime Power [KW]”

11.90 Communications

Add new line “New fire alarm panel []”

11.XX School Security

Add new section “School Security” with lines “New Security System/CCTV [SF]”; “Key Card Entry System [EA]”; “Enhanced reception security [SF]”



School Design & Construction Standards Handbook

Template

[System Name] – [DEED CostFormat #]

Building System Summary

This section will provide a summary of the building system and will typically include a descriptive statement for each subsystem at Level 3. (Example: Roof System – 05 will describe pitched roofs (051), flat roofs (052), and roof accessories (053).)

Design Philosophy

This section will provide any general guidance or approach for design determinations for the building system. It would include any statements of fact or analysis that provide an understanding of the function and purpose of the system and its importance relative to other systems. Discussion of life cycle analysis, first cost, and maintenance/operating costs belongs in this section.

Model Alaskan School

This section will establish, at Unifomat Level 4, the features and components that are included in the baseline Model Alaskan School and the size, quantity, and quality. It will provide or reference applicable standards. Appropriate differentiation will be made for types of schools (e.g., elementary, secondary, K-12, etc.) and geographic locations. This will be the core element of each section that responds to the new statutory requirement to provide regionally-based model school standards that “describe acceptable building systems and anticipated costs”. The section will also provide acceptable alternatives to the model school elements with details on their applicable use.

Design Criteria

This section will be a bullet list of parameters pertaining to the building system for a designer to acknowledge and incorporate into the design. It might include anticipated life expectancies, lessons learned, and clarifications among possible standards, etc. Care will be needed to ensure a clear demarcation between higher level state standards and standards that a district may develop relative to their local conditions, maintenance, and operational needs. (Example:

- Calculate the actual slope of all pitched roof valleys and ensure selected materials and installation requirements meet warranty provisions for that slope.)

Design Ratios

This section will provide applicable ratios for cost-effective design of the system. (Example:

1. Roof Surface Area (RSA) to GSF less than 1.15:1 for single story construction.)



Cost Format

EED Standard Construction
Cost Estimate
Format

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Department of Education & Early Development
Juneau, Alaska

**Cost Format
Levels 2 - 4**

01 SITE Unit: AC (Acres of Site Improved)

011 Special Site Preparation SITE SQUARE FOOT (SF) AREA REQUIRING SPECIAL PREPARATION

Level 4 Section	Description	Unit	Model Alaskan School Element
0111	Site Demolition	SF	Removal of man made objects from site and complete building demolition. Demolition SF.
0112	Hazardous Waste Remediation	SF	Removal or remediation of hazardous materials in the soil or site structures. Remediation SF.
0113	Building Relocation	SF	Relocation of complete structures. SF of relocated structures.
0114	Site Shoring	SF	Shoring for site walls and building pad area (includes equipment). Shoring SF.
0115	Site Dewatering	SF	Removal of water from site for project duration, pumping, well points or by diversion. Dewatering SF.

012 Earthwork TOTAL CUBIC YARD (CY) MOVED

Level 4 Section	Description	Unit	Model Alaskan School Element
0121	Clear & Grub	AC	Removal of vegetation from site. Clearing SF.
0122	Excavation, Grading & Backfill	CY	Excavation and backfill of building and site (excludes utility, foundation & basement backfill; includes geotextile). CY moved.
0123	Soil Export & Import	CY	Load, haul, and disposal of exported spoils; supply and import fill. CY moved.

013 Site Improvements SQUARE FOOT (SF) AREA OF SITE IMPROVED

Level 4 Section	Description	Unit	Model Alaskan School Element
0131	Vehicular Paving	SF	Includes base preparation and paving, curbs and gutters and signage. Vehicular circulation SF.
0132	Walks/Hardscape	SF	Paving, specialty paving, decorative walls, steps, boardwalks. Pedestrian circulation SF.
0133	Sport Court	SF	Includes base preparation, surfacing, painting, and accessories. Sport court SF.
0134	Elevated Decks, Stairs & Ramps	SF	Elevated walkways & boardwalks contiguous to building. Elevated circulation SF.
0135	Walls	SF	Includes foundation, wall system, excavation, backfilling, drainage, etc.. Wall SF.
0136	Landscaping & Irrigation	MSF	Planting, seeding, topsoil, and irrigation (includes sports fields). Landscaping MSF.
0137	Fencing & Gates	SF	Perimeter, security including gates. Fencing SF.
0138	Site Furnishing & Equipment	EA	Benches, signs, flagpoles, planters, play structures, etc. Total furnishing/equipment.
0139	Other Improvements	SF	Snowmelts systems, water features, etc. Improvement SF.

**Cost Format
Levels 2 - 4**

014 Site Structures SQUARE FOOT (SF) AREA OF STRUCTURES

Level 4 Section	Description	Unit	Model Alaskan School Element
0141	Freestanding Shelters	SF	Shelters, covered walks and covered play areas that are not attached to the building. Sheltered SF.
0142	Attached Shelters	SF	Canopies, shelters, covered walks, and covered play areas that are attached to the building, but are not an extension of the building roof structure. Sheltered SF.
0143	Support Buildings	SF	Complete structures; pumphouses, boiler buildings, etc. Building SF.

015 Civil/Mechanical Utilities SQUARE FOOT (SF) AREA OF SITE IMPROVED

Level 4 Section	Description	Unit	Model Alaskan School Element
0151	Potable & Fire Protection Water	LF	Water piping, storage, wells, pumps, and treatment (includes excavation/backfill). Water pipe LF.
0152	Sanitary Sewer	LF	Sewer piping, pumping & treatment equipment (includes excavation/backfill). Sewer pipe LF.
0153	Storm Water	SF	Piping, culverts, swales, holding areas, water/oil separators, etc. (includes excavation/backfill). Site coverage SF (see 013 quantity).
0154	Gas	LF	Natural gas and propane piping and tanks (includes excavation/backfill). Gas pipe LF.
0155	Fuel Oil	GAL	Oil piping, tanks, containment, & foundation. Fuel oil GAL.
0156	Heating & Cooling Piping	LF	Steam or hydronic flow and return pipes, insulation, also chilled water piping (includes excavation/backfill). Total pipe LF.
0157	Utilidors	LF	Concrete or wood utilidor or arctic pipe. Utilidor LF.

016 Site Electrical SQUARE FOOT (SF) AREA OF SITE IMPROVED

Level 4 Section	Description	Unit	Model Alaskan School Element
0161	Supply & Distribution	LF	Switchgear, panels, transformers, conduit, and feeders. Conduit LF.
0162	Lighting & Equipment	EA	Fixtures, poles, devices, panels, conduit, and wire (includes excavation/backfill). Total fixtures and equipment.
0163	Communications Systems	LF	Trench, conduit, cable, satellite dishes (includes excavation/backfill, foundation systems, etc.). Conduit LF.
0164	Security Systems	EA	Detection devices, CCTV system, etc. Total sensors.

**Cost Format
Levels 2 - 4**

017 Offsite Work Lump Sum (LS)

Level 4 Section	Description	Unit	Model Alaskan School Element
0171	Offsite Paving	SF	Extension of roads and sidewalks to the site, repair of offsite paving. Paving SF.
0172	Offsite Utility	LF	Extension and connections of utilities to the site. Utility LF.
0173	Other Offsite Work	LS	Railroad tracks, bridges, etc.

02 SUBSTRUCTURE Unit: FPA (Building Footprint Area)

021 Standard Foundations BUILDING FOOTPRINT SQUARE FOOT (SF) AREA OF STANDARD FOUNDATION

Level 4 Section	Description	Unit	Model Alaskan School Element
0211	Continuous & Column Footings	CY	Excavation, base, forms, reinforcing steel, concrete, and equipment. Concrete CY.
0212	Foundation Walls	SF	Backfill, forms, reinforcing steel, and concrete (also includes pilasters). Wall SF.
0213	Foundation Wall Treatment	SF	Waterproofing, dampproofing, insulation, and protection. Wall SF receiving treatment.
0214	Foundation Drainage	LF	Pipe, fill and geotextile. Foundation drainage LF.

021 Standard Foundations BUILDING FOOTPRINT SQUARE FOOT (SF) AREA OF STANDARD FOUNDATION

Level 4 Section	Description	Unit	Model Alaskan School Element
0211	Continuous & Column Footings	CY	Excavation, base, forms, reinforcing steel, concrete, and equipment. Concrete CY.

022 Slab on Grade BUILDING FOOTPRINT SQUARE FOOT (SF) AREA OF SLAB ON GRADE

Level 4 Section	Description	Unit	Model Alaskan School Element
0221	Standard Slab on Grade	SF	Base, vapor barrier, forms, reinforcement, concrete, joints, finish, etc. Slab SF.
0222	Structural Slab on Grade	SF	Base, vapor barrier, forms, reinforcement, concrete, joints, finish, etc. Slab SF.
0223	Trench, Pit, or Pad	SF	Base, vapor barrier, forms, reinforcement, concrete, joints, finish, etc. Exposed SF.
0224	Underslab Insulation	SF	Insulation SF.
0225	Underslab Drainage	SF	Pipe, fill and geotextile. Underslab drainage SF.

**Cost Format
Levels 2 - 4**

023 Basements BASEMENT FOOTPRINT SQUARE FOOT (SF) AREA

Level 4 Section	Description	Unit	Model Alaskan School Element
0231	Basement Excavation/Backfill	CY	Excavation, backfill, and all associated hauling & disposal costs
0232	Basement Walls & Piers	SF	Forms, reinforcing steel and concrete (excludes standard foundations - 021). Basement wall SF.
0233	Basement Wall Treatment	SF	Waterproofing, exterior applied insulation, drain mat, etc. Wall SF receiving treatment.

024 Special Foundations BUILDING FOOTPRINT SQUARE FOOT (SF) AREA OF SPECIAL FOUNDATION

Level 4 Section	Description	Unit	Model Alaskan School Element
0241	Piling & Pile Cap	LF	All costs associated with placement of piles and caps (includes equipment and thermopiles). Piling LF.
0242	Caissons	LF	All costs associated with placement of caissons (includes equipment).
0243	Grade Beams	CY	All costs associated with installation of grade beams (includes equipment).
0244	Raft Foundation	CY	All costs associated with installation of raft foundations (includes equipment).
0245	Arctic Foundation System	SF	Thermosyphons, etc., including trenches and insulation
0246	Other Special Foundations	SF	Underpinning, vibroreplacement, etc. Foundation system area.

03 SUPERSTRUCTURE Unit: SF (Square Foot Area of Floor and Roof Structure)

031 Floor Structure SQUARE FOOT (SF) AREA OF FLOOR STRUCTURE

Level 4 Section	Description	Unit	Model Alaskan School Element
0311	Lower & Main Floors	SF	Floor structure that bears on the substructure (includes soffit and insulation). Lower & main floor SF.
0312	Upper Floors	SF	Floor structure that bears on superstructure columns (includes columns). Upper floor SF.
0313	Balcony	SF	Support columns (if any), framing and deck. Balcony SF.
0314	Ramp	SF	Support columns, framing and deck. Ramp SF.
0315	Special Floors	SF	Raised floors, platforms, computer floors, utility distribution floors, etc. Special floor SF.

**Cost Format
Levels 2 - 4**

032 Roof Structure SQUARE FOOT (SF) AREA OF ROOF STRUCTURE

Level 4 Section	Description	Unit	Model Alaskan School Element
0321	Pitched Roof	SF	Support columns to floor or substructure (if only single story), framing and deck. Pitched roof SF.
0322	Flat Roof	SF	Support columns to floor or substructure (if only single story), framing and deck. Flat roof SF.
0323	Special Roof	SF	Pneumatic structures, domes, etc. Special roof SF.

033 Stairs NUMBER OF FLIGHTS (FLT)

Level 4 Section	Description	Unit	Model Alaskan School Element
0331	Stair Structure	FLT	Stair construction costs (excludes stair finishes). Stair flights.
0332	Stair Railings	LF	Wall mount and free standing stair railings. Railing LF.
0333	Ladders & Steps	EA	Ladder and steps construction costs (excludes finishes). Total ladders and sets of steps.

04 EXTERIOR CLOSURE Unit: SF (Square Foot Area of Exterior Closure)

041 Exterior Walls SQUARE FOOT (SF) AREA OF EXTERIOR WALL SURFACE

Level 4 Section	Description	Unit	Model Alaskan School Element
0411	Exterior Walls	SF	All components of the exterior wall system (excludes interior wall finish and structure). Wall SF.
0412	Fascias & Soffits	SF	Fascia and soffit framing and finish. Total fascia and soffit SF.

042 Exterior Glazing SQUARE FOOT (SF) AREA OF GLAZING

Level 4 Section	Description	Unit	Model Alaskan School Element
0421	Windows	SF	Standard window, clerestory, etc. fixed or operable. Window SF.
0422	Storefronts	SF	Nonstructural window walls (excludes doors). Storefront SF.
0423	Curtain Walls	SF	Structural window walls (excludes doors). Curtain wall SF.
0424	Glass Blocks	SF	Exterior wall glass block (includes reinforcing). Glass block SF.

**Cost Format
Levels 2 - 4**

043 Exterior Doors TOTAL NUMBER EACH (EA) OF DOOR LEAFS & SPECIAL DOORS

Level 4 Section	Description	Unit	Model Alaskan School Element
0431	Personnel Doors	EA	Leafs, frames, paint, & hardware (excludes adjacent lights - 0422). Exterior door leaf quantity.
0432	Special Doors	EA	Overhead door, revolving door, etc. Special door quantity.

044 Exterior Accessories SQUARE FOOT (SF) AREA OF EXTERIOR CLOSURE

Level 4 Section	Description	Unit	Model Alaskan School Element
0441	Louvers & Screens	SF	To mechanical openings and penthouses. Louver and screen SF.
0442	Sun Control	SF	Window shutters, trellis, sun screens, etc. Sun control SF.
0443	Balcony Decking & Paving	SF	Includes balcony floor finish (excludes structure, roof membrane and roof decking & paving - 0314, 0521 & 0533). Balcony SF.
0444	Balcony Wall & Railing	LF	Balcony wall components & railing (excludes roof deck wall & railing - 0534). Railing LF.
0445	Other Exterior Accessories	SF	Signage, decorations, ect. Exterior closure SF.

05 ROOF SYSTEMS UNIT: FPA (Building Footprint Area)

051 Pitched Roof SQUARE FOOT (SF) AREA OF PITCHED ROOF

Level 4 Section	Description	Unit	Model Alaskan School Element
0511	Pitched Roofing	SF	All components of the roof system (excludes structural sheathing - 0321). Pitched roof SF.
0512	Gutters & Downspouts	LF	All components of roof drainage system (includes splashblocks). Gutter & downspout LF.

052 Flat Roof SQUARE FOOT (SF) AREA OF FLAT ROOF

Level 4 Section	Description	Unit	Model Alaskan School Element
0521	Flat Roofing	SF	All components of the roof system (excludes structural sheathing - 0322). Flat roof SF.
0522	Roof Drains & Piping	EA	Drain and piping to 5' from building perimeter (includes heat trace). Total roof drains.

**Cost Format
Levels 2 - 4**

053 Roof Accessories SQUARE FOOT (SF) AREA OF ROOF ACCESSORIES

Level 4 Section	Description	Unit	Model Alaskan School Element
0531	Skylights	SF	Operable and fixed roof mounted skylights (excludes clerestory - 0421).
0532	Roof Hatches	EA	Smoke vents, access, etc. Total roof hatches.
0533	Roof Decking & Paving	SF	Includes finish materials (excludes roofing - 0521). Roof deck SF.
0534	Roof Deck Wall & Railing	LF	Includes finish materials (excludes roofing - 0521). Railing LF.
0535	Other Roof Accessories	SF	Snow control, etc. Roof SF affected.

06 INTERIORS UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

061 Partitions/Soffits SQUARE FOOT (SF) AREA OF STANDARD PARTITIONS

Level 4 Section	Description	Unit	Model Alaskan School Element
0611	Fixed Partitions	SF	All components of a partition wall system (excludes finish). Partition SF (single side).
0612	Soffits & Ceilings	SF	Framing and sheathing of soffits and bulkheads (excludes finish). Soffit SF.

062 Special Partitions SQUARE FOOT (SF) AREA OF SPECIAL PARTITIONS

Level 4 Section	Description	Unit	Model Alaskan School Element
0621	Operable Partitions	SF	Partition, support structure and integral finish. Operable partition SF.
0622	Demountable Partitions	SF	Partition, support structure and integral finish. Demountable partition SF.
0623	Glazed Partitions	SF	Glazing, finish jamb, muttins, glass block, etc. Glazing SF.
0624	Railing & Screen	SF	Railing assemblies, chainlink, visual screens, etc (excludes stair railing). Total railing and screen SF.

063 Interior Doors TOTAL NUMBER EACH (EA) OF DOOR LEAFS & SPECIAL DOORS

Level 4 Section	Description	Unit	Model Alaskan School Element
0631	Personnel Doors	EA	Leafs, frames, paint, & hardware (excludes adjacent lights - 0623). Interior door leaf quantity.
0632	Special Doors	EA	Overhead doors, vaults, rolling grilles, fire doors, access doors, etc. Special door quantity.

**Cost Format
Levels 2 - 4**

064 Interior Finishes GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0641	Wall Finishes	SF	Applied finishes, acoustic finishes, etc. Wall finish SF.
0642	Floor Finishes	SF	Soft and hard finishes, stair finishes, etc. Floor finish SF.
0643	Ceiling Finishes	SF	Painting, acoustic finishes, etc. Ceiling finish SF.
0644	Other Finishes	SF	Paint metals and other miscellaneous needs. Other finish SF.

065 Interior Fixed Furnishings GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0651	Specialties	GSF	Toilet partitions, bath accessories, marker boards, corner guards, wall rails, signs. Gross floor area.
0652	Casework/Millwork	LF	Upper and lower cabinets, countertops, display cases, trim, etc. Casework/Millwork LF.
0653	Seating	EA	Fixed units and benches. Total seating units.
0654	Window Coverings	SF	Drapes, blinds, blackout shades, etc. Glazing SF to be covered.

07 CONVEYORS UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

071 Passenger Conveyor TOTAL CONVEYORS EACH (EA)

Level 4 Section	Description	Unit	Model Alaskan School Element
0711	Elevators	STOP	Hydraulic or electric elevators. Total elevator stops.
0712	Escalators	FLT	Single lane per flight. Total flights.
0713	Lifts	EA	ADA requirements. Total lift quantity.
0714	Moving Walk	LF	Single lane. Moving walk LF.
0715	Other Conveyor	EA	

**Cost Format
Levels 2 - 4**

072 Material Handling Systems TOTAL EACH (EA) SYSTEMS

Level 4 Section	Description	Unit	Model Alaskan School Element
0721	Elevator & Lifts	STOP	Dumbwaiters, freight elevator, lifts, etc. Total stops.
0722	Hoist or Crane	TON	Hoist or crane, support structure and rails. Hoist or crane ton capacity.
0723	Conveyor	LF	Baggage handling, belt type, etc. Conveyor LF.
0724	Pneumatic Tube System	LF	Stations, tubing and equipment. Tubing LF.
0725	Other System	EA	

08 MECHANICAL UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

081 Plumbing TOTAL PLUMBING FIXTURE (FXT) QUANTITY

Level 4 Section	Description	Unit	Model Alaskan School Element
0811	Plumbing Fixtures	FXT	Sinks, drinking fountains, toilets, showers, etc. (excludes roof drains). Total fixture quantity (fixture has a supply and waste connection).
0812	Plumbing Equipment	EA	Circulation pumps, water heaters, water softeners, etc. Total plumbing equipment quantity.
0813	Waste & Vent Piping	FXT	Pipe, fittings, cleanouts, floor drains, floor sinks, insulation, etc. Total fixture quantity.
0814	Domestic Water Supply	FXT	Pipe, fittings, valves, hose bibs, insulation, etc. Total fixture quantity.
0815	Special Systems	EA	

082 HVAC GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0821	Heating Equipment	GSF	Hydronic or steam systems. Gross floor area.
0822	Heating Distribution Systems	LF	Pipes, fittings, valves and insulation. Pipe LF.
0823	Ventilation Equipment	GSF	Fans, make-up units, terminals, etc. Gross floor area.
0824	Ventilation Distribution Systems	GSF	Ducting, insulation, diffusers, etc. Gross floor area.
0825	Cooling Equipment	GSF	Cooling methods. Gross floor area.
0826	Cooling Distribution Systems	LF	Piping, fittings, valves and insulation. Pipe LF.

**Cost Format
Levels 2 - 4**

Level 4 Section	Description	Unit	Model Alaskan School Element
0827	Heat Recovery System	EA	Equipment and distribution.
0828	Controls & Balancing	GSF	Electrical or pneumatic controls and instrumentation

083 Fire Protection GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0831	Riser & Equipment	EA	Entrance, pipe, headers, valves, etc.
0832	Sprinkler Systems	SF	Wet, dry other complete system. Total sprinkled SF
0833	Special Fire Protection Systems	EA	Equipment and distribution

084 Special Mechanical Systems GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0841	Gas Supply	LF	Natural/propane gas storage and distribution within 5' beyond the building perimeter. Pipe LF.
0842	Fuel Oil Supply	LF	Fuel oil storage and distribution within 5' beyond the building perimeter. Pipe LF.
0843	Dust Collection System	EA	Equipment and distribution. Total collection points.
0844	Compressed Air System	EA	Equipment and distribution. Total compressed air outlets.
0845	Lab/Medical Gas Systems	EA	Equipment and distribution. Total lab/medical gas outlets.
0846	Vacuum System	EA	Equipment and distribution. Total vacuum outlets.
0847	Special Exhaust System	EA	Equipment and distribution. Total exhaust fans.
0848	Humidification	EA	Equipment and distribution
0849	Other Mechanical Systems	EA	

**Cost Format
Levels 2 - 4**

09 Electrical UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

091 Service and Distribution TOTAL AMPERES (AMP) OF ELECTRICAL SYSTEM

Level 4 Section	Description	Unit	Model Alaskan School Element
0911	Distribution Panels & Switchgear	AMP	Equipment including grounding. Total amperes of electrical system.
0912	Panels & Motor Control Centers	AMP	Equipment including grounding. Total amperes of electrical system.
0913	Transformers	KVA	Equipment including grounding. Total transformer(s) KVA.
0914	Conduit & Feeders	LF	Including fittings and connections. Conduit LF.

092 Lighting TOTAL LIGHTING FIXTURE (FXT) QUANTITY

Level 4 Section	Description	Unit	Model Alaskan School Element
0921	Light Fixtures & Controls	FXT	Interior lights, exterior lights mounted on building, switches, etc. Total light fixtures.
0922	Conduit & Wiring Distribution	FXT	Conduit, fittings and wiring. Total light fixtures.

093 Power TOTAL EACH (EA) DEVICES AND CONNECTIONS QUANTITY

Level 4 Section	Description	Unit	Model Alaskan School Element
0931	Devices & Connections	EA	Outlets, disconnects, equipment connections, etc. Total devices and connections
0932	Conduit & Wiring Distribution	LF	Conduit, fittings and wiring. Conduit LF.

094 Special Systems GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0941	Fire Alarm System	EA	Devices, panels, conduit and wire. Total fire alarm devices.
0942	Communication Systems	EA	Telephone, data, intercom, cable trays/television/sound system. Total outlets.
0943	Security Systems	EA	Detection, CCTV, accessories control. Total detection points.
0944	Clock System	EA	Clocks, controls, conduit and wire. Total clocks.
0945	Other Special Systems	GSF	Other low voltage systems. Gross floor area.

**Cost Format
Levels 2 - 4**

095 Other Electrical Systems GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
0951	Power Generation & Distribution	KVA	Generators, switchgear panels, conduit, and feeders (includes grounding). Total generator(s) KVA.
0952	Heating Systems	SF	Baseboard, unit heaters, radiator or radiant heat.
0953	Grounding Systems	EA	Special grounding, lightning protection, etc. Total grounding systems.

10 EQUIPMENT AND FURNISHING UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

101 Equipment GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
1011	Food Service/Kitchen Equipment	SF	Commercial and residential grade kitchen equipment. Space housing equipment SF.
1012	Athletic Equipment	SF	Gym and other sports equipment. Space housing equipment SF.
1013	Shop Equipment	SF	Wood work, engine, metal work, etc. Space housing equipment SF.
1014	Laboratory/Medical Equipment	SF	Casework, equipment, etc. Space housing equipment SF.
1015	Library Equipment	SF	Stacks, shelves, desks, etc. Space housing equipment SF.
1016	Theatre & Stage Equipment	SF	Lighting, sound, curtains, etc. Space housing equipment SF.
1017	Art Equipment	SF	Kilns, sinks, etc. Space housing equipment SF.
1018	Loading Dock Equipment	SF	Bumpers, levelers, etc. Loading dock SF.
1019	Other Equipment	SF	Detention equipment, etc.

102 Furnishings GROSS SQUARE FOOT FLOOR AREA (GSF)

Level 4 Section	Description	Unit	Model Alaskan School Element
1021	Furniture	EA	Furniture that is not fixed. Total furniture quantity.
1022	Mats	SF	Entry mats and grates. Total mat and grate SF.
1024	Other Furnishings	EA	

**Cost Format
Levels 2 - 4**

11 SPECIAL CONDITIONS UNIT: GSF (GROSS SQUARE FOOT FLOOR AREA)

111 Special Construction SQUARE FOOT (SF) AREA OF SPECIAL CONSTRUCTION

Level 4 Section	Description	Unit	Model Alaskan School Element
1111	Swimming Pool	SF	Complete with plumbing requirements. Swimming pool interior surface SF.
1112	Ice Rink	SF	Complete with chilling requirements. Ice rink SF.
1113	Greenhouse	SF	Complete structure. Greenhouse SF.
1114	Marine Work	SF	Seawall, docks and piers, etc. Marine surface SF.
1115	Other Special Facility	SF	

112 Special Demolition SQUARE FOOT (SF) AREA OF BUILDING AFFECTED

Level 4 Section	Description	Unit	Model Alaskan School Element
1121	Non-Hazardous Demolition	SF	Selective, non-hazardous demolition. Affected building SF.
1122	Hazardous Demolition	SF	Abatement of hazardous building materials. Affected building SF.

12 GENERAL CONDITIONS UNIT: MO (PROJECT DURATION, MONTHS)

121 Mobilization and Demobilization LUMP SUM (LS)

Level 4 Section	Description	Unit	Model Alaskan School Element
1211	Freight Material	TON	Freight cost of materials to job site (air, barge, truck, etc.). Material weight in tons.
1212	Freight Construction Equipment	TON	Freight cost of construction equipment to and from job site. Construction equipment weight in tons.
1213	Labor Travel	RT	Cost of travel for construction personnel to and from job site. Total round trips.

122 Site Staff PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1221	Supervision	MO	Project manager, superintendent, foreman. Months of on-site supervision.
1222	Engineering	MO	Engineering personnel. Months of on-site engineering.

**Cost Format
Levels 2 - 4**

Level 4 Section	Description	Unit	Model Alaskan School Element
1223	Quality Control	MO	Personnel. Months of on-site quality control.
1224	Scheduling/Estimating	MO	Estimating personnel. Months of on-site estimating/scheduling.
1225	Surveying	MO	Crew to set out features of project. Months of on-site surveying.
1226	Expediting	MO	Persons arranging deliveries. Months of on-site expediting.
1227	Clerical	MO	Payroll, invoices, etc. Months of on-site clerical work.
1228	Other	MO	

123 Temporary Construction PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1231	Temporary Facilities	MO	Offices, storage, signs, staging, partitions and protection, installation and use. Project duration.
1232	Fences & Barriers	LF	Perimeter fence, security. Fencing LF.
1233	Scaffolding	MO	Installation and rental. Months of scaffold rental.
1234	Utilities	MO	Water, sewer, electrical, gas, oil, installation and use. Project duration.
1235	Communications	MO	Telephone, fax, email, installation and use. Project duration.

124 Equipment and Tools PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1241	Equipment	MO	Vertical and horizontal transportation, pumps, etc. Project duration.
1242	Tools	MO	Hand tools, manlifts, ladders, etc. Project duration.
1243	Consumables	MO	Fuel, cleaning products, safety needs. Project duration.

125 Miscellaneous PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1251	Submittals/As-Builts	LS	Project records/printing costs/manuals.
1252	Testing	LS	Material tests.

**Cost Format
Levels 2 - 4**

Level 4 Section	Description	Unit	Model Alaskan School Element
1253	Cleaning	MO	Includes snow removal and final clean-up. Project duration.
1254	Security	MO	Badges, security service, night watchman. Project duration.
1255	Permits	LS	Local building permits, street-use permits, etc.

126 Labor Employment Costs PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1261	Camp	MO	Remote site needs. Months of construction camp operation.
1262	Per-Diem	MDAY	Remote site needs. Total man-days of imported personnel.
1263	Premium Time	HRS	Payment for overtime. Total overtime hours.

127 Mark-Ups PROJECT DURATION, MONTHS (MO)

Level 4 Section	Description	Unit	Model Alaskan School Element
1271	Home Office Overhead	%	Headquarters costs. % of direct construction cost.
1272	Profit	%	Mark-up for investment and risk, also consideration of market conditions. % of direct construction cost.
1273	Bond	%	Performance, pay and bid bonds. % of direct construction cost.
1274	Insurance	%	General liability. % of direct construction cost.

13 CONTINGENCIES UNIT: % (PERCENTAGE OF TOTAL CONSTRUCTION COST)

131 Estimate Contingency

Level 4 Section	Description	Unit	Model Alaskan School Element
1311	Estimator's	%	Allowance for unknown aspects of the project that may become necessary (not a change order or bid contingency). % of total project cost.
1312	Escalation	%	Allowance for changes in costs of labor and materials from the date of the estimate to date of construction project. % of total project cost.

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File: G:\br&gr\papers\publications\
BP Swimming Pool

For: Bond Reimbursement & Grant
Review Committee

Subject: Swimming Pool Guidelines – 2019 Ed.

BRIEFING PAPER

Background

Department guidance on swimming pools was originally published in 1983 by the State of Alaska, Department of Education as Water Safety Facilities and State Financial Aid, then published in February 1985 and in 1997 as Swimming Pool Guidelines. A draft update was started by the department's Facilities Manager in 2008 and worked on through 2010 but it was never finalized. The current effort, aimed at an updated edition in early 2019 is presented under this briefing paper.

Discussion

The current draft, while building somewhat on the 2008-2010 effort, is primarily an update of existing content and continues to memorialize what might be best described as a “negotiated approach” to state aid for swimming pools. The document sets out required processes for identifying educational programs and includes various tables and resources for pool sizing. However, the culmination of the assessment is relatively subjective since the tools (tables and resources) are not particularly well integrated. This lack of integration is somewhat unavoidable because the tools, gathered from disparate though related sources, were not prepared to be integrated. If the update were to remain within the current framework, it will remain a useable guide for all parties. It just will not provide the clearest set of guidance.

The attempted update in 2008-2010 introduced the possibility of what would commonly be understood as a “prescriptive approach.” It is likely that this shift in philosophy was the result of the prior section manager having to use the 1997 handbook to guide determinations of state participation in at least two challenging projects (Ketchikan Gateway Aquatic Center and Juneau Dimond Park Aquatic Center), if not more. A table identifying the elements of this prescriptive approach is included in the committee's packet. It seems that this approach, which appears primarily based on a learn-to-swim model, would make a simple calculation of state support based on groupings of student population and some established coefficients for supplementary pool areas (e.g., pool deck, mechanical space, etc.).

Feedback on these two approaches, negotiated or prescriptive, is desired. This publication, when completed, will be cited in regulation and policies therein will have the force of regulation. An updated publication based on the one presented here could be completed and returned to the committee with public comment in time for the December meeting and, if approved, published shortly afterward. Making the shift to a prescriptive model would likely require additional

research and development by department staff, an interim presentation to the committee in December before public comment and approval by the committee at a meeting in February of 2019. The current schedule accommodates either timeline.

Recommendation(s)

The department staff does not have a strong preference regarding direction. There is often merit in providing very clear guidance. In that case, leaning toward the prescriptive would be appropriate. There is also merit in a process that allows significant dialog as long (as it doesn't result in claims of inappropriate determinations).

Department of Education and Early Devopment

Swimming Pool Guidelines

April, 2010

Student ADM Served at 5 Years Post-Occupancy	Students Receiving Mandatory Instruction Each Year	Number of Instructors	Students per Class Period	Maximum DEED Supported Pool Water Area	Maximum DEED Supported Building Square Footage (includes pool tank)	Pool Dimensions	Building SF to Pool Area	% of Tank to Building area	Support Space
10-1000	10-200	1	10	900	4439	15'x60'	4.933	20%	2,711
1001-2000	201-400	2	20	1,875	5662	22'x75'	3.020	33%	2,734
2001-3000	401-600	3	30	2,100	7561	29'x75'	3.601	28%	4,372
3001-5000	601-1000	4	40	2,700	8699	36'x75'	3.222	31%	4,814
5000+	1000+	5+	50+	3,375	9916	43'x75'	2.938	34%	5,248

Table Assumptions

- ~10 students per instructor
- At least 4 mandatory Learn to Swim classes per day per instructor
- Each instructor can educate 40 students per day or 200 per week
- Students take one class per week
- each course is approximately 10 hours
- Each learn to swim component is 10 weeks long
- School year can accommodate two ten week sessions, one fall and one spring
- Each student can take two levels per year
- Each instructor can teach one level to 400 students per year
- If there is only one instructor, with three classes, the instructor can teach approximately 66 students in each level per semester
- Assume 20% of total student population enrolled in mandatory learn to swim program

Minimum Pool Dimensional Requirements

- Beginning Swimming
 - Minimum of 15' width of shallow depth water (0.5-3.5 ft)
 - 60'-75' length
- Advanced Beginning
 - Minimum of 15' width of shallow depth water (3.5')
 - 60'-75' length
 - Minimum deep end depth 6'-9'
- Intermediate
 - Minimum of 15' width of shallow depth water (3.5')
 - 60'-75' length
 - Minimum deep end depth 6'-9'
- Minimum Deck area at least 12' wide along one long side of the water tank (for out of water instruction)
- Minimum depth for diving 12'

District Requirements

- Grant applications must demonstrate space eligibility, Debt applications must demonstrate space eligibillity as required.
- State funding will only be provided upon receipt of evidence of a K-12, school curriculum based learn to swim program.
- Facilities that are not owned, or under the direct control of the school district must provide evidence of a joint use agreement with the owner that:
 - 1) Identifies the responsibilities of each party with respect to operations, maintenance, and systems replacement.
 - 2) Provides the school district with scheduling control of the facility for all hours during the school day on days for which school is in session.
- District must provide evidence of a basic learn to swim program that contains at least three levels of learn-to-swim classes to the regular student population during school hours.
- If evidence of full use for the district's K-12 program is not provided, state participation will be prorated based on the number of hours per school day in which K-12



Swimming Pool Guidelines for Educational Facilities

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State of Alaska
Department of Education
Juneau, Alaska

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Introduction

These guidelines have been developed to give assistance and direction to Alaska school districts in planning [for school swimming pools, and to provide the department with a basis for review of applications submitted by school district for state participation in funding of facilities for educational purposed in Alaska](#). ~~They are based upon~~ [direction for development of these guidelines comes from statute \[AS 14.11.013\(d\) and 14.11.100-\(h\)\]](#), which provides for swimming ~~poools-facilities~~ as an eligible project cost in projects approved for state aid under AS 14.11.

~~This Grant~~ eligibility is first subject to limitations in general space eligibility established under 4 AAC 31.020. [Debt eligibility is governed by the application of AS 14.11.100\(h\)](#). ~~Secondly,~~ ~~†~~[This guideline implements-identifies](#) standards for swimming ~~pool-facility~~ size based on the planned educational program and student population. Thus, these guidelines are intended to help Alaska school districts determine what portion of swimming ~~pool-facility~~ space is eligible for State funding as determined by the commissioner.

[Items that are not eligible for consideration of funding support in constructing a swimming facility include:](#)

- [Parking for a swimming facility, unless the facility is constructed as part of an educational facility for which parking is constructed in order to satisfy parking requirements associated with the school population;](#)
- [Timing systems including touch-pads, and other components;](#)
- [Recreation accessories including slides, saunas, Jacuzzi tubs, and equipment that cannot be demonstrated to be integral to the instructional program;](#)
- [Locker and shower facilities in excess of that required to support the instructional program; and](#)
- [Administration and ancillary space beyond that required for the instructional program.](#)

Authority

Statutory Requirements

~~A.S. 14.11.100(h)~~ [requires the department to adopt standards on the size of swimming pools](#):

“An allocation under (a) (4) or (5) of this section for school construction begun after July 1, 1982, shall be reduced by the amount of money used for the construction of residential space, hockey rinks, planetariums, saunas, and other facilities for single purpose sporting or recreational uses that are not suitable for other activities and by the money used for construction that exceeds the amount needed for construction of a facility of efficient design as determined by the department. An allocation under (a) (4) or (5) of this section may not be reduced by the amount of money used for construction of a small swimming pool, tank, or water storage facility used for water sports. However, ***an allocation shall be reduced by the difference between the amount of money used to construct a swimming pool that exceeds the standards adopted by the department and the amount of money that would have been used to construct a small swimming pool,**** tank, or water storage facility, as determined by the commissioner.” [\[](#)

~~*—emphasis added]~~

Department of Education Review

AS 14.07.020(a)(11) [provides that](#)

~~T~~he department shall:“

review plans for construction of new public elementary and secondary schools and for additions to and major renovations of existing public elementary and secondary schools and, in accordance with regulations adopted by the department, determine and approve the extend of eligibility for state aid of a school construction or major maintenance project; for the purposes of this paragraph, “plans” include educational specifications, schematic designs and final contract documents;” [. . .](#)

Plans for a swimming pool are to be submitted to the Facilities section of the Alaska Department of Education [& Early Development](#) as part of the standard review documents required by statute and regulation. At the educational specifications stage, plans must contain, 1) a detailed description of the planned pool program with anticipated uses, ~~and~~ 2) detailed information about numbers of students to be involved in the various programs, and 3) the anticipated pool size, the support spaces needed and basic technical information on materials and systems desired. Subsequent submittals should provide drawings and details of the proposed swimming pool facility.

District Requirements

- –State funding will only be provided upon receipt of evidence of a K-12, school curriculum based learn to swim program.
- –Facilities that are not owned, or under the direct control of the school district must provide evidence of a joint use agreement with the owner that
 - 1) Identifies the responsibilities of each party with respect to operations, maintenance, and systems replacement.
 - 2) Details the preventive maintenance for the facility that meets requirements of AS_14.11.011(4)
 - 3) Provides the school district with scheduling control of the facility for all hours during the school day on days for which school is in session.
- –District must provide evidence of a basic learn to swim program that contains at least three levels of learn-to-swim classes to the regular student population during school hours.
- –If evidence of full use for the district's K-12 program is not provided, state participation will be prorated based on the number of hours per school day in which K-12 school curriculum based education takes place in the facility.

Factors in Determining Pool Size

Any swimming facility sponsored by a public school must be designed foremost for instructional purposes. Such design allows the teaching of basic swimming strokes, general water safety, boat safety and lifesaving. Additionally, a pool design enabling the teaching and practicing of diving may be desirable. Recreational swimming for students and the community is a valuable by-product of an instructional swimming program and should not be overlooked in planning the facility. Also not to be overlooked is the possibility for the pool facility to act as a water supply for a fire suppression system. However, State funding is available only in support of the instructional program (K-12) or for a facility serving as an emergency water storage facility.

Pool size, therefore, will be determined by the district primarily by three factors: population, the instructional program and the program space requirements. These factors will need to be balanced with the available funding and the operations and maintenance costs for the facility.

Population Served

The District will need to analyze the following information for program determination. This information must also be provided to the Department of Education:

- eCurrent district enrollment of the population to be served by the facility (K-12)
- bBreakdown of enrollment by individual school and grade level.
- aAn enrollment projection for five years beyond the anticipated occupancy date by school and grade level.
- Number of students taking swim classes during each swim instruction period.

Program to be Offered

Pool instructional space is determined by the classes, basic and elective, to be offered and the student population to be served. In addition to basic swimming instruction, courses that may be included in a well-rounded program are described as follows:

- Competitive Swimming -to foster elements of teamwork, character, and skills among students.
- Water safety courses to develop and train instructors for the American Red Cross. These instructors qualify to teach lifesaving and to conduct water programs for all age groups.
- Water safety aide courses to develop and train young people in pool safety and the fundamentals of teaching swimming.
- Boat safety instruction for students and for interested community members. Such topics as overloading, personal flotation devices, maneuvering in rough water, high speed turning, capsizing, explosion and/or fire, and falling overboard can all be discussed during water safety courses. Many of these topics can also be demonstrated through the use of a small boat.

- Drown proofing: A system of self-rescue developed at Georgia Institute of Technology, particularly aimed at those who feel they will never learn to swim a regular stroke, but want to be able to save themselves in the event of an emergency.
- Diving instruction for the one-meter board.
- Synchronized swimming training: For those boys and girls who are interested in the exacting and artistic demands that this activity has to offer.
- Scuba training: Almost every region of the United States has pools offering this training to the general public.

If the pool will be available for community use in off-school hours additional activities to be considered in planning are:

- Infant training: This is a specialized offering, given by an experienced swimming instructor. Many infants have been given an excellent start as swimmers. Such training reduces the fear associated with water and reduces the time a student needs to learn to swim.
- Adult swimming courses: These courses prove to be surprisingly popular for their social as well as instructional benefits.
- Swim to stay fit programs for persons who want a relaxing activity which maintains body tone. Individualized activity is stressed in this program.
- Survival training for the general public: A large number of people are concerned with being able to get themselves out of difficult situations.
- Rescue squad training: Most rescue squads feel that they should be prepared to handle all emergencies. There are many areas having potential water hazards which are protected by such squads.
- General recreational swimming for the public: Family nights, mother-daughter, father-son, and other combinations can provide a source of revenue to support pool operation.
- Water ballet training: For persons of all ages who enjoy group training and the artistic results that an exacting physical activity can produce. Water ballet allows for all ranges of talent.
- Fly and bait casting: Training practice can be provided.

In determining the programs to be offered, the district should consider the following recommended courses and hours of instruction along with any current Red Cross recommendations.

Recommended Courses

BASIC COURSES	INSTRUCTIONAL HOURS
Pre-school Swimming (to 5yrs.)	30
Beginning Swimming	25
Advanced Beginning	25
Intermediate	25
Swimmers	25
Advanced Swimmers	25
Advanced Lifesaving	25
Lifeguard Training	30
Water Safety Instructor	45
Adapted Aquatics (Handicapped)	10
Water Ballet/ Synchronized Swimming	25
Canoeing/ Kayaking	15
Diving	20
Boating Safety	15
Water games (Water Polo, Basketball)	15
Basic Scuba/ Snorkeling Program	30
First Aid/ C.P.R. (in conjunction with Water Safety Program)	25
Pool Chemistry	25
Other	25

Small Craft Courses Information

BASIC COURSES	PREREQUISITES	MIN. AGES	TIME REQUIREMENTS
Introduction to Paddling	None	None	Approx. 4 hours
Fundamentals of Canoeing	Swimming Skills	11	Approx. 15 hours
Basic River Canoeing	a) Fundamentals of Canoeing or Equivalent b) Swimming skills	14	Approx. 20 hours
Fundamentals of Kayaking	Swimming Skills	11	Approx. 12 hours
Basic River Kayaking	a) Fundamentals of Kayaking or Equivalent b) Swimming skills	14	Approx. 20 hours

Red Cross Instructional Programs

COURSE	PREREQUISITES	MIN. AGE	TIME REQUIREMENTS
Beginner	None	None	As required
Advanced Beginner	Beginner Skills	None	As required
Intermediate	Adv. Beginner Skills	None	As required
Swimmer	Intermediate Skills	None	As required
Advanced Swimmer	Swimmer Skills Basic Rescue/Adv. Lifesaving	11	As required
Basic Water Safety	None	None	Approx. 4 hours
Basic Rescue	Basic Water Safety Certification	11	Approx. 6 hours
Advanced Lifesaving (ALS)	Preliminary Swim Test	15	Approx. 21 hours
Adv. Lifesaving Review view	Current ALS Certificate	15	Approx. 12 hours
Swimmer Aide	None	17	Approx. 6 hours
Water Safety Aide	Swimmer Skills Basic Rescue/ Adv. Lifesaving ALS Certificate	11	Approx. 19 hours
Basic Swimming Instructor (BSI)	Intermediate Skills Basic Rescue Certification	None	Approx. 20 hours
Water Safety Instructor (WSI)	Swimmer Skills Adv. Lifesaving ALS Certificate	None	Approx. 40 hours
Adapted Aquatic Instructor	Current BSI/WSI Certificate	17	Approx. 24 hours
Instructor Reviews	Current Instructor Certificate	None	As required

Note: Ages are those on the first day of the courses.

Program Space Requirements

The Red Cross recommends certain pool space minimums in implementing identified program components. Chart 1 and Figures 1 and 2 on the following pages contain current requirements.

Chart 1 - Minimum Instructional Requirements

Program	Instructional Lane Per Student	SQ.FT./ Student	Water Depth Minimums	Deep End (Over Head)	Diving	Comments
Beginning Swimming	4' x 25'	100/Student	Recommend 3' to 3 ½'	No Regulation	No Regulation	Possible minimum pool sizes for optimum class or 10 students: 40' wide x 25' long or 20' x 50' (5 students at each end).
Advanced Beginning Swimming	4' x 60'	120/Student	25' of 3 ½' Water Depths	6' to 9'	No Regulation	Red Cross allows 60' swimming length to be done in laps, thus 25' x 40' pool would be acceptable but is not recommended.
Intermediate Swimming	4' x 60'	120/Student	25' of 3 ½' Water Depth	6' to 9'	No Regulation	
Swimmer	4' x 60' minimum (4' x 75' <u>recommended</u>)	120/Student 300/Student	No Regulation	8' to 10' Diving Depth	½ meter board or platform	Minimum size possible 20' x 60' (rec. 20' x 75'). If meter board is used width must be increased by 1'-8".
Advanced Swimmer	4' x 60' minimum (4' x 75' <u>recommended</u>)	120/Student 300/Student	No Regulation	12' Diving Depth	1 meter board	21' 8" Width Required 75' Length Recommended
Advanced Life-Saving and Lifeguard Training	25' x 75'	120/Student	25' of 3 ½' Water Depth	6' to 9'	No Regulation	

~~State of Alaska Department of Education Swimming Pool Guidelines - 1997 Edition~~

Note: Boating safety will be a part of some courses. The ability to turn a boat or kayak end-for-end is important. Pool width should be twice that of the boat length.

Figure 1 - Lane Dimensions and Water Depths

This figure illustrates minimum recommended lane dimensions and water depths for each instructional program offering: Beginning, Advanced Beginning and Intermediate Swimming. Requirements for diving instruction are also illustrated.

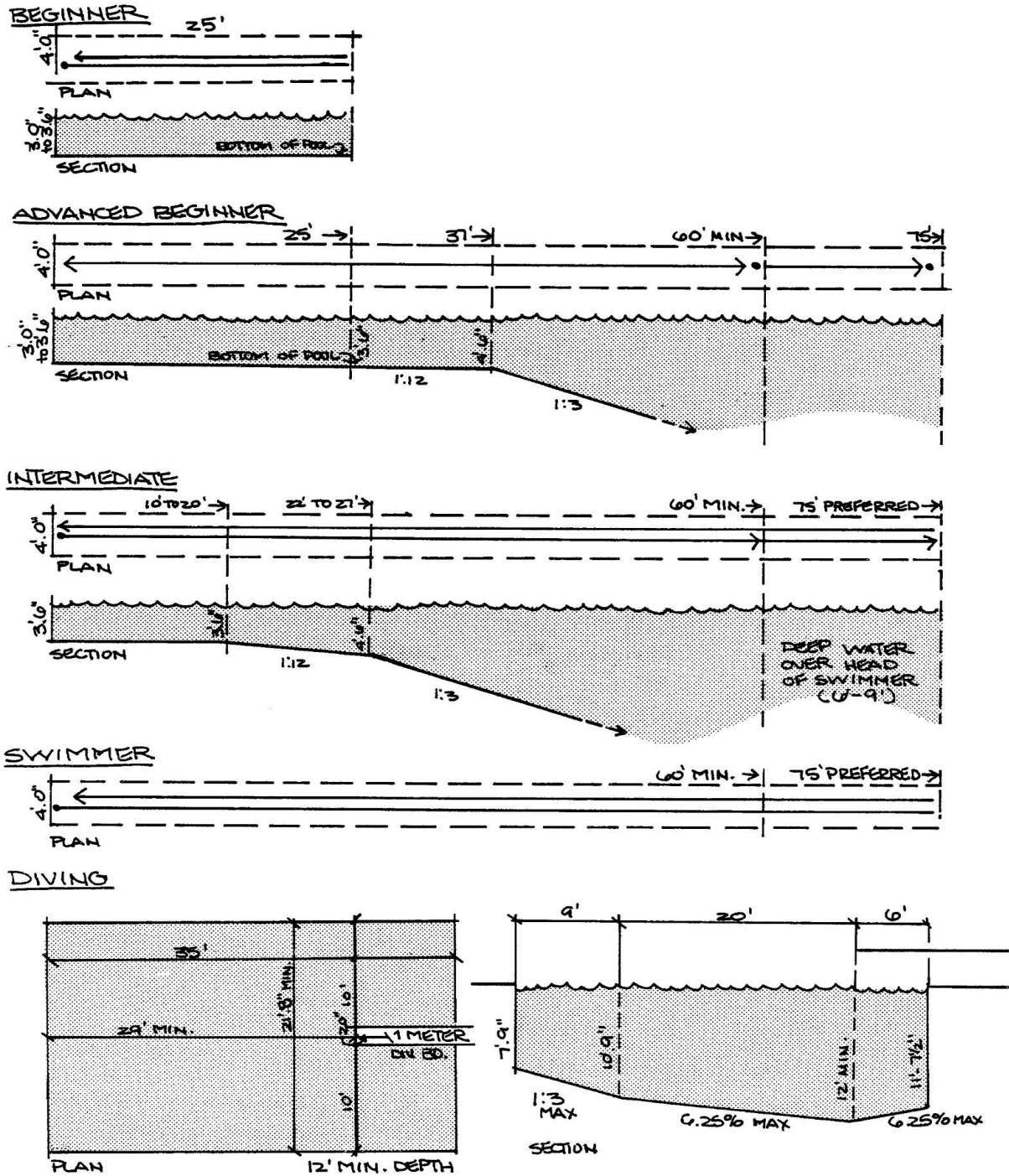
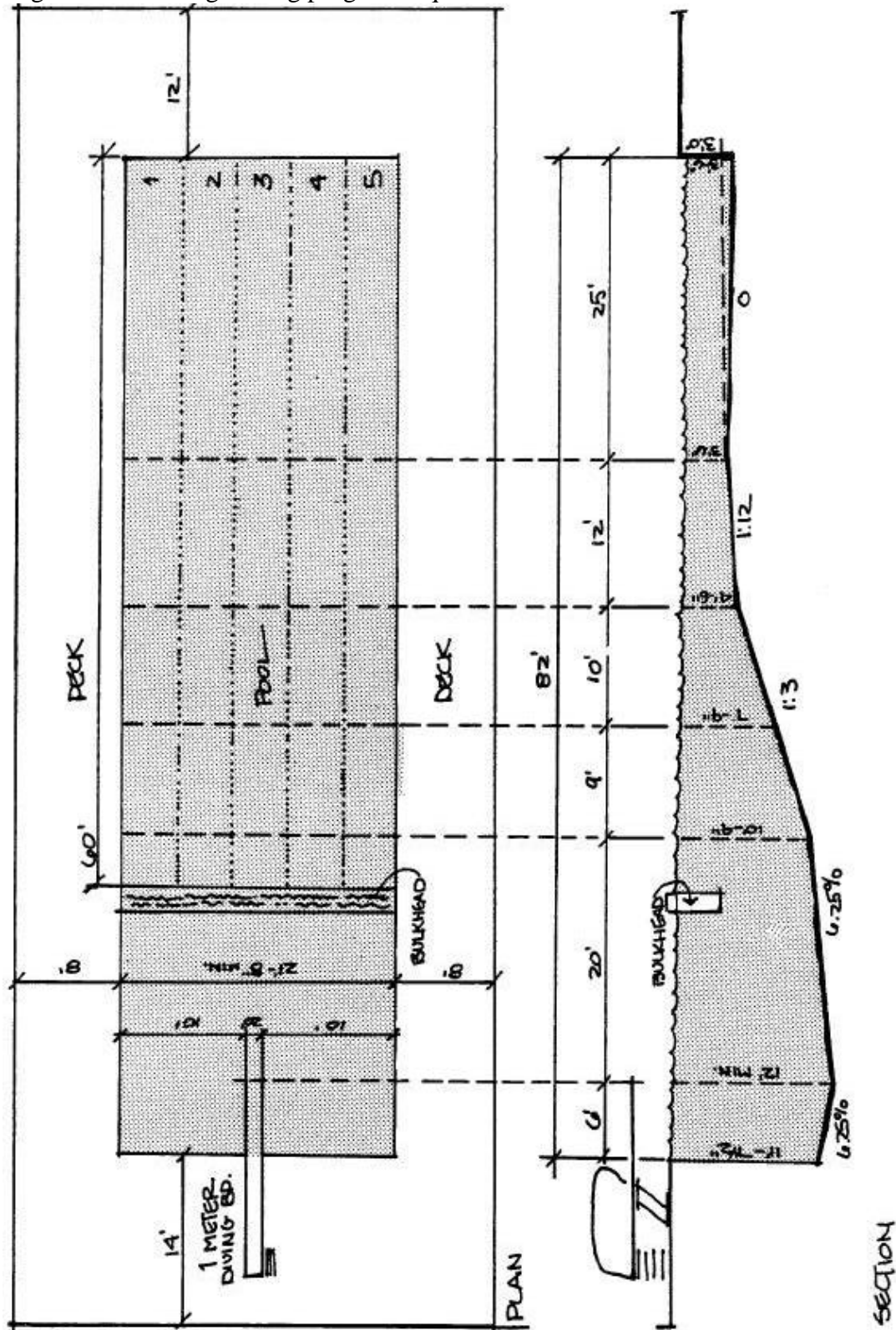


Figure 2 - Pool Layout

Pool design for Swimming/Diving program requirements:



Operations, Maintenance and Repair

A district developing a swimming facility must take into consideration the following cost factors in planning the facility and incorporating it into the district's operating budget:

- 1) **A**nnual routine and preventive maintenance and repair.
- 2) **M**ajor maintenance and renewal.
- 3) **U**tilities
- 4) **P**ossible increased costs for additional instructors/staff.
- 5) **C**ommunity use of pool could be a source of income but will also increase maintenance, repair, and staff cost.
- 6) **P**ossible increased expenses to transport students to and from the facility.
- 7) **I**ncreased insurance costs, however, the possibility should be explored as to the feasibility of using the pool as a water reservoir, which may reduce the cost of fire insurance.
- 8) **L**ife cycle cost of the proposed facility.

Allowable Pool Size

General Philosophy

The total educational square footage, including the swimming pool facility, housing the population to be served must be at or below the space allowed under 4 AAC 31.020.

Based on an analysis of instructional needs and facility costs as discussed in the preceding chapter, a school district should select the smallest standard pool size from those listed in Chart 2 that would meet program goals and student population.

Assuming, however, that in addition to primary use for school instruction, the pool facility will also accommodate community use and possibly some interscholastic competitive and athletic event swimming, certain general recommendations can be made regarding pool sizes which the district may want to consider.

Recommendations

1. The optimum size pool to offer a full program of courses as outlined in chapter 2 is 75' x 30'. This meets minimum requirements for instruction programs, boating safety and recreational swimming, and would meet minimum requirements for some interscholastic competition.
2. For a small program of required instruction with 10 students per class, a 22' x 60' pool is recommended.
3. For a program which includes boating safety, a pool must be at least 25' x 40'. This is also the absolute minimum size to offer a small program of intermediate instruction, but is not recommended by the Red Cross for such a program. The minimum size pool for offering a mandatory and elective program would be 25' by 50'.
4. If diving is to be emphasized it is important that the full 12' diving depth be directly under the last 1 ½' of the diving board. Note: Rather than emphasize diving depth, it is more important that divers be trained to dive as shallow as possible. Most head and neck injuries occur when students dive off the edge or in the shallow end of the pool. Most diving tanks vary in depth with older constructed tanks having 8' to 10' depth and modern tanks 12' or more. An "L" shaped pool which isolates the diving area, though more costly, is the most desirable configuration.
5. To pick the most versatile depths for these pool sizes, use diving tank requirements for one end, 3' 6" for intermediate depth, and depending on community use concerns possibly a small section of 3' 0" depth at shallow end. Note: A removable insert in a 3' 0" shallow end which allows young children to overcome water fear in a comfortable atmosphere and assists in the offering of adapted aquatics to the disabled can be desirable.

Chart 2 on the next page summarizes standard pool sizes and the student population that can be served by each in a district offering a basic swimming program consisting of 3 required courses.

Chart 2 - Summary of Standard Pool Sizes and Population Served

Pool Dimensions	Pool Area S.F.	Students Per Class Period	Students Per Year Able To Receive Mandatory Courses	Total Population Served 100% Basic Swim Program			Total Population Served 50% Basic Swim Program		
				Enrollees per year in all 3 classes	Secondary Only (6 Years)	Elementary and Secondary (12 Years)	Enrollees per year in all 3 classes	Secondary Years (6 years)	Elementary Years (6 years)
1. Recommended Minimum 22' x 60'	1,320	20	450	160	960	1,920	80	480	960
2. Standard Instruction 30' x 60'	1,800	20	480	160	960	1,920	80	480	960
3. Minimum Competitive 28' x 75'	2,100	30	720	240	1,440	2,880	120	720	1,440
4. "Montreal" 36' x 75'	2,700	50	1,200	400	2,400	4,800	200	1,200	2,400
5. L Shape 45' x 75' plus 45' x 30' (diving)	3,375 1,350	100	2,400	800	4,800	9,600	400	2,400	4,800
6. "Competition" 45' x 75' (25 yards)	3,375	100	2,400	800	4,800	9,600	400	2,400	4,800

Method for Determining Allowable Size

The allowable size of the actual pool tank is based on the district’s analysis of current program needs, anticipated population and the amount of space required for the instructional program. Though a certain size may be allowable, the district may need to provide a smaller size due to anticipated operation and maintenance costs.

Program Determination-A

A district developing an instructional plan must consider the following factors:

1. **T**ype of swimming program, i.e. beginning swimming, advanced life saving and lifeguard training (see Instruction Programs and Red Cross recommended courses).
2. **A**mount of instruction for each course to meet minimum requirements (see Instructional programs and Red Cross requirements).
3. **M**aximum amount of water square footage per student for each course offered (see Chart 1).
4. **T**otal number of students to be served by the program and per class estimates.
5. **L**ength of each course, i.e. half a semester or a semester. Note: courses may be separate or offered as part of physical education program.
6. **N**umber of hours in school day.
7. **S**wimming instruction staffing pattern; assuming a normal school day of six hours, at least three must be mandatory swimming courses.

Knowing what it must set aside for its basic program, the **D**istrict can consider alternatives such as additional mandatory requirements, enlarging voluntary offerings, increasing usage to 6 periods per day to gain greatly expanded offerings with the same facility or, although not recommended, reducing the number of periods for which the instruction will be available.

Determine Size of Pool

Review the information in the section **Factors in Determining Pool Size** and Figures 1 and 2, which illustrate pool layouts:

- Determine the dimensions necessary to accommodate program needs based on the program determination above.
- Select the smallest pool from Chart 2 - Summary of Standard Pool Sizes that will accommodate the combination of factors evaluated above.
- Chart 2 shows the “Competition” pool as the largest available pool size for selection. This pool size (45’ x 75’) is the maximum size pool for which the Department of Education will

contribute funding. If the program demands required a pool area larger than the “Competition” pool, the district should be prepared to identify additional sources of funding.

The work sheet on the following page may be used to determine appropriate size pool for a given program and student population to be served.

Program Determination Worksheet

Use the table provided below to assist in determining the pool size needed for the population served by the proposed instruction programs.

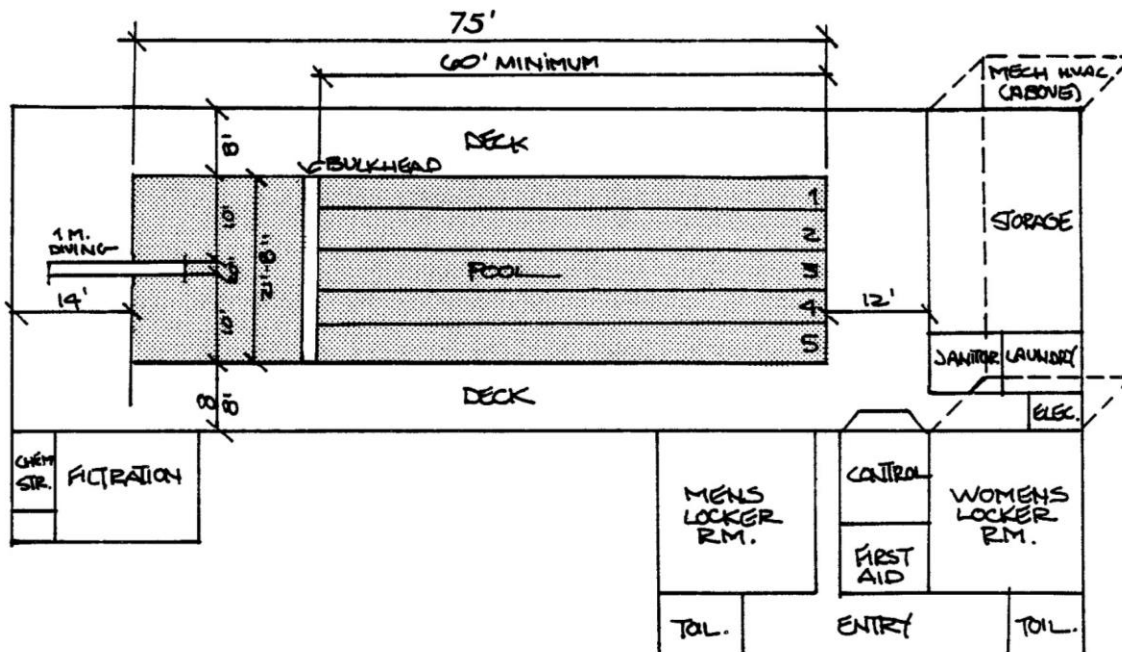
Swimming Instructional Program Type	M or E	Minimum Hours Instruction	Water Square Foot Per Student	# of Students Per Class Period	Length of Course Semester or ½ Semester	Number of Class Periods Per Day	Staffing Instructional Staffing	Total Students Served	Chart 2 Pool Size Needed

* Reference Chart 2 - Summary of Standard Pool Sizes and Population Served on page 13.

Conceptualizing the Swimming Facility

- After the envisioned instructional program and other uses of the pool area have been determined, the complete swimming facility should be conceptualized.
- Adequate deck space for instruction must be provided. A minimum of twelve feet is recommended for this purpose.
- A minimum of 6 feet of deck space should be allowed on all other sides of the pool for safety . As many as 2/3 of the group will be out of the water at any one time.
- Equipment, office space, locker and shower rooms must be included and designed with a functional amount of space depending on population served.
- If diving is provided, ceilings should be at least 16 feet above the highest board surface. A one-meter board and 12 foot depth is the recommended minimum for diving.
- Safety is of primary concern, a secure area for chemical storage should be provided, as well as a control station and first aid area. (For additional Health-Safety information see ~~HEW Publication No. DCD79-8319, Swimming Pools, Safety and Disease Control, 1979~~ [the Center for Disease Control website; https://www.cdc.gov/healthywater/swimming/aquatics-professionals/index.html](https://www.cdc.gov/healthywater/swimming/aquatics-professionals/index.html))
- If the district desires to utilize the pool as a water storage facility for a fire suppression system, considerations for tying into the fire alarm system, providing backup power for pumps, water distribution, specifications for piping, sprinkler heads, etc. should be referred to a mechanical engineer or fire sprinkler design company. Some room for additional equipment may be required.
- Because of safety and health concerns, several agencies have regulatory authority covering a water safety facility. In addition to applicable uniform codes for building, mechanical, electrical, fire safety, etc., Districts must adhere to DOT/PF barrier free regulations and Department of Environmental Conservation health and safety regulations, including those covering swimming pools. (18 AAC 30)

Figure 3 - Conceptual Layout



This chart shows a conceptual layout of a swimming pool facility using the Recommended Minimum Pool (22' x 60') with a diving instruction area. For this type of facility, approximately 7,800 square feet (sf) would be anticipated for the total building area.

Pool	1,635 sf
Deck	2,180 sf
Control	120 sf
First Aid	100 sf
Locker Rooms	740 sf
Laundry	70 sf
Janitor	80 sf
Mechanical/HVAC @ 7%	560 sf
Filtration	250 sf
Chlorine	30 sf
Chemical Storage	60 sf
Electrical	50 sf
Structural - Deck Equipment	340 sf
Toilet	240 sf
Circulation/Entry/Exit	630 sf
Interior walls @ 3%	230 sf
Planning Factor @ 5%	385 sf
Total Area	7,700 sf