

**COMMISSION FOR ARKANSAS PUBLIC SCHOOL ACADEMIC FACILITIES
AND TRANSPORTATION RULES GOVERNING THE ACADEMIC
FACILITIES PARTNERSHIP PROGRAM**

March 17, 2008

1.00 AUTHORITY

- 1.01 The Commission for Arkansas Public School Academic Facilities and Transportation authority for promulgating these Rules is pursuant to Ark. Code Ann. §§ 6-21-114 (Act 1327 of 2005), 6-20-2507 (Act 2206 of 2005), 6-20-2512 (Act 2206 of 2005), 6-20-2507 *et seq.*, 25-15-201 and Act 989 of 2007.
- 1.02 These Rules shall be known as the Commission for Arkansas Public School Academic Facilities and Transportation Rules Governing the Academic Facilities Partnership Program.

2.00 PURPOSE

- 2.01 The purpose of these Rules is to establish a process whereby the Arkansas Division of Public School Academic Facilities and Transportation shall provide state financial participation based upon a school district's academic facilities wealth index in the form of cash payments to a school district for eligible new construction projects.

3.00 DEFINITIONS - For the purpose of these Rules, the following terms mean:

- 3.01 “Academic facility” – a building or space, including related areas such as the physical plant and grounds, where public school students receive instruction that is an integral part of an adequate education as described in Ark. Code Ann. § 6-20-2302.
- 3.01.1 A public school building or space, including related areas such as the physical plant and grounds, used for an extracurricular activity or an organized physical activity course as defined in Ark. Code Ann. §6-16-137 shall not be considered an academic facility for the purposes of these Rules to the extent that the building, space, or related area is used for extracurricular activities or organized physical activities courses, except for physical educational training and instruction under Ark. Code Ann. § 6-16-132;
- 3.01.2 The Division of Public School Academic Facilities and Transportation shall determine the extent to which a building,

space, or related area is used for extracurricular activities or organized physical activities courses based on information supplied by the school district and, if necessary, on-site inspection;

- 3.01.3 Buildings or spaces, including related areas such as the physical plant and grounds, used for pre-kindergarten education shall not be considered academic facilities for purposes of these Rules;
 - 3.01.4 District administration buildings and spaces, including related areas such as the physical plant and grounds, shall not be considered academic facilities for the purpose of these Rules; and
 - 3.01.5 Facilities owned and/or operated by education service cooperatives, leased facilities (other than facilities which are part of a lease purchase agreement), portable buildings, modular buildings and facilities owned by others but occupied by school districts are not considered academic school facilities for purposes of these Rules.
- 3.02 "Academic Facilities Partnership Program" - the process under which the Arkansas Division of Public School Academic Facilities and Transportation shall provide state financial participation based upon a school district's academic facilities wealth index in the form of cash payments to a school district for eligible new construction projects.
- 3.03 "Academic facilities wealth index" - a percentage derived from the following computations:
- (1) Determine the value of one (1) mill per student in each school district as follows:
 - (a) Multiply the value of one (1) mill by the total assessed valuation of taxable real, personal, and utility property in the school district as shown by the applicable county assessment for the most recent year; and
 - (b) Divide the product from (1)(a) above by the greater of the prior year average daily membership of the school district or the prior three-year average of the school district's average daily membership;
 - (2) Determine student millage rankings by listing the computation under (1) above of this section for each school district from students with the lowest value per mill to students with the highest value per mill;

- (3) Allocate the student millage rankings into percentiles with the first percentile containing the one percent (1%) of students with the lowest value per mill and the one-hundredth percentile containing the one percent (1%) of students with the highest value per mill; and
 - (4) Divide the value of one (1) mill per student in each school district as computed under (1) above by the amount corresponding to the ninety-fifth percentile of the student millage rankings under (3) above.
 - (5) The percentage derived from the computation under (4) above is the academic facilities wealth index for a school district, which shall be computed annually and used to determine the amount of the school district's share of financial participation in a local academic facilities project eligible for state financial participation under priorities established by the Division of Public School Academic Facilities and Transportation.
- 3.04 "Add-ons" - additional academic areas or spaces which are constructed as a part of or separate additions to an existing academic area or space, and which falls under the definition of "New Construction" contained in Section 3.14 of these Rules.
- 3.05 "Arkansas Public School Academic Facilities Manual" – a document which contains uniform standards to guide the planning, design and construction of new academic facilities and additions to existing academic facilities; and which is hereby incorporated into and made a part of these Rules, as "Appendix B" to these Rules, as if the Manual was fully set forth herein. The Manual can also be accessed on the Division's website (www.arkansasfacilities.com).
- 3.06 "Commission" - the Commission for Arkansas Public School Academic Facilities and Transportation.
- 3.07 "Construction Cost" – The actual cost of constructing a new facility as defined in Section 3.14 of these Rules. It consists of all construction related costs, both direct and indirect, to include but not be limited to construction contract costs and costs associated with design, advertisement and reimbursable expenses.
- 3.08 "Conversion Project" – (1) a project that converts existing academic or non-academic space into a missing academic core, special education or student dining component of the POR and the conversion project is part of an add-on project for which the district has applied for partnership assistance. In such conversions, any partnership assistance funding from

the state is limited to only that amount of square footage required by the suitability analysis for the add-on project subject to the requirements of Section 4.01 of these Rules. The component shall meet the POR specifications when converting or adding such a space to the district; or (2) a new project that converts existing academic or non-academic space into a missing academic core space only and is in compliance with the POR space requirements. For this type of conversion project, state partnership assistance funding shall only be allowed provided the district has no suitability square footage need and the project is limited to no more than the component number and square footage spaces required in Academic Core of the POR.

- 3.09 "Division" - the Arkansas Division of Public School Academic Facilities and Transportation.
- 3.10 "Facility Condition Index" - means that particular index obtained by dividing the existing condition costs (that cost to bring a public school academic facility up to current standards) by the facility's replacement cost, using data for such costs available in 2004 or later data if the Division has such data available.
- 3.11 "Facilities master plan" - a ten-year plan developed by a school district that contains current enrollment projections, the school district's strategy for maintaining, repairing, renovating, and improving through new construction or otherwise the school district's academic facilities and equipment and other information as required by law.
- 3.12 Facilities improvement plan – an improvement plan developed by a school district for a public school or school district identified as being in academic facilities distress, or by a school district which has been notified after February 1, 2008, by the Division of non-participation in the Academic Facilities Partnership Program by failing to apply for state funding for necessary facilities to meet adequacy requirements, that supplements the school district's facilities master plan by:
- 3.12.1 Identifying specific interventions and actions the public school or school district will undertake in order to correct deficient areas of practice with regard to custodial, maintenance, repair and renovation activities with regard to academic facilities in the school district; and
 - 3.12.2 Describing how the school district will remedy those areas in which the school district is experiencing facilities distress, including the designation of the time period by which the school district will correct all deficiencies that placed the school district in facilities distress status.

- 3.13 "Local Resources" - any moneys lawfully generated by a school district for the purpose of funding the school district's share of financial participation in any academic facilities project for which a school district is eligible to receive state financial participation under priorities established by the Division. Also referred to as "raised funds" for the purpose of defining "Self-Funded Project".
- 3.14 "New Construction" - any improvement to an academic facility and, if necessary, related areas such as the physical plant and grounds, that brings the state of condition or efficiency of the academic facility to a state of condition or efficiency better than the academic facility's original condition of completeness or efficiency. "New construction" includes a new addition to an existing facility and construction of a new academic facility.
- 3.15 "New Facilities" - a new construction project which is not an addition to, renovation or conversion of, an existing facility nor a project involving maintenance, renovation or repair of an existing facility, but a new addition to a school district's building inventory .
- 3.16 "Non-academic facility" – a building or space that is not used for the provision of student instruction that is an integral part of an adequate education as described in Ark. Code Ann. § 6-20-2302. The term "non-academic facility" comprises, but is not limited to, those buildings, spaces and grounds described in Subsections 3.01.1, 3.01.3, 3.01.4 and 3.01.5 of these Rules, or any buildings, spaces or grounds that do not fit the definition of "Academic Facility" set forth in Section 3.01 of these Rules.
- 3.17 "Prioritization" - that methodology established by the Commission, and set forth in these Rules in Section 5.04, which provides a system of ranking new construction projects and those projects which are not categorized "warm, safe and dry" under Section 5.04 of these Rules submitted for state financial participation in the Partnership Program, in order to comply with Ark. Code Ann. § 6-20-2507 and the necessary and appropriate allocation of limited funding resources.
- 3.18 "Program of Requirements (POR)" – the requirements that each new construction project which is not a "warm, safe and dry" project is required to adhere to as the established minimum adequate components, and total square footage required in a school construction project as otherwise permitted in Section 4.02 of these Rules for add-on projects and as set forth in the Arkansas Public School Academic Facilities Manual. The POR is hereby incorporated into and made a part of these Rules, as "Appendix C" to these Rules, as if the POR was fully set forth herein.

- 3.19 "Project" - an undertaking in which a school district engages in:
- (a) Maintenance, repair, and renovation activities with regard to an academic facility.
 - (b) New construction (warm, safe and dry) of an academic facility; or
 - (c) Any combination of maintenance, repair, and renovation activities with regard to an academic facility and new construction activities with regard to an academic facility.
- 3.20 Project Cost – A projected construction cost determined by the Division utilizing the specific project cost funding factors stipulated in Ark. Code Ann. § 6-20-2509 and localized to regional cost centers in the state. It serves as the basis for the estimated state financial participation for partnership projects per square foot. The specific project cost funding factors, New Facilities Project Cost Funding Factor and Warm, Safe and Dry (Renovation) and Conversion Project Cost Funding Factor, are defined as set forth in Sections 3.20.1 and 3.20.2 of these Rules. Neither the New Facilities Funding Factor nor the Warm, Safe and Dry (Renovation) and Conversion Project Cost Funding Factor shall include land purchases, mold abatement or removal, environmental clean-up and supersite clean-up.
- (i) The Project Cost for newly constructed academic facilities or additions for which a square foot cost would be applicable to all facets of the construction will be the lesser of either:
 - (a) The New Facilities Project Cost Funding Factor which shall be that factor established on a regional basis by the Division in effect as of May 1, 2009, and updated annually by the Division in compliance with Ark. Code Ann. § 6-20-2509; plus the appropriate soft cost for demolition costs and/or asbestos abatement in the amount of one (1) percent of the Funding Factor for each category (however, the Funding Factor shall not increase to more than \$175.00 per square foot without the approval of the Commission) multiplied by the project approved size in square feet; or
 - (b) The actual construction cost amount of the project.
 - (ii) The Project Cost for projects which are building systems or components thereof, not covered in Section 3.20(i) of these Rules (above), will be the lesser of either:
 - (a) The Warm Safe and Dry (Renovation) and Conversion Project Cost Funding Factor (which shall be that factor established on a regional basis by the Division in effect as of May 1, 2009, and updated annually by the Division in

compliance with Ark. Code Ann. § 6-20-2509; plus the appropriate soft cost for demolition costs and/or asbestos abatement in the amount of one (1) percent of the Funding Factor for each category multiplied by the approved unit of measure per project (however, the Funding Factor shall not increase to more than \$175.00 per square foot without the approval of the Commission) multiplied by the project approved size in square feet; or

(b) The actual construction cost of the project.

3.20.1 New Facilities Project Cost Funding Factor – that factor, based upon grade level configuration of the public school academic facility and the proposed enrollment within the facility and regionalized to twelve (12) different areas within the state, which the Division will use to provide a funding amount for construction projects covered by Section 6.03(i) of these Rules on a square foot basis.

3.20.2 Warm, Safe and Dry (Renovation) and Conversion Project Cost Funding Factor - that factor, based upon the amount of square footage contained, the type of conversion of existing space to a different use or the type of item or system renovation regionalized to twelve (12) different areas within the state, which the Division will use to provide a funding amount for construction projects covered by Section 6.03(ii) of these Rules on a square foot basis.

3.21 “Project Funding Cycle” – a two (2) year cycle corresponding to the state’s biennial appropriation period, for which school districts’ Partnership Projects submitted by a specified deadline in an even-numbered year are reviewed by the Division for state financial participation by May 1 of the succeeding odd-numbered year.

3.22 “Public School Facility” – any public school building or space, including related areas such as the physical plant and grounds, this is used for any purpose, including, without limitation:

3.22.1 An extracurricular activity;

3.22.2 An organized physical activity course defined in Ark. Code Ann. § 6-16-137;

3.22.3 Pre-kindergarten education;

3.22.4 District administration;

3.22.5 Delivery of instruction to public school students that is an integral part of an adequate education as described in Ark. Code Ann. § 6-20-2302.

- 3.23 “Renovation Project” – a “warm, safe and dry” new construction project addressing a facility system. To receive state financial participation, the project must be a “warm, safe and dry” project.
- 3.24 "Resolution" - a written document voted upon and approved by at least a majority of a quorum of a school district's Board of Directors at a lawfully called meeting, which certifies the school district's dedication of local resources to meet the school district's share of financial participation in the new construction project.
- 3.25 “Schematic Drawing” – a diagram which fully illustrates all of the areas, spaces and dimensions of a new construction project, and meets any additional requirements set forth in Section 7.02(i) of these Rules. The schematic drawing does not have to be prepared by a licensed architect, but must meet the approval of the Division as to the actual detail required.
- 3.26 "School district" - a geographic area with an elected board of directors that qualifies as a taxing unit for purposes of ad valorem property taxes under Title 26 of the Arkansas Code and which board conducts the daily affairs of public schools under the supervisory authority vested in it by the General Assembly and Title 6 of the Arkansas Code.
- 3.27 “Self-Funded Project” - means a project where the moneys needed to complete the project are one hundred percent (100%) raised and provided by the school district, and that shall be submitted to and approved by the Division upon compliance with state codes and standards. Any project, whether the district requests state financial participation or not, shall meet the standards of the Arkansas Public School Academic Facilities Manual or industrial codes and the Program of Requirements.
- 3.28 "State financial participation" - the state's share of financial participation in a local academic facilities project eligible for state financial participation according to the prioritization schedule established by the Commission and set forth in Section 5.04 of these Rules.
- 3.29 “Suitability” – The process undertaken by the Division to determine whether any existing academic facility is eligible for state financial participation for new construction projects, as set forth in Section 5.04 of these Rules. The state financial participation shall be the project cost described in Section 3.20 multiplied by the difference of one hundred percent (100%) minus the school district's wealth index. Except for approved warm, safe and dry projects, only that space total gross square footage required by the POR which is not already deemed available to a school district, whether on an existing campus or a new school campus, shall be determined eligible for state financial participation.

3.29.1 On An Existing Campus:

When a school district is proposing to build an academic facility on an existing campus with existing educational facilities, the Division shall compare the appropriate existing total gross square footage space of the existing facility on the **campus** to the total gross square footage space requirements of the POR for the proposed new school facility based on the projected student enrollment by grade level. After making the comparison, the school will only be deemed to not be suitable and thus eligible for state financial participation on a proposed facility project for the additional gross square footage space required in the POR not currently available on the school **campus**. However, the state recognizes that four particular space areas existing in school districts may skew the comparison of existing space to that of the required POR space. Therefore, the Division will not count as existing space that total gross footage area above the required POR standard for the following four areas: Physical Education, Media Center, Student Dining and Performing Arts.

3.29.2 On A New School Campus:

When a school district is proposing to build a new academic facility on a school campus for which the Division determines there are no other currently existing appropriate school facilities or the district is seeking a separate LEA number for the new academic facility, the Division shall compare the total gross square footage required by the POR for the proposed facility for the appropriate student grade population to that currently existing total gross square footage available in the **district** for the appropriate student grade population less the gross square footage to be demolished as part of the proposed project. After making the comparison the school will only be deemed to not be suitable and thus eligible for state financial participation on a proposed facility project for that additional space required in the POR not currently available in the school district. The State recognizes that four particular space areas existing in the school district may skew the comparison as mentioned above in Section 3.29.1 of these Rules in the “on an existing campus” comparison. As a result, the Division will give the same consideration and not count as existing space that total gross footage area above the required POR standard already existing in the district.

3.29.3 Warm, safe and dry: For new construction projects not requesting additional space or replacement of academic square footage, state financial participation will only be provided for “warm, safe and

dry” projects as defined in Section 3.31 of these Rules. Suitability for warm, safe and dry analysis and determination shall be made on a warm, safe and dry project by project basis and shall be determined based on the actual need as determined by the Division using current Facilities Manual standards.

- 3.30 “Waiver” and “Variance” – the process by which a school district in unusual and limited circumstances may seek a waiver or variance from Sections 4.06.1, 4.06.2, 7.06 and 7.07 of these Rules as approved by the Division.
- 3.31 “Warm, safe and dry” – new construction projects that support a facility’s needs as they pertain to fire and safety needs, roofing, major plumbing replacements, major electrical replacements, HVAC systems and structural needs. These projects must apply to the entire facility or system or if a separate building the entire building. Fire and safety needs include fire alarms and warning systems and fire prevention systems, but do not include surveillance systems, security systems or closed circuit TV systems. Warm, safe and dry projects do not include asbestos abatement, land purchases, demolition and removal costs of school facility structures, environmental clean-up or supersite clean-up.

4.00 SUBMISSION PROCESS

- 4.01 All applications for state financial participation under this Partnership Program for the fiscal years 2009-2010 and 2010-2011 shall be postmarked, or received, via first class mail return receipt requested or via stamped receipt of hand delivery, in the Office of the Director of the Division of Public School Academic Facilities and Transportation, 501 Woodlane, Suite 600, Little Rock, Arkansas 72201, no later than 4:30 p.m. on May 1, 2008, and by no later than 4:30 p.m. on March 1 of every even-numbered year thereafter.
- 4.02 A school district may apply for state financial partnership participation under these Rules for projects that fall under one (1) of the following categories:

- Warm, safe and dry (renovation);
- New facilities;
- Add-ons and/or Conversions;

If the state provides financial participation for an add-on or conversion project, the district must construct any missing component to the POR specification. The district will have to choose a component contained in the POR it does not have and add it, in the following order:

- Academic Core Areas;
- Special Education;
- Student Dining;
- Administrative

The state will not participate in add-on projects concerning gymnasiums, media centers and/or auditoriums if the district already has this space and is in need (according to the POR) of Academic Core Areas, Special Education or Student Dining Areas.

The state will consider the replacement of demolished space to be a prudent and resourceful expenditure of state funds issue. School districts are encouraged to discuss such issues with the state before entering into demolition projects when the districts will be filing applications for state partnership assistance.

School districts applying for state financial participation for projects that support their Facilities Master Plan shall file applications (and approved schematic drawings) using the application forms attached to these Rules as “Appendix A” and which are hereby incorporated into and made a part of these Rules as if fully set forth herein and are listed in the district’s Facilities Master Plan. No project shall be considered for state financial partnership participation unless it is included in the district’s Facilities Master Plan.

4.02.1 For the 2008 Partnership Project cycle only, the district’s schematic drawings must be submitted by the district to the Division by August 1, 2008. For subsequent cycles, the timelines set out in Section 4.01 of these Rules concerning submission of partnership applications with schematic drawings must be complied with.

- 4.03 Except for those facilities which have FCI of greater than .65, any project that applies for state financial assistance which cannot prove suitability and involves the demolition of space for replacement of the same space will be considered a prudent and resourceful expenditure of state funds issue. To the extent that the school district can show that the facility has a FCI greater than .65 and that the renovation or replacement of the facility represents a prudent and resourceful expenditure of state funds, even though there is no suitability need, the state will consider it a project for state partnership assistance.
- 4.04 Any submission for state financial participation which does not comply with applicable state laws and these Rules shall be denied by the Division. Any district whose submission is denied by the Division under this

Section 4.04 may submit a written appeal of the Division's decision to the Commission.

- 4.05 In order to apply for state financial participation in a new construction project, a school district shall provide the Division with a detailed narrative, description and justification for the project and evidence of:
- 4.05.1 Preparation for the new construction project as demonstrated by inclusion of the new construction project in the school district's facilities master plan;
 - 4.05.2 (i) The adoption of a resolution certifying to the Division the school district's dedication of local resources to meet the school district's share of financial participation in the new construction project.

(ii) The resolution shall specify the approximate date that the board of directors of the school district intends to seek elector approval of any bond or tax measures or to apply other local resources to pay the school district's share of financial participation in the new construction project;
 - 4.05.3 The total estimated cost of the new construction project that shall be a minimum of three hundred dollars (\$300) per student or one hundred and fifty thousand dollars (\$150,000) whichever is less, per campus or district depending upon whether the project is a campus or district project.
 - 4.05.4 The new construction project's conformance with sound educational practices;
 - 4.05.5 The new construction project's compliance with current academic facilities standards, including, without limitation, appropriate space utilization of the applicable school in the district as determined by the Division;
 - 4.05.6 The allocation of project costs between new construction activities and maintenance, repair, and renovation activities if the new construction project includes improvements that could be classified as maintenance, repair, and renovation; and
 - 4.05.7 How the new construction project supports the prudent and resourceful expenditure of state funds and improves the school district's ability to deliver an adequate and equitable education to public school students in the district.

- 4.06 All proposed new construction projects shall be in compliance with the standards set forth in the Arkansas Public School Academic Facilities Manual which is attached to these Rules as “Appendix B”, as set forth in Section 3.04 of these Rules.
- 4.06.1 Variances to the Arkansas Public School Academic Facilities Manual standards may be granted by the Division upon the presentation of evidence of existing conditions that makes compliance with applicable standards impractical or unreasonably burdensome, and;
- 4.06.2 Other conditions determined by the Division as warranting a variance from applicable public school academic facility standards.
- 4.07 All applications for state financial participation under this Partnership Program for new construction projects which are not considered “warm, safe and dry” projects pursuant to these Rules shall be prepared in accordance with the Program of Requirements except in **unusual and limited circumstances (including, but not limited to, the variances set forth in Sections 4.06.1 and 4.06.2 of these Rules)** where the Division determines that a waiver of the POR is the only means whereby the district can meet adequacy requirements. The POR is attached to these Rules as “Appendix C”, as set forth in Section 3.18 of these Rules. In such instances, a district may submit a request in writing to the Division, signed by the district’s Superintendent and President of its Board of Directors, setting forth in detail the circumstances requiring the waiver for the POR. No waiver request shall be deemed granted unless and until an Order to that effect has been signed by the Division.
- 4.08 After February 1, 2008, a district may request and be granted by the Division a review conference that shall be held within twenty (20) working days after the date of request. The district may be advised through the review conference process by an architectural and engineering firm if the school district pays the cost of the advice from the architectural and engineering firm.
- 4.08.1 The review conference shall consider the following:
- (i) That the proposed project is academic;
 - (ii) The application of the space calculation to the project agreed upon by the district and the Division;
 - (iii) The wealth index of the district and the date at which the wealth index will be applied to the partnership project if approved;

(iv) The project cost promulgated by the commission under Ark. Code Ann. §6-20-2509, for the project and the date on which the project cost data will be applied to the partnership project if approved;

(v) A projected amount of state funding based on current application of the wealth index and the project cost promulgated by the commission under Ark. Code Ann. § 6-20-2509, to the planned project for planning purposes to allow a projection of local funding share required.

(vi) The Division shall make a record of the findings of the review conference.

4.09 The minimum requirement set forth in section 4.05.3 of these rules may be waived by the Division upon a recommendation being made by the Director of the Division to the Commissioners for the Division for the minimum to be waived for cause and a majority of the Commission supports the waiver.

5.00 DIVISION'S EVALUATION AND APPROVAL OF SCHOOL DISTRICT'S APPLICATION

5.01 The Division shall use criteria to evaluate a school district's application for state financial participation in a new construction project, pursuant to Ark. Code Ann. § 6-20-2507, which shall include, without limitation, the following;

5.01.1 How the school district's facilities master plan and current academic facilities do not address the following:

- (i) Student health and safety, including, without limitation, but not limited to, critical health and safety needs;
- (ii) Compliance with current academic facilities standards, including, without limitation, appropriate space utilization of existing academic facilities in the district;
- (iii) Conformance with sound educational practices;
- (iv) Curriculum improvement and diversification, including, without limitation, the use of instructional technology, distance learning, and access to advanced courses in science, mathematics, language arts, and social studies;
- (v) Multischool, multidistrict, and regional planning to achieve

the most effective and efficient instructional delivery system;

- (vi) Reasonable travel time and practical means of addressing other demographic considerations; and
- (vii) Regularly scheduled maintenance, repair, and renovation;

5.01.2 How the school district's facilities master plan and any new construction project under the facilities master plan address the following:

- (i) Student health and safety, including, without limitation, critical health and safety needs;
- (ii) Compliance with current academic facilities standards, including, without limitation, appropriate space utilization of existing academic facilities in the district;
- (iii) Conformance with sound educational practices;
- (iv) Curriculum improvement and diversification, including, without limitation, the use of instructional technology, distance learning, and access to advanced courses in science, mathematics, language arts, and social studies;
- (v) Multischool, multidistrict, and regional planning to achieve the most effective and efficient instructional delivery system;
- (vi) Reasonable travel time and practical means of addressing other demographic considerations; and
- (vii) Regularly scheduled maintenance, repair, and renovation;

5.01.3 How the new construction project supports the prudent and resourceful expenditure of state funds and improves the school district's ability to deliver an adequate and equitable education to public school students in the district;

5.01.4 How the new construction project has been prioritized by the school district; and

5.01.5 The allocation and expenditure of funds in accordance with this subchapter and the Arkansas Public School Academic Facility Program Act, Ark. Code Ann. § 6-21-801 *et seq.*

5.02 If a school district should fail to comply with any of the requirements set forth in state law and/or these Rules concerning the Division's evaluation of its application, the Division and Commission can deny the application for state financial participation.

5.03 (i) The Division shall review all projects submitted to determine their suitability for state financial participation, pursuant to the criteria set forth in Section 3.29 of these Rules.

(ii) No project that is determined by the Division to go beyond "suitable" will be approved for state financial participation.

Prioritization of Projects

5.04 All approved partnership projects shall be funded according to the following order as funding shall become available:

5.04.1 Warm, safe and dry

All warm, safe and dry new construction projects for which the Commission determines that a school district is currently not in suitable condition shall be entitled to receive state partnership assistance in a ranking of first order prior to any other partnership project. Any and all warm, safe and dry projects for which the Commission determines the district is currently in a suitable condition shall not be entitled to any state partnership assistance for that particular project or part thereof. To the extent there is limited funding available, the warm, safe and dry project shall be prioritized according to the school district's Actual Growth and Wealth Index and the campus or district FCI (depending upon the type of project for which the district applies for state partnership assistance) as is done in Sections 5.04.1.2 of these Rules.

The suitability analysis and determination of warm, safe and dry shall be performed as per Sections 3.29.3 and 3.31 of these Rules.

5.04.2 New Construction – additions to existing facilities or entirely new facilities

All new construction partnership projects which are approved by the Commission because a school district or campus is currently deemed not suitable shall be ranked and, thus, entitled to receive state partnership assistance in the following order according to the following procedure of ranked order:

First, the Division shall numerically rank all school projects based on a ten (10) year actual growth of student population review with the districts with the greatest percentage of growth being ranked first and districts with the least percentage of student growth ranked last. The growth is measured by showing (on a percentage basis) the student population growth when comparing the three quarter average daily membership of the district ten (10) years ago to the district's three quarter average daily membership in the previously completed school year. If a district has not been in existence for at least ten (10) school years as a result of the annexation or consolidation of other districts into it or with it, then for any years within the last ten (10) years for which the district was not in existence its three quarter average daily membership shall be the sum of the three quarter average daily membership of those former school districts that now comprise the school district applying for state financial participation.

Second, the Division shall numerically rank all school projects based on the Facility Condition Index (FCI) of the district or campus depending on what type of project is proposed. The projects with the greatest FCI shall be ranked first and in descending order to the projects with the least FCI.

Third, the Division shall numerically rank all school projects based on the Facilities Wealth Index of the school district. The districts with the least Wealth Index shall be ranked first with the districts with the greater Wealth Index numerically ranked last.

Fourth, the Division shall average the numerical Growth, FCI and Wealth Index ranking of each school's project. Once each project is averaged, the Division shall establish a ranked order with the projects with the lowest average score being ranked first and the projects with the highest average score being ranked last.

Any project for which the Commission determines the district or campus is currently suitable shall not be entitled for any state partnership assistance in that year's partnership cycle.

- 5.04.3 Conversion Projects: Conversion projects will be reviewed against POR requirements to determine compliance with the POR. If the Division determines that the project qualifies for state financial participation, then the project will be subject to the conditions set forth in Sections 4.00 and 5.00 of these Rules.

5.05 If the school district's new construction project or "warm, safe and dry" project is approved for funding in the current funding cycle, then the district must execute the Partnership Agreement attached to these Rules as "Appendix D", as which is hereby incorporated into these Rules as if fully forth herein. If the Partnership Agreement is not executed within the time period set forth in Section 7.06 of these Rules, unless there is an approved waiver, the state's financial participation in part or in whole may be deemed null and void by the Commission.

6.00 AVAILABILITY OF STATE FINANCIAL PARTICIPATION AND TIMELINES

6.01 State financial participation under the academic facilities partnership program is not available until July 1, of each odd numbered year. The Division shall give priority in state financial participation to school district proposals relating to academic facilities according to the prioritization process set forth in section 5.04 of these Rules.

6.02 To the extent a district's Partnership Project has been ranked of such low priority and there are not sufficient state funds available to fully fund the district's Partnership Project, the district shall be entitled to the following:

- 1.) The Division shall consider the district's current application a valid application for the next Partnership Project cycle and will prioritize and fund the application consistent with the prioritization and funding amounts utilized in the next Partnership Project cycle; or
- 2.) The district may choose to withdraw its project application prior to the next Partnership Program cycle and reapply for Partnership Project assistance in a subsequent cycle based upon that year's availability of funding pursuant to that cycle's adjusted funding rate and Partnership Program.

6.03 With regard to an academic facilities project for which a school district intends to apply for state financial participation, the Division shall notify the school district of its final decision on the application and the estimated amount of state financial participation in the new construction project no later than May 1 of each odd-numbered year.

The Division's notice of its decision on a school district's application for state financial participation in a new construction project shall include an explanation of the evaluation factors underlying the decision of the Division to provide or not provide state financial participation in support of the new construction project.

- (i) Projects, which are newly constructed academic facilities or additions for which a square foot cost would be applicable to all facets of the construction, may qualify for funding in the lesser amount of either option A: which is the dollar amount set by the Division and incorporated herein or otherwise known as New Facilities Project Cost Funding Factor which shall be that factor established on a regional basis by the Division in effect as of May 1, 2009, and updated annually by the Division in compliance with Ark. Code Ann. § 6-20-2509; plus the appropriate soft cost for demolition costs and/or asbestos abatement in the amount of one (1) percent of the Funding Factor for each category multiplied by the approved project square feet multiplied by the difference of one hundred percent (100%) minus the school district's wealth index (however, the Funding Factor shall not increase to more than \$175.00 per square foot without the approval of the Commission) or option B: which is the actual construction cost amount multiplied by the difference of one hundred percent (100%) minus the school district's wealth index.
- (ii) Projects which are building systems or components thereof, not covered in (i), above may qualify for funding in the lesser amount of either option A: the dollar amount set by the division and incorporated herein or otherwise known as the warm, safe and dry (Renovation) and Conversion Project Cost Funding Factor (which shall be that factor established on a regional basis by the Division in effect as of May 1, 2009, and updated annually by the Division in compliance with Ark. Code Ann. § 6-20-2509; plus the appropriate soft cost for demolition costs and/or asbestos abatement in the amount of one (1) percent of the Funding Factor of each category multiplied by the approved unit of measure per project multiplied by the difference of one hundred percent (100%) minus the school district's wealth index (however, the Funding Factor shall not increase to more than \$175.00 per square foot without the approval of the Commission) or option B: the actual construction cost amount multiplied by the difference of one hundred percent (100%) minus the school district's wealth index.

7.00 AGREEMENT BETWEEN THE DIVISION AND THE SCHOOL DISTRICT CONCERNING STATE FINANCIAL PARTICIPATION

- 7.01 If the Division determines that the new construction project is eligible for state financial participation, the Division and the school district shall enter into an agreement specifying the terms of the state's financial participation and the conditions that must be satisfied by the school district.

7.02 At a minimum, the agreement shall:

- (i) Identify the estimated amount of local financial participation and state financial participation in the new construction project. The estimated amount of the state's financial participation, as stated in the agreement, will be arrived at after the schematic drawings and any variances to the Arkansas Public School Academic Facilities Manual are considered for new facilities, new additions to facilities or renovations or conversions. Schematic drawings should include as a minimum, single line drawings with dimensions, labeled to identify all spaces in the "footprint" of the entire project. For "warm, safe and dry" projects, the major system components and their location should be identified. The final amount of the State's financial participation will be specified upon receipt of the final contract amount and determined as specified in section 6.03 of these rules:
- (ii) Define the method of and schedule for transferring state financial participation funds to the school district;
- (iii) Identify whether the new construction project includes any improvements that are classified as maintenance, repair, and renovation, and how the project costs will be allocated between new construction activities and maintenance, repair, and renovation activities;
- (iv) Define the detailed scope of work for which the agreement applies;
- (v) Provide that changes to the plans for the new construction project shall be made in consultation with the Division;
- (vi) Provide the areas of project responsibility of both parties during the course of the project;
- (vii) Provide that the district shall be in compliance with all state laws concerning bidding and construction;
- (viii) Provide that the Division or any person acting on behalf of the Division may conduct on-site inspections of the new construction project as frequently as the Division deems necessary to assure the prudent and resourceful expenditure of state funds with regard to public school academic facilities;
- (ix) Determine how risk will be allocated between the school district and the state if the new construction project is not completed;

- (x) Describe how changes in the school district's wealth index over the course of the new construction project will be treated; and
 - (xi) Specify that the agreement is void and the state will have no further obligation to provide state funds to the school district for the new construction project that is the subject of the agreement if the school district does not raise local resources and apply local resources toward the new construction project as provided under the agreement.
- 7.03 The agreement specified above and required by Ark. Code Ann. § 6-20-2507 is attached to these Rules as “Appendix D”, as set forth in Section 5.05 of these rules.
- 7.04 All funding agreements under these Rules are contingent upon the prudent and resourceful expenditure of state funds as determined by the Division.
- 7.05 Before the district is allowed to proceed and start construction on the project, the district must submit, and the Division must approve, its final plans and complete specifications.
- 7.06 Within sixty (60) days of the Commission’s final approval of the district’s partnership project, the agreement referenced in Sections 7.02 and 7.03 of these rules must be executed by the district and the Division. The Division shall have the right to grant a waiver from this provision, if the district has unusual and limited circumstances which prevent it from executing the agreement within the sixty (60) day timeframe.
- 7.07 If the Partnership Agreement is not executed within the time period set forth in Section 7.06 of these Rules, unless there is an approved appeal or waiver request pending, the state’s financial participation in whole or in part may be deemed null and void by the Division.

Construction of the project must begin within eighteen (18) months from the date of the final approval of the project by the Commission. The district must obtain the Division’s approval of the completion of all district project requirements within four (4) years from the date of final approval of the project by the Commission.

A district may request a waiver of timelines in Section 7.07 of these Rules if the district believes it can show unusual and limited circumstances which prevent it from meeting the timelines. State financial participation in a district’s project is contingent upon the district meeting all timelines and deadlines set forth in these Rules. Absent an approved appeal or waiver, the Division may render the state’s financial participation in a district’s project null and void in whole or in part for failure to meet all of

the timelines and deadlines set forth in these Rules and may recapture any state partnership funding assistance funds already paid to the district.

8.00 APPEAL PROCESS

8.01 (i) A school district may appeal any determination of the Division to the Commission pursuant to the Rules Governing Commission Appeals.

(ii) If the district appeals the determination of the Division to the Commission, the Commission shall have the authority to fully review all parts of the district's Partnership Project(s) (project) and may approve, deny, reduce or increase the amount of state financial participation in any or all of the appealed project(s).

9.00 DISTRIBUTION AND TRACKING OF STATE FINANCIAL PARTICIPATION

9.01 If a school district qualifies for state financial participation under this section, the Division shall certify the amount of state financial participation to the Commission for oversight purposes. The Commission shall certify the amount to the Arkansas Department of Education for payment.

9.02 The amount of the State Financial Participation under these rules is limited to the amount resulting from the application of the academic facilities wealth index to the project cost promulgated by the Commission to calculate the cost necessary to bring the academic facility into compliance with the Arkansas Public School Academic Facilities Manual under Ark. Code. Ann. § 6-20-2509.

9.03 The Commission shall certify the amount to the Arkansas Department of Education for payment, less any withholding or reduction imposed by the Commission under Ark. Code Ann. § 6-21-114 (d) for a school district's failure to comply with the Commission's insurance requirements.

9.04 For tracking purposes, the school district shall account for the funds received as state financial participation under this section as restricted funds and shall account for the funds in accordance with provisions of law, including, without limitation, the Arkansas Educational Financial Accounting and Reporting Act of 2005, Ark. Code Ann. § 6-20-2201 *et seq.* and Rules established by the Arkansas State Board of Education and the Commission.

STATE OF ARKANSAS

**DIVISION OF PUBLIC SCHOOL ACADEMIC FACILITIES and
TRANSPORTATION**

**ACADEMIC FACILITIES PARTNERSHIP PROGRAM
Fiscal Years 2010 and 2011**

**July 1, 2009-June 30, 2010
and
July 1, 2010-June 30, 2011**

Application Form

Arkansas Division of Public School



Academic Facilities & Transportation

SUBMITTAL DEADLINE May 1, 2008

Revised March 12, 2008

**DIVISION OF PUBLIC SCHOOL ACADEMIC FACILITIES and
TRANSPORTATION**

ACADEMIC FACILITIES PARTNERSHIP PROGRAM

I. Eligibility for Funding:

1. The project cost shall be a minimum of \$300 per student or \$150,000, whichever is less. Same system projects may not be combined across multiple facilities (campuses) nor multiple system projects combined to meet the minimum dollar threshold for Partnership Program funding. (The minimum project cost requirement may be waived if recommended by the Division director and a majority of the Commissioners vote to support the waiver.)
2. Projects must be “new construction” projects as defined in paragraph 3.14 of these rules. Maintenance and repair projects including the simple replacement of facility systems are not eligible for Partnership Program funding.

II. Application Process

- A. School districts must complete the application forms included in these guidelines, providing all requested information. School districts must complete one Part A for their application and must complete Parts B and C for each project submitted.
- B. All applications for state financial participation under this program for fiscal years 2010 (July 1, 2009 – June 30, 2010) and 2011 (July 1, 2010 – June 30, 2011) shall be submitted in accordance with paragraph 4.01 of these rules.
 1. School districts may submit only one application and shall identify all new construction academic facilities projects on the application in order of district priority..
 2. If additional space is required in filling out any part of this application, continuation sheets may be used as attachments.
- C. Project narratives, descriptions, and justifications submitted in Part B, item B.6 must be complete so that the division can fully understand the scope of the project in order to review the project and determine state financial participation, if applicable. Projects must also include a schematic (line) drawing as defined in Section 3.25 and described in paragraph 7.02 of these rules by August 1, 2008.

III. On-Site Assessments:

Upon receipt and an initial review and evaluation of a school district’s application for Partnership funding, the Division reserves the right to conduct an on-site assessment of the proposed project.

Application Form

Date Prepared:

NOTE: Starting year is defined as the year that design begins on the project.

Part A: District Contact Information

A.1. District Name:			
A.2. District LEA:		A.3. County:	
A.4. Address			
A.5. Number of Partnership Projects being submitted for State Financial Participation for Fiscal Year 2009-2010:			
A.5.A Number of Partnership Projects being submitted for State Financial Participation for Fiscal Year 2010-2011:			
A.6. List of Partnership Program Projects starting in FY 2009-2010: Please place in order of district priority (1 is the highest priority). Use format of Name/Master Plan Project Number, e.g. New HS/0910-4401-001.			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
(If more than ten, please insert additional lines)			
A.7. List of Partnership Program Projects starting in FY 2010-2011: Please place in order of district priority (1 is the highest priority). Use format of Name/Master Plan Project Number, e.g. New HS/1011-4401-001.			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
(If more than ten, please insert additional lines)			
A.8. Superintendent:			
A.9. Superintendent Phone:			
A.10. Contact person other than Superintendent:			
Name:			Title:
Phone:			Email:

ACADEMIC FACILITIES PARTNERSHIP PROGRAM 2009-2011

Part B: Project General Information

(Please download and complete Part B for each project)

Please Check All That Apply:

New school (If applicable, name of existing school that new school will replace)

Addition to existing facility (includes new building on existing campus)
 “Warm, Safe, and Dry” renovation (exceeds original condition) to an existing facility

Conversion of space in existing facility
 Includes maintenance, repair or renovation (to original condition – not qualified for state financial participation)

<u>Project Information:</u>	
B.1. Name of School District:	B.2. District LEA:
B.3. Name of School and Address:	
B.4. Type of Facility:	
B.5. Project Title and Project Number as listed in Part A:	
B.6. Provide detailed scope information to allow the Division to determine all aspects of the project and formulate state financial participation. Provide schematic drawings. For renovations, include descriptions of existing and replacement systems and quantities. Description must include general dimensions and construction type. Examples are as follows. (a) New roof: existing 2 ply flat roof about 8,000 square feet. Replacement roof is 2 ply pitched roof, 3:12 slope, with Durolast, 8,000 square feet. (b) Addition of 10,000 square feet to existing facility. Add 8 classrooms at elementary school. 4 regular classrooms, 2 special purpose rooms, 1 art, and 1 music room.	

Part B Continued: Project General Information

Project Name

Project Number used in A.6. or A.7.

(If new construction project is an <u>improvement/renovation of an existing facility</u>)	
B.7. Original Construction Date:	B.8. Years of Prior Addition(s):
B.9. Square Footage:	B.10. Grades Served:
B.11. Facility Condition Index (of existing facility):	B.12. School Enrollment:
B.13. Square feet/Student:	
(If new construction is an <u>addition to an existing school (including a new building) or space conversion</u>)	
B.14. Facility Condition Index (of existing facility):	B.15. Current School Enrollment:
<p>B.16</p> <p>(A) District must submit completed Program of Requirements (POR) contained in Section 2, Chapter 5, <u>Arkansas School Facility Manual</u> for the existing school campus.</p> <p>(B) On Summary sheet enter projected NUMBER OF STUDENTS by grade configuration and TOTAL SPACE EXISTING CAMPUS (#4).</p> <p>(C) On Suitability Analysis sheet enter gross area in SF for existing Physical Education, Media Center, Student Dining, and Performing Arts program areas if these spaces exist in the school.</p> <p>(D) Enter all NEW SPACES included in addition, conversion, or new building project.</p> <p>(E) Enter Qty and AREA of existing REQUIRED SPACES and Workforce Development spaces in their final configuration after any space conversions. (AREA of existing spaces may be estimated.)</p>	
(If new construction is a <u>new school campus</u>)	
B.17. Site Size (acres):	
<p>B.18</p> <p>(A) District must submit completed Program of Requirements (POR) contained in Section 2, Chapter 5, <u>Arkansas School Facility Manual</u> as described below for new and existing school campuses.</p> <p>(B) For new school campus, enter projected NUMBER OF STUDENTS by grade configuration and all NEW SPACES to be included in school.</p> <p>(C) Submit a POR Summary sheet and Suitability Analysis sheet for <u>each</u> existing campus in the district with the same grade levels as the proposed new school. (If district grade assignments are to be reconfigured, existing schools should reflect final grade configurations.) -</p> <p>(1) On Summary sheet enter projected NUMBER OF STUDENTS by grade configuration and TOTAL SPACE EXISTING CAMPUS (#4).</p> <p>(2) On Suitability Analysis sheet enter gross area in SF for existing Physical Education, Media Center, Student Dining, and Performing Arts program areas if these spaces exist in the school.</p>	

ACADEMIC FACILITIES PARTNERSHIP PROGRAM 2009 – 2011

Part C: Project Funding Criteria						
<i>(Please download and complete Part C for each project)</i>						
School District:						
School:						
Project Name:						
Project Number used in A.6. or A.7.						
C.1. New Construction Project Cost						
TOTAL estimated project Costs (including professional fees for design and construction management, construction, furniture, technology, site costs, land purchase (if applicable)etc. anticipated to be part of this project):						
Design Costs:			Construction Management Costs:			
Total project funds (local plus state) required for fiscal year 2009-2010:						
Total project funds (local plus state) required for fiscal year 2010-2011:						
Total project funds (local plus state) required for fiscal year 2011-2012:						
Total project funds (local plus state) required for fiscal year 2012-2013:						
Total project funds (local plus state) required for fiscal year 2013-2014:						
C.2. Indicate how the school district intends to fund their share of the partnership program: NOTE: If more than one source of district funds is to be used, indicate what percentage of the district's share of each type funds will support the project.						
A. District share to be funded through existing operational fund balances:		YES		NO		%
B. District share to be funded through any State or Federal grant:		YES		NO		%
C. District share to be funded through bonds already secured:		YES		NO		%
D. District share to be funded through bonds to be secured in an election during the course of the project:		YES		NO		%
E. Indicate the FY in which you intend to apply for permission to sell bonds to support this project.		FY:				
C.3. Does the new construction project include work that could be classified as maintenance, repair, and renovation (and does not qualify for state financial participation)? Please indicate: If NO, please skip to question C.4.				YES		NO
If yes, please provide the allocation of project costs between new construction activities and maintenance, repair, and renovation activities below:						
Total Maintenance, Repair, Renovation Costs (These costs are not eligible for state financial participation because the completed project facility condition does not exceed original condition):						
Total New Construction Costs:						
C.4. Project Construction Dates						
A. Estimated date of start of project design {mm/dd/yyyy}:						
B. Estimated date of start of construction {mm/dd/yyyy}:						
C. Estimated date of completion of construction {mm/dd/yyyy}:						

Project Name and Number

C.5 Discuss how this project ties to and supports the major emphasis of the district Facilities Master Plan.

C.6. Discuss how this new construction project supports sound educational practices. Does project improve practices of entire district, several schools, or only one school?

C.7. Discuss the new construction project's compliance with current academic facilities standards as contained in the Arkansas School Facility Manual, including, without limitation, appropriate space utilization of existing academic facilities in the district.

C.8 Discuss how the new construction project supports the prudent and resourceful expenditure of state funds and improves the school district's ability to deliver an adequate and equitable education to public school students in the district.

Project Name and Number

C.9. Discuss the new construction project's improvements to health and safety needs, including the addressing of critical health and safety needs.

C.10. Discuss the new construction project's effect on curriculum improvement and diversification, including, if applicable 1) the use of instructional technology, 2) distance learning, and 3) access to advanced courses in science mathematics, language arts, and social studies. Please discuss all three areas.

C.11. Discuss the school district's multi-school, multi-district and regional planning to achieve the most effective and efficient instructional delivery system.

C.12. Discuss the new construction project's impacts on reasonable travel time and practical means of addressing other demographic considerations.

Part D: Submission Requirements

1. All applications for state financial participation under this program shall be postmarked or received, via first class mail return receipt requested or via stamped receipt of hand delivery, in the Office of the Director of The Division of Public School Academic Facilities and Transportation, 501 Woodlane St., Suite 600, Little Rock, Arkansas 72201, no later than 4:30 pm on May 1, 2008, for fiscal years 2009-2011.
2. School districts may only submit one application and shall identify all new construction projects of academic facilities on the application.
3. If additional space is required in filling out any part of this application, insertions may be used to provide additional information. However, the application form should not be modified to omit or delete any information.
4. School districts must submit:
 - a. This application completed in its entirety. Complete one Part A with general school district information. Complete one Part B and one Part C for each project submitted for Partnership Program Funding. **(Note Part B requirements for submission of Arkansas School Facility Manual Program of Requirements.**
 - b. A resolution certifying to the Division the school district's dedication of local resources to meet the school district's share of financial participation in the new construction project. The resolution shall specify the approximate date that the board of directors of the school district intends to seek elector approval of any bond or tax measure or to apply other local resources to pay the school district's share of the financial participation in the new construction project.
 - c. Schematic (line) drawings or preliminary designs as defined in Section 3.25 and described in paragraph 7.02 of these rules by August 1, 2008.

Chapter 1	How to Use This Section
	1000-1 Introduction
	1100-1 Executive Summary
	1200-1 Planning, Design, and Construction Process
	1300-1 Definitions
	1400-1 Abbreviations
Chapter 2	Educational Facility Planning Concepts
	2000-1 Best Practices
	2100-1 Special Education
	2200-1 Workforce Development
Chapter 3	Educational Framework
	3000-1 Principles
Chapter 4	Site Guidelines
	4000-1 Introduction
	4100-1 Site Selection Criteria – Site Size
	4100-2 Site Selection Criteria – Urban Sites
	4100-3 Site Selection Criteria – Urban Sites - Parking
	4100-4 Site Selection Criteria – Urban Sites - Elementary Schools
	4100-5 Site Selection Criteria – Urban Sites - Middle Schools
	4100-6 Site Selection Criteria – Urban Sites - High Schools
	4100-7 Site Selection Criteria – Outdoor Athletic and Recreation Fields
	4200-1 Site Design
Chapter 5	Program of Requirements (Bracketing)
	5000-1 Introduction and Overview
	5000-7 Square Foot Allowance Charts
	5100-1 Elementary Schools
	5200-1 Middle Schools
	5300-1 High Schools
	5400-1 PK-8 Schools
	5500-1 PK-12 Schools
	5600-1 K-12 Schools (2009-2011 Partnership Program)
Chapter 6	Program Space Guidelines
	6000-1 Introduction
	Elementary School Space Plates
	Academic Core Spaces
	6101-1 E-AC-1 Pre-Kindergarten Classroom
	6101-2 E-AC-2 Pre-Kindergarten Restroom
	6101-3 E-AC-3 Kindergarten Classroom
	6101-4 E-AC-4 Kindergarten Restroom
	6101-5 E-AC-5 Elementary Classroom
	6101-6 E-AC-6 Teacher Prep Area/Workroom
	6101-7 E-AC-7 Individual Restroom
	6101-8 E-AC-8 Instructional Material Storage
	6101-9 E-AC-9 Instructional Multi-Purpose Room
	6101-10 E-AC-10 Fine Arts Instruction Room
	6101-11 E-AC-11 Fine Arts Instruction Storage
	Special Education Spaces
	6102-1 E-SE-1 Self-contained Classroom

6102-2	E-SE-2	Workroom/Conference
6102-3	E-SE-3	Restroom/Shower
6102-4	E-SE-4	Special Education/Resource
6102-5	E-SE-5	Speech Therapy
6102-6	E-SE-6	Storage
6102-7	E-SE-7	Occupational and Physical Therapy

Administrative Spaces

6103-1	E-AD-1	Reception Area
6103-2	E-AD-2	Secretarial Area
6103-3	E-AD-3	Principal's Office
6103-4	E-AD-4	Assistant Principal's Office
6103-5	E-AD-5	Conference Room
6103-6	E-AD-6	Mail/Work/Copy Room
6103-7	E-AD-7	Administrative Storage
6103-8	E-AD-8	Vault/Records Storage
6103-9	E-AD-9	In-school Suspension
6103-10	E-AD-10	Restroom
6103-11	E-AD-11	Guidance Counselor's Office
6103-12	E-AD-12	Guidance Reception
6103-13	E-AD-13	Guidance Records/Storage
6103-14	E-AD-14	Parent Center
6103-15	E-AD-15	Health Clinic
6103-16	E-AD-16	Itinerant Personnel Office
6103-17	E-AD-17	Family Restroom

Media Center Spaces

6104-1	E-MC-1	Reading Room/Circulation
6104-2	E-MC-2	Media Specialist Office
6104-3	E-MC-3	Workroom/Storage
6104-4	E-MC-4	Computer Lab
6104-5	E-MC-5	A/V Storage
6104-6	E-MC-6	Conference Room

Visual Art Spaces

6105-1	E-VA-1	Art Room
6105-2	E-VA-2	Kiln/Ceramic Storage
6105-3	E-VA-3	Art Material Storage

Music Spaces

6106-1	E-MU-1	Music Room
6106-2	E-MU-2	Music Storage

Physical Education Spaces

6107-1	E-PE-1	Gymnasium
6107-2	E-PE-2	P.E. Workroom/Storage

Student Dining Spaces

6108-1	E-SD-1	Student Dining
6108-2	E-SD-2	Stage
6108-3	E-SD-3	Staff Dining
6108-4	E-SD-4	Table Storage

Food Service Spaces

6109-1	E-FS-1	Warming Kitchen
6109-2	E-FS-2	Kitchen
6109-3	E-FS-2a	Preparation Area
6109-4	E-FS-2b	Serving Area
6109-5	E-FS-2c	Dry Food Storage
6109-6	E-FS-2d	Cooler/Freezer
6109-7	E-FS-2e	Ware Washing
6109-8	E-FS-3	Dietician's Office

6109-9	E-FS-4	Restroom
6109-10	E-FS-5	Locker Room

Custodial Spaces

6110-1	E-CU-1	Workroom
6110-2	E-CU-2	Custodial Office

Building Services

6111-1	E-BS-1	Large Group Restrooms
6111-2	E-BS-2	Custodial Closet
6111-3	E-BS-3	Electrical Closet
6111-4	E-BS-4	Telecommunications Room
6111-5	E-BS-5	Corridors
6111-6	E-BS-6	Mechanical Room/Electrical Space/Decks
6111-7	E-BS-7	Storage Area
6111-8	E-BS-8	Central Storage Area
6111-9	E-BS-9	Loading/Receiving Area
6111-10	E-BS-10	Main Cross-connect

Middle School Space Plates

Academic Core Spaces

6201-1	M-AC-1	Middle School Classroom
6201-2	M-AC-2	Project Laboratory
6201-3	M-AC-3	Teacher Prep Area/Workroom
6201-4	M-AC-4	Individual Restroom
6201-5	M-AC-5	Instructional Material Storage
6201-6	M-AC-6	Small Group Room
6201-7	M-AC-7	Instructional Multi-purpose Room

Special Education Spaces

6202-1	M-SE-1	Self-contained Classroom
6202-2	M-SE-2	Workroom/Conference
6202-3	M-SE-3	Restroom/Shower
6202-4	M-SE-4	Special Education/Resource
6202-5	M-SE-5	Speech Therapy
6202-6	M-SE-6	Storage
6202-7	M-SE-7	Occupational and Physical Therapy

Administrative Spaces

6203-1	M-AD-1	Reception Area
6203-2	M-AD-2	Secretarial Area
6203-3	M-AD-3	Principal's Office
6203-4	M-AD-4	Assistant Principal's Office
6203-5	M-AD-5	Conference Room
6203-6	M-AD-6	Mail/Work/Copy Room
6203-7	M-AD-7	Administrative Storage
6203-8	M-AD-8	Vault/Records Storage
6203-9	M-AD-9	In-school Suspension
6203-10	M-AD-10	Restroom
6203-11	M-AD-11	Guidance Counselor's Office
6203-12	M-AD-12	Guidance Reception
6203-13	M-AD-13	Guidance Records/Storage
6203-14	M-AD-14	Parent Center
6203-15	M-AD-15	Health Clinic
6203-16	M-AD-16	Itinerant Personnel Office
6203-17	M-AD-17	Family Restroom

Media Center Spaces

6204-1	M-MC-1	Reading Room/Circulation
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6204-2	M-MC-2	Media Specialist Office
6204-3	M-MC-3	Workroom/Storage
6204-4	M-MC-4	Computer Lab
6204-5	M-MC-5	A/V Storage
6204-6	M-MC-6	Conference Room
6204-7	M-MC-7	Multimedia Production Room
Visual Arts Spaces		
6205-1	M-VA-1	Art Room
6205-2	M-VA-2	Kiln/Ceramic Storage
6205-3	M-VA-3	Art Material Storage
Music Spaces		
6206-1	M-MU-1	Instrumental Room
6206-2	M-MU-2	Vocal Room
6206-3	M-MU-3	Music Office
6206-4	M-MU-4	Music Library
6206-5	M-MU-5	Music Storage
Workforce Development Spaces		
6207-1	M-WD-1	Modular Technology Lab
6207-2	M-WD-2	Production Lab
6207-3	M-WD-3	Storage
Family and Consumer Science Spaces		
6208-1	M-FCS-1	Life Skills Lab
6208-2	M-FCS-2	Life Skills Storage
Physical Education Spaces		
6209-1	M-PE-1	Gymnasium
6209-2	M-PE-2	P.E./Athletic Office
6209-3	M-PE-3	Staff Shower
6209-4	M-PE-4	Student Locker Room
6209-5	M-PE-5	Student Restroom/Shower
6209-6	M-PE-6	Physical Education Storage
Student Dining		
6210-1	M-SD-1	Student Dining
6210-2	M-SD-2	Stage
6210-3	M-SD-3	Staff Dining
6210-4	M-SD-4	Table Storage
Food Service Spaces		
6211-1	M-FS-1	Warming Kitchen
6211-2	M-FS-2	Kitchen
6211-3	M-FS-2a	Preparation Area
6211-4	M-FS-2b	Serving Area
6211-5	M-FS-2c	Dry Food Storage
6211-6	M-FS-2d	Cooler/Freezer
6211-7	M-FS-2e	Ware Washing
6211-8	M-FS-3	Dietician's Office
6211-9	M-FS-4	Restroom
6211-10	M-FS-5	Locker Room
Custodial Spaces		
6212-1	MCU-1	Workroom
6212-2	MCU-2	Custodial Office
Building Services		
6213-1	M-BS-1	Large Group Restrooms
6213-2	M-BS-2	Custodial Closet
6213-3	M-BS-3	Electrical Closet
6213-4	M-BS-4	Telecommunications Room
6213-5	M-BS-5	Corridors

6213-6	M-BS-6	Mechanical Room/Electrical Space/Decks
6213-7	M-BS-7	Storage Area
6213-8	M-BS-8	Central Storage Area
6213-9	M-BS-9	Loading/Receiving Area
6213-10	M-BS-10	Main Cross-connect

High School Space Plates

Academic Core Spaces

6301-1	H-AC-1	High School Classroom
6301-2	H-AC-2	Science Classroom – General/Physics
6301-3	H-AC-3	Science Classroom – Chemistry
6301-4	H-AC-4	Science Classroom – Biology
6301-5	H-AC-5	Science Prep
6301-6	H-AC-6	Teacher Prep Area/Workroom
6301-7	H-AC-7	Individual Restroom
6301-8	H-AC-8	Project/Classroom
6301-9	H-AC-9	Small Group Room
6301-10	H-AC-10	Instructional Material Storage
6301-11	H-AC-11	Chemical Storage
6301-12	H-AC-12	Multi-use Room
6301-13	H-AC-13	Instructional Multi-purpose Room

Special Education Spaces

6302-1	H-SE-1	Self-contained Classroom
6302-2	H-SE-2	Workroom/Conference
6302-3	H-SE-3	Restroom/Shower
6302-4	H-SE-4	Special Education/Resource
6302-5	H-SE-5	Speech Therapy
6302-6	H-SE-6	Storage
6302-7	H-SE-7	Occupational and Physical Therapy

Administrative Spaces

6303-1	H-AD-1	Reception Area
6303-2	H-AD-2	Secretarial Area
6303-3	H-AD-3	Principal's Office
6303-4	H-AD-4	Assistant Principal's Office
6303-5	H-AD-5	Conference Room
6303-6	H-AD-6	Mail/Work/Copy Room
6303-7	H-AD-7	Administrative Storage
6303-8	H-AD-8	Vault/Records Storage
6303-9	H-AD-9	In-school Suspension
6303-10	H-AD-10	Restroom
6303-11	H-AD-11	Guidance Counselor's Office
6303-12	H-AD-12	Guidance Records/Storage
6303-13	H-AD-13	Guidance Conference/Group Procedures Room
6303-14	H-AD-14	Guidance Reception and Display Area
6303-15	H-AD-15	Parent Center
6303-16	H-AD-16	Health Clinic
6303-17	H-AD-17	Itinerant Personnel Office
6303-18	H-AD-18	Career Center
6303-19	H-AD-19	Family Restroom

Media Center Spaces

6304-1	H-MC-1	Reading Room/Circulation
6304-2	H-MC-2	Media Specialist Office
6304-3	H-MC-3	Workroom/Storage
6304-4	H-MC-4	A/V Storage
6304-5	H-MC-5	Conference Room

6304-6	H-MC-6	Multimedia Production Room
6304-7	H-MC-7	Document Storage

Visual Arts Spaces

6305-1	H-VA-1	Art Room
6305-2	H-VA-2	Kiln/Ceramic Storage
6305-3	H-VA-3	Art Material Storage

Music Spaces

6306-1	H-MU-1	Instrumental Room
6306-2	H-MU-2	Instrument Storage
6306-3	H-MU-3	Instrument Repair Room
6306-4	H-MU-4	Orchestra Storage
6306-5	H-MU-5	Instrumental Music Library
6306-6	H-MU-6	Instrumental Office
6306-7	H-MU-7	Uniform Storage
6306-8	H-MU-8	Vocal Room
6306-9	H-MU-9	Vocal Storage
6306-10	H-MU-10	Vocal Music Library
6306-11	H-MU-11	Vocal Office
6306-12	H-MU-12	Ensemble Room
6306-13	H-MU-13	Practice Room
6306-14	H-MU-14	Restroom

Physical Education Spaces

6307-1	H-PE-1	Gymnasium
6307-2	H-PE-2	Auxiliary Gymnasium
6307-3	H-PE-3	Student Locker Room
6307-4	H-PE-4	Student Restroom/Shower
6307-5	H-PE-5	Physical Education Storage
6307-6	H-PE-6	P.E./Athletic Office
6307-7	H-PE-7	Staff Shower
6307-8	H-PE-8	Athletic Director's Office
6307-9	H-PE-9	Lobby Services
6307-10	H-PE-10	Training Room
6307-11	H-PE-11	Physical Health Classroom
6307-12	H-PE-12	Multi-use P.E. Room

Student Dining Spaces

6308-1	H-SD-1	Student Dining
6308-2	H-SD-2	Staff Dining
6308-3	H-SD-3	Table Storage

Performing Arts Spaces

6309-1	H-PA-1	Auditorium
6309-2	H-PA-2	Orchestra Pit
6309-3	H-PA-3	Stage Area
6309-4	H-PA-4	Scene Shop
6309-5	H-PA-5	Scene Shop Storage
6309-6	H-PA-6	Make-up/Dressing Room
6309-7	H-PA-7	Green Room
6309-8	H-PA-8	Costume Storage
6309-9	H-PA-9	Control Room
6309-10	H-PA-10	Lobby/Concessions/Gallery
6309-11	H-PA-11	Ticket Booth
6309-12	H-PA-12	Theatre/Drama Office
6309-13	H-PA-13	Storage

Food Service Spaces

6310-1	H-FS-1	Warming Kitchen
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6310-2	H-FS-2	Kitchen
6310-3	H-FS-2a	Preparation Area
6310-4	H-FS-2b	Serving Area
6310-5	H-FS-2c	Dry Food Storage
6310-6	H-FS-2d	Cooler/Freezer
6310-7	H-FS-2e	Ware Washing
6310-8	H-FS-3	Dietician's Office
6310-9	H-FS-4	Restroom
6310-10	H-FS-5	Locker Room
Custodial Spaces		
6311-1	H-CU-1	Workroom
6311-2	H-CU-2	Custodial Office
Building Services		
6312-1	H-BS-1	Large Group Restrooms
6312-2	H-BS-2	Custodial Closet
6312-3	H-BS-3	Electrical Closet
6312-4	H-BS-4	Telecommunications Room
6312-5	H-BS-5	Corridors
6312-6	H-BS-6	Mechanical Room/Electrical Space/Decks
6312-7	H-BS-7	Storage Area
6312-8	H-BS-8	Central Storage Area
6312-9	H-BS-9	Loading/Receiving Area
6312-10	H-BS-10	Main Cross-connect

Workforce Development Space Plates

Agriculture Spaces

Agribusiness Systems

6313-1 WD-AG-1 Agribusiness Lab

Agricultural Power, Structural, & Technical Systems

6313-2 WD-AG-2 Ag Mechanics Lab

6313-3 WD-AG-3 Outdoor Covered Work Area

Agricultural Science – Animal or Plant Systems

6313-4 WD-AG-4 Outdoor Animal Science Lab

Horticulture/Plant Systems

6313-5 WD-AG-5 Greenhouse

6313-6 WD-AG-6 Cold Frame

6313-7 WD-AG-7 Shade House

6313-8 WD-AG-8 Hydroponics Lab

Natural Resources/Environmental Service Systems

6313-9 WD-AG-9 Aquaculture Lab

Related Spaces

6313-10 WD-AG-10 Classroom

6313-11 WD-AG-11 Office

6313-12 WD-AG-12 Restroom/Locker Room

6313-13 WD-AG-13 Storage

Business & Marketing Spaces

Management

6314-1 WD-BM-1 Management Lab

Office Administration

6314-2 WD-BM-2 Office Administration Lab

Hospitality

6314-3 WD-BM-3 Hospitality Lab

Lodging

6314-4 WD-BM-4 Lodging Lab

Desktop Publishing

6314-5 WD-BM-5 Desktop Publishing Lab

Multimedia

6314-6 WD-BM-6 Multimedia Lab

Programming

6314-7 WD-BM-7 Programming Lab

Accounting

6314-8 WD-BM-8 Accounting Lab

Banking & Finance

6314-9 WD-BM-9 Banking & Finance Lab

Marketing

6314-10 WD-BM-10 Marketing Lab

Related Spaces

6314-11 WD-BM-11 Classroom

6314-12 WD-BM-12 Office

6314-13 WD-BM-13 Storage

Family & Consumer Science Spaces

Family & Consumer Sciences

6315-1 WD-FCS-1 Family & Consumer Science Lab

6315-2 WD-FCS-2 Food Prep Lab [kitchen units]

6315-3 WD-FCS-3 Sewing Lab

6315-4 WD-FCS-4 Fitting Room

6315-5 WD-FCS-5 Laundry Room

Education & Training

6315-6 WD-FCS-6 Education & Training Lab

Food Production, Management, & Services

6315-7 WD-FCS-7 Food Production, Management, & Services Lab

6315-8 WD-FCS-8 Food Prep Lab [kitchen units]

Facilities Management, Maintenance, & Services

6315-9 WD-FCS-9 Facilities Management, Maintenance, & Services Lab

Child Care Guidance, Management, & Services

6315-10 WD-FCS-10 Child Care Guidance, Management, & Services Lab

6315-11 WD-FCS-11 Laundry Room

Cosmetology

6315-12 WD-FCS-12 Cosmetology Lab

6315-13 WD-FCS-13 Cosmetology Clinic Area

6315-14 WD-FCS-14 Cosmetology Instruction Area

Related Spaces

6315-15 WD-FCS-15 Classroom

6315-16 WD-FCS-16 Office

6315-17 WD-FCS-17 Restroom

6315-18 WD-FCS-18 Storage

Architecture & Construction Spaces

Construction Technology

6316-1 WD-ARC-1 Construction Technology Lab

HVACR

6316-2 WD-ARC-2 HVACR Lab

Related Spaces

6316-3 WD-ARC-3 Classroom

6316-4 WD-ARC-4 Office

6316-5 WD-ARC-5 Storage

Arts, A/V Technology, & Communication Spaces

Advertising Design

6317-1 WD-AV-1 Advertising Design Lab

Career Communications

6317-2 WD-AV-2 Career Communications Lab

Commercial Photography

- 6317-3 WD-AV-3 Photography Production Lab
- 6317-4 WD-AV-4 Photography Workroom
- 6317-5 WD-AV-5 Photography Darkroom

Graphic Communications

- 6317-6 WD-AV-6 Graphic Communication Work Area

Performing Arts

- 6317-7 WD-AV-7 Performing Arts Studio
- 6317-8 WD-AV-8 Dressing Rooms
- 6317-9 WD-AV-9 Performing Arts Storage

Radio/TV Broadcasting

- 6317-10 WD-AV-10 Radio/TV Broadcasting Lab

Related Spaces

- 6317-11 WD-AV-11 Classroom
- 6317-12 WD-AV-12 Office
- 6317-13 WD-AV-13 Storage

Government & Public Administration Spaces

ROTC

- 6318-1 WD-GOV-1 ROTC Lab

Related Spaces

- 6318-2 WD-GOV-2 Classroom
- 6318-3 WD-GOV-3 Office
- 6318-4 WD-GOV-4 Storage

Health Science Spaces

Medical Professions Education

- 6319-1 WD-HSC-1 Clinic Area

Related Spaces

- 6319-2 WD-HSC-2 Classroom
- 6319-3 WD-HSC-3 Office
- 6319-4 WD-HSC-4 Storage

Law, Public Safety, & Security Spaces

Criminal Justice

- 6320-1 WD-LAW-1 Criminal Justice Lab

Related Spaces

- 6320-2 WD-LAW-2 Classroom
- 6320-3 WD-LAW-3 Office
- 6320-4 WD-LAW-4 Storage

Manufacturing Spaces

Electronics

- 6321-1 WD-MAN-1 Electronic Lab

Furniture Manufacturing

- 6321-2 WD-MAN-2 Furniture Manufacturing Lab

Industrial Equipment Maintenance

- 6321-3 WD-MAN-3 Industrial Equipment Lab

Machine Tool Technology

- 6321-4 WD-MAN-4 Machine Tool Lab

Major Appliance Repair

- 6321-5 WD-MAN-5 Major Appliance Repair Lab

Welding

- 6321-6 WD-MAN-6 Welding Lab

Related Spaces

- 6321-7 WD-MAN-7 Classroom
- 6321-8 WD-MAN-8 Office
- 6321-9 WD-MAN-9 Storage

Science, Technology, Engineering, & Mathematics Spaces

Drafting & Design

6322-1 WD-ENG-1 Drafting & Design Lab
Computer Engineering
 6322-2 WD-ENG-2 Computer Engineering Lab
Geospatial Technology (GIS)
 6322-3 WD-ENG-3 Geospatial Technology (GIS) Lab
Pre-Engineering
 6322-4 WD-ENG-4 Pre-Engineering Lab
Related Spaces
 6322-5 WD-ENG-5 Classroom
 6322-6 WD-ENG-6 Office
 6322-7 WD-ENG-7 Storage

Transportation, Distribution, & Logistics Spaces

Automotive Collision
 6323-1 WD-TDL-1 Automotive Collision Repair Lab
Automotive Service Technology
 6323-2 WD-TDL-2 Automotive Service Technology Lab
Aviation Mechanics
 6323-3 WD-TDL-3 Aviation Mechanics Lab
 6323-4 WD-TDL-4 Aviation Technology Lab
Diesel Mechanics
 6323-5 WD-TDL-5 Diesel Mechanics Lab
Power Equipment Technology
 6323-6 WD-TDL-6 Power Equipment Technology Lab
Related Spaces
 6323-7 WD-TDL-7 Classroom
 6323-8 WD-TDL-8 Office
 6323-9 WD-TDL-9 Storage

Workforce Development Building Services Spaces

6324-1 WD-BS-1 Large Group Restrooms
 6324-2 WD-BS-2 Custodial Closet
 6324-3 WD-BS-3 Electrical Closet
 6324-4 WD-BS-4 Telecommunications Room
 6324-5 WD-BS-5 Corridors/Vestibules
 6324-6 WD-BS-6 Mechanical Room/Decks
 6324-7 WD-BS-7 Storage Area
 6324-8 WD-BS-8 Central Storage Area
 6324-9 WD-BS-9 Loading/Receiving Area
 6324-10 WD-BS-10 Main Cross-Connect

Chapter 7

Building Systems
7000-1 Introduction
7100-1 Foundations and Floor Slabs at Grade
7110-1 Framing Systems
7120-1 Exterior Walls
 7120-2 Masonry Cavity
 7120-3 Veneer and Metal Framing
 7120-4 Precast Concrete - Insulated Panels
 7120-5 Metal Panel on Metal Framing
7130-1 Roofs
 7130-2 Shingle Roof System
 7130-3 Metal Roof with Batt Insulation
 7130-4 Built-up Roof System
 7130-5 Single-ply Roof System
 7130-6 Metal Roof with Rigid Insulation
 7130-7 Coal Tar Roof System

7140-1	Openings
	7140-2 Windows and Doors
7150-1	Interior Partitions
	7150-2 CMU/Tile
	7150-3 Gypsum Wallboard
	7150-4 Moveable Partitions
7160-1	Interior Floor Finishes
	7160-2 Soft Surface Flooring
	7160-3 Hard Surface Flooring
7170-1	Wall & Ceiling Finishes
	7170-2 Paints & Vinyl Wall Coverings
	7170-3 Acoustical Ceilings & Panels
7180-1	Specialties
	7180-2 Visual Display Boards, Fire Extinguishers, Wire Mesh Partitions
	7180-3 Lockers & Toilet Compartments
7190-1	Equipment & Furnishings
	7190-2 Equipment
	7190-3 Furnishings
7200-1	Plumbing Design Criteria
	7200-2 Valving, Hangers, Identification, Testing
	7200-3 Potable Water System
	7200-4 Domestic Water Heater System
	7200-4 Water Conditioning and Softening Systems
	7200-5 Sanitary Piping System / Gas Piping Systems
	7200-6 Roof Drain and Storm Sewer Systems
	7200-6 Plumbing Systems for Food Service Areas
	7200-6 Building Fire Protection Systems
	7200-7 Plumbing Fixtures and Specialties
7300-1	HVAC Design Criteria
	7300-3 Outdoor/Indoor Air Design Values
	7300-3 Outdoor Air Ventilation Requirements
	7300-4 Temperature Control System / Interior and Exterior Noise Control
	7300-5 Equipment Accessibility
	7300-5 Closeout Documents
7400-1	Electrical Design Criteria
	7400-2 Lighting
	7400-4 Wiring Devices
	7400-5 Fire Alarm System
	7400-6 Security System/Lightning Protection/Technology
	7400-8 Telecommunications Grounding
	7400-10 Intercom & Bell Systems
	7400-11 School Lighting Levels
	7400-13 Outlet Locations
7500-1	Technology Standards - Introduction
	7500-2 Wiring
	7500-5 Telephone System
	7500-7 Video Distribution System
	7500-7 Data/Computer Network System
	7500-9 Central Sound System/Public Address System
	7500-10 Gymnasium Sound Reinforcement System
	7500-10 High School Student Dining Area Sound Reinforcement System
	7500-11 Student Dining Sound Reinforcement System
	7500-12 Music Room Sound Reinforcement System
	7500-12 Security System

7500-15 Interactive Classroom Design

The Arkansas Department of Education (ADE) is charged with overseeing the design and construction of school facilities in the state of Arkansas. The Arkansas School Facility Manual has been developed to provide consistent, clear information for school districts and design professionals as a new generation of schools is being created for Arkansas. The Standards & Guidelines contained within this section are the culmination of standards, accepted procedures, statutory requirements, and the experience of experts and authorities throughout the United States and establish a uniform level of quality for all public school buildings. The Standards & Guidelines will apply to new school facilities and new additions to existing buildings. Renovation to existing facilities should adhere to the Standards & Guidelines as outlined in Section 1200.

Since the Standards & Guidelines must communicate information about so many issues, the length and quantity of the document can be intimidating. However, understanding how the Standards & Guidelines is organized and which information will be needed during the various phases of the process will enable each participant to be better prepared for the exciting opportunity of creating school facilities.

An important consideration in developing a state-wide program that must provide equity among districts is the balance between broadly applicable standards and program delivery. A fundamental tenet of educational facility planning is that school facilities must be responsive to a school district's educational program. The Standards & Guidelines allows districts to develop building programs that respond to their current, unique needs as well as prepare for their educational future. There are also many different ways in which districts are delivering educational programs and helping students accomplish learning objectives at every school and school level. By designing classrooms and other instructional spaces to be flexible and adaptable, individual districts are better prepared to accommodate future educational program developments.

Throughout the planning, design, and construction phases of a project there are three factors that must be considered and held in balance: quality, cost, and time (schedule). The Standards & Guidelines was created to provide parameters for balancing these three essential elements fairly for all projects throughout the state.

The Standards & Guidelines are intended as a starting point for architects, engineers, other design professionals, and school districts to develop solutions to meet the needs of the individual school community. The information is provided to allow the planning, design, and construction process to proceed most efficiently, without undo restriction on the design of the facilities, focusing efforts on the creation of best possible school facilities for each project rather than "reinventing the wheel".

The Arkansas School Facility Manual is the exclusive property of the Arkansas Department of Education of the State of Arkansas, and the Arkansas Department of Education reserves the right to add, delete, modify, or otherwise change the content of this manual at any time. Specific information contained within the manual will be periodically modified to reflect current and future trends in teaching methodologies, construction and

educational technologies, and lessons learned as Arkansas proceeds with the ongoing task of improving and maintaining its schools.

The Standards & Guidelines are organized into eight chapters that explain the planning, design, and construction process; suggest current educational best practices and facility planning concepts, recommend components of an education framework, identify the square footage provisions for each school level; detail the features and amenities of each space; and provide systems, materials, guidelines information; and technology infrastructure recommendations. This chapter contains an outline of the information found within this section of the Arkansas School Facility Manual and a summary of the standards and guidelines contained within each chapter.

The chapters included in this section of the Arkansas School Facility Manual are:

- Chapter 1: How to Use This Section
- Chapter 2: Educational Facility Planning Concepts
- Chapter 3: Educational Framework
- Chapter 4: Site Guidelines
- Chapter 5: Program of Requirements [Bracketing]
- Chapter 6: Program Space Guidelines
- Chapter 7: Building Systems
- Chapter 8: Cost Guidelines

Chapter 1: How to Use This Section

Chapter 1 contains introductory information that indicates the organization of Section Two; an executive summary highlighting the standards and guidelines; a glossary of general Arkansas School Facility Manual definitions and abbreviations; and a general overview of the planning, design, and construction process intended to respond to the educational facility needs of Arkansas schools.

Chapter 2: Educational Facility Planning Concepts

Chapter 2 contains planning concepts related to current educational best practices, special education, workforce development, and program and design capacity. The facility planning concepts contained within this chapter are intended to be informative only and are not standards.

Chapter 3: Educational Framework

Chapter 3 contains a series of broad principles associated with organizational, facility, program, and service issues, including: grade configuration, school size, and class size. In conjunction with the Chapter 2: Educational Facility Planning Concepts, Chapter 3 provides assistance when developing an educational facility.

Chapter 4: Site Guidelines

Chapter 4 contains information about site size and site amenities. Guidelines are also outlined for a multitude of factors that must be considered, including: various types of circulation and site access, drainage, play fields and playgrounds, fencing, lighting, mechanical/electrical yard, landscaping, site furnishings, and exterior security provisions.

Chapter 5: Program of Requirements [Bracketing]

Chapter 5 assists the school district in establishing the size and quantity of instructional and support spaces for construction of a new facility or an addition to an existing facility. The size of a school facility is based on total student population and grade configuration. The Program of Requirements identifies an overall square feet for a facility and then identifies spaces that must be included and provides an allowance for additional support spaces that the district may choose based on their programs and method of delivery.

Chapter 6: Program Space Guidelines

Chapter 6 contains space plates for each type of space in the Programs of Requirements. Most space plates contain a graphic representation and information related to features, loose furnishings, finishes, and notes.

Chapter 7: Building Systems

Chapter 7 provides an overview and examples of the various materials and systems that have been used to establish a design standard and level of quality for the systems and materials to be incorporated into new school buildings and additions to existing school buildings.

Chapter 8: Cost Guidelines

Chapter 8 will be added at a later date.

The Standards and Guidelines contain a vast number of educational planning, facility design, and construction concepts. The next few pages

serve as a summary of the standards and guidelines contained within Section Two of the Arkansas School Facility Manual. For additional information, refer to the various chapters for clarification.

Standards are identified by **bolded** text. Guidelines are identified as regular text.

Chapter	Standards & Guidelines	Notes										
3	<p><i>GRADE CONFIGURATION</i> The Program of Requirements has been developed to address any K-12 grade configuration.</p>											
3	<p>CLASS SIZE:</p> <table border="0"> <tr> <td>A. Pre-Kindergarten/Kindergarten</td> <td>20 students</td> </tr> <tr> <td>B. 1st Grade through 3rd Grade</td> <td>25 students</td> </tr> <tr> <td>C. 4th Grade through 6th Grade</td> <td>28 students</td> </tr> <tr> <td>D. 7th Grade through 12th Grade</td> <td>30 students</td> </tr> <tr> <td>E. Workforce Development</td> <td>30 students</td> </tr> </table>	A. Pre-Kindergarten/Kindergarten	20 students	B. 1st Grade through 3rd Grade	25 students	C. 4th Grade through 6th Grade	28 students	D. 7th Grade through 12th Grade	30 students	E. Workforce Development	30 students	<p>Districts may decrease class size by adding teaching stations at their own expense or by utilizing innovative program delivery methods that allow multiple uses of spaces.</p>
A. Pre-Kindergarten/Kindergarten	20 students											
B. 1st Grade through 3rd Grade	25 students											
C. 4th Grade through 6th Grade	28 students											
D. 7th Grade through 12th Grade	30 students											
E. Workforce Development	30 students											
5	<p>SQUARE FOOT PER STUDENT</p> <p>A. A gross square foot per student for the overall building may be calculated using the total student population and the total gross square feet indicated by the Program of Requirements.</p> <p>B. The Program of Requirements indicates the following approximate square foot per student ranges:</p> <ol style="list-style-type: none"> 1. ES = -119 - 151 2. MS = -124 - 182 3. HS = -161 - 243 4. PK-8 = Blended 5. PK-12 = Blended 	<p>Total student population is established by the highest projected enrollment beginning three years out from the date of the 10-year projection.</p>										

Chapter	Standards & Guidelines	Notes
5	<p>NET AND GROSS SQUARE FOOTAGE The net square footage will be composed of the following two components:</p> <p>A. Required Spaces. The Program of Requirements identifies the quantity and size of all required spaces to provide an adequate education.</p> <p>B. Support Space Allowance. The Program of Requirements provides a net square foot allowance for districts to provide flexibility for their instructional programs. Districts must include the indicated support space allowance in a new school. Support space allowance shall not be used to increase the size of gymnasiums or auditoriums.</p> <p>C. The gross square footage will be equal to the net square footage plus a construction factor that accounts for wall thickness and equal to 10% of the total net square footage.</p>	<p>Size of the building is driven by the total number of students.</p> <p>The percentage of support space allowance is 10% for elementary school spaces and 15% for middle and high school spaces.</p>
5	<p>SIZE MODIFICATION OF INDIVIDUAL SPACES</p> <p>A. The size standard for all individual required spaces is established by the Programs of Requirements located in Chapter 5.</p> <p>B. Sizes indicated by the Programs of Requirements located in Chapter 5 for support spaces are not intended to be standards but to serve as guidelines for planning and design purposes.</p> <p>C. Size of individual required space may be altered $\pm 5\%$ for design and structural purposes only provided the following:</p> <ol style="list-style-type: none"> 1. The standard for total gross square footage is met. <p>D. Individual required spaces may NOT be removed or reduced in size.</p>	<p>The selection of support spaces is limited only by the following basic rules:</p> <ol style="list-style-type: none"> a. The standard for total gross square footage must be met. Any overages will be at district expense. b. If an instructional space is selected, its size may only be altered by the design professional for design and structural purposes.
4	<p>SITE SIZE</p> <p>A. The recommended site sizes are:</p> <ol style="list-style-type: none"> 1. Elementary School: 10 acres plus 1 acre per 100 students 2. Middle School: 20 acres plus 1 acre per 100 	<p>The site sizes shown should be considered as the minimum size to provide adequate pedestrian & vehicular circulation, parking for staff, students, & visitors.</p>

Chapter	Standards & Guidelines	Notes
	<p>students</p> <p>3. High School: 35 acres plus 1 acre per 100 students</p> <p>4. Combination Schools:</p> <p>a. PK-12 School: 40 acres plus 1 acre per 100 students</p> <p>b. PK-8 School: 20 acres plus 1 acre per 100 students</p> <p>B. Deviations from the site size may be required because of extenuating circumstances. Deviations from the site size recommendations must be approved by the Arkansas Department of Education. The site sizes shown should be considered.</p>	<p>and playgrounds and playfields.</p> <p>When selecting a site, the District should consider current and future student needs, changing demographics, and possible development around the site.</p> <p>It is recognized that not all sites, especially urban sites, will be able to meet those recommendations. The Design Professional, working with the District, should make every attempt to meet as many of the recommendations as possible. Variances will be considered by the Department of Education.</p>

Chapter	Standards & Guidelines	Notes														
5	<p>PROGRAMS The following programs are guidelines. It is the responsibility of each district to determine the appropriate programs for their students. The programs listed below were used to develop the spaces contained in the Programs of Requirements.</p> <p>A. Elementary Schools 1. Academic Core 2. Special Education 3. Visual Arts 4. Music 5. Physical Education</p> <p>B. Middle Schools 1. Academic Core 2. Special Education 3. Visual Arts 4. Music 5. Technology Education 6. Family and Consumer Sciences 7. Physical Education 8. Workforce Development</p> <p>C. High Schools 1. Academic Core 2. Special Education 3. Visual Arts 4. Music 5. Physical Education 6. Workforce Development 7. Alternative Education</p>	<p>Combination Schools contain the programs from which those schools are comprised.</p> <p>Example: A Pre-K – 8 school would contain all the elementary school programs and the middle school programs.</p> <p>Workforce development is an exception. Accreditation Requirements make it necessary for all comprehensive high schools to make available at least three programs of study from three different occupational areas. Refer to Workforce Development in Chapter 2.</p>														
5	<p>SIZE OF SPECIFIC SPACES The following sizes are standards from the Programs of Requirements in Chapter 5. The spaces listed below are intended to be samples and representative of typical spaces.</p> <table border="0" data-bbox="349 1575 1031 1764"> <tr> <td>Regular Classrooms</td> <td>850 SQFT</td> </tr> <tr> <td>Pre-Kindergarten/Kindergarten Classrooms</td> <td>1,000 SQFT</td> </tr> <tr> <td>Special Education Classrooms</td> <td>850 SQFT</td> </tr> <tr> <td>Resource Room</td> <td>450 SQFT</td> </tr> <tr> <td>Art Classroom</td> <td>1,200 SQFT</td> </tr> <tr> <td>Music Classroom</td> <td>1,200 SQFT</td> </tr> <tr> <td>Student Dining</td> <td>50% TSP x 15 SQFT/Student</td> </tr> </table>	Regular Classrooms	850 SQFT	Pre-Kindergarten/Kindergarten Classrooms	1,000 SQFT	Special Education Classrooms	850 SQFT	Resource Room	450 SQFT	Art Classroom	1,200 SQFT	Music Classroom	1,200 SQFT	Student Dining	50% TSP x 15 SQFT/Student	<p><u>TSP</u> = Total Student Population</p> <p>The Program of Requirements contained in Chapter 5 details the size and quantity of all instructional and support space allowances that must be included in new school construction.</p>
Regular Classrooms	850 SQFT															
Pre-Kindergarten/Kindergarten Classrooms	1,000 SQFT															
Special Education Classrooms	850 SQFT															
Resource Room	450 SQFT															
Art Classroom	1,200 SQFT															
Music Classroom	1,200 SQFT															
Student Dining	50% TSP x 15 SQFT/Student															

Chapter	Standards & Guidelines	Notes
7	<p>EXTERIOR WALLS</p> <p>A. Options available for numerous, insulated wall systems.</p> <p>B. All systems to be well insulated and have moisture barrier.</p>	<p>Minimum insulation R values.</p> <p>40-year minimum lifespan.</p>
7	<p>ROOFS</p> <p>A. New construction to be sloped or low slope roof system.</p> <p>B. Options available for numerous, UL class "A" systems with warranties.</p> <p>C. Vapor barrier are critical for weather protection.</p>	<p>Meet "energy star" values</p> <p>Minimum, thermal resistant U-values.</p>
7	<p>OPENINGS</p> <p>A. All academic spaces to have natural daylight.</p> <p>B. Minimize east and west facing glass.</p> <p>C. Interior wood doors to be solid core and factory finished.</p>	<p>Encourage top lighting. Provide uniform light distribution. Select formaldehyde-free doors constructed with recycled or recovered content.</p>
7	<p>INTERIOR FLOOR FINISHES</p> <p>A. Use water-based coatings and adhesives.</p> <p>B. Options available for soft and hard surface flooring.</p> <p>C. Choose low-VOC emitting materials.</p> <p>D. Meet carpet "green label plus" rating and use carpet reclamation programs.</p>	<p>Use products containing recycled content.</p>
7	<p>PLUMBING</p> <p>A. Water piping should not be installed under floor slabs.</p> <p>B. Domestic water systems within the building shall be type "K" or "L" copper tubing.</p>	<p>No additional notes.</p>
7	<p>HVAC</p> <p>A. All new construction will include air conditioning.</p> <p>B. Several systems are available and selection shall be based on a life cycle cost analysis.</p> <p>A. All temperature control systems shall be electronic, direct digital controls.</p>	<p>All systems shall be designed in compliance with ASHRAE standard 90.1 Energy Code.</p> <p>Control indoor and outdoor HVAC noise.</p>

Chapter	Standards & Guidelines	Notes
	<p>B. Commissioning of HVAC is recommended.</p>	
7	<p>ELECTRICAL</p> <p>A. Conductors shall only be copper.</p> <p>B. All branch circuits and feeder circuits should be run above ceilings and within walls.</p> <p>C. Interior lighting shall be controlled by occupancy sensors, automatic timed lighting controlled system or a combination of both.</p>	<p>Within building electric system, provide technology infrastructure such as cable trays, conduit, boxes, etc.</p>
8	<p>TECHNOLOGY</p> <p>A. All instructional spaces will be wired for voice, video, data, and power.</p> <p>B. All offices and meeting spaces will be wired for voice, data, and power.</p>	<p>Selected offices may also be wired for video.</p>

INTRODUCTION

An Educational Framework is a series of broad principles associated with organizational, facility, program, and service issues. In conjunction with the Educational Facility Planning Concepts, the Education Framework establishes the foundation on which educational facilities are designed.

The Standards & Guidelines are not intended to address every possible condition. Flexibility is required to develop appropriate solutions given the diversity of programs, community requirements, existing building conditions, site constraints, etc. found in the school district.

The following educational assumptions/concepts were derived from a wide range of sources that included representation from parents and students, teachers and school administrators, business and government [state and local] officials.

GRADE CONFIGURATION

Following are the suggested grade configurations for each level of school facility.

Pre-Kindergarten programs should be included as part of the school facility as required by state law.

Workforce Development courses are included in middle and high school facilities.

- A. ***Elementary School: Pre-K-5***
- B. ***Middle School: 6-8***
- C. ***High School: 9-12***
- D. ***Combination Schools***
 - 1. ***Pre-K-8***
 - 2. ***Pre-K-12***

SCHOOL SIZE

School size is based on the number of students projected to attend a particular school facility. For the number of students by grade level the Program of Requirements provides the total required school size that contains both the required spaces and a support space allowance needed to adequately meet the needs of the students.

The Program of Requirements found in Chapter 5 provides required spaces and a support space allowance for the selection of spaces needed for the various program areas found in each grade level of school.

CLASS SIZE

Class size [or Average class size] is defined as the number of students occupying a space at one time. Class size is not necessarily synonymous with student teacher ratio.

A.	Pre-Kindergarten-Kindergarten	20 students
B.	1 st Grade through 3 rd Grade	25 students
C.	4 th Grade through 6 th Grade	28 students
D.	7 th Grade through 12 th Grade	30 students

WORKFORCE DEVELOPMENT

Workforce Development [WFD] refers to programs traditionally offered under the label Career Technical Education or Vocational Education.

- A. Middle schools and PK-8 combination schools must provide access to pre-technical courses for students in grades 7-8.
- B. High schools and PK-12 combination schools must provide access to at least three different WFD occupational areas for students in grades 9-12.
- C. High schools and PK-12 combinations schools must provide access to at least one Program of Study within each occupational area in grades 9-12.

Note: Access to a WFD occupational area can occur in the following ways:

1. On-site
2. Through a partnership with an off-site organization.

KINDERGARTEN

Kindergarten courses will be delivered all day.

PROGRAMS

As programs and services change it is important that each school district identify the current and future educational needs of its students. Once those needs have been identified, the District should then determine the types of instructional programs that will result in a successful student. The Standards & Guidelines are based on current and future trends in education and include the following programs. As stated above, ultimately each district should determine the appropriate programs for their students.

- A. Elementary Schools
 - 1. Core Academic
 - 2. Special Education
 - 3. Visual Arts
 - 4. Music
 - 5. Physical Education

- B. Middle Schools
 - 1. Core Academic
 - 2. Special Education
 - 3. Visual Arts
 - 4. Music
 - 5. Technology Education
 - 6. Family and Consumer Science
 - 7. Physical Education
 - 8. Workforce Development

- C. High School
 - 1. Core Academic
 - 2. Special Education
 - 3. Visual Arts
 - 4. Music
 - 5. Performing Arts
 - 6. Physical Education
 - 7. Workforce Development

Purpose

The intent of Chapter 7 is to provide standards and guidelines necessary to plan, and design and construct school facilities throughout the state of Arkansas. The focus is on building systems and materials that will provide buildings that are economical and reflect quality construction. Along with mandatory performance standards, additional options and available choices are available.

All items and systems, such as loose furnishings, casework, technology, etc., should be integrated early in the planning phase of the project.

Definitions

The planning and design of school facilities shall be based upon criteria described in Chapter 7 in accordance with the following definitions:

“Standards” – Performance or construction required or mandatory items for which there is mandatory adherence that must be adhered to

“Guidelines” – Performance or construction items which are recommended, but NOT required.

“Examples” – Typical component(s) of standards or guidelines.

Codes and Standards

Applicable local, state, and international building codes and standards are not repeated in this chapter. It is the responsibility of the Design Professionals to conform to the current codes in their design process. Should the Where these standards contained in this manual bear in conflict with international, state, or local codes, the established codes shall prevail. The requirements of (ADAAG) (Americans with Disabilities Act) should be consulted.

No attempt has been made to provide detailed specifications in Chapter 7. Again, options Standards and guidelines are available that allow architects and engineers the flexibility to design to fit the school district needs.

Renovation Applicability

The main purpose of these The construction and performance standards and guidelines contained herein are applicable to both new construction of public school facilities and renovation of existing public school facilities. is to apply them to new school facilities. However, we recognize that the majority of existing buildings may be renovated and upgraded rather than replaced. In the assessment process there may be buildings that will require exceptions or variances to the standards and guidelines. Every attempt should be made to apply these standards and guidelines to existing buildings, in gradual steps as funding and other influences allow. (refer to Chapter 1 It may be recognized that some standards may not be compatible with existing facilities in renovation projects nor may it be possible to completely conform a performance or construction standard to new a new facility. It those instances variances to those standards, upon request, may be granted by the Division)

Green Building Design (optional)

A strong motive of these building systems standards and guidelines is to promote high performance schools. High performance schools are healthy, comfortable, energy efficient, resource efficient, water efficient, safe, secure, adaptable, and easy to operate and maintain. Designing for high performance goals is a guideline. It is to be considered, but not mandatory.

Commissioning (optional)

The commissioning process is a single-point responsibility to make sure that certain systems in a building are functioning and performing according to the design intent. The independent Commissioning Agent goes far beyond the occasional Design Professional job visits during the construction period. Actual tests are performed and components are verified under the guidance of the Commissioning Agent. Several systems can be commissioned, but emphasis in the chapter is to commission the HVAC components.

Definition

Commissioning is the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained according to the Owner's operational needs.

Application

Commissioning may be applicable to both new facilities and renovation. It is a guideline to be considered, but not mandatory.

~~New, addition/renovation, and renovation projects. Commissioning is optional.~~

Commissioning Authority (CA)

The CA is in charge of the commissioning process and is an objective, independent advocate of the Owner.

Commissioning Authority Options

CA can be selected from an independent third party; a mechanical or installing contractor; or a design professional.

Contractor: Desirable when building is small and contractor performs all mechanical work, but a conflict of interest can arise.

Design Professional: Good idea provided that the project specifications detail the requirements. Already familiar with the design intent but may not have day-to-day experience in the process.

How To Select

Use competitive Request for Qualifications (RFQ) and follow a qualification based selection process (QBS).

CA Qualifications

Experience required:

- Designing, specifying, or installing educational building mechanical-control systems or general HVAC systems
- Working with project teams and conducting "scoping meetings"
- Building systems start-up, balancing, testing, and troubleshooting
- Commissioning at least two projects involving HVAC and lighting controls
- Writing functional performance-test plans for at least two projects.

Extent of Commissioning

The degree or extent of commissioning for new buildings is recommended for the planning, design, and construction phases. However, involvement can occur only in design, construction, or post-construction phases.

What to Commission

All projects that include controls, EMCS, pneumatic equipment, integrated systems, HVAC-related equipment, and air distribution systems should be commissioned.

Benefits

- Improved performance of building equipment and building systems interactions
- Improved IAQ occupant comfort and productivity
- Decreased potential for building Owner liability related to IAQ
- Reduced operation and maintenance costs
- Maximize energy efficiency
- Provide training for school personnel

Green Building Design (optional)

The term "green building" is synonymous with "high-performance building", "sustainable design and construction", as well as other terms that refer to a holistic approach to design and construction. Green building design strives to balance environmental responsibility, resource efficiency, occupant comfort and well-being, and community sensitivity. Green building design includes all players in an integrated development process, from the design team (building owners, architects, engineers, and consultants), to the construction team (materials manufacturers, contractors, and waste haulers), to the maintenance staff and building occupants. The green building process results in a high-quality product that maximizes the owner's return on investment.

Why Design Green?

The building sector has a tremendous impact on the environment. According to the U.S. Department of Energy (DOE), buildings in the United States consume more than 30% of our total energy and 60% of our electricity annually. Buildings are a major source of pollutants that cause urban air quality problems and contribute to climate change. Buildings produce 35% of the country's carbon dioxide emissions. Green building practices can substantially reduce the negative environmental impacts associated with these buildings and reverse the trend of unsustainable construction activities. Green design also reduces operating costs, enhances building marketability, potentially increases occupant productivity, and helps create a sustainable community. Green design has environmental, economic, and social elements that benefit all stakeholders, including owners, occupants, and the general public.

Creating High Performance Schools (optional)

School districts around the country are finding that smart energy choices can help them save money and provide healthier, more effective learning environments. By incorporating energy improvements into their construction or renovation plans, school can significantly reduce energy consumption and costs. These savings can then be redirected to educational needs such as additional teachers, instructional materials, or new computers.

Establishing High Performance Goals

Cost-effective energy- and resource-efficient schools start with good planning. Working closely with the school's design and planning staff, the architects and engineers should develop objectives that reflect local conditions and priorities, balance short-term needs and long-term savings, and address environmental issues. Goals can include reducing operating costs; designing building that

teach; improving academic performance; protecting the environment; increasing health, safety, and comfort; supporting community values; and considering emerging solutions.

- A. Reducing Operating Costs - To ensure that your school is water- and energy-efficient, you must first work with the school system to establish clear consumption goals. Given your climatic region and building type, this "energy budget" must be realistic, and it must be based on the potential of current, proven energy-saving technologies. Many energy- and resource-saving options have very good financial value. Some of these solutions do not add anything to installation costs.

Establishing High Performance Goals (continued)

- B. Designing Buildings That Teach - When designing the school, consider the importance of incorporating high performance features that can be used for educational purposes. Some high performance features may be harder to rationalize financially, but from an educational standpoint are still important to consider. Solar electric systems (photovoltaics), for example, may have a longer return on investment, but if installed properly, can be a very powerful educational tool.
- C. Improving Academic Performance - During the past decade, remarkable studies have indicated a correlation between the way schools are designed and student performances. You can maximize student performance by setting air quality objectives that:
1. Define a level of indoor air quality desired during occupied times
 2. Place limitations on the use of materials, products, or systems that create indoor air quality problems.
 3. Require monitoring equipment.
- Establishing day lighting objectives will also improve classroom conditions and can help improve performance if you:
1. Include controlled day lighting in all classrooms, administrative areas, the gymnasium, and other significantly occupied spaces.
 2. Develop intentional visual connections between the indoor and outdoor environment.
- D. Protecting Our Environment - High performance school design takes into consideration not only the economic and academic impacts of design, but also environmental impacts. Environmentally sound design elements are those that:
1. Use renewable energy systems and energy-efficient technologies
 1. Use renewable energy systems and energy-efficient technologies
 2. Incorporate resource-efficient building products and systems
 3. Promote water-conserving strategies
 4. Use less polluting transportation alternatives
 5. Establish recycling systems
 6. Incorporate environmentally sound site design
- E. Designing for Health, Safety, and Comfort - You cannot design a high performance school without including design strategies that address health, safety, and comfort issues. Goals should include objectives that:

Green Building Design

1. Implement day lighting and indoor air quality solutions to make the school a healthier place to teach and learn
 2. Address acoustical and thermal comfort
- F. Supporting Community Values
1. Incorporating high performance strategies in your school's design results in a win-win situation for the community and the school. Through the implementation of energy-savings strategies, the school saves money and taxpayers benefit. Additionally, the energy dollars saved don't leave the immediate region but stay within the community and help to build a stronger local economy. Building to high performance standards implies the purchase of locally manufactured products and the use of local services. This approach is effective because much of the environmental impact associated with materials, products, and equipment purchased for construction involves transportation. The more transportation, the more pollution. Specifying local products benefits the community in the same way that retaining energy dollars helps: it strengthens the local economy.

Green Building Rating System (optional)

The Green Building Initiative design program called Green Globes and the program offered by the U.S. Green Building Council, LEED (Leadership in Energy and Environmental Design), are green measurement systems designed for rating commercial and institutional buildings. Both address new construction and major renovations. The programs address various environmental categories, typically sustainable sites, water efficiency, energy, indoor environmental quality, and materials and resources. Both are performance oriented systems where points are earned for satisfying performance criteria. Different levels of green building certification are awarded based on the total points earned.

~~LEED (Leadership in Energy and Environmental Design) for new construction and major renovations is a measurement system designed for rating commercial and institutional buildings. The rating system is organized into five environmental categories: sustainable sites, water efficiency, energy & atmosphere, materials & resources, and indoor environmental quality. LEED is a performance oriented system where points are earned for satisfying performance criteria. Different levels of green building certification are awarded based on the total points earned. The system is designed to be comprehensive in scope, yet simple in operation.~~

- A. Sustainable Sites - Properly chosen and developed site help minimize negative project impacts of the surrounding areas, the project site, and occupants of the project site.
- B. Water Efficiency – Reduce quality of water needed for the building and the burden of water from the site on municipal treatment facilities.
- C. Energy & Atmosphere – Establish energy efficiency to reduce operational expenses, conserve natural resources, and reduce local and global pollution.
 1. Commissioning and Training – All schools should be commissioned to ensure that the design meets the expectations of the district, and that the school is built as it was designed. Modern schools are complex buildings. Commissioning ensures that all building systems are working properly, and that the school staff knows how to operate and maintain them.
- D. Materials & Resources – Reduce the amount of materials needed. Those used should have less environmental impact. More sustainable

Green Building Design

alternatives exist and should be used as much as possible. Waste from the project should be reduced and managed. It is now possible to recycle, compost, or salvage a majority of construction and demolition waste instead of disposing it in landfills.

- E. Indoor Air Quality – Schools must protect student health, and good indoor air quality is essential for healthy schools. Good indoor environmental quality can be managed by controlling the sources of pollutants, ensuring thermal comfort and student connections to the outdoor environment.
 - 1. Acoustics – If not controlled to appropriate levels, noise from loud ventilation systems, outdoor sources, and neighboring rooms can significantly impeded communication between teachers and students. Young learners, students with hearing difficulties, and those learning English as a second language are particularly vulnerable. Classrooms should be designed to be accessible for all students.

Application

Green building design may be applicable to both new facilities and renovation. It is a guideline to be considered, but not mandatory.

Components

1. Spread footings and wall footings.
2. Trenched footings/turned down footings
3. Drilled piers
4. Reinforced concrete foundation walls
5. Reinforced concrete masonry walls utilizing normal weight masonry units with all cores grouted and reinforced
6. Concrete grade beams
7. Driven piles and pile caps
8. Auger cast piles and pile caps
9. Other systems if recommended and acceptable to the geotechnical engineer and the structural engineer.
10. Where expansive clays are present on the site, the geotechnical investigation is to address such and special foundation and floor slab systems and/or undercutting and backfilling shall be utilized as recommended by the geotechnical engineering investigation.

Performance Standards

1. **Foundations shall be designed by a structural engineer to meet the recommendations given by a geotechnical engineer based upon his geotechnical investigation and report and in accordance with the current state building code. ~~Geotechnical engineer is to inspect the foundation excavations during construction.~~**
2. **Structurally sound**
3. **Deflections and differential movement to be limited to magnitudes compatible with other building components.**
4. **Compatible with soil type**
5. **Water Barrier**
6. **Long life expectancy**
7. ~~For concrete materials, may use 10-20% flyash as replacement, but not addition. Mix design to be done by qualified independent testing agency.~~
8. ~~Use low and non-toxic form releases.~~

97. Sub-slab ventilation in areas with radon or potential soil gas submissions. Requirement for such is to be determined by qualified testing agency.

Construction Standards

48. Concrete minimum compressive strength at 28 days to be as required by structural engineer's design, but shall be no less than the following:
 a. Foundations – 3,000 psi
 b. Floor slabs – 3,000 psi
 c. Precast systems – 5,000 psi
 Strength of concrete provided is to be tested by independent testing lab, during construction.

29. Concrete reinforcing steel shall meet the requirements of the current state building code and structural engineer's design.

310. Project site concrete mixing shall not be used, unless otherwise approved by an independent testing agency.

411. For classrooms and corridor areas, use no less than a 4" thick concrete slab with 6x6 - W1.4 x W1.4 welded wire fabric.

512. Under concrete building slabs, place a minimum 10 mil vapor barrier and compact a minimum of 64" of drainage fill material unless geotechnical engineering investigation recommends otherwise.

Guidelines

1. Concrete materials may use 10-20% flyash as replacement, but not addition. Mix design to be done by qualified independent testing agency.
2. Use low and non-toxic form releases.

Examples

1. Spread footings and wall footings.
2. Trenched footings/turned-down footings
3. Drilled piers
4. Reinforced concrete foundation walls
5. Reinforced concrete masonry walls utilizing normal weight masonry units



with all cores grouted and reinforced

6. Concrete grade beams
7. Driven piles and pile caps
8. Auger cast piles and pile caps
9. Other systems if recommended and acceptable to the geotechnical engineer and the structural engineer.
10. Where expansive clays are present on the site, the geotechnical investigation is to address such and special foundation and floor slab systems and/or undercutting and backfilling shall be utilized as recommended by the geotechnical engineering investigation.

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast-in-place floor slabs (1 way or 2 way)
7. Steel and/or reinforced concrete columns and beams
8. Load bearing masonry walls
9. Wood Frame systems or Heavy Timber Frame Systems
10. Heavy Timber Frame Systems
104. Engineered wWood products including engineered wood joists and beams, pre-engineered wood trusses, OSB and plywood.Products
112. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Performance Standards

1. Structurally sound
2. Non-deteriorating
- ~~23. Structural systems and members shall be designed by by a licensed structural engineer to meet current state fire prevention and building codes and to have adequate stiffness to limit deflections and lateral drift to the requirements of theseis codes.~~
 - a. ~~Where the current state building code is deficient in guidance on deflection limitations, the deflection limit recommendations found in the American Institute of Steel Construction (AISC) Design Guide #3 "Serviceability Design Considerations for Low-Rise Buildings" shall be utilized.~~
 - b. ~~Beams and/or lintels supporting masonry shall limit the vertical deflection at mid-span to 1/800 of the span or 3/8", whichever is smaller.~~

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast in place floor slabs (1-way or 2-way)
7. Steel and/or reinforced concrete columns and beams
8. Load bearing masonry walls
9. Wood Frame systems
10. Heavy Timber Frame Systems
11. Engineered Wood Products
12. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Considerations Construction Standards

1. Structurally sound
2. Structural systems and members shall be designed by a licensed structural engineer to meet current state fire prevention and building codes and to have adequate stiffness to limit deflections and lateral drift to the requirements of these codes.
12. Steel roof deck: minimum 20-gauge as designed by structural engineer
23. For cementitious decks, use galvanized sub-purlins
34. For roof slopes greater than 1:12, metal joists shall span parallel to the slope
45. Do not use calcium chloride in concrete.
4. Prefabricated wood trusses and glue-laminated beams shall not be used. For structural steel, comply with AISC specifications and current state building codes.

Considerations (continued)

5. Plywood and oriented strand board (OSB) shall not be used as

structural roof deck.

- ~~6.~~ Do not use calcium chloride in concrete
- ~~7.~~ For structural steel, comply with AISC specifications and current state building codes
- ~~678.~~ Steel joist manufacturer shall be certified by steel joist institute (SJI)
- ~~789.~~ Non-painted Galvanizing for steel roof deck, if galvanized, to be ASTM A924, G90 (90 oz. per sq.ft.) zinc coating. For steel floor deck shall be galvanized and to be ASTM A924, use G60.
- ~~8940.~~ Concrete deck fill: minimum compressive strength of 43,000 psi or greater at 28 days
- ~~91044.~~ Structural steel fabrication must be certified in accordance with standards by the AISC.
- ~~1012.~~ Rolled Steel columns and beams: ASTM A572, grade 50; or ASTM A36 or others if recommended and approved by the structural engineer; Square or rectangular hollow structural steel sections shall be ASTM Grade B, Fy = 46 ksi; Round hollow structural steel sections shall be ASTM A 500, Grade B, Fy = 42 ksi.
- ~~1123.~~ Concrete columns: minimum compressive strength of 3,000 psi or greater at 28 days
- ~~1234.~~ Steel form deck shall comply with SDI design manual (publication no. 27)
- ~~145.~~ Structural masonry columns shall be filled and reinforced.
- ~~156.~~ Load bearing masonry walls shall comply with current state building codes.
- ~~1567.~~ Steel lintels in exterior walls: if 8" or less in depth and 12" or less in length, use hot-dipped galvanized, grade 65. For lintels greater in size, use ~~ASTM A641~~ ASTM A123M-02.
- ~~1678.~~ Steel lintels, other than angles, supporting masonry shall have rigid masonry anchors at 32" maximum spacing to secure masonry to steel.
- ~~1789.~~ Reinforced masonry lintels shall be used in exterior walls wherever possible.
- ~~18920.~~ Concrete mix design to be designed and strength tested by qualified independent testing agency to meet these

requirements and any others from the Design Professional.

192024. ~~Provide compressive strength testing of all concrete.~~ All lumber used for wood trusses shall be #2 grade, kiln dried, Southern Pine; #2 grade, kiln dried, Spruce-Pine-Fir; or #2 grade Hem-Fir or better. #3 grade lumber shall not be allowed for chords or web members.

Guidelines

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast-in-place floor slabs (1 way or 2 way)
7. Steel and/or reinforced concrete columns and beams
8. Load-bearing masonry walls
9. Wood Frame systems
10. Heavy Timber Frame Systems
11. Engineered Wood Products
12. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Components

1. Masonry cavity walls
2. Veneer and metal framing walls
3. Pre-cast concrete insulated panels
4. Metal panel on metal framing walls
5. Veneer and wood framing walls

NOTE: Other types of exterior wall construction may be acceptable if type meets or exceeds the above performance standards criteria. Construction standards following, indicated in bold type, are to be considered mandatory minimum requirements. More stringent requirements shall be used when required by the current state building codes.

Performance StandardsGuidelines**Standards**

1. **Impact resistant – must resist breakdown from projectiles**
2. **Moisture resistant – provide vapor retarder to inside of insulation**
3. **Thermal resistant – minimum U-factor of 0.074. Consider long-term performance**
4. ~~Economical – consider life cycle evaluation~~
5. ~~Long life span – 40 year minimum~~
546. **Minimum maintenance – no routine applied maintenance**

Guidelines

67. ~~Light-colored exteriors walls~~
1. Economical – consider life cycle evaluation
2. Light-colored exteriors walls

Examples

1. ~~Masonry cavity walls~~
2. ~~Veneer and metal framing walls~~
3. ~~Pre-cast concrete insulated panels~~
4. ~~Metal panel on metal framing walls~~
5. ~~Veneer and wood framing walls~~

~~NOTE: Other types of exterior wall construction may be acceptable if type meets or exceeds the above performance standards criteria. Construction standards following, indicated in bold italicized type, are to be considered mandatory minimum requirements. More stringent requirements shall be used when required by the current state building codes.~~

Components

1. Exterior stone, clay, or concrete masonry units
2. One inch cavity (two inch recommended)
3. Rigid insulation – seal inside face – seal seams with tape or mastic
4. Interior concrete masonry units

Performance Standards

1. *Impact resistant*
2. *Moisture resistant*
3. *Thermal resistant*
4. *Fire resistant*

~~Construction Standards~~ Guidelines ~~Standards~~

1. Impact, moisture, and thermal resistant.

- 2. Fire resistant
- 13. In-wall flashing – copper fabric laminate; Elastomeric thermoplastic; sheet metal
- 24. Drain cavity with weep holes, 4'0" o.c.
- 35. Steel reinforcement to meet the requirements of the current ~~state~~ building code, including the seismic provisions where re_ applicable.
- 46. Face brick: grade SW
- 57. Concrete masonry: unit compressive strength 1900 psi (13.1 MPa) Use CMU's containing ~~flyash~~ fly ash.
- 68. Insulation: extruded polystyrene board or spray polyurethane foam. Minimum R-value of 10.00.
- ~~7. Use mortar dropping control product to prevent blocking of weep holes~~
- 89. For CMU's, maximize recycled content (minimum 10%)
- ~~9. For exterior CMU, provide with order integral color. Do not paint.~~
- Guidelines 1. Use mortar dropping control product to prevent blocking of weep holes
- 2. For exterior CMU, provide with integral color. Do not paint.

Components

- 1. Exterior stone, clay, or concrete masonry units
- 2. One inch cavity (two inch recommended)
- 3. Exterior sheathing: glass-mat gypsum
Sheathing board: extruded polystyrene sheathing
- ~~4. Cold formed metal framing having 30% recycled content~~
- 54. Bat/blanket insulation with faced membrane
- 65. Interior gypsum wallboard, type X, foil-backed

Performance Standards

- 1. *Impact-resistant*
- 2. *Moisture-resistant*
- 3. *Thermal-resistant*

Construction Standards Guidelines Standards

- 1. Impact, moisture, and thermal resistant
- 12. **In-wall flashing**
- 23. **Drain cavity with weep holes, 4'0" o.c.**
- 34. **Mill galvanized wall ties**
- 45. **Face brick: grade SW**
- 56. **Concrete masonry: unit compressive strength 1900 psi (13.1Mpa) ~~Optional~~ Optional Use of CMU's containing flyash fly ash. Maximize recycled content.**
- 67. **Use minimum R-19 fiberglass insulation. The paper or foil vapor barrier should be anchored to the face of the studs.**
- 78. **Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam.**

Guidelines

- 1. Maximize recycled content.

Components

1. Exterior architectural concrete with smooth or exposed aggregate texture finish or thin brick facing.
2. Rigid cavity insulation.
3. Structural concrete backup.
4. Interior finish, if exposed, to be smooth concrete or concrete or exposed aggregate concrete or a surface applied smooth or textured finish.

Performance Standards

1. *Impact-resistant*
2. *Moisture-resistant*
3. *Thermal-resistant*
4. *Long-lasting system*
5. *Low maintenance*
6. *Meet ASHRAE 90.1-2001 (or later) and current state energy code requirements*

Construction Standards Guidelines Standards

1. Impact, moisture, and thermal resistant
2. Low maintenance
3. Meet ASHRAE 90.1-2001 (or later) and current state energy code requirements
4. **Use extruded polystyrene or polyisocyanurate insulation**
5. **Use fiber composite or plastic connectors – no metal connectors**
6. **Concrete materials: Portland cement ASTM C 180, Type I or III; Fly ash, ASTM C 618, Class C or F may be substituted for up to 20 percent of total cementitious materials**
7. **Concrete mix: 28 day compressive strength, 5,000 psi minimum**
8. **Interior surface: paint or skim-coat plaster**

Guidelines

Components

1. Exterior metal wall panel
2. Weather barrier
3. Exterior sheathing
4. Batt insulation with vapor barrier
5. Cold-formed metal framing
6. Interior gypsum wallboard

Performance Standards

1. *Low maintenance*
2. *Moisture resistant*
3. *Thermal resistant*
4. *Provide 20-year warranty for exterior panel finish*

Construction Standards Guidelines **Standards**

1. **Metal wall panel: 0.0269 inches minimum thickness zinc-coated (galvanized) or aluminum-zinc alloy-coated sheet steel; fluoropolymer exterior finish with minimum 20 year finish warranty**

2. **Low maintenance**

3. **Moisture and thermal resistant**

24. **Weather barrier: composite, self-adhesive, rubberized-asphalt compound flashing product**

3. **Use ¾ inch extruded polystyrene-foam wall sheathing**

45. **Provide 18-gauge, standard C-shaped steel studs steel studs as designed by structural engineer**

56. **Provide ASTM C665, Type 1, faced mineral fiber insulation blankets**

67. **Interior surface: painted, ½ inch, Type X gypsum wallboard**

78. **Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam**

Guidelines

1. **Consider uUse of ¾ inch extruded polystyrene-foam wall sheathing**

Performance Standards

1. Moisture resistant – integral finishes
2. Thermal resistant – minimum U-factor for low-slope roof is 26.0 and steep roof 19.6.
3. Positive slope – minimum slope 3/8" in 12", unless specified otherwise.
4. Minimal maintenance – upkeep but not continual maintenance
5. Wind / weather resistant – meet FM uplift criteria
6. Positive drainage to interior drains or exterior sources
7. Fire resistive – meet UL class "A"
8. "ENERGY STAR" ~~performance ratings for surface treatments~~
9. Consider "radiant barriers", such as aluminum foil at the ceiling of _____ attics

Examples

1. Shingle roof system
2. Metal roof with batt insulation
3. Built-up roof system
4. Single-ply roof system
5. Metal roof with rigid insulation
6. _____ Cold tar roof system
7. Modified Bitumen Roofing System

NOTE: #1: Other types of roof systems may be acceptable if system meets or exceeds the above performance standards.
 #2: All roof system and products shall be designed in accordance with state fire prevention code and state building code.

Components

1. Asphalt shingles, UL class "A"
2. Felt or membrane underlayment
3. Vented nailboard insulation: oriented strand board (OSB) or plywood
4. Rigid insulation with vapor barrier on under side: extruded polystyrene or polyisocyanurate board
5. Vapor barrier
6. Structural roof deck

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **"ENERGY STAR":** 0.004 or better thermal transmittance and 0.0005 or better air permeability and surface treatments
4. **40-year Maximum industry available material and wind**

warranty

Construction Standards

1. **Minimum 3:12 slope**
2. **Fasten shingles to roof sheathing with nails – not staple fasteners.**
3. **Metal drip edge: brake formed sheet metal with at least a 2 inch roof deck flange**
4. **Glass-fiber reinforced, mineral-granule surfaced, self-healing shingles.**
5. **Felt underlayment ~~45-90~~ pound asphalt-saturated organic felts, nonperforated. Use two layers where slope equals or is less than 4/12.**
6. **Sheet metal flashings conform to SMACNA's "Architectural**

Sheet Metal" manual.

Components

1. Metal panels: aluminum zinc alloy coated steel sheet with fluoropolymer two-coat finish system or Kynar 500 finish system
2. Insulation: glass fiber blanket with vapor tight edge tabs and facer on under side
3. Galvanized steel purlins
4. Steel joist or other structural members

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **"ENERGY STAR":** 0.20 value of U-factor and 60% solar reflectance and 0.16 value of U-factor and 75% solar reflectance
4. **20 year finish and weathertightness warranty**
5. **System shall have ASTM E 1592-94 wind uplift classification.**
6. **Contractor furnish 2 year guarantee on materials and workmanship.**

Construction Standards

1. **Minimum 3:12 slope**
2. **Thermal space;s where panels attach directly to purlins**
3. **Standing seam assembly: factory formed, cap seam assembly designed for concealed mechanical attachment of panels to roof purlins or deck**
4. **Air leakage through assembly of not more than 0.06 CFM/sq.ft. of roof area when tested to ASTM E 1680.**

Z
Construction Guideline

- 5. No water penetration when tested according to ASTM E 1646.

- 1. "ENERGY STAR" compliant roof surface recommended

Components

- 1. Top membrane: cap sheet, interply sheet, and base sheet
- 2. Recovery board
- 3. Rigid roof insulation – one or two layers
- 4. Structural support: steel deck or cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB)

Performance Standards

- 1. Moisture resistant
- 2. Thermal resistant
- 3. Relatively low maintenance
- 4. Economical
- 5. "ENERGY STAR" compliant surface treatments
- 6. Must have class A rating complying with ASTM E 108
- 7. Manufacturer to provide a 15 year warranty
- 8. Contractor to provide 2 year guarantee warranting the roofing, _____insulation, and flashing

Construction Standards

- 1. Minimum slope ~~0.375:12~~ "12"

2. **Base sheet: asphalt-impregnated no. 28 glass-fiber HT-felt or _____ styrene butadiene styrene (SBS) modified bitumen**
3. **Interply sheet: (SBS) sheet with glass-fiber or nonwoven polyester reinforcing with minimum 15 year warranty.**
4. **Cap sheet: (SBS) modified asphalt sheet with granule surface**
5. **Install modified bituminous flashing at cant strips, roof edges, _____ and at penetrations through roof**

4. Pre-confer with Conference prior to final installation of roofing

Components

1. Uniform elastomeric EPDM membrane _____
2. ½ inch, rigid cover board
3. Rigid insulation – one or two layers
4. Vapor barrier
5. ¼ inch substrate board
6. Structural support: steel deck or cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB).

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **Weather / temperature resistant**
4. **"ENERGY STAR": CES total color reflectance and CES-emittance minimum compliance surface treatment**

- 5. Class "A" U.L. roof system
- 6. Manufacturer to provide ~~10~~ 10 year warranty
- 7. Contractor to provide 2 year guarantee warranting the _____ roofing, _____ insulation, and flashing work

Construction Standards

- 1. Minimum slope ~~3/8" : 12"~~ 1/4" : 12"
- 42. Loose laid/ballasted, fully adhered or mechanically fastened ethylene propylene diene monomers (EPDM) membrane, .045 inch thick minimum
- 32. Cover board: ASTM C 1177, glass mat, water resistant _____gypsum substrate Type X, or ASTM C 272 gypsum wood fiber composite board
- 43. Insulation: extruded polystyrene board or polyisocyanurate board
- 54. Vapor barrier: polyethylene retarder, ASTM D 4397, 6 mils (0.15 mm) thick minimum
- 65. Substrate board: glass mat, water resistant gypsum board
- 7. ~~Pre-roofing Permittances prior to field installation of roofing~~

Components

1. Metal panels: aluminum zinc alloy coated steel sheet with fluoropolymer two-coat finish system or Kynar 500 finish system
2. Underlayment (ice and water shield)
3. Nail base Rigid roof insulation – one or two layers
4. Structural support: steel deck

Performance Standards

1. Moderate impact resistant
2. Moisture resistant
3. Thermal resistant
4. Low maintenance
5. Long-lasting system
6. "ENERGY STAR"
67. ~~20~~ 20 year finish and weathertightness warranty
78. System shall have ASTM E 1592-94 wind uplift classification
89. No water penetration when tested according to ASTM E 1646
190. Contractor finish 2 year guarantee on materials and workmanship
191. ~~ENERGY STAR~~ ENERGY STAR ~~minimum surface~~ minimum

Construction Standards

1. Minimum 3:12 slope
2. Underlayment: self-adhering high temperature sheet: 30 to 40 mils thick
3. Standing seam assembly: factory formed, cap seam assembly designed for concealed mechanical attachment of panels to roof purlins or deck
4. ~~4.~~ Air leakage through assembly of not more than 0.06

CFM/sq.ft. of roof area when tested to ASTM E 1680

5. Energy Star-compliant surface treatment. Pre-roofing Conference prior to field installation of roofing

CHAPTER 7: Building Systems

Components

1. Top membrane: coal-tar bitumen and glass-fiber ply felts
2. Backer sheet
3. Rigid roof insulation
4. Structural support: steel deck

Performance Standards

1. Moisture resistant
2. Thermal resistant
3. Long lasting
4. Fume emission
5. "ENERGY STAR" certified
6. Contractor to provide 3 year guarantee warranting the roofing, insulation, and flashing
7. Manufacturer to provide a 10 year warranty

Construction Standards

1. Minimum slope: 1/4" to 1/2"
2. Coal-tar pitch: ASTM D 450, Type I, specially formulated for low fume emission
3. Coal-tar primer: ASTM D43; high pen primer 452
4. Backer sheet: standard spun-bonded, non-woven, polyester reinforced fabric
5. 1/4 inch to 5/8 inch, clean gravel surface
6. Four plies of coal tar-impregnated glass-fiber mats, complying with ASTM D 4990, Type I
7. Pre-opening Conference prior to field installation of roofing

- Components
1. Top membrane: APP or SBS bitumen with glass fiber or polyester reinforcing.
 2. Interply sheet, ply IV fiber/glass felt
 3. Base sheet: UL-G2, ASTM D4601 Type II
 4. Rigid roof insulation Perlite cover board is required
 5. Structural support: Steel deck, cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB), concrete, wood or wood fiber

Performance Standards

1. Moisture resistant
2. Thermal resistant
3. Long lasting
4. "ENERGY STAR" compliant surface treatment
5. Contractor to provide a minimum 2 year warranty covering the roofing, insulation and flashing
6. Manufacturer to provide a minimum 20 year warranty

Construction Standards

1. Minimum slope ~~3/8" / 12"~~ to 12
2. Torch applied or hot mopped asphalt
3. Fibrated aluminum coating or granular surface coating
4. Pre-roofing Conference prior to field installation of roofing

Performance Guidelines

1. Provide uniform light distribution
2. Provide low glare
3. Reduce energy costs
4. Mitigate safety / security concerns
5. Low maintenance
6. Provide ~~daylighting~~day lighting that uses diffused or reflected sunlight
7. Provide windows views to help eye health and help reduce stress
8. Encourage "~~teplighting~~top lighting" to provide best uniform illumination
9. ~~Consider~~ All academic spaces ~~should~~ have natural daylight
10. Minimize east and west facing glass

Examples

1. View windows
2. "~~Toplighting~~Top lighting" (roof monitors, unit skylights, and skylights)
3. Entrance assemblies
4. Interior and exterior doors

Components

1. View windows
2. Clerestory windows
3. Roof monitors and skylights
4. Entrance assemblies
5. Interior doors
6. Exterior doors

Construction Standards Guidelines

1. Air infiltration rate of less than 0.4 CFM/ft performance class AW and grade 65 by AAMA.
2. Testing for thermal performance according to AAMA 1503.
3. Not less than 26 STC when tested for sound transmission loss according to ASTM A90.
4. Operating window sash to be factory glazed.
5. Windows to be double glazed and have low emissivity ~~emissive~~ coating.
6. Glass for exterior doors and sidelights shall be ~~4-inch-thick total, fully tempered insulation glass, comply with state fire prevention codes.~~ Provide vestibule at main entrance.
7. In un-rated assemblies, glass for interior doors shall be a minimum of ¼ inch clear tempered.
8. Interior wood doors to be solid-core and factory finished.
9. Consider sSelection of interior doors constructed with recycled or recovered content and low VOC (volatile organic compounds) if available.
10. Consider sSelection of interior doors with wood veneers harvested from sustainable forests if available.
11. For a high degree of sound isolation on both interior and exterior doors, provide full perimeter gaskets and automatic

door bottoms with a neoprene element for acoustical doors and an STC rating appropriate for the intended use.

12. On exterior doors, provide full perimeter weather-stripping and thresholds.
13. Exterior hollow metal doors shall be insulated.

Performance Standards

1. **Easy to clean materials**
2. **Resistant to moisture or that inhibit the growth of biological contaminants**
3. **Impact resistant materials in high traffic areas**
4. **Durable, long life materials**
5. **Dimensional planning to reduce waste (i.e. 4 ft. by 8 ft. wallboard, 12 ft. wide carpet)**
6. **Use materials that meet industry consensus standards for VOC emissions.**

Guidelines

16. Consider D design for disassembly for a product and its parts to be reused, remanufactured, or recycled
27. Good acoustical qualities
38. Consider R recycled/recyclable
9. Low VOC materials
410. Local (within 500 miles) materials and products where possible
454. Consider F renewable materials

Examples

1. Concrete masonry walls (CMU)
2. Glazed tile and ceramic tile
3. Gypsum wallboard
4. Veneer plaster over gypsum wallboard
5. Operable partitions
6. Folding partitions
7. Demountable partitions
8. Wood partitions framing

Examples

1. Concrete masonry walls (CMU)
2. Structural glazed tile walls (CGFU)
3. Ceramic tile (CT)

Performance Standards

1. Impact resistant
2. Easily cleanable & maintainable
3. Good acoustic qualities
4. Daylight enhancement qualities

Construction Standards

1. CMU walls: ASTM C190, 1900 psi compressive strength, normal weight aggregate
2. Tooled or struck mortar joints for cleanability. Use Type "N" mortar for loadbearing walls and Type "S" for non-loadbearing walls.
3. Glazed structural clay tile: ASTM C 126, Type I (single-faced units) and Type II (double-faced units)
4. Ceramic tile: for materials ANSI A 137.1 "Specifications for Ceramic Tile"; for installation ANSI 108 series and TCA handbook
5. Glazed wall tile: 5/16 inch thick, flat tile with cushion edges
6. Grout tile using latex Portland cement grout. Exception: use chemical resistant epoxy grout in kitchens

|

Examples

1. Metal studs with gypsum wallboard both sides
2. Veneer plaster over gypsum wallboard

Performance Standards Guidelines

1. "Abrasive-resistant" and "high impact" in high traffic areas
2. Economical
3. Relatively easy to move or remove
4. Accommodates periodic finish color changes
5. Good sound barrier with acoustical insulation

1. "Abrasive-resistant" and "high impact" in high traffic areas
Do not use in exterior walls where threat of moisture and mold might be present

2. Economical
Sound transmission characteristic: Minimum STC: 41 in academic areas

3. Relatively easy to move or remove
Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating

4. Accommodates periodic finish color changes
Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick

5. Good sound barrier with acoustical insulation
Metal studs: ASTM C645, 20 guage sheet base metal

6. Provide control joints in partitions 30 feet maximum

Construction Standards Guidelines Standards

1. Do not use in exterior walls where threat of moisture and mold might be present

2. Sound transmission characteristic: Minimum STC: 41 in academic areas

3. Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating

4. Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick

~~5. Metal studs: ASTM C645, 20 gauge sheet base metal~~

~~6. Provide control joints in partitions 30 feet maximum~~

~~"Abrasive resistant" and "high impact" in high traffic areas~~

~~Do not use in exterior walls where threat of moisture and mold might be present~~

~~2. Economical Sound transmission characteristic: minimum STC:~~

~~44~~

~~3. Relatively easy to move or remove Steel framing: comply with
ASTM C754 and G40 hot-dip galvanized zinc coating~~

~~4. Accommodates periodic finish color changes~~

~~Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick~~

~~5. Good sound barrier with acoustical insulation Metal studs: ASTM~~

~~C-645, 20-gauge sheet base metal~~

~~76. Provide control joints in partitions 30 feet maximum~~

~~67. Veneer plaster: ASTM C58T consisting of separate base
coat and finish coat~~

~~878. Spot-grout hollow metal door frames~~

~~8. Wood stud grade marked as required by the applicable
building code~~

Examples

1. Operable partitions
2. Folding partitions
3. Demountable partitions

Performance Standards

~~1. Easily moved by manual or electrical means~~ Easily moved

- from opened to closed (stored) position by manual or electrical operating mechanism
- 2. Sound control equal to fixed partitionsSound control (STC rating) as required to meet the sound isolation requirements for the functional use of the rooms or spaces to be divided
- 3. Options for tack and marker-boardchalk surfaces
- 4. Flexibility for space usageOverhead structural support with minimal deflection as required for functional operation.
- 5. Convenient to relocateDemountable partitions convenient to disassemble and reocaterelocate

Construction StandardsGuidelines**Standards**

sheet (STC
or marker
required

- 1. Manually or electrically operated partitions
- 2. Operable partitions: panels ½ inch gypsum board laminated with 3/16 inch natural cork (STC 47) or steel face 50); Panel finish-vinyl fabric, carpet, tackboardstack boards boards; pedestrian pass doors availableas
- 3. _____
- 3. _____ Accordion folding partitions: steel or aluminum suspension tracks; manually operated; interior 22 gauge steel panels for sound isolation; vinyl coated fabric finish
- 4. _____
- 4. _____ Demountable partitions; face panels of gypsum board painted or covered with vinyl; face panels of steel painted or covered with vinyl or plastic laminate; standard doors and windows available as required
- 5. _____ Non-combustablecombustible products that meet rated fire or smoke separation building code requirements

Performance Standards

1. **Water-based coatings and adhesives**
2. **Nontoxic and non-polluting materials (low VOC)**
3. **Resistant to moisture or inhibits the growth of biological contaminants**
4. **Easy to clean with non-polluting maintenance products**
5. **Durable to withstand heavy use without requiring frequent replacement**
6. **Easy to maintain**
7. **Provide moisture testing of concrete floors to meet flooring manufacturer's requirements**

Examples

1. Soft surface flooring
 - ~~resilient~~ Resilient ~~Resilient~~
 - ~~carpeting~~ Carpeting ~~Carpeting~~
 - ~~resinous~~ Resinous
2. Hard surface flooring
 - ~~tile~~ Tile ~~Tile~~
 - ~~terrazzo~~ Terrazzo ~~Terrazzo~~
 - ~~concrete~~ Concrete ~~Concrete~~
 - ~~wood~~ Wood ~~Wood~~
 - ~~rubber~~ Rubber ~~Resilient~~
 - Rubber
 - ~~resinous~~ Resinous ~~Resinous~~
 - Hardwood

Rubber**Considerations** Construction Guidelines

1. Recycled/recyclable
2. Minimize PVC content

Examples

1. Vinyl composition tile (VCT) and Vinyl enhanced tile (VET)
2. Linoleum and Sheet vinyl
3. Carpet (CAR) and carpet tiles
4. Rubber flooring

Performance Standards Criteria Standards Guidelines

1. Easy to clean and maintain
2. Acoustical benefits
3. Physical comfort (cushion)
4. Recycled content/Recyclable
5. Safety for small children
6. Consider meeting Carpet and Rug Institute Green Label Plus criteria
7. Research and use carpet reclamation programs where available for disposal of existing carpet.
8. Minimize PVC content where possible.
9. Review life cycle costs including materials, cleaning and maintenance

Construction Standards

1. **Carpet: minimum recycled content guideline of 25%, minimum 17 ounce faceweight.**
~~Meet Carpet and Rug Institute Green Label Plus.~~
2. **Low-VOC emitting materials. Resilient VOC content limited to 340 GM/liter or less**
3. ~~VCT: 12 inch by 12 inch by 1/8 inch thick~~
34. **Maximum acceptable moisture emission rate for concrete subfloors sub floors:**
 - **carpet Carpet and sheet vinyl – 3 lbs/1,000 sq. ft. per hours or less**
 - **VCT – 5 lbs/1,000 sq.ft.**
5. **Use water-based low VOC adhesives, sealants, and cleaning**

products

- 6. **Sheet vinyl with backing: 0.080 inch thick**
- 7. **Linoleum: 0.10 inch (2.5mm) minimum thickness, with heat-welded seams**
- 8. ~~Research and use carpet reclamation programs where available for existing carpet.~~

9. Minimize PVC content where possible

~~Review life cycle costs including materials, cleaning, and _____ maintenance.~~

Examples

- 1. Porcelain ceramic tile (CT) with recycled content
- 2. Quarry tile (QT)
- 3. Terrazzo tile with recycled content
- 4. Concrete finish
- 5. Wood (athletic)
- 6. Resinous Epoxy

Performance StandardsGuidelines

- 1. Easy to clean and stain resistant
- 2. Highly durable
- 3. ~~High reflectivity can augment daylighting~~day lighting
- 4. Reasonably economical based on life-cycle cost analysis

4. Consider finishes and/or materials suitable for use in _____
 _____5. High traffic area uses

5. Wood flooring: Use certified hardwood, salvaged wood and/or laminated or veneered wood products where possible.

Construction Standards

- 1. **Low-VOC emitting materials: flooring, adhesives, grouts, caulk, or sealants**
- 2. **Comply with ANSI ceramic tile standard**
- 3. **Use M-latex Portland cement mortar setting material for tileortars and grouts should be based upon the installation**

conditions and as recommended by the Tile Council of America.

4. Use epoxy-modified grout mixture for high moisture areas
5. For concrete floors use two-component, water-based, low odor, dust proofing, color pigmented epoxy sealer, or stain
6. Wood gym floors: ~~(consider local wood)~~
 - maximum 4.5 pounds per 1,000 sq.ft. moisture emission in slab
 - two year guarantee
 - second and better grade, maple strip flooring
7. ~~Wood flooring: Use certified hardwood, salvaged wood and laminated or veneered wood products where possible.~~

Purpose

The intent of Chapter 7 is to provide standards and guidelines necessary to plan, and design and construct school facilities throughout the state of Arkansas. The focus is on building systems and materials that will provide buildings that are economical and reflect quality construction. Along with mandatory performance standards, additional options and available choices are available.

All items and systems, such as loose furnishings, casework, technology, etc., should be integrated early in the planning phase of the project.

Definitions

The planning and design of school facilities shall be based upon criteria described in Chapter 7 in accordance with the following definitions:

"Standards" – Performance or construction required or mandatory items for which there is mandatory adherence that must be adhered to

"Guidelines" – Performance or construction items which are recommended, but NOT required.

"Examples" – Typical component(s) of standards or guidelines.

Codes and Standards

Applicable local, state, and international building codes and standards are not repeated in this chapter. It is the responsibility of the Design Professionals to conform to the current codes in their design process. Should the Where these standards contained in this manual bear in conflict with international, state, or local codes, the established codes shall prevail. The requirements of (ADAAG) (Americans with Disabilities Act) should be consulted.

No attempt has been made to provide detailed specifications in Chapter 7. Again, options Standards and guidelines are available that allow architects and engineers the flexibility to design to fit the school district needs.

Renovation Applicability

The main purpose of these The construction and performance standards and guidelines contained herein are applicable to both new construction of public school facilities and renovation of existing public school facilities. is to apply them to new school facilities. However, we recognize that the majority of existing buildings may be renovated and upgraded rather than replaced. In the assessment process there may be buildings that will require exceptions or variances to the standards and guidelines. Every attempt should be made to apply these standards and guidelines to existing buildings, in gradual steps as funding and other influences allow. (refer to Chapter 1 It may be recognized that some standards may not be compatible with existing facilities in renovation projects nor may it be possible to completely conform a performance or construction standard to new a new facility. It those instances variances to those standards, upon request, may be granted by the Division)

Green Building Design (optional)

A strong motive of these building systems standards and guidelines is to promote high performance schools. High performance schools are healthy, comfortable, energy efficient, resource efficient, water efficient, safe, secure, adaptable, and easy to operate and maintain. Designing for high performance goals is a guideline. It is to be considered, but not mandatory.

Commissioning (optional)

The commissioning process is a single-point responsibility to make sure that certain systems in a building are functioning and performing according to the design intent. The independent Commissioning Agent goes far beyond the occasional Design Professional job visits during the construction period. Actual tests are performed and components are verified under the guidance of the Commissioning Agent. Several systems can be commissioned, but emphasis in the chapter is to commission the HVAC components.

Definition

Commissioning is the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained according to the Owner's operational needs.

Application

Commissioning may be applicable to both new facilities and renovation. It is a guideline to be considered, but not mandatory.

~~New, addition/renovation, and renovation projects. Commissioning is optional.~~

Commissioning Authority (CA)

The CA is in charge of the commissioning process and is an objective, independent advocate of the Owner.

Commissioning Authority Options

CA can be selected from an independent third party; a mechanical or installing contractor; or a design professional.

Contractor: Desirable when building is small and contractor performs all mechanical work, but a conflict of interest can arise.

Design Professional: Good idea provided that the project specifications detail the requirements. Already familiar with the design intent but may not have day-to-day experience in the process.

How To Select

Use competitive Request for Qualifications (RFQ) and follow a qualification based selection process (QBS).

CA Qualifications

Experience required:

- Designing, specifying, or installing educational building mechanical-control systems or general HVAC systems
- Working with project teams and conducting "scoping meetings"
- Building systems start-up, balancing, testing, and troubleshooting
- Commissioning at least two projects involving HVAC and lighting controls
- Writing functional performance-test plans for at least two projects.

Extent of Commissioning

The degree or extent of commissioning for new buildings is recommended for the planning, design, and construction phases. However, involvement can occur only in design, construction, or post-construction phases.

What to Commission

All projects that include controls, EMCS, pneumatic equipment, integrated systems, HVAC-related equipment, and air distribution systems should be commissioned.

Benefits

- Improved performance of building equipment and building systems interactions
- Improved IAQ occupant comfort and productivity
- Decreased potential for building Owner liability related to IAQ
- Reduced operation and maintenance costs
- Maximize energy efficiency
- Provide training for school personnel

Green Building Design (optional)

The term "green building" is synonymous with "high-performance building", "sustainable design and construction", as well as other terms that refer to a holistic approach to design and construction. Green building design strives to balance environmental responsibility, resource efficiency, occupant comfort and well-being, and community sensitivity. Green building design includes all players in an integrated development process, from the design team (building owners, architects, engineers, and consultants), to the construction team (materials manufacturers, contractors, and waste haulers), to the maintenance staff and building occupants. The green building process results in a high-quality product that maximizes the owner's return on investment.

Why Design Green?

The building sector has a tremendous impact on the environment. According to the U.S. Department of Energy (DOE), buildings in the United States consume more than 30% of our total energy and 60% of our electricity annually. Buildings are a major source of pollutants that cause urban air quality problems and contribute to climate change. Buildings produce 35% of the country's carbon dioxide emissions. Green building practices can substantially reduce the negative environmental impacts associated with these buildings and reverse the trend of unsustainable construction activities. Green design also reduces operating costs, enhances building marketability, potentially increases occupant productivity, and helps create a sustainable community. Green design has environmental, economic, and social elements that benefit all stakeholders, including owners, occupants, and the general public.

Creating High Performance Schools (optional)

School districts around the country are finding that smart energy choices can help them save money and provide healthier, more effective learning environments. By incorporating energy improvements into their construction or renovation plans, school can significantly reduce energy consumption and costs. These savings can then be redirected to educational needs such as additional teachers, instructional materials, or new computers.

Establishing High Performance Goals

Cost-effective energy- and resource-efficient schools start with good planning. Working closely with the school's design and planning staff, the architects and engineers should develop objectives that reflect local conditions and priorities, balance short-term needs and long-term savings, and address environmental issues. Goals can include reducing operating costs; designing building that

teach; improving academic performance; protecting the environment; increasing health, safety, and comfort; supporting community values; and considering emerging solutions.

- A. Reducing Operating Costs - To ensure that your school is water- and energy-efficient, you must first work with the school system to establish clear consumption goals. Given your climatic region and building type, this "energy budget" must be realistic, and it must be based on the potential of current, proven energy-saving technologies. Many energy- and resource-saving options have very good financial value. Some of these solutions do not add anything to installation costs.

Establishing High Performance Goals (continued)

- B. Designing Buildings That Teach - When designing the school, consider the importance of incorporating high performance features that can be used for educational purposes. Some high performance features may be harder to rationalize financially, but from an educational standpoint are still important to consider. Solar electric systems (photovoltaics), for example, may have a longer return on investment, but if installed properly, can be a very powerful educational tool.
- C. Improving Academic Performance - During the past decade, remarkable studies have indicated a correlation between the way schools are designed and student performances. You can maximize student performance by setting air quality objectives that:
1. Define a level of indoor air quality desired during occupied times
 2. Place limitations on the use of materials, products, or systems that create indoor air quality problems.
 3. Require monitoring equipment.
- Establishing day lighting objectives will also improve classroom conditions and can help improve performance if you:
1. Include controlled day lighting in all classrooms, administrative areas, the gymnasium, and other significantly occupied spaces.
 2. Develop intentional visual connections between the indoor and outdoor environment.
- D. Protecting Our Environment - High performance school design takes into consideration not only the economic and academic impacts of design, but also environmental impacts. Environmentally sound design elements are those that:
1. Use renewable energy systems and energy-efficient technologies
 1. Use renewable energy systems and energy-efficient technologies
 2. Incorporate resource-efficient building products and systems
 3. Promote water-conserving strategies
 4. Use less polluting transportation alternatives
 5. Establish recycling systems
 6. Incorporate environmentally sound site design
- E. Designing for Health, Safety, and Comfort - You cannot design a high performance school without including design strategies that address health, safety, and comfort issues. Goals should include objectives that:

Green Building Design

1. Implement day lighting and indoor air quality solutions to make the school a healthier place to teach and learn
 2. Address acoustical and thermal comfort
- F. Supporting Community Values
1. Incorporating high performance strategies in your school's design results in a win-win situation for the community and the school. Through the implementation of energy-savings strategies, the school saves money and taxpayers benefit. Additionally, the energy dollars saved don't leave the immediate region but stay within the community and help to build a stronger local economy. Building to high performance standards implies the purchase of locally manufactured products and the use of local services. This approach is effective because much of the environmental impact associated with materials, products, and equipment purchased for construction involves transportation. The more transportation, the more pollution. Specifying local products benefits the community in the same way that retaining energy dollars helps: it strengthens the local economy.

Green Building Rating System (optional)

The Green Building Initiative design program called Green Globes and the program offered by the U.S. Green Building Council, LEED (Leadership in Energy and Environmental Design), are green measurement systems designed for rating commercial and institutional buildings. Both address new construction and major renovations. The programs address various environmental categories, typically sustainable sites, water efficiency, energy, indoor environmental quality, and materials and resources. Both are performance oriented systems where points are earned for satisfying performance criteria. Different levels of green building certification are awarded based on the total points earned.

~~LEED (Leadership in Energy and Environmental Design) for new construction and major renovations is a measurement system designed for rating commercial and institutional buildings. The rating system is organized into five environmental categories: sustainable sites, water efficiency, energy & atmosphere, materials & resources, and indoor environmental quality. LEED is a performance oriented system where points are earned for satisfying performance criteria. Different levels of green building certification are awarded based on the total points earned. The system is designed to be comprehensive in scope, yet simple in operation.~~

- A. Sustainable Sites - Properly chosen and developed site help minimize negative project impacts of the surrounding areas, the project site, and occupants of the project site.
- B. Water Efficiency – Reduce quality of water needed for the building and the burden of water from the site on municipal treatment facilities.
- C. Energy & Atmosphere – Establish energy efficiency to reduce operational expenses, conserve natural resources, and reduce local and global pollution.
 1. Commissioning and Training – All schools should be commissioned to ensure that the design meets the expectations of the district, and that the school is built as it was designed. Modern schools are complex buildings. Commissioning ensures that all building systems are working properly, and that the school staff knows how to operate and maintain them.
- D. Materials & Resources – Reduce the amount of materials needed. Those used should have less environmental impact. More sustainable

Green Building Design

alternatives exist and should be used as much as possible. Waste from the project should be reduced and managed. It is now possible to recycle, compost, or salvage a majority of construction and demolition waste instead of disposing it in landfills.

- E. Indoor Air Quality – Schools must protect student health, and good indoor air quality is essential for healthy schools. Good indoor environmental quality can be managed by controlling the sources of pollutants, ensuring thermal comfort and student connections to the outdoor environment.
 - 1. Acoustics – If not controlled to appropriate levels, noise from loud ventilation systems, outdoor sources, and neighboring rooms can significantly impeded communication between teachers and students. Young learners, students with hearing difficulties, and those learning English as a second language are particularly vulnerable. Classrooms should be designed to be accessible for all students.

Application

Green building design may be applicable to both new facilities and renovation. It is a guideline to be considered, but not mandatory.

Components

1. Spread footings and wall footings.
2. Trenched footings/turned down footings
3. Drilled piers
4. Reinforced concrete foundation walls
5. Reinforced concrete masonry walls utilizing normal weight masonry units with all cores grouted and reinforced
6. Concrete grade beams
7. Driven piles and pile caps
8. Auger cast piles and pile caps
9. Other systems if recommended and acceptable to the geotechnical engineer and the structural engineer.
10. Where expansive clays are present on the site, the geotechnical investigation is to address such and special foundation and floor slab systems and/or undercutting and backfilling shall be utilized as recommended by the geotechnical engineering investigation.

Performance Standards

1. **Foundations shall be designed by a structural engineer to meet the recommendations given by a geotechnical engineer based upon his geotechnical investigation and report and in accordance with the current state building code. ~~Geotechnical engineer is to inspect the foundation excavations during construction.~~**
2. **Structurally sound**
3. **Deflections and differential movement to be limited to magnitudes compatible with other building components.**
4. **Compatible with soil type**
5. **Water Barrier**
6. **Long life expectancy**
7. ~~For concrete materials, may use 10-20% flyash as replacement, but not addition. Mix design to be done by qualified independent testing agency.~~
8. ~~Use low and non-toxic form releases.~~

97. Sub-slab ventilation in areas with radon or potential soil gas submissions. Requirement for such is to be determined by qualified testing agency.

Construction Standards

48. Concrete minimum compressive strength at 28 days to be as required by structural engineer's design, but shall be no less than the following:

- a. Foundations – 3,000 psi
- b. Floor slabs – 3,000 psi
- c. Precast systems – 5,000 psi

Strength of concrete provided is to be tested by independent testing lab, during construction.

29. Concrete reinforcing steel shall meet the requirements of the current state building code and structural engineer's design.

310. Project site concrete mixing shall not be used, unless otherwise approved by an independent testing agency.

411. For classrooms and corridor areas, use no less than a 4" thick concrete slab with 6x6 - W1.4 x W1.4 welded wire fabric.

512. Under concrete building slabs, place a minimum 10 mil vapor barrier and compact a minimum of 64" of drainage fill material unless geotechnical engineering investigation recommends otherwise.

Guidelines

- 1. Concrete materials may use 10-20% flyash as replacement, but not addition. Mix design to be done by qualified independent testing agency.
- 2. Use low and non-toxic form releases.

Examples

- 1. Spread footings and wall footings.
- 2. Trenched footings/turned-down footings
- 3. Drilled piers
- 4. Reinforced concrete foundation walls
- 5. Reinforced concrete masonry walls utilizing normal weight masonry units



with all cores grouted and reinforced

6. Concrete grade beams
7. Driven piles and pile caps
8. Auger cast piles and pile caps
9. Other systems if recommended and acceptable to the geotechnical engineer and the structural engineer.
10. Where expansive clays are present on the site, the geotechnical investigation is to address such and special foundation and floor slab systems and/or undercutting and backfilling shall be utilized as recommended by the geotechnical engineering investigation.

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast-in-place floor slabs (1 way or 2 way)
7. Steel and/or reinforced concrete columns and beams
8. Load bearing masonry walls
9. Wood Frame systems or Heavy Timber Frame Systems
10. Heavy Timber Frame Systems
104. Engineered wood products including engineered wood joists and beams, pre-engineered wood trusses, OSB and plywood products
112. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Performance Standards

1. ***Structurally sound***
2. ***Non-deteriorating***
23. ***Structural systems and members shall be designed by by a licensed structural engineer to meet current state fire prevention and building codes and to have adequate stiffness to limit deflections and lateral drift to the requirements of these codes.***
 - a. ***Where the current state building code is deficient in guidance on deflection limitations, the deflection limit recommendations found in the American Institute of Steel Construction (AISC) Design Guide #3 "Serviceability Design Considerations for Low-Rise Buildings" shall be utilized.***
 - b. ***Beams and/or lintels supporting masonry shall limit the vertical deflection at mid-span to 1/800 of the span or 3/8", whichever is smaller.***

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast in place floor slabs (1-way or 2-way)
7. Steel and/or reinforced concrete columns and beams
8. Load bearing masonry walls
9. Wood Frame systems
10. Heavy Timber Frame Systems
11. Engineered Wood Products
12. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Considerations Construction Standards

1. Structurally sound
2. Structural systems and members shall be designed by a licensed structural engineer to meet current state fire prevention and building codes and to have adequate stiffness to limit deflections and lateral drift to the requirements of these codes.
12. Steel roof deck: minimum 20-gauge as designed by structural engineer
23. For cementitious decks, use galvanized sub-purlins
34. For roof slopes greater than 1:12, metal joists shall span parallel to the slope
45. Do not use calcium chloride in concrete.
4. Prefabricated wood trusses and glue-laminated beams shall not be used. For structural steel, comply with AISC specifications and current state building codes.

Considerations (continued)

5. Plywood and oriented strand board (OSB) shall not be used as

structural roof deck.

- ~~6.~~ Do not use calcium chloride in concrete
- ~~7.~~ For structural steel, comply with AISC specifications and current state building codes
- ~~678.~~ Steel joist manufacturer shall be certified by steel joist institute (SJI)
- ~~789.~~ Non-painted Galvanizing for steel roof deck, if galvanized, to be ASTM A924, G90 (90 oz. per sq.ft.) zinc coating. For steel floor deck shall be galvanized and to be ASTM A924, use G60.
- ~~8940.~~ Concrete deck fill: minimum compressive strength of 43,000 psi or greater at 28 days
- ~~91044.~~ Structural steel fabrication must be certified in accordance with standards by the AISC.
- ~~1012.~~ Rolled Steel columns and beams: ASTM A572, grade 50; or ASTM A36 or others if recommended and approved by the structural engineer; Square or rectangular hollow structural steel sections shall be ASTM Grade B, Fy = 46 ksi; Round hollow structural steel sections shall be ASTM A 500, Grade B, Fy = 42 ksi.
- ~~1123.~~ Concrete columns: minimum compressive strength of 3,000 psi or greater at 28 days
- ~~1234.~~ Steel form deck shall comply with SDI design manual (publication no. 27)
- ~~145.~~ Structural masonry columns shall be filled and reinforced.
- ~~156.~~ Load bearing masonry walls shall comply with current state building codes.
- ~~1567.~~ Steel lintels in exterior walls: if 8" or less in depth and 12" or less in length, use hot-dipped galvanized, grade 65. For lintels greater in size, use ~~ASTM A641~~ ASTM A123M-02.
- ~~1678.~~ Steel lintels, other than angles, supporting masonry shall have rigid masonry anchors at 32" maximum spacing to secure masonry to steel.
- ~~1789.~~ Reinforced masonry lintels shall be used in exterior walls wherever possible.
- ~~18920.~~ Concrete mix design to be designed and strength tested by qualified independent testing agency to meet these

requirements and any others from the Design Professional.

192024. ~~Provide compressive strength testing of all concrete.~~ All lumber used for wood trusses shall be #2 grade, kiln dried, Southern Pine; #2 grade, kiln dried, Spruce-Pine-Fir; or #2 grade Hem-Fir or better. #3 grade lumber shall not be allowed for chords or web members.

Guidelines

Examples

1. Steel roof deck on open web steel joists or steel beams
2. Cementitious deck on open web joists
3. Composite action concrete slabs and steel beams
4. Pre-engineered building systems
5. Concrete on steel form deck floor
6. Cast-in-place floor slabs (1 way or 2 way)
7. Steel and/or reinforced concrete columns and beams
8. Load-bearing masonry walls
9. Wood Frame systems
10. Heavy Timber Frame Systems
11. Engineered Wood Products
12. Other systems if recommended and acceptable to the structural engineer and Owner and in accordance with the applicable Fire Prevention and/or Building Codes.

Components

1. Masonry cavity walls
2. Veneer and metal framing walls
3. Pre-cast concrete insulated panels
4. Metal panel on metal framing walls
5. Veneer and wood framing walls

NOTE: Other types of exterior wall construction may be acceptable if type meets or exceeds the above performance standards criteria. Construction standards following, indicated in bold type, are to be considered mandatory minimum requirements. More stringent requirements shall be used when required by the current state building codes.

Performance StandardsGuidelines**Standards**

1. **Impact resistant – must resist breakdown from projectiles**
2. **Moisture resistant – provide vapor retarder to inside of insulation**
3. **Thermal resistant – minimum U-factor of 0.074. Consider long-term performance**
4. ~~Economical – consider life cycle evaluation~~
5. ~~Long life span – 40 year minimum~~
546. **Minimum maintenance – no routine applied maintenance**

Guidelines

67. ~~Light-colored exteriors walls~~
1. Economical – consider life cycle evaluation
2. Light-colored exteriors walls

Examples

1. ~~Masonry cavity walls~~
2. ~~Veneer and metal framing walls~~
3. ~~Pre-cast concrete insulated panels~~
4. ~~Metal panel on metal framing walls~~
5. ~~Veneer and wood framing walls~~

~~NOTE: Other types of exterior wall construction may be acceptable if type meets or exceeds the above performance standards criteria. Construction standards following, indicated in bold italicized type, are to be considered mandatory minimum requirements. More stringent requirements shall be used when required by the current state building codes.~~

Components

1. Exterior stone, clay, or concrete masonry units
2. One inch cavity (two inch recommended)
3. Rigid insulation – seal inside face – seal seams with tape or mastic
4. Interior concrete masonry units

Performance Standards

1. *Impact resistant*
2. *Moisture resistant*
3. *Thermal resistant*
4. *Fire resistant*

~~Construction Standards~~ Guidelines Standards

1. Impact, moisture, and thermal resistant.

- 2. Fire resistant
- 13. In-wall flashing – copper fabric laminate; Elastomeric thermoplastic; sheet metal
- 24. Drain cavity with weep holes, 4'0" o.c.
- 35. Steel reinforcement to meet the requirements of the current state building code, including the seismic provisions where re applicable.
- 46. Face brick: grade SW
- 57. Concrete masonry: unit compressive strength 1900 psi (13.1 MPa) Use CMU's containing flyashfly ash.
- 68. Insulation: extruded polystyrene board or spray polyurethane foam. Minimum R-value of 10.00.
- 7. Use mortar dropping control product to prevent blocking of weep holes
- 89. For CMU's, maximize recycled content (minimum 10%)
- 9. For exterior CMU, provide with order integral color. Do not paint.
- Guidelines 1. Use mortar dropping control product to prevent blocking of weep holes
- 2. For exterior CMU, provide with integral color. Do not paint.

Components

- 1. Exterior stone, clay, or concrete masonry units
- 2. One inch cavity (two inch recommended)
- 3. Exterior sheathing: glass-mat gypsum
Sheathing board: extruded polystyrene sheathing
- 4. Cold-formed metal framing having 30% recycled content
- 54. Bat/blanket insulation with faced membrane
- 65. Interior gypsum wallboard, type X, foil-backed

Performance Standards

- 1. *Impact-resistant*
- 2. *Moisture-resistant*
- 3. *Thermal-resistant*

Construction Standards Guidelines Standards

- 1. Impact, moisture, and thermal resistant
- 12. **In-wall flashing**
- 23. **Drain cavity with weep holes, 4'0" o.c.**
- 34. **Mill galvanized wall ties**
- 45. **Face brick: grade SW**
- 56. **Concrete masonry: unit compressive strength 1900 psi (13.1Mpa) ~~Optional~~ Optional Use of CMU's containing flyash fly ash. Maximize recycled content.**
- 67. **Use minimum R-19 fiberglass insulation. The paper or foil vapor barrier should be anchored to the face of the studs.**
- 78. **Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam.**

Guidelines

- 1. Maximize recycled content.

Components

1. Exterior architectural concrete with smooth or exposed aggregate texture finish or thin brick facing.
2. Rigid cavity insulation.
3. Structural concrete backup.
4. Interior finish, if exposed, to be smooth concrete or concrete or exposed aggregate concrete or a surface applied smooth or textured finish.

Performance Standards

1. *Impact-resistant*
2. *Moisture-resistant*
3. *Thermal-resistant*
4. *Long-lasting system*
5. *Low maintenance*
6. *Meet ASHRAE 90.1-2001 (or later) and current state energy code requirements*

Construction Standards Guidelines Standards

1. Impact, moisture, and thermal resistant
2. Low maintenance
3. Meet ASHRAE 90.1-2001 (or later) and current state energy code requirements
4. **Use extruded polystyrene or polyisocyanurate insulation**
5. **Use fiber composite or plastic connectors – no metal connectors**
6. **Concrete materials: Portland cement ASTM C 180, Type I or III; Fly ash, ASTM C 618, Class C or F may be substituted for up to 20 percent of total cementitious materials**
7. **Concrete mix: 28 day compressive strength, 5,000 psi minimum**
8. **Interior surface: paint or skim-coat plaster**

Guidelines

Components

1. Exterior metal wall panel
2. Weather barrier
3. Exterior sheathing
4. Batt insulation with vapor barrier
5. Cold-formed metal framing
6. Interior gypsum wallboard

Performance Standards

1. *Low maintenance*
2. *Moisture resistant*
3. *Thermal resistant*
4. *Provide 20-year warranty for exterior panel finish*

Construction Standards Guidelines **Standards**

1. **Metal wall panel: 0.0269 inches minimum thickness zinc-coated (galvanized) or aluminum-zinc alloy-coated sheet steel; fluoropolymer exterior finish with minimum 20 year finish warranty**

2. **Low maintenance**

3. **Moisture and thermal resistant**

24. **Weather barrier: composite, self-adhesive, rubberized-asphalt compound flashing product**

3. **Use ¾ inch extruded polystyrene-foam wall sheathing**

45. **Provide 18-gauge, standard C-shaped steel studs steel studs as designed by structural engineer**

56. **Provide ASTM C665, Type 1, faced mineral fiber insulation blankets**

67. **Interior surface: painted, ½ inch, Type X gypsum wallboard**

78. **Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam**

Guidelines

1. **Consider uUse of ¾ inch extruded polystyrene-foam wall sheathing**

Performance Standards

1. Moisture resistant – integral finishes
2. Thermal resistant – minimum U-factor for low-slope roof is 26.0 and steep roof 19.6.
3. Positive slope – minimum slope 3/8" in 12", unless specified otherwise.
4. Minimal maintenance – upkeep but not continual maintenance
5. Wind / weather resistant – meet FM uplift criteria
6. Positive drainage to interior drains or exterior sources
7. Fire resistive – meet UL class "A"
8. "ENERGY STAR" ~~performance ratings for surface treatments~~
9. Consider "radiant barriers", such as aluminum foil at the ceiling of _____ attics

Examples

1. Shingle roof system
2. Metal roof with batt insulation
3. Built-up roof system
4. Single-ply roof system
5. Metal roof with rigid insulation
6. _____ 6. _____ Cold tar roof system
7. Modified Bitumen Roofing System

NOTE: #1: Other types of roof systems may be acceptable if system meets or exceeds the above performance standards.
 #2: All roof system and products shall be designed in accordance with state fire prevention code and state building code.

Components

1. Asphalt shingles, UL class "A"
2. Felt or membrane underlayment
3. Vented nailboard insulation: oriented strand board (OSB) or plywood
4. Rigid insulation with vapor barrier on under side: extruded polystyrene or polyisocyanurate board
5. Vapor barrier
6. Structural roof deck

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **"ENERGY STAR":** 0.004 or better thermal transmittance and 0.005 or better air permeability and surface treatments
4. **40-year Maximum industry available material and wind**

warranty

Construction Standards

1. **Minimum 3:12 slope**
2. **Fasten shingles to roof sheathing with nails – not staple fasteners.**
3. **Metal drip edge: brake formed sheet metal with at least a 2 inch roof deck flange**
4. **Glass-fiber reinforced, mineral-granule surfaced, self-healing shingles.**
5. **Felt underlayment ~~45-20~~ pound asphalt-saturated organic felts, nonperforated. Use two layers where slope equals or is less than 4/12.**
6. **Sheet metal flashings conform to SMACNA's "Architectural**

Sheet Metal" manual.

Components

1. Metal panels: aluminum zinc alloy coated steel sheet with fluoropolymer two-coat finish system or Kynar 500 finish system
2. Insulation: glass fiber blanket with vapor tight edge tabs and facer on under side
3. Galvanized steel purlins
4. Steel joist or other structural members

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **"ENERGY STAR":** 0.20 value of U-factor and 60% solar reflectance and 0.16 value of U-factor and 75% solar reflectance
4. **20 year finish and weathertightness warranty**
5. **System shall have ASTM E 1592-94 wind uplift classification.**
6. **Contractor furnish 2 year guarantee on materials and workmanship.**

Construction Standards

1. **Minimum 3:12 slope**
2. **Thermal space;s where panels attach directly to purlins**
3. **Standing seam assembly: factory formed, cap seam assembly designed for concealed mechanical attachment of panels to roof purlins or deck**
4. **Air leakage through assembly of not more than 0.06 CFM/sq.ft. of roof area when tested to ASTM E 1680.**

Z
Construction Guideline

- 5. No water penetration when tested according to ASTM E 1646.

- 1. "ENERGY STAR" compliant roof surface recommended

Components

- 1. Top membrane: cap sheet, interply sheet, and base sheet
- 2. Recovery board
- 3. Rigid roof insulation – one or two layers
- 4. Structural support: steel deck or cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB)

Performance Standards

- 1. Moisture resistant
- 2. Thermal resistant
- 3. Relatively low maintenance
- 4. Economical
- 5. "ENERGY STAR" compliant surface treatments
- 6. Must have class A rating complying with ASTM E 108
- 7. Manufacturer to provide a 15 year warranty
- 8. Contractor to provide 2 year guarantee warranting the roofing, _____insulation, and flashing

Construction Standards

- 1. Minimum slope ~~0.375:12~~ "12"

2. **Base sheet: asphalt-impregnated no. 28 glass-fiber HT-felt or _____ styrene butadiene styrene (SBS) modified bitumen**
3. **Interply sheet: (SBS) sheet with glass-fiber or nonwoven polyester reinforcing with minimum 15 year warranty.**
4. **Cap sheet: (SBS) modified asphalt sheet with granule surface**
5. **Install modified bituminous flashing at cant strips, roof edges, _____ and at penetrations through roof**

4. *Pre-confer with Contractor prior to final installation of roofing*

Components

1. Uniform elastomeric EPDM membrane per TPO
2. ½ inch, rigid cover board
3. Rigid insulation – one or two layers
4. Vapor barrier
5. ¼ inch substrate board
6. Structural support: steel deck or cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB).

Performance Standards

1. **Moisture resistant**
2. **Thermal resistant**
3. **Weather / temperature resistant**
4. **"ENERGY STAR": *CES total solar reflectance and CES emittance minimum compliance surface treatment***

- 5. Class "A" U.L. roof system
- 6. Manufacturer to provide ~~10~~ 10 year warranty
- 7. Contractor to provide 2 year guarantee warranting the _____ roofing, _____ insulation, and flashing work

Construction Standards

- 1. Minimum slope ~~3/8~~ 1/4":12"
- 42. Loose laid/ballasted, fully adhered or mechanically fastened ethylene propylene diene monomers (EPDM) membrane, .045 inch thick minimum
- 32. Cover board: ASTM C 1177, glass mat, water resistant _____gypsum substrate Type X, or ASTM C 272 gypsum wood fiber composite board
- 43. Insulation: extruded polystyrene board or polyisocyanurate board
- 54. Vapor barrier: polyethylene retarder, ASTM D 4397, 6 mils (0.15 mm) thick minimum
- 65. Substrate board: glass mat, water resistant gypsum board
- 7. ~~Pre-roofing Permittances prior to field installation of roofing~~

Components

1. Metal panels: aluminum zinc alloy coated steel sheet with fluoropolymer two-coat finish system or Kynar 500 finish system
2. Underlayment (ice and water shield)
3. Nail base Rigid roof insulation – one or two layers
4. Structural support: steel deck

Performance Standards

1. Moderate impact resistant
2. Moisture resistant
3. Thermal resistant
4. Low maintenance
5. Long-lasting system
6. "ENERGY STAR"
67. ~~20~~ 20 year finish and weathertightness warranty
78. System shall have ASTM E 1592-94 wind uplift classification
89. No water penetration when tested according to ASTM E 1646
190. Contractor finish 2 year guarantee on materials and workmanship
191. ~~ENERGY STAR~~ ENERGY STAR ~~minimum surface~~ minimum

Construction Standards

1. Minimum 3:12 slope
2. Underlayment: self-adhering high temperature sheet: 30 to 40 mils thick
3. Standing seam assembly: factory formed, cap seam assembly designed for concealed mechanical attachment of panels to roof purlins or deck
4. ~~4.~~ Air leakage through assembly of not more than 0.06

CFM/sq.ft. of roof area when tested to ASTM E 1680

5. Energy Star-compliant surface treatment. Pre-roofing Conference prior to field installation of roofing

CHAPTER 7: Building Systems

Components

1. Top membrane: coal-tar bitumen and glass-fiber ply felts
2. Backer sheet
3. Rigid roof insulation
4. Structural support: steel deck

Performance Standards

1. Moisture resistant
2. Thermal resistant
3. Long lasting
4. Fume emission
5. "ENERGY STAR" certified
6. Contractor to provide 3 year guarantee warranting the roofing, insulation, and flashing
7. Manufacturer to provide a 10 year warranty

Construction Standards

1. Minimum slope: 1/4" to 1/2"
2. Coal-tar pitch: ASTM D 450, Type I, specially formulated for low fume emission
3. Coal-tar primer: ASTM D43; high pen primer 452
4. Backer sheet: standard spun-bonded, non-woven, polyester reinforced fabric
5. 1/4 inch to 5/8 inch, clean gravel surface
6. Four plies of coal tar-impregnated glass-fiber mats, complying with ASTM D 4990, Type I
7. Pre-opening Conference prior to field installation of roofing

- Components
1. Top membrane: APP or SBS bitumen with glass fiber or polyester reinforcing.
 2. Interply sheet, ply IV fiber/glass felt
 3. Base sheet: UL-G2, ASTM D4601 Type II
 4. Rigid roof insulation Perlite cover board is required
 5. Structural support: Steel deck, cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB), concrete, wood or wood fiber

Performance Standards

1. Moisture resistant
2. Thermal resistant
3. Long lasting
4. "ENERGY STAR" compliant surface treatment
5. Contractor to provide a minimum 2 year warranty covering the roofing, insulation and flashing
6. Manufacturer to provide a minimum 20 year warranty

Construction Standards

1. Minimum slope ~~3/8" / 12"~~ to 12
2. Torch applied or hot mopped asphalt
3. Fibrated aluminum coating or granular surface coating
4. Pre-roofing Conference prior to field installation of roofing

Performance Guidelines

1. Provide uniform light distribution
2. Provide low glare
3. Reduce energy costs
4. Mitigate safety / security concerns
5. Low maintenance
6. Provide ~~daylighting~~day lighting that uses diffused or reflected sunlight
7. Provide windows views to help eye health and help reduce stress
8. Encourage "~~teplighting~~top lighting" to provide best uniform illumination
9. ~~Consider~~ All academic spaces ~~should~~ have natural daylight
10. Minimize east and west facing glass

Examples

1. View windows
2. "~~Toplighting~~Top lighting" (roof monitors, unit skylights, and skylights)
3. Entrance assemblies
4. Interior and exterior doors

Components

1. View windows
2. Clerestory windows
3. Roof monitors and skylights
4. Entrance assemblies
5. Interior doors
6. Exterior doors

Construction Standards Guidelines

1. Air infiltration rate of less than 0.4 CFM/ft performance class AW and grade 65 by AAMA.
2. Testing for thermal performance according to AAMA 1503.
3. Not less than 26 STC when tested for sound transmission loss according to ASTM A90.
4. Operating window sash to be factory glazed.
5. Windows to be double glazed and have low emissivityemissive coating.
6. Glass for exterior doors and sidelights shall be ~~4-inch-thick total, fully tempered insulation glass, comply with state fire prevention codes.~~ Provide vestibule at main entrance.
7. In un-rated assemblies, glass for interior doors shall be a minimum of ¼ inch clear tempered.
8. Interior wood doors to be solid-core and factory finished.
9. Consider sSelection of interior doors constructed with recycled or recovered content and low VOC (volatile organic compounds) if available.
10. Consider sSelection of interior doors with wood veneers harvested from sustainable forests if available.
11. For a high degree of sound isolation on both interior and exterior doors, provide full perimeter gaskets and automatic

door bottoms with a neoprene element for acoustical doors and an STC rating appropriate for the intended use.

12. On exterior doors, provide full perimeter weather-stripping and thresholds.
13. Exterior hollow metal doors shall be insulated.

Performance Standards

1. **Easy to clean materials**
2. **Resistant to moisture or that inhibit the growth of biological contaminants**
3. **Impact resistant materials in high traffic areas**
4. **Durable, long life materials**
5. **Dimensional planning to reduce waste (i.e. 4 ft. by 8 ft. wallboard, 12 ft. wide carpet)**
6. **Use materials that meet industry consensus standards for VOC emissions.**

Guidelines

- ~~16.~~ Consider D design for disassembly for a product and its parts to be reused, remanufactured, or recycled
- ~~27.~~ Good acoustical qualities
- ~~38.~~ Consider R recycled/recyclable
- ~~9.~~ Low VOC materials
- ~~410.~~ Local (within 500 miles) materials and products where possible
- ~~454.~~ Consider F renewable materials

Examples

1. Concrete masonry walls (CMU)
2. Glazed tile and ceramic tile
3. Gypsum wallboard
4. Veneer plaster over gypsum wallboard
5. Operable partitions
6. Folding partitions
- ~~7.~~ ~~7.~~ Demountable partitions
8. Wood partitions framing

Examples

1. Concrete masonry walls (CMU)
2. Structural glazed tile walls (CGFU)
3. Ceramic tile (CT)

Performance Standards

1. Impact resistant
2. Easily cleanable & maintainable
3. Good acoustic qualities
4. Daylight enhancement qualities

Construction Standards

1. CMU walls: ASTM C190, 1900 psi compressive strength, normal weight aggregate
2. Tooled or struck mortar joints for cleanability. Use Type "N" mortar for loadbearing walls and Type "S" for non-loadbearing walls.
3. Glazed structural clay tile: ASTM C 126, Type I (single-faced units) and Type II (double-faced units)
4. Ceramic tile: for materials ANSI A 137.1 "Specifications for Ceramic Tile"; for installation ANSI 108 series and TCA handbook
5. Glazed wall tile: 5/16 inch thick, flat tile with cushion edges
6. Grout tile using latex Portland cement grout. Exception: use chemical resistant epoxy grout in kitchens

|

Examples

1. Metal studs with gypsum wallboard both sides
2. Veneer plaster over gypsum wallboard

Performance Standards Guidelines

1. "Abrasive-resistant" and "high impact" in high traffic areas
2. Economical
3. Relatively easy to move or remove
4. Accommodates periodic finish color changes
5. Good sound barrier with acoustical insulation

1. "Abrasive-resistant" and "high impact" in high traffic areas
Do not use in exterior walls where threat of moisture and mold might be present

2. Economical
Sound transmission characteristic: Minimum STC: 41 in academic areas

3. Relatively easy to move or remove
Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating

4. Accommodates periodic finish color changes
Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick

5. Good sound barrier with acoustical insulation
Metal studs: ASTM C645, 20 guage sheet base metal

6. Provide control joints in partitions 30 feet maximum

Construction Standards Guidelines Standards

1. Do not use in exterior walls where threat of moisture and mold might be present

2. Sound transmission characteristic: Minimum STC: 41 in academic areas

3. Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating

4. Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick

~~5. Metal studs: ASTM C645, 20 gauge sheet base metal~~

~~6. Provide control joints in partitions 30 feet maximum~~

~~"Abrasive resistant" and "high impact" in high traffic areas~~

~~Do not use in exterior walls where threat of moisture and mold might be present~~

~~2. Economical Sound transmission characteristic: minimum STC:~~

~~44~~

~~3. Relatively easy to move or remove Steel framing: comply with
ASTM C754 and G40 hot dip galvanized zinc coating~~

~~4. Accommodates periodic finish color changes~~

~~Gypsum wallboard: ASTM C36, Type X, 5/8 inch thick~~

~~5. Good sound barrier with acoustical insulation Metal studs: ASTM~~

~~C-645, 20-gauge sheet base metal~~

~~76. Provide control joints in partitions 30 feet maximum~~

~~67. Veneer plaster: ASTM C58T consisting of separate base
coat and finish coat~~

~~878. Spot-grout hollow metal door frames~~

~~8. Wood stud grade marked as required by the applicable
building code~~

Examples

1. Operable partitions
2. Folding partitions
3. Demountable partitions

Performance Standards

1. Easily moved by manual or electrical means Easily moved

- from opened to closed (stored) position by manual or electrical operating mechanism
- 2. Sound control equal to fixed partitionsSound control (STC rating) as required to meet the sound isolation requirements for the functional use of the rooms or spaces to be divided
- 3. Options for tack and marker-boardchalk surfaces
- 4. Flexibility for space usageOverhead structural support with minimal deflection as required for functional operation.
- 5. Convenient to relocateDemountable partitions convenient to disassemble and reocaterelocate

Construction StandardsGuidelines**Standards**

sheet (STC
or marker
required

- 1. Manually or electrically operated partitions
- 2. Operable partitions: panels ½ inch gypsum board laminated with 3/16 inch natural cork (STC 47) or steel face 50); Panel finish-vinyl fabric, carpet, tackboardstack boards boards; pedestrian pass doors availableas
- 3. _____
- 3. _____ Accordion folding partitions: steel or aluminum suspension tracks; manually operated; interior 22 gauge steel panels for sound isolation; vinyl coated fabric finish
- 4. _____
- 4. _____ Demountable partitions; face panels of gypsum board painted or covered with vinyl; face panels of steel painted or covered with vinyl or plastic laminate; standard doors and windows available as required
- 5. _____ Non-combustablecombustible products that meet rated fire or smoke separation building code requirements

Performance Standards

1. **Water-based coatings and adhesives**
2. **Nontoxic and non-polluting materials (low VOC)**
3. **Resistant to moisture or inhibits the growth of biological contaminants**
4. **Easy to clean with non-polluting maintenance products**
5. **Durable to withstand heavy use without requiring frequent replacement**
6. **Easy to maintain**
7. **Provide moisture testing of concrete floors to meet flooring manufacturer's requirements**

Examples

1. Soft surface flooring
 - ~~resilient~~ Resilient ~~Resilient~~
 - ~~carpeting~~ Carpeting ~~Carpeting~~
 - ~~resinous~~ Resinous
2. Hard surface flooring
 - ~~tile~~ Tile ~~Tile~~
 - ~~terrazzo~~ Terrazzo ~~Terrazzo~~
 - ~~concrete~~ Concrete ~~Concrete~~
 - ~~wood~~ Wood ~~Wood~~
 - ~~rubber~~ Rubber ~~Resilient~~
 - Rubber
 - ~~resinous~~ Resinous ~~Resinous~~
 - Hardwood

Rubber**Considerations** Construction Guidelines

1. Recycled/recyclable
2. Minimize PVC content

Examples

1. Vinyl composition tile (VCT) and Vinyl enhanced tile (VET)
2. Linoleum and Sheet vinyl
3. Carpet (CAR) and carpet tiles
4. Rubber flooring

Performance Standards Criteria Standards Guidelines

1. Easy to clean and maintain
2. Acoustical benefits
3. Physical comfort (cushion)
4. Recycled content/Recyclable
5. Safety for small children
6. Consider meeting Carpet and Rug Institute Green Label Plus criteria
7. Research and use carpet reclamation programs where available for disposal of existing carpet.
8. Minimize PVC content where possible.
9. Review life cycle costs including materials, cleaning and maintenance

Construction Standards

1. **Carpet: minimum recycled content guideline of 25%, minimum 17 ounce face weight.**
~~Meet Carpet and Rug Institute Green Label Plus.~~
2. **Low-VOC emitting materials. Resilient VOC content limited to 340 GM/liter or less**
3. ~~VCT: 12 inch by 12 inch by 1/8 inch thick~~
34. **Maximum acceptable moisture emission rate for concrete subfloors sub floors:**
 - **carpet Carpet and sheet vinyl – 3 lbs/1,000 sq. ft. per hours or less**
 - **VCT – 5 lbs/1,000 sq.ft.**
5. **Use water-based low VOC adhesives, sealants, and cleaning**

products

- 6. **Sheet vinyl with backing: 0.080 inch thick**
- 7. **Linoleum: 0.10 inch (2.5mm) minimum thickness, with heat-welded seams**
- 8. ~~Research and use carpet reclamation programs where available for existing carpet.~~

9. Minimize PVC content where possible

~~Review life cycle costs including materials, cleaning, and maintenance.~~

Examples

- 1. Porcelain ceramic tile (CT) with recycled content
- 2. Quarry tile (QT)
- 3. Terrazzo tile with recycled content
- 4. Concrete finish
- 5. Wood (athletic)
- 6. Resinous Epoxy

Performance StandardsGuidelines

- 1. Easy to clean and stain resistant
- 2. Highly durable
- 3. ~~High reflectivity can augment daylighting~~day lighting
- 4. Reasonably economical based on life-cycle cost analysis

4. Consider finishes and/or materials suitable for use in _____
 _____5. High traffic area uses

5. Wood flooring: Use certified hardwood, salvaged wood and/or laminated or veneered wood products where possible.

Construction Standards

- 1. **Low-VOC emitting materials: flooring, adhesives, grouts, caulk, or sealants**
- 2. **Comply with ANSI ceramic tile standard**
- 3. **Use M-latex Portland cement mortar setting material for tileortars and grouts should be based upon the installation**

conditions and as recommended by the Tile Council of America.

4. Use epoxy-modified grout mixture for high moisture areas
5. For concrete floors use two-component, water-based, low odor, dust proofing, color pigmented epoxy sealer, or stain
6. Wood gym floors: ~~(consider local wood)~~
 - maximum 4.5 pounds per 1,000 sq.ft. moisture emission in slab
 - two year guarantee
 - second and better grade, maple strip flooring
7. ~~Wood flooring: Use certified hardwood, salvaged wood and laminated or veneered wood products where possible.~~

**ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS (2009-2011 PARTNERSHIP PROGRAM)
SUMMARY AND REQUIRED SPACES**

Form Printed
5/20/2008

SCHOOL DISTRICT		ONLY ENTER DATA IN SHADED AREAS										
SCHOOL NAME												
PROJECT NAME												
PROJECT NUMBER												
1. NUMBER OF STUDENTS		Enter maximum projected number of students during next ten years										
Kindergarten												
Grades 1-3												
Grades 4-5												
Grade 6												
Grades 7-8												
Grades 9-12												
TOTAL	0											
2. KITCHEN		School may have warming kitchen or full service kitchen										
Select from menu below YES or NO if school will have warming kitchen												
Warming Kitchen	NO											
Full Service Kitchen	YES											
3. MULTI-STORY SCHOOL		Select from menu if school is multi-story										
	NO - Single Story											
4. TOTAL SPACE EXISTING CAMPUS												
TOTAL REQUIRED SPACES	0	Square Feet										
SUPPORT SPACE ALLOWANCE	0	Square Feet										
TOTAL REQUIRED + SUPPORT SPACE ALLOWANCE	0	Square Feet										
10% CONSTRUCTION FACTOR	0.10											
TOTAL REQUIRED/FUNDED SQUARE FOOTAGE	0	Square Feet										
REQUIRED SPACES		STANDARD	REQUIRED SPACES		NEW SPACES		EXISTING SPACES (in their final configuration)		TOTAL SPACES (NEW + EXISTING)		REQUIRED SPACES CHECK	
Space	SF	Qty	AREA	Qty	AREA	Qty	AREA	Qty	AREA	Qty	AREA	
ACADEMIC CORE												
E-AC-3	Kindergarten Classroom	1000	0	0				0	0	0	0	
E-AC-4	Kindergarten Restroom	50	0	0				0	0	0	0	
E-AC-5a	Elem Classroom Grades 1-3	850	0	0				0	0	0	0	
E-AC-5b	Elem Classroom Grades 4-5	850	0	0				0	0	0	0	
M-AC-1a	MS Classroom Grade 6	850	0	0				0	0	0	0	
M-AC-1b	MS Classroom Grades 7-8	850	0	0				0	0	0	0	
M-WD-1	Workforce Development	1,300	0	0				0	0	0	0	
H-AC-1	HS Classroom	850	0	0				0	0	0	0	
H-AC-2	Science Clrm/Lab-Gen/Physics	1,440	0	0				0	0	0	0	
H-AC-3	Science Clrm/Lab-Chemistry	1,440	0	0				0	0	0	0	
H-AC-4	Science Clrm/Lab-Biol/Life Sci	1,440	0	0				0	0	0	0	
H-AC-5	Science Prep	300	0	0				0	0	0	0	
H-AC-11	Chemical Storage	150	0	0				0	0	0	0	
H-AC-12	Multi-Use Room	1,500	0	0				0	0	0	0	
H-AC-13	Instructional Multi-Purpose Rm	850	0	0				0	0	0	0	
H-AC-8	Project Lab/Classroom	1,100	0	0				0	0	0	0	
E-MC-1	Reading Room/Circulation	0	0	0				0	0	0	0	
E-MC-4	Computer Lab	900	0	0				0	0	0	0	
M/H-MC-1	Reading Room/Circulation	0	0	0				0	0	0	0	
M-MC-4	Media Center Computer Lab	900	0	0				0	0	0	0	
E-VA-1	Art Room	1200	0	0				0	0	0	0	
E-VA-3	Art Material Storage	80	0	0				0	0	0	0	
E-AC-10	Fine Arts Instruction Room	1,200	0	0				0	0	0	0	
E-AC-11	Fine Arts Instruction Storage	100	0	0				0	0	0	0	
M-VA-1	Art Room	1200	0	0				0	0	0	0	
H-VA-1	Art Room	1200	0	0				0	0	0	0	
M/H-VA-3	Art Material Storage	100	0	0				0	0	0	0	
E-MU-1	Music Room	1,200	0	0				0	0	0	0	
E-MU-2	Music Storage	100	0	0				0	0	0	0	
M-MU-2	Music Storage	100	0	0				0	0	0	0	
M/H-MU-1	Instrumental Room	1,400	0	0				0	0	0	0	
H-MU-2	Instrument Storage	200	0	0				0	0	0	0	
M-MU-8	Vocal Room	1,200	0	0				0	0	0	0	
H-MU-8	Vocal Room	1,200	0	0				0	0	0	0	
H-MU-9	Vocal Storage	150	0	0				0	0	0	0	
E-PE-1	PE Area	2500	0	0				0	0	0	0	
M-PE-1	PE Area	4000	0	0				0	0	0	0	
H-PE-1	PE Area	6000	0	0				0	0	0	0	
H-PE-3	Student Locker Room	400	0	0				0	0	0	0	
H-PE-4	Student Restroom/Shower	150	0	0				0	0	0	0	
H-WD	Workforce Dev Program One	Varies	0	0	0	0	0	0	0	0	0	
H-WD	Workforce Dev Program Two	Varies	0	Varies								
H-WD	Workforce Dev Program Three	Varies	0	Varies								
SPECIAL EDUCATION												
E/M/H-SE-1	Self-contained Classroom	850	1	850				0	0	-1	-850	
E/M/H-SE-2	Workroom/Conference	150	1	150				0	0	-1	-150	
E/M/H-SE-3	Restroom/Shower	100	1	100				0	0	-1	-100	
E/M/H-SE-4	Special Education/Resource	450	1	450				0	0	-1	-450	
E/M/H-SE-5	Speech Therapy	475	1	475				0	0	-1	-475	
E/M/H-SE-7	OT/PT	350	1	350				0	0	-1	-350	
ADMINISTRATIVE SPACES												
E/M/H-AD-3	Principal's Office	150	1	150				0	0	-1	-150	
E/M/H-AD-4	Assistant Principal's Office	120	0	0				0	0	0	0	
E/M/H-AD-11	Guidance Counselor's Office	120	1	120				0	0	-1	-120	
E/M/H-AD-15	Health Center	250	1	250				0	0	-1	-250	
PERFORMING ARTS												
H-PA-1	Auditorium	1500	0	0				0	0	0	0	
H-PA-3	Stage Area (includes wings)	600	0	0				0	0	0	0	



ACADEMIC FACILITIES PARTNERSHIP PROGRAM

March 2008

PROJECT AGREEMENT

(Applicable beginning with Partnership Projects for 2009-2011 Biennium)

This Project Agreement (“Agreement”) is made and entered into by and between the *Division of Public School Academic Facilities and Transportation* (“Division”) and the _____ *School District* (“District”), _____ *County*, pursuant to Act 2206 of 2005.

WHEREAS, The Division, created pursuant to Act 1327 of 2005 is a body corporate and politic, an agency of state government and an instrumentality of the State of Arkansas (“State”), performing essential government functions of the State; and

WHEREAS, the District is acting as an agency of state government, performing essential functions of government pursuant to the laws of the State of Arkansas, and

WHEREAS, the District and the Division have approved a Master Facilities Plan describing the classroom facilities needs of the entire student population of the district, and the total budget for the Public School Academic Facilities Project (“Project”); and

WHEREAS, the District and the Division acknowledge that for funding and planning purposes, the Project is anticipated to commence on _____ and be completed on _____.

NOW, THEREFORE, in consideration of the mutual promises herein contained, the District and the Division agree to cooperate in the design, construction and terms described herein and as follows.

I. AGREEMENT APPLICABILITY

This Project Agreement (Agreement) will become effective upon the signing of both parties and be binding on the date signed by the Director of the Division of Public School Academic Facilities. The district certifies that scope planning and financial planning have been completed prior to the project application submission. Preliminary design through project concept or schematic drawings must be presented prior to the signing of this agreement. No additional aspect of the Project will proceed prior to the signing of this Agreement. By signing, the District certifies that it has not begun the Project beyond the steps outlined above. The signing of this Agreement certifies that the Commission for Arkansas Public School Academic Facilities and Transportation (“Commission”) has approved the Project and funding under the Academic Facilities Partnership Program. The District further acknowledges by signing that, should it be determined that the Project began prior to the signing of this agreement, the Commission may exercise one of the following options: (1) Exercise its authority for Project disapproval, (2) Declare any Project aspects undertaken prior to the signing date ineligible for Program funds, or (3) Require the District to modify any plans and or contracts such that they are in conformance with the provisions of this Agreement. The district agrees that should any of these options be exercised by the Commission, the agreement will be amended and the State Financial Participation adjusted accordingly. The Commission may also exercise their option to amend the Agreement should the plan review or the approval of a variance, request by the District, change in scope or final contract price alter the initial State Financial Participation as stated on the agreement.

Furthermore, if construction of the project has not commenced by (enter date 18 months from Commission approval), this Agreement is null and void and any monies paid by the state to a district shall be subject to immediate recapture by the state. The parties agree to exercise good faith in the execution of this Agreement and the completion of the requirements set forth herein, and that both parties will endeavor to follow and implement the aspects of the Program, the district agrees to comply with all timelines and process requirements in the Rules Governing the Partnership Program or be subject to those Commission options referenced above.

II. SCOPE OF THE PROJECT

A. The parties agree that the Project shall be described as follows;

District inserts detailed scope of work here.

(Do not attach the application as the scope)

B. The Division and the District agree that the Project will, where applicable, and to the fullest extent possible, comply with the Arkansas Public School Academic Facility Manual and Division policies and rules, unless a variance is requested and approved by the Division. Requests for any variance to the Arkansas Facility Manual will be submitted to the Division prior to or at the

time of the signing of this agreement. The District shall not use any of the Project constructed pursuant to this Agreement for any purpose other than as an academic facility, as that term is defined in Ark. Code Ann. § 6-20-2502.

C. Total budget for the Project is (\$_____).

State's share of the total Project budget shall be (\$_____).

The District's local share of the total Project budget shall be (\$_____), as set forth in Article IV. of this Agreement.

D. The District shall provide to the Division, at the time of the signing of this agreement, data on the programmed amounts of budget elements and, at the completion of the Project, data on the actual cost of the Project programmed elements, inclusive of all changes.

III. RESPONSIBILITIES DURING COURSE OF PROJECT

The Division and District shall be responsible for the following:

School District

Division

Determination of Project Scope
(Partnership Project Application)

Review and Approval
(Application Review)

Architect/Engineer, Construction
Manager (if desired), Construction
Contractor Selection Process

Provide guidance as requested
pertaining to procurement laws.

Submittal of Project Drawings

Review for conformance with
facility manual.

Site Selection and Request

Provide recommended guidelines
Contained in the Arkansas Facility
Manual

Request for variance consideration
to the Arkansas Facility Manual

Division Plan Review and
Variance Determination

Educational Program Choices,

Approval of Design in Accordance
Design and Material Choices
with current state law and
Arkansas Facility Manual

Recommend Special Conditions
Documents

Provide recommended contract
clauses for Architect and
construction contracts

Bid Procedures	No action
Submission of Project Approval Forms and State Reviews	Final Project Approval
Recommendation of Award, Notification of Bids	No action
Fund Management in Accordance With Arkansas Department of Education Accounting Guidelines	Audit Option.
Provide Maintenance Plan/Certification	None

- A. The project review and approval schedule will be as outlined in Appendix A.
- B. Any property interest of the State during, and subsequent to construction of the Project, extends only to the extent necessary to facilitate financing the Project. The District will continue to possess all other lawful rights, obligations and interests in the Project.
- C. Site Selection: The District shall be solely responsible for all costs associated with the project site, including acquisition, environmental remediation, and unanticipated site conditions.

IV. SCHOOL DISTRICT SHARE OF THE BASIC PROJECT COST

- A. The signing of this Agreement will serve as certification by the District that the local share amount listed in Section II has been appropriated, budgeted and made available to support the District’s share of this Project. It further certifies that funds are of the type indicated below. The Division reserves the right to audit the funds allocated by the District to the Project Fund or any expenditure related to the Fund or the Project at any time. The method of financial accountability for any project funds will be as established by the Arkansas Department of Education.
- B. Funded from bond proceeds: (\$_____). (The school district is responsible for the administration of the bond sale (if applicable), all necessary notices and cost associated therewith. The proceeds of any such bonds or notes, except any premiums, accrued interest and interest included in the amount of the bonds or notes, shall be used first to retire any bond anticipation notes issued by the District for the Project).
- C. Funded from locally donated contributions: (\$_____). (To include letters of credit, moneys donated or contributions spent directly by a third party.)

- D. Funded from Grant sources: (\$_____).
(Specify origin of Grant and any special conditions that might affect this Project as a result of the grant award.)
- E. Funded from operational fund balances: (\$_____).
(To include Maintenance Escrow accounts.)

V. STATE SHARE OF PROJECT COST

- A. The Division shall certify to the Department of Education the State's portion of the Project cost, to transfer the State's portion of the Project cost, or the applicable portion thereof, which shall then be transferred to the District as may be necessary to pay obligations incurred pursuant to the terms of this Agreement. The District will submit payment requests to the Division, in a format provided in Appendix B. Payment requests for the design contract will be submitted in accordance with the design schedule in the contract. Payments to the district, as state share of the construction contract, will begin one month after the Notice to Proceed is issued and each month thereafter with the final payment request being made at final Project closeout. This procedure applies to contracts whose duration is greater than six (6) months. Projects under six months duration will be submitted at the conclusion of the project. The Division will make payments to the District, of its prorated share of the project cost, commensurate with the contract invoices.
- B. The amount of the state's financial participation for the Project in each fiscal biennium shall be determined by the Division based on the Project's estimated construction schedule. In each subsequent biennium, in order to complete the Project per the construction schedule, the approved Project will have priority for state funds over new Projects for which initial state funding is sought.
- C. The State's share of the Project cost is limited to new construction on academic facilities as defined by Arkansas statute. Project funding, if applicable, as may pertain to portions of the scope that are agreed to be maintenance, repair or renovation are the responsibility of the District and will be accounted for separately from Project funds provided pursuant to this Agreement.
- D. The total extent of the State's share will be based on the district academic facilities wealth index and basis of state financial participation applicable at the time the Project is approved, as applied by the Rules Governing the Academic Facilities Partnership Program. It will not be adjusted during the duration of the Project except as stated in paragraph I, Applicability.
- E. Under no circumstances shall the state's share of project cost exceed the appropriate per square foot funding factor as allowed in the Partnership Rules.

VI. THE PROJECT CONSTRUCTION FUND

- A. The District shall identify and describe any fund or account, other than the Project Construction Fund (Fund) that is related to the Project. The District shall include in the Fund, sufficient funds as required by law, for issuance of any contracts during the duration of the project.
- B. The District shall be responsible for distributing moneys from the Fund upon receipt and approval of proper invoices.

- C. Transactions involving the Fund shall be restricted to: 1) payments for design and project management services, 2) payments to contractors, 3) purchases related to the project, 4) transactions authorized for establishing and administering the investment accounts and construction administration.
No Fund moneys shall be spent for any items inconsistent with the provisions of the Arkansas School Facility Manual and Division policies, unless a variance is approved by the Division.
- D. The District shall not transfer moneys from the Fund, investment earnings credited to the Fund, to any other fund or account except as permitted by this Agreement or with the written approval of the Division.
- E. The District shall provide a full accounting of the Fund, upon request of the Division. The Division reserves the right to audit the Fund, or any expenditure related to the Fund or the Project.
- F. The contingency reserve portion of the construction budget shall be used to pay only costs resulting from unforeseen job conditions, to comply with rulings regarding building and other codes, to pay costs related to design clarifications or corrections to contract documents, and to pay the cost of settlements and judgments related to the Project, unless otherwise approved by the Division.
- G. If the Fund, including all investment earnings credited to the Fund, and any interest earned through completion of the Project, becomes depleted by payments of proper Project costs, the District shall complete the Project, by contributing additional funds. The state share is limited to the state financial participation as stated in the agreement and any amendments.
- H. This Agreement is contingent on and subject to the district's ability to raise appropriate local resources. The Agreement may be declared null and void and the State will have no further obligation to provide state funds to the District for the Project that is the subject of this agreement if the District fails to raise local resources and apply local resources toward the Project as provided under this agreement.

VII. LOCALLY FUNDED INITIATIVES

- A. Locally Funded Initiatives (LFI) are defined as portions of a project not subject to this Agreement. The LFI may include construction which is determined to exceed the standards in the Facility Manual; maintenance, repair or renovation.
- B. The District agrees to assume all financial responsibility for the LFI and establish a method to account for all the local resources supporting LFI separate from the Project funds. The Division and the District will agree as noted herein to the cost associated with the LFI to include, but not limited to pro-rated: design fees, construction and or construction management fees, reimbursable expenses and operational cost.
- C. The District agrees to locally fund the following scope and budget associated with the LEI.

(The district should include a description of the Locally Funded Initiative.

Statement of district LFI amount: (\$_____)

VIII. CONTRACT ADMINISTRATION

- A. The District shall competitively bid, execute and administer contracts for construction on the Project and all other contracts as necessary, in compliance with State of Arkansas bidding procurement laws in place at the time of bid. It further agrees that it will follow all state and local government procurement and construction codes, Division policies and manuals regarding any procurement actions, and administration and execution of design and construction contracts. Both parties further acknowledge that this Agreement is in addition to and not to replace any state annotated codes, policies or rules governing state procurement practices and contract administration.
- B. The District will submit Appendix A with proposed project schedule dates. These dates may be determined in concert with the design firm. Required submissions to the Division are identified in the appendix.
- C. The Division will recommend contract formats for projects of varying size and estimated cost.
- D. The Division shall recommend contract clauses for the Architect and the Project Manager. If the District chooses to use its own form of Agreement for the Architect/Engineer or Construction Manager, the District's Agreement may contain the clauses listed, as applicable, in Appendix C.
- E. The Division shall recommend an Invitation for Bids and Special Clauses for use by the District (Appendix D). The Standard Conditions of Contracts for Construction in effect at the time of the applicable bid advertisement for the Project shall apply to the Project.
- F. Any proposed changes to the plans or scope of the Project that affects the Project budget cost, Project length or facility standards shall be brought to the attention of the Division. The Division reserves the right to conduct on-site inspections of the new construction as frequently as deemed necessary to insure the prudent and resourceful expenditure of state funds.
- G. The District shall provide to the Division, at the time of bid opening, the bid results and an updated construction schedule that may be recommended as a result of the bidding process. The District will be responsible for all administrative measures of the bidding procedures.
- H. Should the Project not be completed, through no fault of the District, the State and the District will share liability and recovered losses and damages to the extent of the Agreement. Should the Project not be completed due to the fault of the District, the State reserves the right to recover its total loss from district financial balances.
- I. The Division will make final payment to the District upon receipt of the final invoice submitted to the District by the contracted service provider. Final invoice will indicate: (1) original contract price, (2) changes to cost (3) final contract cost and be certified for payment in accordance with District policy.
- J. This Agreement will be declared null and void and the State will not have any obligation to provide State funds to the District for the Project, that is the subject of this Agreement, if the District fails to execute this Agreement or if the District fails to adhere to any of the conditions of the Agreement or if the

INSTRUCTIONS FOR THE SUBMISSION OF APPENDIX A: (Jan 2008)

The appendix should be compiled by the school district in coordination with the design and or design/construction team to establish a checklist of dates for project monitoring. Appendix A is to be initially submitted with the signed Partnership Agreement, indicating anticipated Scheduled Project dates. This submittal will only include those dates the District has identified as milestone dates in its planning. It is intended that the District and Division will update this Appendix as the project proceeds, and will be adapted to be project specific.

Partnership Agreement:

The Partnership Agreement is a narrative that expands from the Partnership Application and joins the Division and School District into a written agreement pertaining to the conduct of the Partnership project. It includes a written scope of work, drawings if available, the project programmed budget, project schedule, and LFI Information. This information is included on the Partnership Agreement form. Required submission to Division.

School Construction Approval Form:

This Approval Form is required in accordance with Arkansas Code Annotated 6-11-105, 6-20-1406, 6-20-1407, 6-21-109. It will include certification of the following elements: Assurance Impact Statement, Annual Equity Report, Financial Assurance Statement. Required submission to Division.

Schematic Design Phase:

The Schematic Design Phase should show the very preliminary program requirements in graphic form. As a minimum, they should be single line drawings with dimensions and labeled as to functional area. (If new facilities) depict the general building footing and support areas, (If building systems) depict the major components and location. Any deviation from the Arkansas Facility Manual Standards must be addressed with a variance request to the Division.

Design Development Phase: (Not required)

The Design Development Phase should show a much more detailed plan of the project and will include specifications for construction. (See design development contents below). Any deviation from the Arkansas Facility Manual Standards must be addressed with a variance request to the Division.

Construction Document Phase:

The Construction Document Phase consists of the final plans and specifications and consists of the submittal, by the school district, of plans to State Fire Marshall, Department of Health, Arkansas Building Authority and local Governmental Authorities. This stage also includes a submittal of full plans and specifications accompanied with Project Budget and Cost Estimate updates and Project Schedule update to DPSAFT. Plan review comments and any corrections, if necessary, will also be submitted when complete.

Bidding or Negotiation Phase:

One set of the tabulation of bids will be submitted to DPSAFT. Should the bids exceed limitations as contained in Arkansas Code Annotated 22-9-203, the District will review their financial program consider the recommended course of action, as discussed in paragraph 7 of Appendix C.

Construction Contract Administration Phase:

The administration of the project is the responsibility of the District. Payment requests to the State will be made in accordance with the Partnership Agreement. Each payment request will be accompanied by an Architect and Contractor invoice (certified by the Architect for payment) and a short project status report which will include, but not limited to: (1) Current project status, including percent of project completion (2) Significant accomplishments since last report, (3) Changes in construction time, (4) Anticipated cost changes, and any information the district deems pertinent to the project.

Project Closeout Documents:

These include final inspection by the District, receipt of all final documentation (to include operating manuals, warranties, occupancy permits), correction of punch list items and final invoice. The District will forward to DPSAFT a certification of completion that the project requirements have been met, the project accepted by the District and final payment invoices received. The submittal to DPSAFT will include a report of actual expenditures in the categories originally submitted as part of the Program Requirement Section.

Design Development Contents: (Not required for submission to Division; for information only)

Documents provided the school district should depict the areas stated below, as applicable. This list is not all inclusive but is meant to assist school districts with submissions to them by design teams.

Architectural

- Dimensioned floor plans indicating structural bay sizes and overall building dimensions. Floor plan should show dimensions and final partition locations including all openings.
- Exterior and core wall sections showing final dimensional relationships, materials and component relationships.
- Floor plan should show all fixed and loose equipment.
- Preliminary room finish schedule identifying all finishes.
- Exterior door and hardware schedule showing door, frame and hardware type.
- Site plan including grading and site utilities, utility connection points and a storm water management design.
- Preliminary development of details and large scale plans and sections.
- Outline specifications indicating manufacturers and suppliers.

- Preliminary reflected ceiling including ceiling grid, light fixtures and all devices that penetrate or are mounted upon finished ceiling.
- Interior movable furniture, office equipment, demountable partitions and system furniture, layouts for all departments and floors including proposed building signage system.
- Gross and net area calculations by department to determine compliance with program of requirements.
- Outline specifications including selected acceptable manufacturers.

Structural

- Floor plan with all structural members located and sized.
- Preliminary footing, beam, column and connection schedule.
- Establish final building elevations.
- Outline specifications including acceptable manufacturers
- Foundation drawings.

Plumbing & Mechanical

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

Electrical

- Floor plan locating all power consuming equipment with a description of the equipment load characteristics.
- Estimate total electrical load, confirm Facility Manual required excess capacity.
- Floor plan showing all major electrical equipment which shall be dimensioned and drawn to scale.
- Site plan showing preliminary site lighting design with and fixture type designation.
- Outline specifications including acceptable manufacturers.
- Floor plan showing lighting layout, power, telecommunications and office automation devices and switches with preliminary circuiting.
- Light fixture schedule should be finalized.

- Estimate interior electrical loads for systems furniture, receptacles, lighting, food service equipment and any other special use areas.
- Preliminary distribution panel schedule.

INSTRUCTIONS FOR THE SUBMISSION OF APPENDIX B:

Appendix B: (Part 1), Column A will be submitted initially with the Agreement when forwarded to the Division. It will indicate the elements of the budget amounts for all expected expenditures. It is intended to be a 1 time submittal but may be updated as if new requirements of expense are identified.

Appendix B: (Part 1), Column B will be submitted upon project completion and closeout. It will indicate all actual expenditures attributed to this project.

Appendix B: (Part 2) will be submitted with each payment request to the state. It will indicate the areas noted and will be accompanied by contract invoices.

Appendix B: (Part 3) will be submitted with each State Payment Request and provide the project status information.

(The Division of Public School Academic Facilities and Transportation (DPSAFT) establish the contract form or format for District contract agreements. It additionally requires the inclusion of certain clauses for the various contracts Districts may use for their projects. The following clauses are required in District – Architect/Engineer Agreements for projects with no Construction Manager. These clauses are to be included in all Architect/Engineer-Owner contracts regardless of basic format).

1. The Architect/Engineer shall perform the responsibilities of this Agreement as representatives of both the District and DPSAFT.
2. The Architect/Engineer shall be currently licensed to practice in Arkansas, and shall carry general liability, workmen’s compensation, errors and omissions and business auto insurance coverage as provided below:

A. Insurance. The insurance required to be maintained by the Architect/Engineer pursuant to this Article shall be maintained with insurance companies having Best Insurance Reports rating of “A-” or better and a financial size category of “IX” or higher, or if not rated by Best Insurance Reports, a Standard & Poor’s claims paying ability rating of “BBB+” or higher (or comparable rating by any other rating entity reasonably acceptable to Owner). Nothing contained elsewhere in this Agreement shall limit the obligations of the companies providing the insurance required by this Article VI under the policies relating to such insurance. The Architect will be responsible for any deductibles with respect to any insurance maintained.

B. Casualty Insurance. Except when a modification is requested in writing by the Architect/Engineer and approved in writing by the Owner, the Architect/Engineer shall carry and maintain at the Architect's/Engineer cost, with companies authorized to do business in Arkansas, all necessary liability insurance (which shall include as a minimum the requirements set forth below) during the term of this Agreement:

Worker’s Compensation/Employer’s Liability. The Architect/Engineer shall procure and maintain Worker’s Compensation insurance in accordance with all applicable Federal and state law together with both an “all States” Endorsement and a Voluntary Compensation Endorsement. Employer’s Liability will have a minimum limit in accordance with Arkansas State Law.

Commercial General Liability. (This clause is applicable in those contracts where the architect or engineer acts as the principal administrator of the construction contract; otherwise it will be included in the construction management contract). The Architect/Engineer will provide Commercial General Liability coverage written on an “occurrence” basis, including coverage for premises operations, explosion, collapse, and underground hazards, products/completed operations with minimum limits of (AMT) dollars (\$AMT) [or project-specific] in a combination of primary, excess or umbrella layers. Owner shall appear as an additional insured up to (AMT) dollars (\$AMT) [or project-specific]. The policy will also contain a cross-

liability of severability of interest endorsement and a three-year extension of coverage following final completion;

Comprehensive Automobile Liability. The Architect/Engineer shall procure and maintain Comprehensive Automobile Liability insurance, including coverage for liability arising out of the use of owned, non-owned, leased or hired automobiles for performance of this Agreement. As used herein, the term "automobile" means any vehicle licensed or required to be licensed under the applicable state vehicle code. The Comprehensive Automobile Liability insurance shall meet the minimum State of Arkansas policy limits

C. Project Professional Liability Insurance. For all Projects with a Construction Budget of \$5,000,000 or more, the Architect/Engineer shall, if requested by the Owner, obtain proposals for project specific professional liability insurance to cover the Architect and any Consultants ("Project Professional Liability Insurance") in an amount of not less than **Project Specific**. The term of coverage of such insurance will include the design period, the construction period and a period of no less than two (2) years after the Contract Completion.

D. Professional Liability Insurance. When the Owner does not elect to procure Project Professional Liability Insurance, and subject to the Owner's waiver or modification of Professional Liability Insurance upon written request of the Architect/Engineer, the Architect/Engineer shall maintain insurance to protect against claims arising from the performance of the Architect/Engineer's services caused by any negligent acts, errors or omissions for which the Architect is legally liable ("Professional Liability Insurance"). Except when a waiver is approved by the Owner upon written request of the Architect/Engineer, such Professional Liability Insurance shall be in an amount not less than \$1,000,000 per claim and in the annual aggregate. The Architect/Engineer shall keep such insurance in effect for so long as the Architect may be held liable for its performance of services for the Project. If the Professional Liability Insurance is written on a claims-made basis, such insurance shall have a retroactive date no later than the date on which the Architect/Engineer commenced to perform services relating to the Project. The insurance company issuing the Professional Liability Insurance policy must be authorized to do business in Arkansas and have a rating of at least A status as noted in the most recent edition of the Best's Insurance Reports.

3. The Architect/Engineer shall provide all services in accordance with applicable Sections of the Arkansas Code and any applicable state rules and regulations, any applicable federal and local statutes, ordinances, rules and regulations, the applicable Announcement issues pursuant to Arkansas Code, the appropriate edition of the Standard Conditions of the Contract for Construction, the Architect's/Engineer Technical Proposal for this Project, *the current edition of the Arkansas School Facility Manual*, and any additional provisions described in the attachments, exhibits and/or Special Conditions of this Agreement.

4. The Architect/Engineer is responsible for employing all necessary consultants to execute the project. Such professionals will be licensed architects and engineers qualified to practice the building discipline for which they are employed. The performance of its

Consultants as it would be if it had rendered these services itself. Architecture/Engineer fees will be inclusive of mechanical, structural and electrical consultants. Other consultants deemed necessary by the architect/engineer, and agreed to by the school district, will be employed by the architect/engineer and their fees to be considered reimbursable expenses unless specifically noted otherwise by the owner.

5. The Architect/Engineer shall be responsible for processing any conditional use permits required. Such processing will be included within the fee structure of the contract and the allowance for reimbursable expenses.

6. The Architect/Engineer shall prepare and submit a Pre-Bid Report for the District's approval a minimum of four (4) weeks prior to the date set for Public Bid Advertisement. The Pre-Bid Report shall include: (1) establishment of the bid date; final working drawings and Project specifications; the Final projected cost; proposed project timeline; the status of governmental approvals and permits; a review of the availability of appropriate categories of labor required for all phases of the Work; recommendations of the release dates for bidding documents and the duration of bidding period for the Project. The Architect/Engineer shall forward to the DPSAFT one record copy of the District-approved Pre-Bid Report.

7. If the Construction Budget is exceeded by the total of the lowest responsive and responsible bids and any legally negotiated prices for the Project, the District shall, take those actions as allowed by A.C.A 22-9-203, at its option, (1) approve in writing an increase in the Construction Budget, if the District is solely capable of financing 100% of the necessary increase; (2) authorize re-bidding or renegotiation for some or all parts of the Project within a reasonable time without an increase in the Construction Budget; (3) abandon the Project, in whole or in part, and terminate this Agreement in accordance with the agreed terms and conditions; (4) cooperate in the revision of the Scope of the Project to reduce the actual cost of construction to the Construction Budget. The Architect/Engineer shall modify the Approved Program of Requirements, the Contract Documents, the Final Cost Estimate and the Project Timeline as required by the option exercised, and submits those revised items for the District's approval. The Architect shall then cooperate in any necessary bidding or negotiation. The Architect/Engineer's responsibilities within this provision shall be performed without additional compensation. Should the District exercise option (4) above, making major revisions to the Program Requirements, and requiring substantial revisions to the original program requirements, original estimated budget or project timeline, then the architect shall be entitled to an equitable adjustment in compensation and expenses. The Architect/Engineer shall forward to the DPSAFT a notice copy, indicating District approval, of the District's exercised option.

8. The Architect/Engineer shall provide assistance to the District in the selection of all contractors and sub-contractors during the bidding phase of the contract.

9. The Architect/Engineer shall provide assistance to the District in any negotiation with contractors resulting from bids or proposals exceeding the Final School District Budget.

10. The Drawings and Specifications produced by the Architect/Engineer shall not contain Design Errors and/or Omissions that cause the Construction Budget to be increased by more than three percent (3%) for new construction or five percent (5%) for renovation/repair/addition construction, through the issuance of additive Change Orders to the Contractor(s) during the Construction Phase. In addition to any other remedy provided by law, the Architect shall be held liable for the entire cost of all Design Error Change Orders and held liable for ten percent (10%) of all Design Omission Change Order costs, once the cumulative value of such Design Omission Change Order costs have exceeded the appropriate three or five percent (3% or 5%) of the Construction Budget threshold. For Design Omission Change Orders only, the architect/engineer will not be held liable for that portion of the change order cost the owner would have paid had the work been originally included in the drawings and specifications.

11. The Architect/Engineer shall assist the Owner in determining dates of Partial Occupancy of the Work or portions thereof designated by the Owner and shall assist in obtaining any necessary temporary occupancy or other certificate from any applicable government authority.

12. The Architect/Engineer shall be required to accompany a contractors re-inspection of the project, fully and completely, at approximately eleven months after the date of substantial completion, or otherwise prior to the expiration of general warranty as directed by the District. The Architect/Engineer shall report all deficiencies uncovered during this inspection and will be responsible for monitoring the correction of the deficiencies to a complete and satisfactory level for acceptance. The Architect/Engineer shall provide to the DPSAFT a notice copy, indicating District receipt and approval, of the warranty inspection and satisfaction of such.

13. The owner shall have the right to examine, copy and audit the books and or other financial records in possession of the architect/Engineer firm relating to this contract at any times deemed necessary by the owner and reasonably convenient to the architect/engineer.

14. The architect/Engineer will be responsible for making revisions to the drawings and specifications or other documents when such documents are; (1) found to be inconsistent with approvals or instructions previously given by the owner, (2) required by the enactment or revision of codes, laws or regulations subsequent to the completion of the construction document phase.

15. The architect/Engineer will insure the following are provided the owner; "as built" drawings, copies of all shop drawings, manuals and instructional texts at the final acceptance of the project by the owner, and will be a condition of final construction contract or payment. Architect/engineer will review and transmit to the owner.

16. The architect/Engineer fee will be inclusive of all elements of the projects and will be based on the construction cost of all aspects designed by the architect/Engineer, or modified, changed regardless of cause by parties. Separate contracts, in conjunction with this project, for which the owner contracts separately for which the architect/Engineer had no direct responsibility and or owner furnished equipment will not serve as the basis for fee calculation in this agreement.

17. Should this project be terminated, through no fault of the architect/Engineer, the total of fees (including reimbursable expenses) will be paid the architect/Engineer compliant with the fee structure in the agreement and based on the budgeted amount by the owner.

(Where the district uses the AIA standard form of contract the Division requires the following contracts be used for the District – Architect agreement with clause modifications as noted).

AIA 141 Contract: To be used for engineer design services. Form will be modified to reflect engineer in lieu of architect. Both Section 1 and Section 2 will be used.

AIA 151 and AIA 201: To be used for projects whose budget exceeds \$1,000,000 or where there is joint maintenance, repair and LFI new construction combined regardless of contract value. All clauses in this appendix will be included and as such modify and or supersede standard AIA clauses.

Design fee appropriation will be as follows: Section 11.2.2

Schematic design Phase:	15%
Design Development Phase:	20%
Construction Documents Phase:	40%
Bidding or Negotiation Phase:	5%
Construction Administration Phase:	20%

AIA 155: To be used for projects whose estimated cost is under \$1,000,000 regardless of the type of design (unless the projects are complicated or require close Architect/Engineer supervision). All clauses in this appendix will be included and as such modify and or supersede standard AIA clauses.

Design fee appropriation will be as follows: Section 6.2

Schematic design Phase:	15%
Design Development Phase:	20%
Construction Documents Phase:	40%
Bidding or Negotiation Phase:	5%
Construction Administration Phase:	20%

(The selection of the construction contract is at the discretion of the district. DPSAFT, will upon request, provide general conditions for a construction contract to be included should the district decide to develop its own contract. In such instances all general and special conditions, attached as Appendix D, will be included. Should the district decide to use a standard AIA construction contract the DPSAFT requires the following contract be used for the District – Contractor agreement)

AIA 101: To be used for projects where the final bid amount exceeds \$250,000, that require Architect/Engineer oversight.

AIA 105 and AIA 205: To be used for projects where the final bid amount is less than \$100,000 with little or no Architect/Engineer oversight.

AIA 107: To be used where the final bid amount is between \$100,000 and \$250,000 that require Architect/Engineer oversight. **EXCEPTION: When the bid documents contain A201 – 1997 General Conditions of the Contract for construction. (use AIA 105).**

**APPENDIX D.
11/17/2006**

(The District may use the invitation for bids contained in this appendix or it may use one which it has originated. Should the invitation for bids used in the procurement process for the Partnership Project subject to this agreement not contain the paragraphs as noted here, then it will be amended to reflect these paragraphs).

INVITATION FOR BIDS

SECTION I: GENERAL INSTRUCTIONS, TERMS AND CONDITIONS

These General Instructions, Terms and Conditions and any special terms and conditions become part of any contract entered into in the event any part or all of the bid is accepted by the (Name) School District. Any special terms and conditions included in the Invitation for Bids override these general instructions, terms and conditions.

DEFINITION OF TERMS

IFB shall mean Invitation for Bids.

The words vendor, bidder, offerer, company, proposer and contractor may be used synonymously in this document.

The terms "District" or "Owner" are used interchangeably and refer to the (Name) School District.

SUBMISSION OF BID

Bids must be submitted to this office using the forms included on or before the date and time specified for bid opening. Each bid should be placed in a separate envelope completely and properly identified using the enclosed mailing label reflecting bid number, bid title and bid opening date/time. Late bids will not be considered under any circumstances.

Failure to sign the bid may result in disqualification. The person signing the bid should show title or authority to bind his/her firm to a contract. Signature must be in ink. Bid must be completed in ink or typed.

ASSIGNMENTS: (Para. To be used if AIA 105 or 107 contracts are used):

Neither this contract nor any interest therein nor claim thereunder may or shall be assigned or transferred by the contractor except as expressly authorized in writing by the District. No contract, subcontract or agreement shall be made by the contractor with any other party for furnishing any of the product, work or services herein contracted without the consent of the District.

CONFLICT OF INTEREST

By submitting a bid, the contractor represents and warrants that no director, board member or employee of the District is in any manner interested directly or indirectly in

the bid or contract which may result from the bid or in any of the expected profits which might arise therefrom; further, that no attempt has been made to influence or gain favorable advantage by communicating directly or indirectly with any official of the School District. It is understood that any action taken which might tend to degrade the integrity of the competitive bidding process will be considered as grounds for disqualification or a breach of this contract.

CONTRACT CHANGES

In no event shall any understanding or agreement, contract modification, change order or other matter which would constitute a deviation from the terms of this contract be effective or binding upon the District unless expressly stated and agreed to in writing executed by the School District Official possessing contractual authority for said district.

CONTRACT GUIDELINES

Offerers agree that a contract does not become effective until it is awarded and a written agreement, purchase order, award letter, or other notice to proceed is executed or issued by the District and the contractor.

INDEMNIFICATION AND LEGAL COMPLIANCE: (may be substituted by Para. 3.18 AIA 201-1997 contract).

The contractor shall at all times observe and fully comply with any and all Federal, State and local laws, statutes, orders, ordinances and regulations. The contractor agrees to save, hold harmless and to indemnify the District, its agents, employees, officers and board members against any and all liability, losses, claims or costs of whatsoever kind or nature relative to the performance of the contract or any occurrence or accident in connection with inadequate design, breach of contract, material failure, default or the performance of any work, services or products supplied, pursuant to the award, whether to property or persons. Further, contractor shall indemnify, hold harmless and defend the District, its agents, employees, officers and board members from any lawsuits, causes of action, claims, liabilities and damages, of any kind and nature, including but not limited to, attorney's fees and costs, arising out of the performance of this contract whether attributable in whole or in part to any act, omission or negligence of the District, its agents or employees, including, but not limited to, any and all lawsuits, causes of action, claims, liabilities, and damages which the District, its agents or employees may sustain by reason of any failure by contractor to indemnify as provided herein, or any failure by contractor to otherwise perform its obligations pursuant to this contract, or by reason of the injury to or death of any person or persons or the damage to, loss of use of or destruction of any property resulting from work undertaken herein.

MINORITY BUSINESS POLICY

It is the policy of the (Name) School District that minority business enterprises shall have the maximum opportunity to participate in the District's purchasing process. Therefore, the District encourages all minority businesses to compete for goods, services, and construction contracts.

NON-COLLUSIVE AFFIDAVIT

By submitting a bid, the company and the individual personally signing the bid represent and warrant that such bid is genuine and is neither collusive nor made for or on behalf of any person not named, and that he has neither induced nor solicited any other company to place a sham bid nor directly or indirectly caused another company to refrain from or be unable to present a bid.

NON-DISCRIMINATION

The company shall not discriminate against, or segregate, a person or a group of persons on account of race, color, creed, religion, sex, sexual orientation, marital status, familial status, national origin, ancestry, disability or condition of acquired immune deficiency syndrome (AIDS) or AIDS-related complex in carrying out its duties and obligations pursuant to this agreement nor shall the company or any person claiming under or through the company establish or permit any such practice or practices of discrimination or segregation. The company must include in any and all subcontracts a provision similar to the proceeding.

PENALTY FOR COLLUSION

If at any time it shall be found that the person, firm or corporation to whom a contract has been awarded has, in presenting any bid, colluded with any other party or parties, then, in the sole discretion of the District, the contract so awarded shall be null and void or considered breached and the contractor shall be liable to the District for any and all loss and damage of whatsoever nature, which the District may suffer and the District may seek a new contractor.

PROPRIETARY INFORMATION

All information submitted in response to this bid is public after the bid opening. The bidder should not include as a part of the response to the invitation to bid any information which the bidder believes to be a trade secret or otherwise privileged or confidential. If the bidder wishes to include such material with a bid, then the material should be supplied under separate cover and identified as confidential. The District does not warrant or agree to, but will endeavor to, keep that information confidential. Contractor acknowledges that information in the possession of the District may be subject to the provisions of the Arkansas Freedom of Information Act.

REJECTION OF BIDS

The District may reject any and all bids and may reject a bid of any party who has failed to perform, been unfaithful and/or delinquent in any former relationship with the District. The District reserves the right to waive any irregularities or formalities in any solicitation or bid response. The District shall be the sole judge as to which bid is best and, in determining that fact, may consider the contractor's business integrity, financial resources, experience, facilities and/or capacity for performing the work.

RESERVATIONS

This IFB does not commit the District to award a contract, to pay any costs incurred in the preparation of a bid in response to this invitation, or to procure or contract for services or supplies. The District reserves the right to accept, or reject, in part or its entirety, any bid received as a result of this IFB, if it is in the best interest of the District to do so.

SEVERABILITY

The finding or determination of any part or parts of the General Instruction, Terms and Conditions is void, unenforceable, invalid or voidable shall result in only that part being stricken with the remainder to continue in full force and effect.

STATEMENT OF EXPERIENCE AND QUALIFICATIONS

The company may be required, upon request, to prove to the satisfaction of the District that they have the skill, experience and the necessary facilities and financial resources to perform the contract in a satisfactory manner and within the required time. If the evidence of competency is not satisfactory, the bid of such company may be rejected.

WITHDRAWAL OF BID

A bid may be withdrawn before the expiration of the time during which bids may be submitted, without prejudice, by submitting a written request for its withdrawal to the District Contacting Official.

[\(Special instructions, terms and conditions are to be included in the General Provisions of the IFB for the Partnership Project subject to this agreement\).](#)

SECTION 2: SPECIAL INSTRUCTIONS, TERMS AND CONDITIONS

BID GUARANTEE AND PERFORMANCE BONDS

Each bid will include with it a bid bond in the amount of 5% of the total bid offered. It will be in the form of a cashier's check or insurance surety bond (with Power of Attorney attached) made payable to the owner.

If bid is over \$20,000, a Performance and Payment bond will also be furnished by the successful bidder within ten (10) days after receipt of the (Name) School District intent to award notice. Failure to furnish the required bonds may cause forfeiture of bid guarantee to the owner as liquidated damages.

The "Performance and Payment Bond" will be in the amount equal to 100% of the contract price as security for the faithful performance of this contract price and for payment of all indebtedness for labor and materials furnished or performed in connection

with this contract. The bond will be written by a surety company which is qualified and is authorized to do business in the State of Arkansas, according to A.C.A. 22-9-402(a)(b) and filing with said bond, his power of attorney as his authority. The bond will be written in favor of the Owner and executed per Arkansas state law. An original and two (2) copies of the bond must be furnished, with power of attorney attached to each. The Contractor will file and record the original with the Clerk in the Circuit Court of (Name) County. The Contractor is to pay all expense incidentals to file the bond. The remaining two copies should be certified by the Clerk to evidence the filing of the original and these two copies submitted to the (Name) School District.

NO SMOKING POLICY

The (Name) School District has a No Smoking Policy on all school properties.

It is the policy of the Board of Education that all uses of tobacco and tobacco products, including smokeless tobacco, will be prohibited on all District facilities. At no time will the use of tobacco products be permitted in classrooms, corridors, restrooms, locker rooms, work areas, cafeterias, offices, faculty lounges, gymnasiums, all other rooms and school grounds.

This policy applies to all Staff Members, Students, Visitors, General Contractors, Sub-Contractors, and Vendors. This policy is strictly enforced without exception.

INSURANCE REQUIREMENT

After bids are opened, the apparent low bidder must provide proof of insurance within five (5) business days from date of request by the District. Insurance must provide sufficient liability protection for all claims, whether direct or indirect, resulting from contractual operations. Failure to submit an insurance certificate by the time provided may be cause for bid disqualification. The following are recommended amounts for insurance coverage: (The District reserves the right to lower/raise these coverages if it is in the best interest of the District).

The (Name) School District must be named as additional insured, and the certificate must contain a clause that the insurer will not cancel or change the insurance without first giving the (Name) School District a minimum of 30 days prior written notice.

1. Workmen's Compensation – Statutory Limits.
2. General Liability
 - General Aggregate - \$2,000,000
 - Each Occurrence - \$1,000,000

Builder's Risk – Fire Extended Coverage and Vandalism and Malicious Mischief Insurance: The Contractor shall procure and maintain during the term of this contract and until work has been completed and accepted, Builder's Risk, Fire Extended Coverage, Vandalism and Malicious Mischief Insurance for an amount equal to 100% of the insurable property value of the project less the cost of any excavation, brick, stone or concrete foundation, piers or other supports which are below the under surface of the lowest basement floor or where there is no basement, piers which are below the surface

of the ground or underground flues, pipes or wiring, said insurance coverage to be written in the name of the Contractor and Owner.

The required insurance must be written by a company licensed to do business in the State of Arkansas in accordance with A.C.A. 23-63 at the time the policy is issued. In addition, the companies must be acceptable to the Owner and Owner's agent.

CANCELLATION PROVISIONS: (May be substituted by Para. 14.2 AIA 201-1997).

Cancellation for Cause: The District may cancel the contract at any time for breach of contractual obligations by providing the contractor with a written notice of such cancellation. Should the District exercise its right to cancel the contract for such reasons, the cancellation shall become effective on the date as specified in the notice of cancellation sent to the contractor.

COMPLETION DATE

All work must be fully complete no later than **(Date)**. If work is not completed by this date, liquidated damages will be assessed.

LIQUIDATED DAMAGES

Liquidated damages imposed against the contractor for failure to meet the final agreed upon completion date will be **(\$Amount)** for each workday beyond the final agreed upon completion date. The contractor shall be relieved of delays due to causes beyond his control such as Acts of God, national emergency, strikes, or fire. The contractor must notify the District Contracting Official in writing, on a timely basis, of such developments stating reason, justification and extent of delay. Weather days will be allowed to be used at the discretion of the contractor and the use of each weather day must be documented and filed with the District Contract Official within 10 days of such use. Weather days will be in accordance with the average inclement weather days as recorded by the National Weather Bureau for the geographical area of the contract.

PRICING

Bid hereinafter is understood to include all expenses, taxes, incidentals and overhead; including, but not limited to wages, fringe benefits, supervision, material and equipment costs and it is further understood that the bidder shall bear the sum of all supplies (except as otherwise specified) necessary or desirable in order to perform the work. Pricing shall be made on those considerations specified in the aforementioned instructions for an award. No bidder may withdraw his bid for a period of 30 days after the date of bid opening.

AWARD OF CONTRACT

Bids will be considered on the basis of the price, however, the District reserves the right to establish the award criteria and to reject any or all and to award the Contract to the firm who, in the judgment of the District, is the best qualified to perform the work.