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

~~July 25, 2016~~

1.00 AUTHORITY

~~1.01~~ The Commission for Arkansas Public School Academic Facilities and Transportation (CAPSAFT) authority for promulgating these Rules is pursuant to Ark. Code Ann. §6-21-114, 6-20-2507, 6-20-2512, 25-15-201 *et seq.*, ~~Act 936 of 2015, and Act 962 of 2015.~~ and Act 1080 of 2019.

~~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 (Rules).~~

2.00 PURPOSE AND SCOPE

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.

2.02 CAPSAFT Rules Governing the Academic Facilities Partnership Program that were in effect July 25, 2016, apply to 2019-2021 project funding cycle.

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

3.01 "Academic ~~facility~~ 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 funding in 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~~ may 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 funding in 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, or both, by education service cooperatives, as well as 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~~ 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.~~

3.03.1 To calculate the academic facilities wealth index for the 2023-2025 project funding cycle and funding cycles thereafter:

(1) Determine the value of one mill per student in each school district as follows:

(a) Multiply the value of one 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 3.03.1(1)(a) by the largest average daily membership of the school district over the previous decade;

(2) Calculate each school district's relative median income by dividing the household median income for the area served by each school district by the household median income of the school district with the highest household median income, using the household median income as estimated by the United States Bureau of the Census's American Community Survey;

(3) Calculate the median income per mill value by multiplying each school district's value of one mill per student as calculated under 3.03.1(1) by the school district's relative median income as calculated under 3.03.1(2); and

(4) Identify the school district at the ninety-fifth percentile according to the value calculated under 3.03.1(3) by:

(a) Determining student millage rankings by listing the median income per mill value under 3.03.1(3) for each school district from districts with the lowest median

income per mill value to school districts with the highest median income per mill value;

(b) Allocating the student millage rankings into percentiles with the first percentile containing the one percent (1%) of students based on the prior year average daily membership with the lowest value per mill and the one-hundredth percentile containing the one percent (1%) of students with the highest value per mill;

(c) Dividing the median income per mill value as computed under 3.03.1(4)(a) of this section by the amount corresponding to the ninety-fifth percentile of the student millage rankings under 3.03.1(4)(b); and

(d) Every school district with a wealth index of one (1.00) or greater will be funded at the same level as the first school district with a wealth index below one (1.00), except that funding under this section shall not exceed the amount of funding provided to a school district with a wealth index of nine hundred and ninety-five one thousandths (0.995).

(5) The percentage derived from the above computation 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.

(6) The state's share of financial participation in a local academic facilities project eligible for state financial participation under priorities established by the Division is the percentage derived from subtracting the school district's percentage share of financial participation determined under the above calculation from ***one*** hundred percent (100%).

(7) A school district identified as a high-growth school district as defined in Ark. Code Ann. § 6-20-2511 shall receive the lesser of the wealth index as calculated under 3.03.1 or 3.03.2 until the school district fails to meet the definition of a high-growth school district as defined in § 6-20-2511 for two consecutive years.

3.03.2 To calculate the academic facilities wealth index for the 2021-2023 project funding cycle only:

(1) Determine the value of one mill per student in each school

district as follows:

(a) Multiply the value of one 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 3.03.2(1)(a) by the prior year average daily membership of the school district or the prior three-year average of the school district's average daily membership, whichever is greater;

(2) Determine the student millage rankings by listing the computation under 3.03.2(1) for each school district from school districts with the lowest value per mill to school districts 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;

(4) Divide the value of one mill per student in each school district as computed under 3.03.2(1) by the amount corresponding to the ninety-fifth percentile of student millage rankings under 3.03.2(3).

(5) Every school district with a wealth index of one (1.00) or greater will be funded at the same level as the first school district with a wealth index below one (1.00), except that funding under this section shall not exceed the amount of funding provided to a school district with a wealth index of nine hundred and ninety-five one-thousandths (0.995).

(6) Subtract the academic facilities wealth index as determined under 3.03.2*(4) and 3.03.2(5)* from the academic facilities wealth index as determined under ~~*3.02.1*~~ *3.03.1(4)*;

(7) Divide the result from 3.03.2(6) by two; and

(8) Add the value from 3.03.2(4) with the number calculated in ~~*3.03.2(6)*~~ *3.03.2(7)*.

(9) The percentage derived from the above computation 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.

(10) The state's share of financial participation in a local academic facilities project eligible for state financial participation under priorities established by the Division is the percentage derived from subtracting the school district's percentage share of financial participation determined under the above calculation from *one* hundred percent (100%).

(11) A school district identified as a high-growth school district as defined in Ark. Code Ann. § 6-20-2511 shall receive the lesser of the wealth index as calculated under 3.03.1 or 3.03.2 until the school district fails to meet the definition of a high-growth school district as defined in § 6-20-2511 for two consecutive years.

3.04 "Add-ons" – Additional academic areas or spaces ~~which~~ that are constructed as a part of or separate additions to an existing academic area or space, and ~~which falls~~ that fall under the definition of "New Construction" contained in Section ~~3.19~~ 3.20 of these Rules.

3.05 "Arkansas Public School Academic Facilities Manual" – A document ~~which~~ that contains uniform standards to guide the planning, design, and construction of new academic facilities and additions to existing academic facilities, a copy of ~~and~~ which is ~~hereby incorporated into and made a part of~~ incorporated into these Rules~~,~~ as "Appendix A." 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.arkansas.gov).~~

3.06 "Alternative Project" – A project proposed by the Division~~,~~ that will accomplish creating a safe, dry, and healthy atmosphere, ~~and~~ meet the suitability need of the school district or individual school facility, and is in compliance with the state standards. ~~The state~~ State financial participation for ~~the~~ an alternative project will be determined in accordance with Sections ~~3.25~~ 3.26, ~~3.33~~ 3.34, 5.02, and 6.03 of these ~~rules~~Rules. The Division will coordinate the development of ~~the~~ an alternative project with the school district.

3.07 "Building Value" – A percentage value reflecting the depreciated value of an academic facility with an assumed depreciation of two per cent (2%) per year. Building Value does not consider improvements that may have been made to the facility.

3.07.1 Building Value is calculated by multiplying two (2) times the age of the academic facility, and subtracting that product from one hundred (100) (Value = 100 – (2 x Age)). The output of this equation may be a positive or negative percentage.

3.07.2 For the purpose of this calculation, an academic facility's age is calculated as the difference between the master plan year and the year of the facility's construction completion.

3.07.3 When an academic facility has multiple additions constructed at different times, a Building Value shall be computed for each addition.

3.07.4 Building Value will be used to develop the Division's state-wide needs priority list per A.C.A. §6-21-112 (f) (18).

3.07.5 Districts are not required to replace an academic facility when the Building Value is at or below zero percent (0%).

3.08 "Campus Value" – A composite percentage value of depreciated Building Values that includes all of the academic facilities on a campus.

3.08.1 Campus value is calculated by multiplying the Building Value of each individual academic facility on a campus by the area in square feet of that individual facility, then adding together the products of that calculation for all academic facilities on the campus, and then dividing that sum by the overall area in square feet of all academic facilities on the campus.

3.08.2 In instances where multiple campuses are involved with a ~~warm, safe, and dry~~ Warm, Safe, and Dry project, a campus value may be computed using the same process for all the campuses involved with the project.

3.09 "Commission" – The Commission for Arkansas Public School Academic Facilities and Transportation.

3.10 "Configuration (~~Re-Configuration~~Reconfiguration)" – The systematic grouping of grades as determined by the school district at any school(s) campus. ~~Re-configuration~~ Reconfiguration is the process of changing the present school(s) configuration, by the school district, to align a different grade configuration. The configuration or ~~re- configuration~~ reconfiguration is determined by the school district.

3.11 "Consolidation/Annexation Project" – A new, complete school campus or one or more additions to existing campuses for the specific purpose of supporting a voluntary consolidation or annexation petition brought by two or more contiguous districts and approved by the Arkansas State Board of Education pursuant to Ark. Code Ann. § 6-13-1401 et. seq. ~~after March 1, 2010.~~ Consolidation/annexation projects must fulfill the requirements of Section 5.05.4 ~~herein~~ of these Rules.

3.12 "Construction Cost" – The actual cost of constructing a new construction project as defined in Section ~~3.19~~ 3.20 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.

3.13 "Conversion Project" –

~~(1)~~ 3.13.1 A new construction 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)~~ 3.13.2 A new construction 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.

3.14 "Division" – The Arkansas Division of Public School Academic Facilities and Transportation.

3.15 "Energy Saving Contract" – Shall have the same meaning and meet the requirements set forth in the CAPSAFT Rules Governing the Acquisition of Energy Conservation Measures for Public Schools.

3.~~15~~16 "Facilities ~~master plan~~ Master Plan" – A six-year plan developed by a school district that contains enrollment projections for ten (10) years from the date of the plan, 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.~~16~~17 "Facilities ~~improvement plan~~ 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~~ that has been notified 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~~ which supplements the school district's facilities master plan by:

~~3.16.1~~ 3.17.1 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

~~3.16.2~~ 3.17.2 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.~~17~~18 "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.~~18~~19 "Maintenance, ~~repair, and renovation~~ Repair, and Renovation" – Any activity or improvement to an academic facility and, if necessary, related areas such as the physical plant and grounds that, maintains, conserves, or protects the state of condition or efficiency of the academic facility.

3.~~19~~20 "New Construction" – Any improvement to an academic facility and, if necessary, related areas such as the physical plant and grounds, that brings the state, condition, or efficiency of the academic facility to a state of condition or efficiency better than the academic facility's current condition of completeness or efficiency. "New construction" includes a new addition to an existing facility and construction of a new academic facility.

~~3.19.1~~ 3.20.1 No state financial participation will be provided for improvements that could be classified as maintenance, repair, and renovation, other than a total renovation project. That portion of a new construction project that consists of maintenance, repair, or renovation will not be considered in calculating state financial participation in a new construction project, nor in prioritization of a new construction project.

3.~~20~~21 "New Facilities" – A new construction project ~~which~~ that is neither an addition to, total renovation, or conversion of an existing facility; nor a project involving maintenance, renovation, or repair of an existing facility; but is a new addition to a school district's building inventory.

3.~~21~~22 "Non-academic ~~facility~~ 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.~~22~~23 "Prioritization" – ~~That~~ The methodology established by the Commission, and set forth in these Rules in Section 5.05, which provides a system of ranking new construction projects 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.~~23~~24 "Program of Requirements (POR)" – The requirements that each new construction project ~~which~~ that is not a ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) 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 B" to these Rules, as if the POR was fully set forth herein.~~ The POR is contained in the Arkansas Public School Academic Facilities Manual, which is attached to these Rules as Appendix A. The District shall submit accurate and complete PORs, which shall include all existing spaces, for any new construction project that is not a ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) project for the Division's review in accordance with Section ~~3.34~~ 3.35 of these rules.

3.~~24~~25 "Project" - An undertaking in which a school district engages in:

3.25.1 ~~(a)~~ Maintenance, repair, and renovation activities with regard to an academic facility;

3.25.2 ~~(b)~~ New construction; or

3.25.3 ~~(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.~~25~~26 "Project Cost" – A projected qualified construction cost for funding purposes 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, although a school district's actual cost might exceed the state cost funding factors. The specific project cost funding factors~~,~~ for New Facilities, ~~Project Cost Funding Factor and~~ Warm, Safe, and Dry (Systems), and Conversion Projects ~~Project Cost Funding Factor,~~ are defined as set forth in Sections ~~3.25.1~~ 3.26.1 and ~~3.25.2~~ 3.26.2 of these Rules. These funding factors ~~Neither the New Facilities Funding Factor nor the Warm, Safe, and Dry (Systems) and Conversion Project Cost Funding Factor~~ shall not include land purchases, mold abatement or removal, environmental clean-up, supersite clean-up, or qualification for LEED or Green Globes certification pursuant to Section 10.0 of these Rules.

(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) 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~~ $200.00 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 conversion projects or projects ~~which~~ that are building systems or components thereof, not covered in Section ~~3.25(i)~~ 3.26(i) of these Rules (above), will be the lesser of either:

(a) The Warm, Safe, and Dry (Systems) 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~~ $200.00 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.

(iii) In calculating the amount of state financial participation in a facilities project that includes a tornado shelter or designated reinforced area, the Division shall deduct from the project cost the total amount of grant funds received by the school district for the shelter or area. Districts shall indicate amount of grant on the initial budget sheet. If a district receives information concerning the grant amount or grant approval after funding/payment by the Division, the district shall immediately report to the Division the grant amount, which will be subtracted from the ~~*Qualified Cost/state financial participation*~~ *qualified project cost, resulting in a change to state financial participation*. Any monies paid by the Division over the revised state financial participation shall be repaid by the district to the Division.

~~3.25.1~~ 3.26.1 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.

~~3.25.2~~ 3.26.2 Warm, Safe, and Dry (Systems) 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.~~26~~27 "Project Funding Cycle" – A two (2) year cycle 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.~~27~~28 "Public School Facility" – Any public school building or space, including related areas such as the physical plant and grounds, that is used for any purpose, including, without limitation:

~~3.27.1~~ 3.28.1 An extracurricular activity;

~~3.27.2~~ 3.28.2 An organized physical activity course defined in Ark. Code Ann. §6-16-137;

~~3.27.3~~ 3.28.3 Pre-kindergarten education;

~~3.27.4~~ 3.28.4 District administration; or

~~3.27.5~~ 3.28.5 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.~~28~~29 "Renovation Project" – A ~~"warm, safe, and dry" (systems)~~ Warm, Safe, and Dry (Systems) new construction project addressing a facility system per Section ~~3.36.1~~ 3.37.1 of these rules or addressing all building systems per Section ~~3.36.2~~ 3.37.2 of these rules. To receive state financial participation, the project must be a ~~"warm, safe, and dry" system~~ Warm, Safe, and Dry (Systems) or ~~space replacement~~ Space Replacement project.

3.~~29~~30 "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 convened 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.~~30~~31 "Schematic Drawing" – A diagram ~~which~~ that fully illustrates all of the areas, spaces and dimensions of a new construction project. Schematic drawings shall include as a minimum: single line drawings with *all* outside ~~contour~~ dimensions, *including all offsets* and overall gross square footage. For add-on or conversion projects, the drawing shall be labeled to identify all interior spaces with interior room net square footage in the "footprint" of the entire project. ~~For "warm, safe, and dry" (systems)~~ *For* Warm, Safe, and Dry (Systems) projects, the replacement major system components and their location shall be identified.

~~3.30.1~~ 3.31.1 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.

~~3.30.2~~ 3.31.2 An aerial photograph is not a "diagram" and may not serve as the basis for the required schematic drawing.

3.~~31~~32 "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.~~32~~33 "Self-Funded Project" – A project where the ~~*moneys*~~ monies 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.~~33~~34 "State ~~financial participation~~ 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 5.05 of these Rules.

3.~~34~~35 "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 5.05 of these Rules. The state financial participation shall be the project cost described in Section ~~3.25~~ 3.26, multiplied by the difference of one hundred percent (100%), minus the school district's wealth index. Except for approved ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) projects, only that space total gross square footage required by the POR ~~which~~ that 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.

~~3.34.1~~ 3.35.1 On An Existing Campus

When a school district is proposing a new construction project on an existing campus with existing educational facilities, the district shall submit a POR of the existing campus and 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** (based on the Division's campus reports or other confirmed information made available to the Division) or on other campuses affected by grade reconfigurations as part of the project. The district shall submit PORs for all campuses and grades affected by the grade reconfigurations which are a part of the project. However, the state recognizes that four particular space areas existing in school districts on or before 2008 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 that existed on or before 2008: Physical Education, Media Center, Student Dining, and Performing Arts.

~~3.34.2~~ 3.35.2 On A New School Campus:

When a school district is proposing a new construction project 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 district shall submit a POR for the new school campus and 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** (based on the Division's campus and district reports or other confirmed information made available to the Division) for the appropriate student grade population in their final grade configuration less the gross square footage to be demolished as part of the proposed project. The Division ~~shall~~ also shall include other campuses and grades affected by grade reconfigurations as part of the project. The district shall submit PORs for all campuses and grades affected by the grade reconfigurations ~~which~~ that are a part of the project. After making the comparison, the school ~~will~~ only will 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 for the appropriate student population in their final grade reconfiguration. The State recognizes that four particular space areas existing in the school district may skew the comparison as mentioned above in Section ~~3.34.1~~ 3.35.1 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 on or before 2008.

~~3.34.3~~ 3.35.3 Warm, ~~safe, and dry (systems)~~ Safe, and Dry (Systems): 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 system~~ Warm, Safe, and Dry (Systems) projects. Suitability analysis and determination shall be made on a project by project basis and shall be determined based on the actual need as determined by the Division using current Facilities Manual standards.

3.~~35~~36 "Waiver" and "Variance" – The process by which a school district in unusual and limited circumstances may seek a waiver or variance from Sections 3.37.2, 4.06, 4.07, 4.09, 7.06 and 7.07 of these Rules as approved by the Division.

3.~~36~~37 "Warm, ~~safe, and dry~~ Safe, and Dry" – New construction projects deemed necessary by the Division to provide students a warm, safe, and dry educational environment. State financial participation may be available for two categories of ~~warm, safe, and dry~~ Warm, Safe, and Dry projects:

~~3.36.1~~ 3.37.1 "Warm, ~~safe, and dry (systems)~~ Safe, and Dry (Systems)" –

(i) 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~~ Roofing, plumbing, and electrical projects must apply to the entire facility or system or if a separate building the entire building. Fire ~~and safety~~ system needs include fire alarms, ~~and~~ warning systems, and fire prevention/suppression systems. ~~, but do not include surveillance systems, security systems or closed circuit TV systems. On and after July 1, 2015, state financial participation will be available for warm, safe, and dry (systems) projects only for the 2015-2017 and 2017-2019 Project Funding Cycles and will be subject to a statewide maximum limitation on the funds available.~~ Partial HVAC projects may be approved by the Division if they are part of an energy-savings contract with performance of a comprehensive energy savings plan.

(ii) Safety system projects must be a comprehensive campus security upgrade, which shall include any renovation projects that are designed to sustain active shooter protocols, efficiently implement lockdown

procedures, and enable an overall immediate and legal response to crises, as well as foster an environment for progressive education and training for proper operation of systems. Eligible security upgrades shall include, but are not limited to, a combination of at least three original installations of the following: secure entrance vestibule, ballistic-rated glass/films, CCTV, Electronic Access controls on doors, intruder locksets, and may include reinforced hallways adjunct to student occupied areas, fully enclosed walkways between buildings, permanently installed screening technology, visitor management systems, hallway security/fire doors, vehicle barriers, etc. To be eligible for funding, districts shall provide with the application a detailed narrative describing all safety and security procedures and systems currently at the campus, new systems being requested for funding, and how the proposed project will enhance the safety and security of students and staff. ~~*Any security upgrade must receive approval from relevant state agencies, including the Fire Marshal, Arkansas Building Authority, Arkansas Department of Health, and the Division.*~~ *All new construction projects must comply with applicable current codes.*

~~3.36.2~~ 3.37.2 "Warm, ~~safe, and dry~~ Safe, and Dry (Space Replacement)" – New construction projects that build a new academic facility to replace an existing academic facility that is not deemed by the Division to provide students a warm, safe, and dry educational environment. In some instances, districts may perform a total facility renovation instead of a building replacement. Total renovation means that all building systems determined by the Division to be required to bring the facility to "like- new" condition are replaced. Total renovations shall comply with Sections 4.06 and 4.07 of these Rules.

~~3.36.3~~ 3.37.3 Warm, ~~safe, and dry~~ Safe, and Dry projects do not include land purchases or environmental clean-up or supersite clean-up.

~~3.36.4~~ 3.37.4 Districts are not required to replace an academic facility when the Building Value is at or below zero percent (0%).

4.00 SUBMISSION PROCESS

4.01 All applications for state financial participation under a Project Funding Cycle of this Partnership Program shall be submitted electronically by utilizing the Master Plan Web Tool located on the Division's Internet website ~~http://arkansasfacilities.arkansas.gov/~~ no later than 4:30 p.m. on March 1 of every even-numbered year.

4.01.1 If, during an even-numbered year, the Arkansas State Board of Education orders the involuntary annexation or consolidation of school

districts, the receiving or resulting school district after annexation or consolidation may submit an updated master plan to the Office of the Director of the Division of Public School Academic Facilities and Transportation no later than January 1 of the following odd-numbered year.

4.01.2 If, during an even-numbered year, the Arkansas State Board of Education orders the involuntary annexation or consolidation of school districts, the receiving or resulting school district after annexation or consolidation may submit an application for state financial participation under this Partnership Program to the Office of the Director of the Division of Public School Academic Facilities and Transportation no later than February 1 of the following odd- numbered year.

4.01.3 For the purposes of Section 4.01.1 and 4.01.2, the phrase "involuntary annexation or consolidation" includes annexations or consolidations approved or required by the Arkansas State Board of Education pursuant to Ark. Code Ann. §6-13-1601 et seq.

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~~ Safe, and Dry;
- New facilities;
- Add-ons and/or Conversions; and
- Consolidation/annexation projects.

If the state provides financial participation for an add-on or conversion project, or a consolidation/annexation project that adds space to an existing campus, the district must construct any missing component to the POR specification. The district will have to submit ~~a POR showing~~ an accurate and complete POR, to include all existing spaces. ~~a component contained in the POR it does not have and add it,~~ If the POR indicates deficient space components, the district must satisfy these components 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 or 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~~ Division 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 PORs, resolutions, ~~and~~ schematic drawings, and other required documentation) in a format prescribed by the Division and shall list the applications 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 School districts must comply with the ~~The~~ timelines set out in Section 4.01 of these Rules concerning submission of partnership applications with schematic drawings and district submitted PORs. ~~must be complied with.~~

4.03 Any project that applies for state financial assistance must prove suitability. All ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) projects that involve the demolition of space for replacement of the same space will be considered a prudent and resourceful expenditure of state funds issue upon approval by the Division and in compliance with POR requirements.

4.03.1 Warm, ~~safe, and dry~~ Safe, and Dry (Space Replacement) projects that replace student dining and kitchen facilities and/or media center are not required to prove the suitability described in Section ~~3.34.1~~ 3.35.1. If the district provides a complete application for and the Division agrees with the need for replacement of the student dining and kitchen facility and/or media center, the project will be eligible for state financial participation to the POR required size of a replacement student dining and kitchen facility and/or media center. Replacement of a student dining and kitchen facility and/or media center will be based on condition and will not be based on size considerations only.

4.04 Any submission for state financial participation ~~which~~ that 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. If, as of the date of application, the school district has already obtained elector approval of the bond or tax measure, the resolution shall identify the date of the election at which approval was obtained.

(iii) If the board of directors of the school districts intends to apply other local resources to pay the school district's share of the financial participation in the new construction project, and does not intend to seek elector approval of a bond or tax measure, the resolution shall specify the approximate date the board intends to apply the other local resources.

(iv) If the resolution does not identify an approximate date for elector approval or application of other local resources, the submission shall be denied by the Division;

4.05.3

(i) 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. This project minimum does not apply to a construction project with a school nursing center.

(ii) 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 for a ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) 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;

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; and

4.05.8 A statement of the district's intent, if any, to seek incentives for LEED Certification or Green Globes Certification pursuant to Section 10.03 of these Rules.

4.05.9 District submitted PORs in accordance with the requirements of Section ~~3.34~~ 3.35 of these ~~rules~~ Rules.:

(i) On a new campus to compute suitability;

(ii) On an existing campus to compute suitability;

(iii) On other existing campuses to compute excess suitability.

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 A", as set forth in Section 3.05 of these Rules~~.

4.06.1 Variances to the Arkansas Public School Academic Facilities Manual standards may be granted by the Division:

(i) Upon the presentation by a school district of evidence of existing conditions that makes compliance with applicable standards impractical or unreasonably burdensome, and;

~~4.06.2~~ (ii) Based on other ~~Other~~ conditions determined by the Division ~~as warranting~~ that warrant a variance ~~from applicable public school academic facility standards~~.

4.07 (i) All applications for state financial participation under this Partnership Program for new construction projects ~~which~~ that are not considered ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) projects pursuant to these Rules shall be prepared in accordance with the ~~Program of Requirements~~ POR 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 B", as set forth in Section 3.23 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~~ the Division issues a written notification that the waiver has been granted.

4.08 At least ~~sixty (60)~~ one hundred twenty (120) days before the application deadline set forth in section 4.01 of these Rules, a district may request in writing by letter or e-mail (received by the Division during this period) and be granted by the Division a review conference that shall be held within ~~twenty (20) working~~ seventy-five (75) 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;

(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) If the applicant provides a ***complete application***, a projected amount of state funding based on current application of the wealth index and the project cost promulgated by the ~~e~~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) Whether or not the proposed application, as submitted, meets all of the technical requirements for partnership applications as set out in the application guidelines and Rules provided by the Division for the applicable partnership program application cycle.

(vii) The Division shall make a written record of the findings of the review conference and provide a copy of the written record to the school district within five (5) working days after the written record is finalized. All findings are subject to final review and Commission approval.

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. Districts must request the waiver by submitting a formal letter signed by the superintendent on district letterhead, which shall include a detailed justification for the request. The request must be uploaded and submitted with the project application due by March 1 of the even year.

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~~ sScheduled and unscheduled maintenance, repair, and renovation as documented in the state-provided Computerized Maintenance Management System;

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~~ sScheduled and unscheduled maintenance, repair, and renovation as documented in the state-provided Computerized Maintenance Management System (CMMS);

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;

5.01.3.1 The Division may perform on-site inspections of the school district facilities during the evaluation of project applications.

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.

5.01.6 In evaluating a school district's application for state financial participation in a new construction project, the Division may resolve any internal inconsistency in or conflict among the application components and supporting documentation by giving precedence to the application components in the following order:

(i) The resolution adopted by the board of directors of the school district;

(ii) The narrative application contents submitted electronically through the Master Plan Web Tool;

(iii) Schematic drawings; and

(iv) Other supporting documents submitted with the application.

5.02 The Project Cost shall be limited to the cost for an alternative project if the Division determines that an alternative project meets facility standards and addresses the suitability and ~~safe, dry and healthy~~ warm, safe, and dry needs expressed by the district in its master plan and project application. The alternative project may consist of replacement of the original facility or component to the original configuration of construction at the most current state standard.

5.03 If a school district ~~should fail~~ fails 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~~ may deny the application for state financial participation.

5.04

(i) The Division shall review all projects submitted to determine their suitability for state financial participation, pursuant to the suitability criteria set forth in Section ~~3.34~~ 3.35 of these Rules.

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

5.05 Prioritization of Projects: All approved partnership projects for each fiscal year of the ~~2015-17~~ 2021-2023 ~~Project Funding Cycle and each Project Funding Cycle thereafter~~ project funding cycle shall be funded according to the following order as funding shall become available:

5.05.1 Warm, ~~safe, and dry~~ Safe, and Dry (Systems)

~~(i)~~ For the ~~2015-2017 and 2017-2019~~ 2021-2023 ~~Project Funding Cycles~~ project funding cycle ~~only, and subject to the availability of funds as restricted in this Section,~~ all ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) 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~~ third order ~~prior~~ priority. ~~to any other partnership project. Any and all warm, safe, and dry (systems) 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~~ The ~~warm, safe, and dry (systems)~~ Warm, Safe, and Dry (Systems) projects shall be prioritized as follows:

First, the Division shall numerically rank all school projects based on the ~~Facilities Wealth Index~~ academic facilities wealth index of the school district. The districts with the least ~~Wealth Index~~ wealth index shall be ranked first with the districts with the greater ~~Wealth Index~~ wealth index numerically ranked last.

Second, the Division shall numerically rank all school projects based on the third-quarter average daily membership (ADM) of the school district for the school year in which the application for state partnership assistance is filed. The districts with the least ADM shall be ranked first with the districts with the greater ADM numerically ranked last.

Third, the Division shall average the numerical ADM and ~~Wealth Index~~ 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.

~~Warm, safe, and dry (systems) projects shall receive ranking of first order prior to any other partnership project only to the extent that the total state financial participation in all warm, safe, and dry (systems) projects does not exceed $10 million in the aggregate for each year of the Project Funding Cycle, or $20 million in the aggregate for the Project Funding Cycle. All otherwise eligible warm, safe, and dry (systems) projects that, because of their ranking, are beyond the aggregate statewide $10 million limitation, will not be funded.~~

~~(ii) Warm, safe, and dry (systems) projects shall be entitled to receive state partnership assistance after the 2017-2019 Project Funding Cycle in a ranking of third priority order.~~

5.05.2 New Facilities, Add-Ons, and Conversions:

For the ~~2015-2017 and 2017-2019~~ 2021-2023 project funding cycle~~s~~, all new facilities, add-ons, and conversion 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 a ranking of ~~second~~ first order ~~prior~~ priority to any other partnership project according to the following procedure of ranked order, subject to the availability of funds:

The Division shall numerically rank all new facilities, add-ons, and conversion 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.

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. ~~After the 2017-2019 project funding cycle, p~~ Projects in this Section shall be entitled to receive state partnership assistance in a ranking of first priority order.

5.05.3 Warm, ~~safe, and dry~~ Safe, and Dry (Space Replacement)

For the 2021-2023 project funding ~~cycles~~ cycle, all ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) 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 ~~third~~ second order ~~prior~~ priority to any other partnership project according to the following procedure of ranked order, subject to the availability of funds. To the extent there is limited funding available, the ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) projects shall be prioritized according to the school district's ~~Wealth Index~~ wealth index and the campus or campuses value (depending upon the type of project for which the district applies for state partnership assistance).

First, the Division shall numerically rank all ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) projects based on the campus (or campuses) value depending on what type of project is proposed. The projects with the lowest campus value shall be ranked first and in ascending order to the projects with the greatest campus value. Second, the Division shall numerically rank all ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) projects based on the ~~Facilities Wealth Index~~ wealth index of the school district. The districts with the least ~~Wealth Index~~ wealth index shall be ranked first with the districts with the greater ~~Wealth Index~~ wealth index numerically ranked last.

Third, the Division shall average the campus value and ~~Wealth Index~~ wealth index ranking of each school's ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) 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.

The suitability analysis and determination of ~~warm, safe, and dry~~ Warm, Safe, and Dry (Space Replacement) projects shall be performed as per Section ~~3.34~~ 3.35.

~~After the 2017-2019 project funding cycle, projects~~ Projects in this Section shall be entitled to receive state partnership assistance in a ranking of second priority order.

5.05.4 Consolidation/Annexation Projects

All projects that fall within the definition of "consolidation/annexation project" listed in Section 3.11 above and that meet all of the requirements of this Section shall be entitled to apply for state Partnership assistance. To the extent that funding is available, consolidation/annexation projects shall be evaluated and funded based upon the following criteria:

(i) Consolidations or annexations involving school districts that appear on the administrative consolidation list pursuant to Ark. Code Ann. § 6-13-1602 shall not be eligible for partnership funding for consolidation/annexation projects;

(ii) A school district may only apply for state partnership funding for a consolidation/annexation project if the effect of the consolidation/annexation is to create, from two or more contiguous districts, one resulting or receiving district, as those terms are defined by Ark. Code Ann. § 6-13-1401;

(iii) The consolidating or annexing districts must submit to the Division an order from the Arkansas State Board of Education granting approval for the consolidation or annexation;

(iv) The consolidating or annexing districts must submit to the Division all required partnership documentation pertaining to the project;

(v) The consolidating or annexing districts must have the proposed project listed in the district's approved master plan, or in the alternative, submit an amended or new master plan that includes the proposed project;

(vi) The consolidating or annexing districts must apply for partnership funding in accordance with the partnership application procedures contained in this rule;

(vii) The consolidating or annexing districts must provide the names, LEA numbers and locations of all schools to be closed as a result of the consolidation or annexation and the applicable dates of such action when submitting their Master Plan;

(viii) Consolidation/annexation projects for new schools shall not be penalized for current space as set forth in Section ~~3.34.2~~ 3.35.2 above, nor shall consolidation/annexation projects be subject to the provisions set forth in 5.02 above. The resulting or receiving district must certify to the Division that the district's current available space will either be used for a valid educational purpose or disposed of in a manner authorized by law;

(ix) The Division shall review the proposed consolidation/annexation projects to ensure that the location of the proposed consolidation/annexation projects supports the prudent and resourceful expenditure of state funds;

(x) In addition to the criteria set forth in Section 5.05.4 (xi) below, all consolidation/annexation projects containing proposed additions to existing facilities will be evaluated in accordance with Section ~~3.34.1~~ 3.35.1 above; ~~Except~~ except that the Division may consider all school closings in the ~~consolidation-annexation~~ consolidation/annexation when determining space when available on other campuses;

(xi) "Consolidation/annexation" projects shall be prioritized in accordance with Section 5.05.2 of these rules and as follows:

Growth~~:~~ Index: For those projects meeting the definition of a "consolidation/annexation" project and which comply with the requirements of this Section, the Division will numerically rank the consolidated/annexed school district's growth index at the greater of the following two levels: (1) the past ten years' growth as calculated in 5.05.2 above; or (2) the same growth level assigned to the project of the school district with the greatest growth ranking represented in the same project year for which the consolidation/annexation partnership application is submitted.

(xii) After completion of the first applicable consolidation/annexation project, the Division will calculate a new wealth index for the resulting or receiving district that will be used to determine the amount of state financial participation in future academic facilities projects undertaken by the resulting or receiving district. These

future academic facilities projects will not be evaluated according to the consolidation/annexation project criteria. Instead, the future academic facilities projects will be evaluated as a warm, safe, and dry project, a new facility, or as an add-on/conversion project, as applicable;

(xiii) Funds made available to a resulting or receiving district under the consolidation/annexation project process shall be in addition to, not in lieu of, funds made available to the resulting or receiving district under the Arkansas Department of Education Rules Governing the ~~Distribution of Consolidation/Annexation Incentive Funding.~~ Consolidation and Annexation of School Districts.

5.06 If the school district's new construction project is approved for funding in the current funding cycle, then the district must execute the Partnership Agreement attached to these Rules as "Appendix ~~C~~ B.", ~~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.

5.07 In accordance with Ark. Code Ann. §6-21-114(d) and the Commission's Rules Governing Property Insurance Requirements, every academic facility must be insured for at least 90% of replacement cost to be eligible for state financial participation. If, as of the date of application or at any point thereafter, an academic facility involved in a project is not sufficiently insured as required, as indicated in the district's current Statement of Values, the application shall be denied by the Division and any state financial participation shall cease.

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 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 5.05 of these Rules.~~ In allocating funds for state financial participation, the Division shall set aside funds sufficient to pay the incentives set forth in Section 10.0 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:

(i) 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

(ii) 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.

(ii) Approved projects not funded in the first year of a Partnership Program cycle will be moved to the second year of the Partnership Program cycle and ranked after all of the approved year-two projects per Section 5.05 of these Rules.

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) New Construction 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~~ $200.00 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) Conversion projects or 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 (systems)~~ Warm, Safe, and Dry (Systems) and conversion

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~~ $200.00 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. 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 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 ~~C~~ B", as set forth in Section 5.06 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 and funding 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 waiver request or appeal pending before the Academic Facilities Review Board or Commission, the state's financial participation in whole or in part may be deemed null and void by the Division.

Construction of the project, as evidenced by a signed construction contract, 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. For the purposes of this subsection, the phrase "signed construction contract" includes construction management contracts.

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.

7.08 Payment of an incentive awarded pursuant to Section 10.0 of these Rules shall not be made to a district until the new facilities project is completed and the appropriate third-party certification entity or assessor has awarded final certification for the project.

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.~~ Commission for Arkansas Public School Academic Facilities and Transportation Rules Governing Appeals From Determinations of the Arkansas Division of Public School Academic Facilities and Transportation.

8.02 ~~(ii)~~ If the district appeals the determination of the Division to the Commission or the Academic Facilities Review Board, the Commission or the Academic Facilities Review Board 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*~~ *Division of Elementary and Secondary* 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, plus any incentives awarded pursuant to Section 10.0 of these Rules.

9.03 The Commission shall certify the amount to the Arkansas ~~*Department of*~~ *Division of Elementary and Secondary* 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~~ 2004, Ark. Code Ann. §6-20-2201 et seq., and Rules established by the Arkansas State Board of Education and the Commission.

10.00 INCENTIVES FOR "GREEN" FACILITIES

10.01 The purpose of this Section is to encourage school districts to build environmentally-friendly new facilities by offering financial incentives through the Academic Facilities Partnership Program.

10.02 DEFINITIONS - For the purpose of this Section, the following terms mean:

10.02.1.1 "LEED Certification" – Certification of a project by a professional third-party certification entity pursuant to the Leadership in Energy and Environmental Design (LEED) for Schools Rating System developed by the U.S. Green Building Council and administered by the Green Building Certification Institute.

10.02.1.2 "Green Globes Certification" – Certification of a project by a professional third-party assessor pursuant to the Green Globes Rating System developed by the Green Building Initiative.

10.03 A new facilities project shall be eligible for financial incentives under this Section if the school district gives timely notice to the Division of the district's intent to seek LEED certification or Green Globes certification for the project. In its notice, the district shall identify which specific type and level of certification it intends to seek.

10.03.1 Notice must be given concurrently with the district's application for state financial participation under Section 4.0 of these Rules.

10.04 A district which completes an eligible new facilities project and successfully obtains LEED certification or Green Globes certification for the project shall be awarded an incentive calculated as a percentage of the amount of state financial participation in the project, as follows:

(i) LEED Certification, Silver: one percent (1%);

(ii) LEED Certification, Gold: one and one-half percent (1.5%);

(iii) LEED Certification, Platinum: two percent (2%);

(iv) Green Globes Certification, Two Globes: one percent (1%);

(v) Green Globes Certification, Three Globes: one and one-half percent (1.5%); or

(vi) Green Globes Certification, Four Globes: two percent (2%).

10.05 A project shall be eligible for financial incentives under this Section for LEED certification~~,~~ or for Green Globes certification, but not for both certifications. No project shall be eligible for financial incentives for a level of certification higher than the level identified in the district's application for state financial participation.

10.06 Financial incentives awarded under this Section shall be in addition to the amount of state financial participation calculated under these Rules.

10.07 A district's application or eligibility for financial incentives under this Section shall have no effect on the prioritization of a project under Section 5.05 of these Rules.

Introduction

Introduction

The Division of Public School Academic Facilities and Transportation (DPSAFT) is charged with overseeing the design and construction of school facilities in the state of Arkansas. The Arkansas Public School Academic Facility Manual (APSAFM) 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 and guidelines contained within this APSAFM are the culmination of standards, accepted procedures, statutory requirements and the experience of experts and authorities throughout the United States and establishes a uniform level of quality for all public school buildings.

Since standards and guidelines must communicate information about so many issues, the length and quantity of the document can be intimidating. However, understanding how the standards and guidelines are 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 statewide program that must provide equity among districts is the balance between broadly applicable standards and educational 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 and guidelines allow districts to develop building programs that respond to their current and 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 grade 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 and guidelines were created to provide parameters for balancing these three essential elements fairly for all projects throughout the state.

The standards and guidelines are intended as a starting point for architects, engineers, other design professionals, and school districts to develop solutions to meet the educational needs of the individual school community. The information is provided to allow the planning, design, and construction processes to proceed most efficiently, without undo restriction on the design of the facilities, focusing efforts on the creation

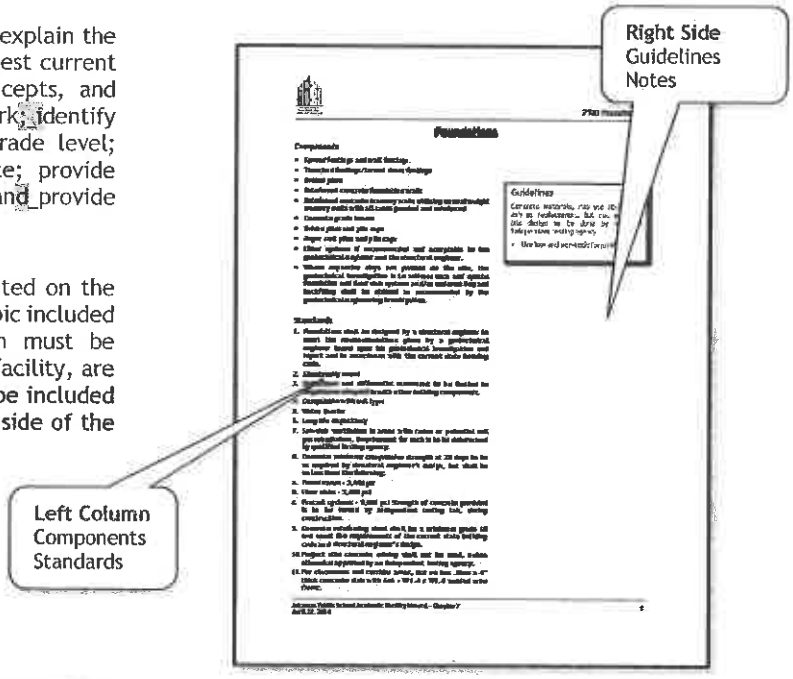
of best possible school facilities for each project rather than "reinventing the wheel".

The APSAFM is the exclusive property of DPSAFT, who 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, educational programs and services, construction and education technologies, and lessons learned as Arkansas proceeds with the ongoing task of improving and maintaining its schools.

Facility Manual Organization

The APSAFM is organized into seven chapters that explain the planning, design, and construction processes; suggest current educational best practices, facility planning concepts, and recommend components of an education framework; identify the square footage provisions for each school grade level; detail the features and amenities of each space; provide systems, materials, guidelines, and information; and provide technology infrastructure recommendations.

Each chapter begins with general comments, located on the left side of the page [left column], regarding the topic included in the chapter. Additionally, standards, which must be incorporated into each new and renovated school facility, are listed in the left column. Guidelines, which may be included in a text box or drawing, are located on the right side of the page [right column]. An example is shown to the right.



This chapter contains an outline ~~of the information found in the APSAFM, in each of the following chapters of the APSAFM,~~ and a summary of the standards and guidelines contained within each chapter of the APSAFM.

The chapters included in the APSAFM are:

- Chapter 1: How ~~To~~ to Use This Manual
- Chapter 2: Educational Facility Planning Concepts
- Chapter 3: Educational Framework
- Chapter 4: Site ~~Guidelines~~ Selection and Design
- Chapter 5: Program of Requirements
- Chapter 6: Program Space Guidelines
- Chapter 7: Building Systems
- Chapter 8: Safety and Security

Chapter 1: How To Use This Manual

Chapter 1 contains introductory information that indicates the organization of the Facility Manual; an executive summary

highlighting the standards and guidelines; ~~a glossary of general APSAFM definitions and abbreviations;~~ and a timeline indicating the steps and persons responsible for the planning, design, and construction processes 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, career education, and program and design capacity. The facility planning concepts contained within this chapter are intended to provide information regarding current and future trends in educational delivery methods and facilities and to assist the planning and design team as they review and develop their individual educational facility concepts. The concepts are for information 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 Chapter 2: Educational Facility Planning Concepts, Chapter 3 provides assistance when developing an educational facility.

Chapter 4: Site ~~Guidelines~~ Selection and Design

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

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 (POR) identifies an overall size in square feet for a facility and then identifies spaces that must be included in the school facility. The POR also provides an allowance for additional support spaces that the district may choose, based on their programs and methods of educational delivery.

Chapter 6: Program Space Guidelines

Chapter 6 contains space plates for each type of space in the POR. Most space plates contain a graphic representation and information related to features, loose furnishings, finishes, and notes. Space plates are intended to give information and are not meant to establish a design standard for the space.

Chapter 7: Building Systems

Chapter 7 provides design and performance standards and guidelines for the level of quality of the systems and materials to be incorporated into new school buildings and additions to

existing school buildings.

Chapter 8: Safety and Security

Chapter 8 provides safety and security standards and guidelines for facility design and construction, incorporating recommendations by the Arkansas School Safety Commission.

Introduction

Introduction

Arkansas Code Annotated § 6-21-806 entitled *Academic Facilities Master Plan Program - School Districts* provides the framework for school facility planning in Arkansas. The law requires each school district to develop a six-year master plan that is approved by the district's board of directors. The district submits the master plan to the Division of Public School Academic Facilities and Transportation for approval.

The following milestones are pertinent to the master plan process:

- February 1 of each even-numbered year - districts must submit final master plans for the next six-year period. Districts that desire Academic Facilities Partnership Program project funding for the next two-year funding cycle must include the projects in the master plan.
- September 1 of each even-numbered year - the Division approves the master plan if all requirements are met.
- February 1 of each odd-numbered year - districts must submit a master plan report and preliminary master plan for the upcoming final master plan submission.

The master plan must include:

- A schedule of custodial activities for each public school facility.
- A schedule of maintenance, renovation, and repair activities.
- Documentation that describes preventative maintenance work.
- Annual expenditures for all custodial, maintenance, renovation, and repair activities.
- A projected replacement schedule for all major building systems in each public school facility.
- Identification of issues with regard to public school facility and program access to individuals with disabilities.
- Identification of committed projects.
- Annual expenditures for capital outlay.
- A description of planned new construction projects with cost estimates.
- Evidence of the school district's insurance coverage.

The division shall establish procedures and timelines for a school district to submit a preliminary facilities master plan or a master plan outline to the division before the submission of the school district's final facilities master plan.

The preliminary facilities master plan or master plan outline shall form the basis for a consultation meeting between

It is important that time be set aside to consider what students will require to be successful in the future as the School District, Educational Planner, and Design Professionals begin to discuss the design, construction or renovation of school facilities. Consideration should be given to current and future trends in educational programs and delivery methods, changes in coursework, impact of technology on teaching methods, and social, economic, and world issues.

This chapter, along with Chapter 3, Section 3000, should provide the Project Team with "fodder" to fuel the creative thinking process and develop a school facility that not only meets the standards and guidelines, but positions the district to achieve the highest results in student education.

representatives of the school district and members of the division.

As soon as practicable after submission of the preliminary facilities master plan or master plan outline, the division shall hold the consultation meeting with the school district to:

- Assure understanding of the general goals of this subchapter and the criteria by which projects will be evaluated
- Discuss ways the facilities master plan may be_structured to meet the goals of this subchapter
- Assist school districts to prepare accurate budgets and reasonable project schedules, and
- Provide for efficiency and productivity in the approval process for local academic facilities projects and state financial participation in local projects.

The master plan consultation meeting between the school district and the division, generally conducted in the summer or fall of each odd-numbered year, provides an excellent opportunity for dialogue and enhances the district's preparation of a complete master plan that meets the district's goals.

Overview

Public education is at a unique point in history. We have transitioned from the industrial age to the information age, and as most organizations have already done, school districts across the country are considering changing the way they do business. School districts are investigating curricula, organizational models, and current and emerging technologies, the role of administration, and their local communities to determine the effect each of these has on student performance.

These investigations have resulted in a series of educational facility planning concepts intended to provide students with the greatest opportunity for success.

Implementing such concepts can have a significant impact on facilities. The following describes a few educational facility planning concepts, cites examples where they have been implemented, and expresses the impact each has on facilities. The information included with the examples is to help facilitate the planning, design and construction of school facilities.

Curriculum

Offer Essential Knowledge, Integrate It, and Make Connections to Real Life

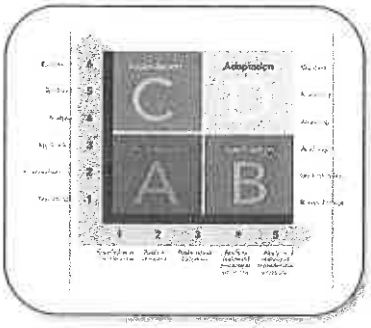
- Based on federal and state content standards
- Require content areas to be linked to one another
- Accommodate multiple-intelligences and learning styles
- Demand critical thinking and problem-solving
- Incorporate pervasive technology
- Utilize multiple performance assessments

Educational Planning Concept

Investigation and research suggest that the core of the high school curriculum must offer both the substance and the practicality to prepare students for an uncertain future. The curriculum should strive to meet individual needs without comprising larger goals. Dr. Willard Daggett, President of the International Center for Leadership in Education and a national expert on education, claims that schools should "make education rigorous and relevant for all students". Daggett uses a Rigor and Relevance Matrix to categorize curricula into one of four quadrants.

Educational Planning Concept

Daggett defines rigor as the level of Bloom's Taxonomy of Thinking Skills achieved in any given lesson [creating, evaluating, analyzing, applying, understanding, and remembering]. He defines relevance as a continuum ranging from "knowledge in one discipline" to "applications to real-world unpredictable situations".



Facilities Impact

Adopting curricula that offer essential knowledge, integrated approaches, and connections to real life can have a significant impact on facilities. Facilities may require student production for spaces for the creation of project work, small group rooms for collaboration, and large group spaces for students to present their work.

Organizational Models

Provide Student-Centered House Approach

Educational Planning Concept

Student-centered approaches provide students with a variety of opportunities to learn and develop skills and competencies based on their individual needs. Organizational models such as grade-level teaming, schools-within-a-school, and thematic approaches often characterize these student-centered approaches.

Organizational Models

Provide Student-Centered House Approach

Examples

- **Grade-Level Teaming**

  Grade-level teaming is based on organizing the building into separate grade-level units. Grade-level teams typically utilize an interdisciplinary approach.

- **Schools-Within-A-School**

  A schools-within-a-school is based upon multiple units of grades housed in the same facility, with separate governing bodies. Thus, a large school can be divided into smaller, more personalized "houses".

- **Thematic Teaming**

  Thematic teaming is based on delivering curriculum within the context of a specific theme. Themes may include Science and Math, Fine and Performing Arts, or Foreign Language and Literature.

Facilities Impact

Implementing these organizational models, specifically the house concept, may offer significant advantages to the delivery of curriculum and observation of students. While the impact these models have on facilities is continually being evaluated in terms of major systems, it typically should not outweigh the educational advantages.

Technology

Create Pervasive and Integrated Systems

- Access to voice, video, data, and electrical outlets provided in every instructional space.
- Proficiencies incorporated into other content areas
- Utilize distance-learning opportunities
- Staff development

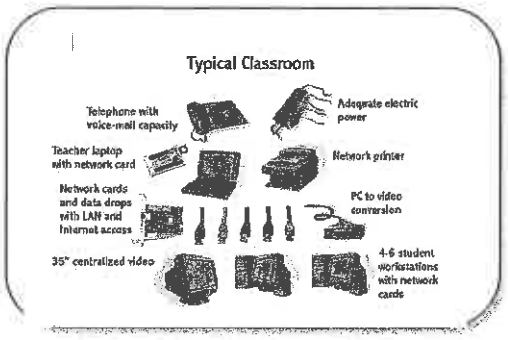
Educational Planning Concept

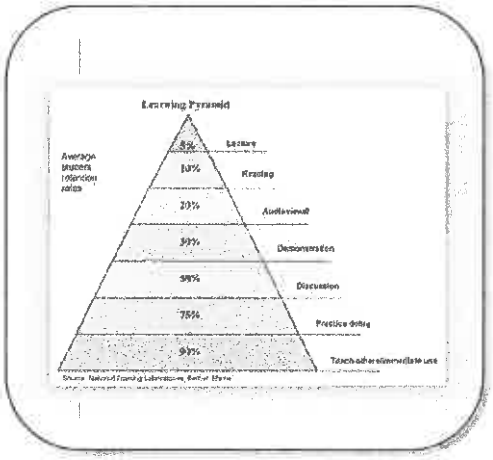
Technology continues to evolve and influence education. Technology has previously been perceived as a stand-alone content area with its own dedicated spaces. Today, technology is most often incorporated into every learning space and curriculum. Incorporating technology can accomplish two basic goals of education: linking traditionally isolated content areas and providing teachers with tools to utilize understanding of multiple intelligences in their lessons.

Howard Gardner has indicated in *"Frames of Mind"* that there are several different types of intelligences (linguistic, mathematical, musical, kinesthetic, spatial, intrapersonal, interpersonal, and natural intelligence). Each person has strengths in some intelligences and weaknesses in others. Experts have indicated that students retain more information when several intelligences are involved in the learning process. For example, the NTL Institute reports that students retain only 10% of what they read, but retain 90% of what they teach others and use immediately, which involves all the intelligences on the Learning Pyramid.

Facilities Impact

Incorporating technology into all learning spaces and into all curricula can have a significant impact on facilities. First, all learning spaces require access to voice, video, data ports, and electrical outlets. Second, infrastructure must be designed in such a way to allow access for maintenance and upgrades as technology continues to evolve.


Typical Classroom
Telephone with voice-mail capacity
Adequate electric power
Teacher laptop with network card
Network printer
Network cards and data drops with LAN and Internet access
PC to video conversion
35" centralized video
4-6 student workstations with network cards


Learning Pyramid
Average student retention rates
5%
Lecture
10%
Reading
20%
Audiovisual
30%
Demonstration
50%
Discussion
75%
Practice doing
90%

Administration

Increase Student Contact and Flexibility

Educational Planning Concept

As a result of recent violent crimes occurring in school facilities, school districts across the country are searching for both active and passive means of security. While not the only reason for decentralizing administration, it may serve this purpose. The decentralization of administrative services may also provide the flexibility and opportunity for increased student contact, decreased student anonymity, and opportunities for passive supervision.

In addition, assistant principals, deans, and counselors for teams, are closer to the students and teachers, and can more efficiently use their time, expertise, and resources because their offices are located in the academic clusters. Communication between administrators is not an issue, as access to instructional information and student records can be achieved through the effective use of technology. This arrangement can maintain a positive and secure environment.

Facilities Impact

Decentralizing administration affects facilities only by the necessity to relocate offices and support spaces within each learning community and/or other areas.

Community Use

Instill a Sense of Participation, Ownership, and Pride

- Cooperative Alliances
- Youth Services
- Shared Decision-Making
- Community Service Volunteers
- Parent Involvement
- School/College Partnerships

Planning Concepts

Facilities can serve as instructional centers for students as well as user-friendly centers for the community. Facilities may provide program and access to resources for adults, businesses, and other community organizations. Community/ school partnerships play an increasing role in school facilities. These partnerships provide students with expanded learning opportunities, professional development opportunities for staff, and a venue for community activities.

Facilities Impact

Providing access to and forming partnerships with the community can have a significant impact on facilities. Additional spaces such as parent or community volunteer rooms, community locker rooms, and storage spaces may be necessary. In addition, for security purposes, community access may require careful attention to the organization of the facility. Community accessible portions of the facility may need to be located in areas that permit the remainder of the facility to be secure before, during, and after school hours.

Sections 2100 - Special Education and 2200 have been moved to Chapter 3.

Summary

As a result of the transition to the information age as well as the aging of facilities, school districts are investigating curricula, organizational models, current and emerging technologies, the role of administration, and their local communities to determine the effect each has on student performance.

The research and investigations provided within this chapter describes educational facility planning concepts that suggest the following:

- Curriculum - Offer Essential Knowledge, Integrate It, and Make Connections to Real Life
- Organizational Models - Provide Student-Centered House Approach
- Technology - Create Pervasive and Integrated System
- Administration - Increase Student Contact and Flexibility
- Community Use - Instill a Sense of Participation, Ownership, and Pride

These concepts are not intended to be solutions to all of the issues confronting schools. Schools may choose to utilize the concepts as they work as a team to determine how best to provide educational opportunities and improve student achievement.

Educational Framework

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 maximum 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.

- Kindergarten 20 students
- 1st Grade through 3rd Grade 25 students
- 4th Grade through 6th Grade 28 students
- 7th Grade through 12th Grade 30 students

Career Education

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

- Middle schools and K-8 combination schools must provide access to pre-technical courses for students in grades 6-8.
- High schools and K-12 combination schools must provide access to at least three different CE occupational areas for students in grades 9-12.
- High schools and K-12 combinations schools must provide access to at least ~~on~~one Program of Study within each occupational area in grades 9-12.

Note: Access to a [CE] occupational area can occur in the following ways:

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

Kindergarten

Kindergarten courses will be delivered all day.

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 Facility Manual is not intended to address every possible condition. Flexibility is important to develop appropriate solutions given the diversity of programs, community requirements, existing building conditions, site constraints, etc. found in the School District.

Grade Configuration

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

- Elementary School: K-5
- Middle School: 6-8
- High School: 9-12
- Combination Schools: K-8 or K-12

Career Education courses are included in middle and high school facilities.

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 its students.

- Elementary Schools
  - Core Academic
  - Special Education
  - Visual Arts
  - Music
  - Physical Education
- Middle Schools
  - Core Academic
  - Special Education
  - Visual Arts
  - Music
  - Technology Education
  - Family and Consumer Science
  - Physical Education
  - Career Education
- High Schools
  - Core Academic
  - Special Education
  - Visual Arts
  - Music
  - Performing Arts
  - Physical Education
  - Career Education

Site Selection and Design

School Districts shall comply with the site selection requirements of A.C.A. § 6-21-809(b)(3), as amended by Act 858 of 2019.

Purpose

The purpose of this chapter is to provide the School District and the Design Professional with informative guidelines to consider prior to selection, purchase, and development of a site. DPSAFT has not established standards with respect to site selection and design. Information is included for informational purposes only.

Site Selection Criteria

At first look, a potential site may appear to be a good acquisition. There are many factors, however, that can distort the picture. A site may be reduced in size if wetlands the site or if part of the area is in a floodplain. There should be a watershed nearby to allow for adequate storm drainage. Irregular topography can escalate site development costs. Adequate area is needed to retain and release storm water from the site.

Access to and from the site, from a major highway or road artery is an important factor. In addition to understanding surface characteristics, sub-surface conditions may require exploration. Preliminary soil borings should be considered to ascertain the presence of poor soil, high water table, voids, or other impediments. A Phase I environmental study should be a requirement.

Site Design

With a good site available, site design and layout becomes the next task. Good site design includes separate bus and car circulation, safe passage for students entering or exiting buses, and bus parking arranged in a continuous line or a 45 degree parking arrangement.

Site Design (continued)

Visitor and staff parking and a separate service drive is recommended.

Orientation of the building is an important factor when considering energy usage. A majority of the windows should be located on the north or south side of the building. Easy access to the main entrance should be obvious to all.

Good site design requires careful and thorough planning to provide maximum safety, and efficient utilization of site features.

Site Size

The recommended minimum site size found in this section should be considered when considering a new school site. The size guidelines are consistent with those recommended in the Council of Educational Facility Planners International (CEFPI), *Guide for School Facility Appraisal*.

Fencing

Site design should incorporate adequate fencing for the safety of students. Fencing should be considered along perimeters of playgrounds and play areas and in other perimeter areas to prevent students from wandering off of school property. Fencing should be considered along vehicular traffic ways to prevent students from accidentally entering traffic.

Fencing of potentially hazardous areas, such as: railroad tracks, trash enclosures and compactors, outdoor storage areas, storm water detention ponds, electrical transformers, mechanical equipment areas, etc., should also be considered.

Fencing materials may vary widely, but should be durable and low maintenance.

Site Size

- Recommended minimum site sizes are:
  - Elementary School: 10 acres plus 1 acre per 100 students
  - Middle School: 20 acres plus 1 acre per 100 students
  - High School: 35 acres plus 1 acre per 100 students
  - Combination Schools:
    - K-12 School: 40 acres plus 1 acre per 100 students
    - K-8 School: 20 acres plus 1 acre per 100 students
- Deviations from recommended minimum site sizes may be needed because of extenuating circumstances, especially in urban areas.
- Larger site sizes or additional acreage may be needed to allow adequate land for storm water detention, building expansion, topography features, subsurface sanitary sewage systems, etc.

Urban Site Size

It is recognized that not all sites, especially those found in urban areas, will be able to accommodate new or replacement facilities. Therefore, it may be necessary to modify/reduce areas such as parking and circulation to "fit" the facility on the smaller site. A list of reductions to consider is provided to assist the School District and Design Professional in analyzing different size options.

- Decrease the amount of visitor and staff parking to be provided
- Decrease the amount of student parking provided
- Decrease the amount of mechanical yard space to be provided
- Delete the bus drop-off and parent drop-off areas and provide curbside service only
- Reduce the amount of greenspace to be provided
- Reduce/decrease the size/number of playfields/playgrounds to be provided

Parking

- The following chart is intended to assist in the development of the recommended parking for new facilities.
- Provide the suggested number of accessible parking spaces as indicated in the chart below.
- Confirm all parking quantities with local building, planning, and/or zoning departments.
- It is suggested that staff parking be located in a secured area separated from other facility parking.
- Check to see that the number of parking spaces equals or exceeds the requirements of the local governing agencies.

Description	Elementary Schools				Middle Schools				High Schools					
Building Capacity	200	350	550	700	200	350	550	700	250	500	1000	1500	2000	
Teaching Stations	8	14	22	28	8	14	22	28	14	23	44	62	81	See Note 1
Staff Parking														
Teachers	8	14	22	28	10	16	26	33	16	27	52	73	96	See Note 2
Ancillary Staff	4	7	11	14	4	7	11	14	2	5	10	15	20	See Note 3
Administration	3	4	7	9	3	5	8	11	5	7	12	16	20	See Note 4
Custodial/Maintenance	2	3	4	5	2	3	4	5	2	4	7	10	14	See Note 5
Food Service	2	3	5	6	2	3	5	6	3	5	10	15	20	See Note 6
Total Staff Parking	19	31	49	62	21	34	54	69	28	48	91	129	170	
Total Visitor Parking	4	7	11	14	4	7	11	14	5	10	20	30	40	See Note 7
High School Student Parking									50	100	200	300	400	See Note 8
Minimum Required Parking	23	38	60	76	25	41	65	83	83	158	311	459	610	See Note 9
Minimum Number of Accessible Parking Spaces	1	2	3	4	1	2	3	4	4	6	8	9	12*	*See Note 10
A. Van Accessible with minimum 96" wide access aisle	1	1	1	1	1	1	1	1	1	1	1	2	2*	*See Note 11
B. Accessible Parking Spaces with minimum 60" wide access aisle	0	1	2	3	0	1	2	3	3	5	7	7	10*	*See Note 12

Note 1: Teaching stations are determined at a percentage of 1 per 25 students.

Note 2: Teachers are calculated at the following utilization of teaching stations: Elementary 100%; Middle 85%; High School 85%
Calculation: Teaching Station/Utilization percentage = Number of Teachers (24/.85 = 29)

Note 3: Ancillary staff includes teaching aides, media center specialist, special education staff, etc. Total is calculated as percentage of the student population as follows: Elementary 2%; Middle 2%; High 1%.

Note 4: Administration includes principals, secretarial, and itinerant staff.

Note 5: Custodial/maintenance staff includes full-time staff for regular school hours.
Calculation: 1 staff per 150 students

Note 6: Food service staff is calculated at 1 staff per 100 meals served with 80% building capacity participation for a full-service kitchen. Satellite kitchen would reduce staff by approximately 50-75%.

Note 7: Visitor parking is calculated at 2% of building student capacity.

Note 8: Student parking is calculated at 20% of all High School students.

Note 9: Minimum required parking is determined by the total of staff, visitor, and student parking or by required zoning.

Note 10: 2% of total parking provided in each lot.

Note 11: One (1) out of every eight (8) accessible spaces.

Note 12: Seven (7) out of every eight (8) accessible spaces.

Outdoor Athletic and Recreation Fields

- When selecting a site, consideration should be given regarding the size and configuration of type and quantity of outdoor athletic and recreation fields to be accommodated.
- The designer should consider drainage, circulation, access, and the need for bleacher seating when determining school site sizes.

Site Design

General

Following are additional factors to consider when determining the merits of a potential site:

- Topography
- Vehicle Access
- Soil Characteristics
- Site Utilities
- Site Preparation
- Codes and Zoning
- Adjacent Property
- Easements/Rights-of-Way
- Environmental Restrictions
- Testing
- Aesthetic Considerations
- Vehicular Circulation
- Pedestrian Circulation
- Storm Sewer System
- Detention Pond
- Sanitary/~~Sewerage~~ Sewage
- Directional Signage
- Playgrounds
- Lighting
- Landscaping
- Positive Drainage

School Districts shall submit site selection(s) to the Arkansas Department of Transportation (ARDOT) for their consideration of a traffic study per Act 858 of 2019.

Topography

- A reasonably level area is needed to accommodate buildings, parking, student playgrounds, and physical education areas.
- There should be sufficient slope to allow for positive drainage to storm sewer outlets or other discharge points.
- Retain natural features.
- Land whose elevation is lower than 5 feet above the elevation of the 100 year flood as defined by FEMA should not be considered for development.

Vehicular Access

- A traffic study may be needed to predict the impact of the school at peak times of arrival and dismissal.
- Consult local street or highway department for turn lane, drive widths, and radius requirements.
- Review site distances at proposed entry exit for hazardous conditions.
- Two or three entry/exit points into the site are recommended to provide appropriate separation of car and bus traffic.

Soil Characteristics

- Obtain preliminary soil borings to obtain characteristics for foundation design, pavement design, storm sewer design, and excavation requirements.
- The presence of high ground water may result in the need for an underground drainage system.
- Erosion characteristics may affect the need for temporary measures, such as silt fence, etc.

Site Utilities

- Storm water may need to be detained on site and released at a rate that will not exceed current runoff rates and meets requirements of the authority having jurisdiction.
- Sewage from school buildings should be discharged into an approved sewage system per applicable codes.

Site Utilities - cont'd

- A water flow test will provide data on the available water flow in gallons per minute (gpm), static pressure available, and available residual pressure for fire protection systems.
- If a local water service is not available, an on-site well system may be needed. An on-site well system may be needed to provide water for domestic use and fire protection systems. The Environmental Protection Agency should be contacted to make an evaluation of the proposed well system.
- The Site Design Professional should evaluate the need and method of providing gas service to the building. If natural gas service is not available, the installation of liquid propane (LP) gas should be investigated.
- Utility Services should be placed underground, where possible. Overhead lines, if required, should be placed away from play areas and playgrounds.
- Electrical transformers and other utility appurtenances should be placed away from play areas, playgrounds, and pedestrian walkways, or adequately fenced to prohibit student access.

Site Preparation

- Consider clearing - site vegetation only as necessary for building, parking, roads, and walks.
- Adequate space should be available on-site for construction staging - location of stockpiles, portable field offices, storage of construction materials, and equipment.
- Consider methods to reduce the loss of soil during construction by storm water runoff and/or wind erosion, including topsoil.
- Sediment should be prevented from running off into storm sewer or receiving streams.
- Every effort should be made to minimize disruption to the site.

Codes and Zoning

- Incompatible or nonconforming zoning may necessitate a zoning change variance or a special exception land use permit.
- Zoning ordinance restrictions such as building height, setback, fence height, landscaping, screening requirements, placement and design of site signage and size of parking spaces can affect site development costs and flexibility.

Adjacent Property

- Screening of noise and views may be required. Minimize environmental pollution.
- Consider the safety of children walking to and from the school site during use of outdoor athletic and play facilities.
- Adjacent railroad rights-of-way or busy streets may require the use of earth berms, landscaping, and/or fencing.

Easements/Rights-of-Way

- Easements and rights-of-way for roads, sewers, gas, power, water, and oil lines should be researched for potential development restrictions.
- Acquisition of additional rights-of-way may be required to accommodate left turn lanes, tapers, passing blisters, and utility extensions.

Environmental restrictions

- Wetland delineation must be performed if the presence of a wetland is suspected.
- A designated wetland may prevent site development.
- Mitigation may be needed if a wetland is to be disturbed.
- Consider air pollution reduction methods.

Testing

- A Phase I Environmental Assessment should be completed to evaluate the potential for environmental liabilities associated with current and past property use and to assess regulatory compliance.
- Consider performing a site investigation and records search of hazardous materials used, stored, or disposed of on the property; proximity to landfills; adjoining property uses; proximity to properties listed on the United States Environmental Protection Agency, Comprehensive Environmental Response, Compensation, and Liability Information System.

Testing - cont'd

- A Phase II Environmental Assessment may be required for areas of the site which indicate the potential for asbestos and other contaminants.

Aesthetic considerations

- It is preferable to choose a site with natural features compatible and complementary to the proposed building and site development.

Vehicular Circulation

- Maintain separate car and bus circulation areas. Buses should not be required to back up.
- Diagonal bus parking spaces should be 12 feet to 13 feet wide by the length of the bus. Spaces may be aligned at a 45-degree to 60-degree angle to the curb.
- Angle diagonal bus parking spaces so the bus exit door will allow children to exit in front of the adjacent bus.
- Provide parking spaces near delivery/receiving area for food service and custodial staff.
- Locate staff parking near visitor parking for economy of pavement design where possible. Staff parking can also be located to one side of the bus parking lot in the area not required for bus traffic.
- Consult building codes for parking space number and size.

Pedestrian Circulation

- Consider constructing walks a minimum of 8-foot wide and a maximum of 12-foot wide from major drop-off drives to major entrances. Minor connecting walks are to be a minimum of 5-foot wide.
- Walks should be reinforced concrete, a minimum of 4 inches thick, with light broom finish. Consider thickened or reinforced edges.
- Walk slope should be a minimum of 1 percent and a maximum of 1:20. If walk exceeds 1:20, it should be designed as a ramp.
- Provide bollards at main entrance walk to block vehicles.

Storm Sewer System

- Create positive drainage away from building. Collect storm water in a series of inlets or swales to be detained and filtered on-site.
- Connect the building site storm drainage system by means of downspouts or roof drains to the building storm drainage system.
- All storm piping should be designed using the 10-year return period and intensity-duration curves consistent with the region.
- All storm piping and culverts should have a smooth interior. All pipes with a diameter greater than 24 inches shall be concrete, aluminized steel, or HDPE.
- Design the project site to maintain natural slope and water flows by promoting infiltration.
- Reuse storm water volumes generated for non-potable uses such as landscape irrigation, toilet and urinal flushing, and custodial use.

Detention Pond

- Detention ponds should be designed to prevent storm water from flowing off the site at a rate greater than permitted by the authorities having jurisdiction. Detention ponds are normally dry except after rainfalls.
- Side slopes should not exceed 4:1 and may be increased to 2:1 in the immediate vicinity of headwalls or other discharge control devices.
- All detention ponds which serve an area greater than 15 acres should be designed using an appropriate hydrograph method. The inflow hydrograph shall be routed through the pond using standard engineering methods to obtain the discharge hydrograph.
- Provide riprap or other erosion control measures at inlet and outlet of pond.
- Storm water detention/retention ponds should be placed away from play areas and playgrounds, where practical. Safety of the student should be considered to prevent accidental access or accidental drowning. Fencing, landscape barriers, transition zones, or other buffers may be utilized where student safety is a concern.

Sanitary/~~Sewerage~~ Sewage

- The disposal of sanitary ~~sewerage~~ sewage to the local utility should be approved by the local authority having jurisdiction.
- Appropriate methods for the disposal or treatment of sanitary ~~sewerage~~ sewage consists of conventional gravity sewer, force main, septic with leach field system, or sand filter and on-site treatment plants.

Directional Signage

- Provide "Stop", "Yield", "No Parking", "One-Way", "Do Not Enter", or other signs as necessary to maintain a fluid traffic stream.
- Signs, and the installation of signs, are to meet the requirements of the authority having jurisdiction.

Playgrounds

- Play equipment to be in compliance with "ASTM (American Society for Testing and Materials) F 1487-95 or most current version of the Standard Consumer Safety Performance Specification for Playground Equipment for Public Use" and the current guidelines for public play equipment by the United States Consumer Product Safety Commission.
- The design of play equipment should comply with Americans with Disabilities Act guidelines.
- Provide a firm, stable, slip-resistant, and resilient soft surface under and around play equipment. Depth and type of soft surfaces should comply with ASTM F 1292-99 or most current version of Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- Provide an accessible route of travel through soft-surface play area. Choice of surfacing and minimum areas of surfacing required should comply with Americans with Disabilities Act guidelines.

Lighting

- Provide a minimum 10-footcandle illumination level at main building entrances. Provide a minimum 5-footcandle illumination level at all entrances except main entrance.
- Light fixtures should incorporate either be high-density discharge or LED type lamp/fixtures located directly over doors, or ~~high-density discharge type~~ recessed in overhangs or soffits located directly over doors. Fixtures shall be designed for exterior use. Wall-mounted fixtures shall be vandal resistant.
- Provide ~~an~~ a minimum illumination level of 0.5 foot-candles at entrance/exit drives. Provide ~~an~~ a minimum illumination of 1.0 foot-candles within parking areas and a minimum of 3.0 foot-candles at bus drop-off/pick-up areas.

Lighting - cont'd

- Lighting should ~~be~~ incorporate either high-intensity discharge or LED type lamp/fixtures located on poles with a concrete base. Pole height shall be a maximum of 39 feet designed to withstand wind loading and overturning of the selected pole and fixture. Where possible, light poles should be placed behind curbs to prevent vehicular contact. Lighting shall be controlled by photoelectric cells, time clocks, or time management system. The Site Design Professional should have discussions with the School District to determine light fixture switching and time clock programming.
- Site lighting should be coordinated with the architectural outdoor lighting.
- Minimize site lighting where possible and model the site lighting using a computer model.
- Consider shielding all site lighting and minimize uplighting.

Landscaping

- Should not exceed 3:1 slope on lawn areas where mowing is required.
- On slopes greater than 3:1, provide slope controlled vegetation to retard erosion. Consider safety of children.
- Provide low maintenance shrubs and flowering trees to emphasize main building entries.
- Consider limiting or eliminating the use of potable water for landscape irrigation.
- Landscape design should include attention to appropriate plant selection on the basis of: plant hardiness zones, avoidance of hazardous plant material (toxic, poisonous, thorny, etc.), avoidance of plant materials with undesirable litter/fruit dropping, species that are indigenous or well adapted to the region, and plant material that is less susceptible to insect issues. Native species and drought tolerant species should also be considered.

Positive Drainage

- At building perimeter, exterior grade should be 8 inches or more below first floor level, except at entrances. The ground around the building perimeter shall slope down and away from the building for a minimum of 20 feet to eliminate any standing water.

Program of Requirements

Introduction

A Program of Requirements (POR) is a compilation of the instructional and support spaces to be incorporated into a new or renovated school facility. The type, size and quantity of each space are included, resulting in a total gross square footage of the proposed building or renovation.

The POR establishes minimum adequate components, and total square footage required in a school construction project.

The POR is available on the Division's website.

Program of Requirements

Before developing a POR, the School District must develop a thorough understanding of its educational mission, vision, and objectives to insure that the project meets current and future student instructional needs. After projected enrollment, grade configuration, and educational programs are established, the District works together with its Design Professional(s) to review and complete the interactive POR spreadsheet.

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~~The following link may be accessed to download the POR.~~
~~http://arkansasfacilities.arkansas.gov/public/userfiles/Program_of_Requirements/Program_of_Requirements_PORb.xls~~

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The information in this chapter consists of a diagram, features, loose furnishings, finishes, and notes which is referred to as a "space plate." There is a space plate for each room in each program area in each school level. The purpose is to provide the Design Professionals and School Districts with guidelines to condition, finish, and equip each space.

Description

The diagram is not intended to fix the size or shape of that room. The size of each space is stated in the Program of Requirements (Chapter 5). Features noted are desirable, but quantities must be determined in relation to the size and capacity stated in Chapter 5. In some cases, casework can be fixed or movable. Loose furnishings are normally furniture items needed to complete the space.

Each room has a unique code that appears in the Program of Requirements and on the space plate. Example: E-AC-1 (E = elementary, AC = academic core, 1 = space plate #1).

Finishes are suggested options from life-cycle analysis that resulted in economical, durable, and maintainable finishes. Refer to material standards and guidelines in Chapter 7.

Plumbing, HVAC, and electrical provisions must, first of all, conform to all appropriate building and energy codes. In addition to the notes on each space plate, design professionals should provide good design recommendations that enhance code requirements where possible.

Technology is a vital part of the teaching programs. Careful programming and early infrastructure inclusion in the design of the facility is recommended.

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ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS (POR)
SUMMARY AND REQUIRED SPACES

Form Printed
5/15/2019

SCHOOL DISTRICT												
SCHOOL NAME					USER DOCUMENTATION -							
PROJECT NAME					RUN BY:							
PROJECT NUMBER					DATE:							
1. NUMBER OF STUDENTS Enter maximum projected number of students during next ten years												
Kindergarten		Grade 7			2. KITCHEN	School may have warming kitchen or full service kitchen						
Grade 1		Grade 8			Select from menu below YES or NO if school will have warming kitchen							
Grade 2		Grade 9			Warming Kitchen	YES						
Grade 3		Grade 10			Full Service Kitchen	NO						
Grade 4		Grade 11										
Grade 5		Grade 12			3. MULTI-STORY SCHOOL							
Grade 6		TOTAL	0		Select from menu if school is multi-story			NO - Single Story				
					4. TOTAL SPACE EXISTING CAMPUS					Gross Square Feet		
	TOTAL REQUIRED SPACES			0	Square Feet							
	SUPPORT SPACES			0	Square Feet							
	TOTAL REQUIRED + SUPPORT SPACE ALLOWANCE			0	Square Feet		TOTAL SPACES (sum)		0	Square Feet		
	10% CONSTRUCTION FACTOR			0.10			NEW SPACES (sum)		0	Square Feet		
	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
	Space	SF	Qty	AREA	Qty	AREA	Qty	AREA	Qty	AREA	Qty
	ACADEMIC CORE										
E-AC-3	Kindergarten Classroom	1,000	0	0					0	0	0
E-AC-4	Kindergarten Restroom	45	0	0					0	0	0
E-AC-5a	Elem Classroom Grades 1-3	850	0	0					0	0	0
E-AC-5b	Elem Classroom Grades 4-5	850	0	0					0	0	0
M-AC-1a	MS Classroom Grade 6	850	0	0					0	0	0
M-AC-1b	MS Classroom Grades 7-8	850	0	0					0	0	0
M-CE 1	Career Education	1,300	0	0					0	0	0
H-AC-1	HS Classroom	850	0	0					0	0	0
H-AC-2	Science Clrm/Lab-Gen/Physics	1,440	0	0					0	0	0
H-AC-3	Science Clrm/Lab-Chemistry	1,440	0	0					0	0	0
H-AC-4	Science Clrm/Lab-Biol/Life Sci	1,440	0	0					0	0	0
H-AC-5	Science Prep	300	0	0					0	0	0
H-AC-11	Chemical Storage	150	0	0					0	0	0
H-AC-12	Multi-Use Room	1,500	0	0					0	0	0
H-AC-13	Instructional Multi-Purpose Rm	850	0	0					0	0	0
H-AC-8	Project Lab/Classroom	1,100	0	0					0	0	0
E-MC-1	Reading Room/Circulation	0	0	0					0	0	0
E-MC-4	Computer Lab	900	0	0					0	0	0
M/H-MC-1	Reading Room/Circulation	0	0	0					0	0	0
M-MC-4	Media Center Computer Lab	900	0	0					0	0	0
E-VA-1	Art Room	1,200	0	0					0	0	0
E-VA-3	Art Material Storage	80	0	0					0	0	0
E-AC-10	Fine Arts Instruction Room	1,200	0	0					0	0	0
E-AC-11	Fine Arts Instruction Storage	100	0	0					0	0	0
M-VA-1	Art Room	1,200	0	0					0	0	0
H-VA-1	Art Room	1,200	0	0					0	0	0
M/H-VA-3	Art Material Storage	100	0	0					0	0	0
E-MU-1	Music Room	1,200	0	0					0	0	0
E-MU-2	Music Storage	100	0	0					0	0	0
M-MU-2	Music Storage	100	0	0					0	0	0
M/H-MU-1	Instrumental Room	1,400	0	0					0	0	0
H-MU-2	Instrument Storage	200	0	0					0	0	0
M-MU-8	Vocal Room	1,200	0	0					0	0	0
H-MU-8	Vocal Room	1,200	0	0					0	0	0
H-MU-9	Vocal Storage	150	0	0					0	0	0
E-PE-1	PE Area	2,500	0	0					0	0	0
M-PE-1	PE Area	4,000	0	0					0	0	0
H-PE-1	PE Area	6,000	0	0					0	0	0
H-PE-3	Student Locker Room	400	0	0					0	0	0
H-PE-4	Student Restroom/Shower	150	0	0					0	0	0
H-CE	Career Education Program One	Varies	0	0	0	0	0	0	0	0	
H-CE	Career Education Program Two	Varies	0	Varies							
H-CE	Career Education Program Three	Varies	0	Varies							
	SPECIAL EDUCATION										
E/M/H-SE-1	Self-contained Classroom	850	1	850					0	0	-1
E/M/H-SE-2	Workroom/Conference	150	1	150					0	0	-1
E/M/H-SE-3	Restroom/Shower	100	1	100					0	0	-1
E/M/H-SE-4	Special Education/Resource	450	1	450					0	0	-1
E/M/H-SE-5	Speech Therapy	475	1	475					0	0	-1
E/M/H-SE-7	OT/PT	350	1	350					0	0	-1
E-GT-1	Gifted and Talented	850	0	0					0	0	0
	ADMINISTRATIVE SPACES										
E/M/H-AD-3	Principal's Office	150	1	150					0	0	-1
E/M/H-AD-4	Assistant Principal's Office	120	0	0					0	0	0
E/M/H-AD-11	Guidance Counselor's Office	120	1	120					0	0	-1
E/M/H-AD-15	Health Center	360	1	360					0	0	-1
E/M/H-AD-20	Health Center Restroom	45	1	45					0	0	-1

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SCHOOL NAME					USER DOCUMENTATION -							
PROJECT NAME					RUN BY:							
PROJECT NUMBER					DATE:							
	PERFORMING ARTS											
H-PA-1	Auditorium	1,500	0	0						0	0	0
H-PA-3	Stage Area (includes wings)	600	0	0						0	0	0
		STANDARD	REQUIRED SPACES		NEW SPACES		EXISTING SPACES (in their final configuration)			TOTAL SPACES (NEW + EXISTING)		D SPACES CHECK
	STUDENT DINING											
E/M/H-SD-1	Student Dining	0	1	0	1					1	0	0
	FOOD SERVICE											
E/M/H-FS-1	Warming Kitchen	0	1	0						0	0	-1
E/M/H-FS-2	Kitchen (total)	0	0	0								
E/M/H-FS-2a	Preparation Area	0	0	0						0	0	0
E/M/H-FS-2b	Serving Area	0	0	0						0	0	0
E/M/H-FS-2c	Dry Food Storage	0	0	0						0	0	0
E/M/H-FS-2d	Cooler/Freezer	0	0	0						0	0	0
E/M/H-FS-2e	Ware Washing	0	0	0						0	0	0
	BUILDING SERVICES											
E/M/H-CU-1	Workroom	125	1	125						0	0	-1
E/M/H-MultiSt	Vertical Circulation	0	0	0						0	0	0
E/M/H-BS-1	Large Group Restrooms	96		96						0	0	
E/M/H-BS-2	Custodial Closet	50	1	50						0	0	-1
E/M/H-BS-3	Electrical Closet	50	1	50						0	0	-1
E/M/H-BS-4	Telecommunications Room	64	1	64						0	0	-1
E/M/H-BS-5	Corridors/Circulation	635		635						0	0	
E/M/H-BS-6	Mech/Elect Space/Decks	175		175						0	0	
E/M/H-BS-7	Storage Area	150	1	150						0	0	-1
E/M/H-BS-8	Central Storage Area	150	1	150						0	0	-1
E/M/H-BS-9	Loading/Receiving Area	100	1	100						0	0	-1
E/M/H-BS-10	Main Cross-connect	150	1	150						0	0	-1

NOTES: PLEASE DESCRIBE 1) ANY CONVERSIONS OF SPACE. FOR EXAMPLE, EXISTING 3,000 SF STUDENT DINING CONVERTED TO THREE 4TH GRADE CLASSROOMS.
2) ANY SHARED SPACES WITH OTHER SCHOOLS.

SUITABILITY ANALYSIS

SUITABILITY ANALYSIS							
BY:	0						
DATE:	1/0/1900						
SELECT PROJECT TYPE BY DROPDOWN							
FOR ADDITION PROJECT (SUITABILITY)	YES						
NEW SCHOOL IN DISTRICT (EXCESS SPACE)	NO						
SCHOOL DISTRICT			0				
SCHOOL NAME			0				
PROJECT NAME			0				
PROJECT NUMBER			0				
	Existing Size (GROSS SF)			POR Allowance (SF)		Difference	
TOTAL SCHOOL/CAMPUS	0			0		0	
SINGLE-PURPOSE AREAS	2008 or Before	After 2008				2008 or Before	
Physical Education				0		0	
Media Center				0		0	
Student Dining				0		0	
Performing Arts				0		0	
	TOTAL SUITABILITY NEED (GROSS SF)					0	
	FOR STATE FINANCIAL PARTICIPATION						
NOTES				District Inputs			
				From POR Summary Sheet			
				Suitability Analysis Computes			
				State Participation Area or Excess Area in Gross SF			

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	**SUGGESTED SF**	**Qty**	**AREA**
	ACADEMIC CORE			
E-AC-6	Teacher Prep Area/Workroom	150		
E-AC-7	Individual Restroom	50		
E-AC-8	Instructional Material Storage	100		
E-AC-9	Instructional Multi-purpose	850		
E-MC-2	Media Specialist Office	100		
E-MC-3	Media Center Workroom/Storage	100		
E-MC-5	A/V Storage	50		
E-MC-6	Conference Room	200		
E-VA-2	Kiln/Ceramic Storage	100		
E-PE-2	P. E. Workroom/Storage	100		
M-AC-2	Project Lab/Classroom	1100		
M-AC-3	Teacher Prep Area/Workroom	200		
M-AC-4	Individual Restroom	50		
M-AC-5	Instructional Material Storage	120		
M-AC-6	Small Group Room	150		
M-AC-7	Instructional Multi-purpose Room	850		
M-MC-2	Media Specialist Office	120		
M-MC-3	Media Center Workroom/Storage	150		
M-MC-5	Media Center A/V Storage	80		
M-MC-6	Media Center Conference Room	150		
M-MC-7	Multimedia Production Room	300		
M-VA-2	Kiln/Ceramic Storage	100		
M-MU-3	Music Office	120		
M-MU-4	Music Library	120		
M-CE-2	Career EducationProduction Lab	1300		
M-CE-3	Career Education Storage	150		
M-FCS-1	Life Skills Lab	1100		
M-FCS-2	Life Skills Storage	100		
M-PE-2	P.E./Athletic Office	75		
M-PE-3	Staff Shower	75		
M-PE-4	Student Locker Room	350		
M-PE-5	Student Restroom/Shower	150		
M-PE-6	Physical Education Storage	200		
H-AC-6	Teacher Prep Area/Workroom	300		
H-AC-7	Individual Restroom	50		
H-AC-9	Small Group Room	150		
H-AC-10	Instructional Material Storage	150		
H-MC-2	Media Specialist Office	120		
H-MC-3	Workroom/Storage	150		
H-MC-4	A/V Storage	75		
H-MC-5	Conference Room	250		
H-MC-6	Multimedia Production Room	400		

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT		0		
SCHOOL NAME		0		
PROJECT NAME		0		
PROJECT NUMBER		0		
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	**SUGGESTED SF**	**Qty**	**AREA**
H-MC-7	Document Storage	60		
H-VA-2	Kiln/Ceramic Storage	100		
H-MU-3	Instrument Repair Room	100		
H-MU-4	Orchestra Storage	100		
H-MU-5	Instrumental Music Library	120		
H-MU-6	Instrumental Office	120		
H-MU-7	Uniform Storage	100		
H-MU-10	Vocal Music Library	120		
H-MU-11	Vocal Office	120		
H-MU-12	Ensemble Room	150		
H-MU-13	Practice Room	80		
H-MU-14	Restroom	50		
H-PE-5	Physical Education Storage	200		
H-PE-6	P.E./Athletic Office	75		
H-PE-7	Staff Shower	75		
H-PE-9	Lobby Services	100		
H-PE-10	Training Room	200		
H-PE-11	Physical Health Classroom	850		
	SPECIAL EDUCATION			
E-SE-6	Storage	80		
M-SE-6	Storage	100		
H-SE-6	Storage	100		
	ADMINISTRATIVE SPACES			
E-AD-1	Reception Area	150		
E-AD-2	Secretarial Area	150		
E-AD-5	Conference Room	150		
E-AD-6	Mail/Work/Copy Room	150		
E-AD-7	Administrative Storage	80		
E-AD-8	Vault/Records Storage	50		
E-AD-9	In-school Suspension	450		
E-AD-10	Restroom	50		
E-AD-12	Guidance Reception	120		
E-AD-13	Guidance Records/Storage	50		
E-AD-14	Parent Center	300		
E-AD-16	Itinerant Personnel Office	100		
E-AD-17	Family Restroom	80		
M-AD-1	Reception Area	150		
M-AD-2	Secretarial Area	150		
M-AD-5	Conference Room	150		
M-AD-6	Mail/Work/Copy Room	150		
M-AD-7	Administrative Storage	75		

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	SUGGESTED SF	Qty	AREA
M-AD-8	Vault/Records Storage	50		
M-AD-9	In-school Suspension	350		
M-AD-10	Restroom	50		
M-AD-12	Guidance Reception	120		
M-AD-13	Guidance Records/Storage	50		
M-AD-14	Parent Center	400		
M-AD-16	Itinerant Personnel Office	120		
M-AD-17	Family Restroom	80		
H-AD-1	Reception Area	150		
H-AD-2	Secretarial Area	150		
H-AD-5	Conference Room	200		
H-AD-6	Mail/Work/Copy Room	150		
H-AD-7	Administrative Storage	100		
H-AD-8	Vault/Records Storage	50		
H-AD-9	In-school Suspension	450		
H-AD-10	Restroom	50		
H-AD-12	Guidance Records/Storage	80		
H-AD-13	Guid. Conference Rm/Group Procedures Rm	250		
H-AD-14	Guidance Reception and Display Area	120		
H-AD-15	Parent Center	450		
H-AD-17	Itinerant Personnel Office	120		
H-AD-18	Career Center	500		
H-AD-19	Family Restroom	80		
	FOOD SERVICE			
E-SD-2	Stage	900		
E-SD-3	Staff Dining	250		
E-SD-4	Table Storage	200		
E-FS-3	Dietician Office	75		
E-FS-4	Restroom	50		
E-FS-5	Locker Room	100		
M-SD-2	Stage	1000		
M-SD-3	Staff Dining	400		
M-SD-4	Table Storage	200		
M-FS-3	Dietician Office	75		
M-FS-4	Restroom	50		
M-FS-5	Locker Room	50		
H-FS-3	Dietician Office	75		
H-FS-4	Restroom	50		
H-FS-5	Locker Room	125		

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	**SUGGESTED SF**	**Qty**	**AREA**
	PERFORMING ARTS			
H-PA-2	Orchestra Pit [with cover]	300		
H-PA-4	Scene Shop	400		
H-PA-5	Scene Shop Storage	250		
H-PA-6	Make-up/Dressing Room	100		
H-PA-7	Green Room	300		
H-PA-8	Costume Storage	150		
H-PA-9	Control Room	100		
H-PA-10	Lobby/Concessions/Gallery	200		
H-PA-11	Ticket Booth	80		
H-PA-12	Theatre/Drama Office	100		
H-PA-13	Storage	200		
	BUILDING SERVICES			
E-CU-2	Custodial Office	80		
M-CU-2	Custodial Workroom	63		
H-CU-2	Custodial Workroom	125		
	Total area of support spaces		0	0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION Required for 9-12)

SCHOOL DISTRICT	0		9-12 schools must provide a minimum of three
SCHOOL NAME	0		Career Education programs. Each program must
PROJECT NAME	0		contain at least three course offerings. Allowable
PROJECT NUMBER	0		Career Education total space is shown on Summary sheet.

			NEW SPACES		EXISTING SPACES		TOTAL SPACES (NEW + EXISTING)	
	CAREER EDUCATION	REQUIRED SIZE	Qty	AREA	Qty	AREA	Qty	AREA
Agribusiness Systems								
CE-AG-1	Agribusiness Lab	1,500					0	0
Agricultural Power, Structural, & Technical Sys.								
CE-AG-2	Ag Mechanics Lab	3,000					0	0
- CE-AG-3	Outdoor Covered Work Area	800					0	0
Agricultural Science - Animal or Plant Sys.								
CE-AG-4	Outdoor Animal Science Lab	1,000					0	0
Horticulture / Plant Systems								
CE-AG-5	Greenhouse	1,800					0	0
CE-AG-6	Cold Frame	800					0	0
CE-AG-7	Shade House	300					0	0
CE-AG-8	Hydroponics Lab	250					0	0
Natural Resources / Environmental Service Sys.								
CE-AG-9	Aquaculture Lab	500					0	0
Related Spaces								
CE-AG-10	Classroom	850					0	0
CE-AG-11	Office	120					0	0
CE-AG-12	Restrooms/Locker Rooms	150					0	0
CE-AG-13	Storage	150					0	0
Business Marketing Management								
CE-BM-1	Management Lab	1,500					0	0
Office Administration								
CE-BM-2	Office Administration Lab	1,500					0	0
Hospitality								
CE-BM-3	Hospitality Lab	1,500					0	0
Lodging								
CE-BM-4	Lodging Lab	1,500					0	0
Desktop Publishing								
CE-BM-5	Desktop Publishing Lab	1,500					0	0
Multimedia								
CE-BM-6	Multimedia Lab	1,500					0	0
Programming								
CE-BM-7	Programming Lab	1,500					0	0
Accounting								
CE-BM-8	Accounting Lab	1,500					0	0
Banking & Finance								
CE-BM-9	Banking & Finance Lab	1,500					0	0
Marketing								
CE-BM-10	Marketing Lab	1,500					0	0
Related Spaces								
CE-BM-11	Classroom	850					0	0
CE-BM-12	Office	120					0	0
CE-BM-13	Storage	100					0	0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION Required for 9-12)

SCHOOL DISTRICT	0		9-12 schools must provide a minimum of three
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PROJECT NAME	0		contain at least three course offerings. Allowable
PROJECT NUMBER	0		Career Education total space is shown on Summary sheet.

		REQUIRED	NEW SPACES		EXISTING SPACES		TOTAL SPACES (NEW + EXISTING)	
	CAREER EDUCATION	SIZE	Qty	AREA	Qty	AREA	Qty	AREA
Family & Consumer Sciences								
CE-FCS-1	Family & Consumer Sciences Lab	1,200					0	0
CE-FCS-2	Food Prep Lab (kitchen units)	600					0	0
CE-FCS-3	Sewing Lab	550					0	0
CE-FCS-4	Fitting Room	150					0	0
CE-FCS-5	Laundry	50					0	0
Consumer Services								
CE-FCS-19	Consumer Services Lab	1,500					0	0
Education & Training								
CE-FCS-6	Education & Training Lab	1,200					0	0
Food Production, Management, & Services								
CE-FCS-7	Food Production, Management, & Services Lab	1,200					0	0
CE-FCS-8	Food Prep Lab (kitchen units)	600					0	0
Facilities Management, Maintenance, & Services								
CE-FCS-9	Facilities Management, Maintenance, & Services	1,200					0	0
Child Care Guidance, Management, & Services								
CE-FCS-10	Child Care Guidance, Management, & Services La	1,200					0	0
CE-FCS-11	Laundry	50					0	0
Cosmetology								
CE-FCS-12	Cosmetology Lab	2,500					0	0
Required Spaces in Cosmetology Lab - included in required SF								
CE-FCS-20	Restroom	100						
CE-FCS-21	Reception	250						
CE-FCS-22	Supply	200						
CE-FCS-23	Dispensary	150						
CE-FCS-16	Office	120						
CE-FCS-13	Cosmetology Clinic Area	1,200					0	0
CE-FCS-14	Cosmetology Instruction Area	275					0	0
Related Spaces								
CE-FCS-15	Classroom	850					0	0
CE-FCS-17	Restrooms	150					0	0
CE-FCS-18	Storage	100					0	0
Architecture and Construction Services								
Construction Technology								
CE-ARC-1	Construction Technology Lab	3,000					0	0
HVACR								
CE-ARC-2	HVACR Lab	3,000					0	0
Related Spaces								
CE-ARC-3	Classroom	850					0	0
CE-ARC-4	Office	120					0	0
CE-ARC-5	Storage	200					0	0
ARTS, AV TECHNOLOGY, & COMMUNICATION SPACES								
Advertising Design								
CE-AV-1	Advertising Design Lab	1,500					0	0
Career Communications								
CE-AV-2	Career Communications Lab	1,500					0	0
Commercial Photography								
CE-AV-3	Photography Production Lab	400					0	0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION Required for 9-12)

SCHOOL DISTRICT	0		9-12 schools must provide a minimum of three
SCHOOL NAME	0		Career Education programs. Each program must
PROJECT NAME	0		contain at least three course offerings. Allowable
PROJECT NUMBER	0		Career Education total space is shown on Summary sheet.

			NEW SPACES		EXISTING SPACES		TOTAL SPACES (NEW + EXISTING)	
	CAREER EDUCATION	REQUIRED SIZE	Qty	AREA	Qty	AREA	Qty	AREA
CE-AV-4	Photography Workroom	750					0	0
Graphic Communications								
CE-AV-6	Graphic Communication Work Area	1,800					0	0
Performing Arts								
CE-AV-7	Performing Arts Studio	1,800					0	0
CE-AV-8	Dressing Rooms	750					0	0
CE-AV-9	Performing Arts Storage	250					0	0
Radio / TV Broadcasting								
CE-AV-10	Radio / TV Broadcasting Lab	1,200					0	0
Related Spaces								
CE-AV-11	Classroom	850					0	0
CE-AV-12	Office	120					0	0
CE-AV-13	Storage	200					0	0
Government and Public Education Spaces								
ROTC								
CE-GOV-1	ROTC Lab	3,000					0	0
Related Spaces								
CE-GOV-2	Classroom	850					0	0
CE-GOV-3	Office	120					0	0
CE-GOV-4	Storage	200					0	0
Health Science Spaces								
Medical Professions Education								
CE-HSC-1	Clinic Area	500					0	0
Related Spaces								
CE-HSC-2	Classroom	850					0	0
CE-HSC-3	Office	120					0	0
CE-HSC-4	Storage	200					0	0
Law, Public Safety and Security Spaces								
Criminal Justice								
CE-LAW-1	Criminal Justice Lab (forensics)	1,200					0	0
Related Spaces								
CE-LAW-2	Classroom	850					0	0
CE-LAW-3	Office	120					0	0
CE-LAW-4	Storage	200					0	0
Manufacturing Spaces								
Electronics								
CE-MAN-1	Electronics Lab	2,000					0	0
Furniture Manufacturing								
CE-MAN-2	Furniture Manufacturing Lab	3,000					0	0
Industrial Equipment Maintenance								
CE-MAN-3	Industrial Equipment Lab	3,000					0	0
Machine Tool Technology								
CE-MAN-4	Machine Tool Lab	3,000					0	0
Major Appliance Repair								
CE-MAN-5	Major Appliance Repair Lab	3,000					0	0
Welding								

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION Required for 9-12)

SCHOOL DISTRICT	0		9-12 schools must provide a minimum of three
SCHOOL NAME	0		Career Education programs. Each program must
PROJECT NAME	0		contain at least three course offerings. Allowable
PROJECT NUMBER	0		Career Education total space is shown on Summary sheet.

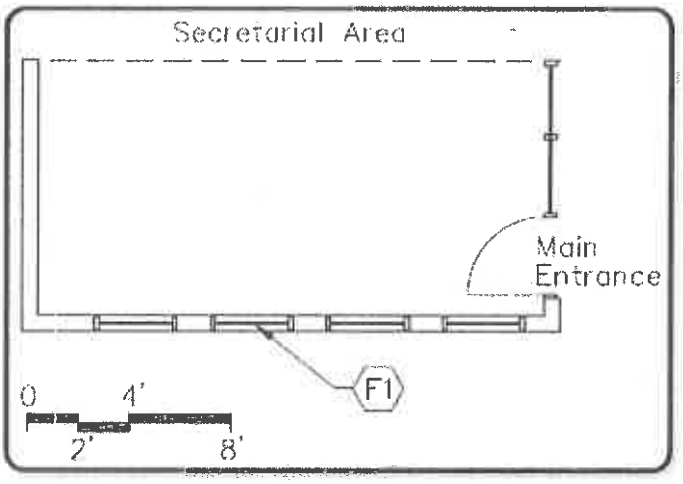
		REQUIRED	NEW SPACES		EXISTING SPACES		TOTAL SPACES (NEW + EXISTING)	
	CAREER EDUCATION	SIZE	Qty	AREA	Qty	AREA	Qty	AREA
CE-MAN-6	Welding Lab	3,000					0	0
Related Spaces								
CE-MAN-7	Classroom	850					0	0
CE-MAN-8	Office	120					0	0
CE-MAN-9	Storage	200					0	0
SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS SPACES								
Drafting & Design								
CE-ENG-1	Drafting & Design Lab	2,000					0	0
Computer Engineering								
CE-ENG-2	Computer Engineering Lab	1,500					0	0
Geospatial Technology (GIS)								
CE-ENG-3	Geospatial Technology (GIS) Lab	1,500					0	0
Pre-Engineering								
CE-ENG-4	Pre-Engineering Lab	1,500					0	0
Related Spaces								
CE-ENG-5	Classroom	850					0	0
CE-ENG-6	Office	120					0	0
CE-ENG-7	Storage	200					0	0
Transportation, Distribution, & Logistics Spaces								
Automotive Collision								
CE-TDL-1	Automotive Collision Repair Lab	4,000					0	0
Automotive Service Technology								
CE-TDL-2	Automotive Service Technology Lab	4,000					0	0
Aviation Mechanics								
CE-TDL-3	Aviation Mechanics Lab	10,000					0	0
CE-TDL-4	Aviation Technology Lab	1,200					0	0
Diesel Mechanics								
CE-TDL-5	Diesel Mechanics Lab	4,000					0	0
Power Equipment Technology								
CE-TDL-6	Power Equipment Technology Lab	3,000					0	0
Related Spaces								
CE-TDL-7	Classroom	850					0	0
CE-TDL-8	Office	120					0	0
CE-TDL-9	Storage	200					0	0
		TOTALS	0	0	0	0	0	0

	REQUIRED SPACES		
		STANDARD SIZE	
	Space	Square Feet	Notes
	ACADEMIC CORE		
E-AC-3	Kindergarten Classroom	1,000	Maximum class size 20 students
E-AC-4	Kindergarten Restroom	45	One per kindergarten classroom
E-AC-5a	Elem Classroom Grades 1-3	850	Maximum class size 25 students
E-AC-5b	Elem Classroom Grades 4-5	850	Maximum class size 28 students
M-AC-1a	MS Classroom Grade 6	850	Maximum class size 28 students.
M-AC-1b	MS Classroom Grades 7-8	850	Maximum class size 30 students.
M-CE-1	Workforce Development	1,300	Two required for 700 or more students.
H-AC-1	HS Classroom	850	Maximum class size 30 students.
H-AC-2	Science Clrm/Lab-Gen/Physics	1,440	Minimum one plus one per each 500 students
H-AC-3	Science Clrm/Lab-Chemistry	1,440	One per each 500 students above 1,000 students.
H-AC-4	Science Clrm/Lab-Biol/Life Sci	1,440	One minimum to 1000 students. Additional for each 500 above 1000 students.
H-AC-5	Science Prep	300	
H-AC-11	Chemical Storage	150	One miminum. Two above 1500 students.
H-AC-12	Multi-Use Room	1,500	
H-AC-13	Instructional Multi-Purpose Rm	850	
H-AC-8	Project Lab/Classroom	1,100	One minimum to 1000 students. Additional for each 500 above 1000 students.
E-MC-1	Reading Room/Circulation	Computed	10% of the student capacity multiplied by 35 SF per student.
E-MC-4	Computer Lab	900	
M/H-MC-1	Reading Room/Circulation	Computed	10% of the student capacity multiplied by 40 SF per student.
M-MC-4	Media Center Computer Lab	900	
E-VA-1	Art Room	1,200	Required for 550 or more students.
E-VA-3	Art Material Storage	80	Required for 550 or more students.
E-AC-10	Fine Arts Instruction Room	1,200	Substituted for Art and Music Room in ES with less than 550 students
E-AC-11	Fine Arts Instruction Storage	100	Substituted for Art and Music Storage in ES with less than 550 students
M-VA-1	Art Room	1,200	
H-VA-1	Art Room	1,200	Minimum one, plus one for each 500 students
M/H-VA-3	Art Material Storage	100	
E-MU-1	Music Room	1,200	Required for 550 or more students.
E-MU-2	Music Storage	100	Required for 550 or more students.
M-MU-2	Music Storage	100	Required for 550 or more students.
M/H-MU-1	Instrumental Room	1,400	Minimum one plus additional room for more than 1000 students.
H-MU-2	Instrument Storage	Computed	Minimum 200 SF. One-half SF per student.
M-MU-8	Vocal Room	1,200	Required for 700 or more students
H-MU-8	Vocal Room	1,200	Minimum one for 500 students plus additional room for more than 2000 students.
H-MU-9	Vocal Storage	150	One per vocal room.
E-PE-1	PE Area	Computed	10 SF per student. Minimum 2,500 SF, Maximum 10,000 SF. Minimum single space size 900 SF.
M-PE-1	PE Area	Computed	15 SF per student. Minimum 4,000 SF, Maximum 10,000 SF. Minimum single space size 900 SF.
H-PE-1	PE Area	Computed	15 SF per student. Min 6,000 SF, Max 30,000 SF. Includes aux gym above 1000 students. Minimum 900 SF.
H-PE-3	Student Locker Room	Computed	Minimum 2 @ 400 SF. Maximum 6 @ 850 SF.
H-PE-4	Student Restroom/Shower	Computed	Minimum 2 @ 150 SF. Maximum 6 @ 350 SF.
H-CE	Career Education Program One	Varies	Total. Minimum 8,000 SF. Maximum 23,000 SF. 15 SF/student.
H-CE	Career Education Program Two	Varies	
H-CE	Career Education Program Three	Varies	
	SPECIAL EDUCATION		
E/M/H-SE-1	Self-contained Classroom	850	Two required for 1,000 students and above.
E/M/H-SE-2	Workroom/Conference	150	Two required for 1,000 students and above.
E/M/H-SE-3	Restroom/Shower	100	Two required for 1,000 students and above.
E/M/H-SE-4	Special Education/Resource	450	Two required for 1,000 students and above.
E/M/H-SE-5	Speech Therapy	475	Two required for 1,000 students and above.
E/M/H-SE-7	OT/PT	350	Two required for 1,000 students and above.
E-GT-1	Gifted and Talented	850	
	ADMINISTRATIVE SPACES		
E/M/H-AD-3	Principal's Office	150	
E/M/H-AD-4	Assistant Principal's Office	120	Required for 500 or more students.
E/M/H-AD-11	Guidance Counselor's Office	120	Minimum 1. Must maintain ratio of 1:450
E/M/H-AD-15	Health Center	360	Must meet the requirements of ACA 6-20-2517 b)
E/M/H-AD-20	Health Center Restroom	45	
	PERFORMING ARTS		
H-PA-1	Auditorium	Computed	Minimum 1500 SF. 5 SF per 9-12 student.
H-PA-3	Stage Area (includes wings)	Computed	Minimum 600 SF. 2 SF per 9-12 student.
	STUDENT DINING		
E/M/H-SD-1	Student Dining	Computed	One-half of the student capacity multiplied by 15 SF per student.
	FOOD SERVICE		Only one of the two kitchens is to be used - either E-FS-1 or E-FS-2 - not both.
E/M/H-FS-1	Warming Kitchen	Computed	2 SF per student.
E/M/H-FS-2	Kitchen (total)	Computed	Equal to sum of areas for preparation, serving, dry food storage, cooler/freezer, and ware washing.
E/M/H-FS-2a	Preparation Area	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 36%.
E/M/H-FS-2b	Serving Area	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 34%.
E/M/H-FS-2c	Dry Food Storage	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 11%.
E/M/H-FS-2d	Cooler/Freezer	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 10%.
E/M/H-FS-2e	Ware Washing	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 9%.
	BUILDING SERVICES		
E/M/H-CU-1	Workroom	Computed	0.5 SF per student. Minimum 125 SF.
E/M/H-MultiSt	Vertical Circulation	Computed	Vertical Circulation for Multi-Story Schools
E/M/H-BS-1	Large Group Restrooms	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 3%.
E/M/H-BS-2	Custodial Closet	50	
E/M/H-BS-3	Electrical Closet	50	
E/M/H-BS-4	Telecommunications Room	64	
E/M/H-BS-5	Corridors/Circulation	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 20%.
E/M/H-BS-6	Mech/Elect Space/Decks	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 5.5%.
E/M/H-BS-7	Storage Area	150	
E/M/H-BS-8	Central Storage Area	150	
E/M/H-BS-9	Loading/Receiving Area	100	
E/M/H-BS-10	Main Cross-connect	150	

Reception Area
E-AD-1

Features - Fixed Equipment

F1 Interior windows



Features - Loose Furnishings

Visitor chairs
End table
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

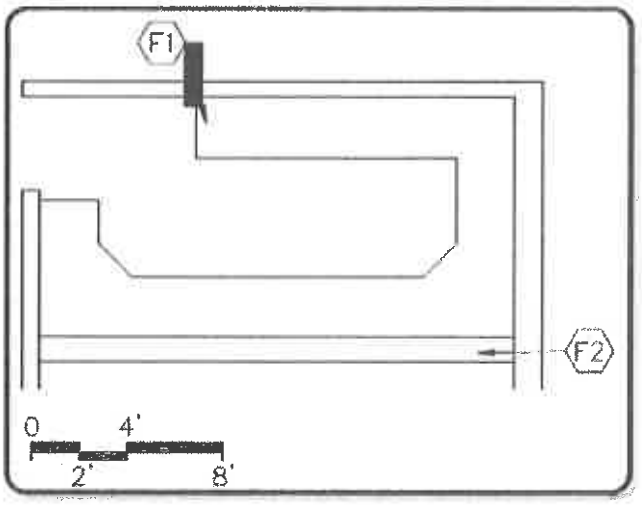
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock

Secretarial Area
E-AD-2

Features - Fixed Equipment

F1 Work surface with file drawers
F2 High counter top



Features - Loose Furnishings

Secretarial chair(s)
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

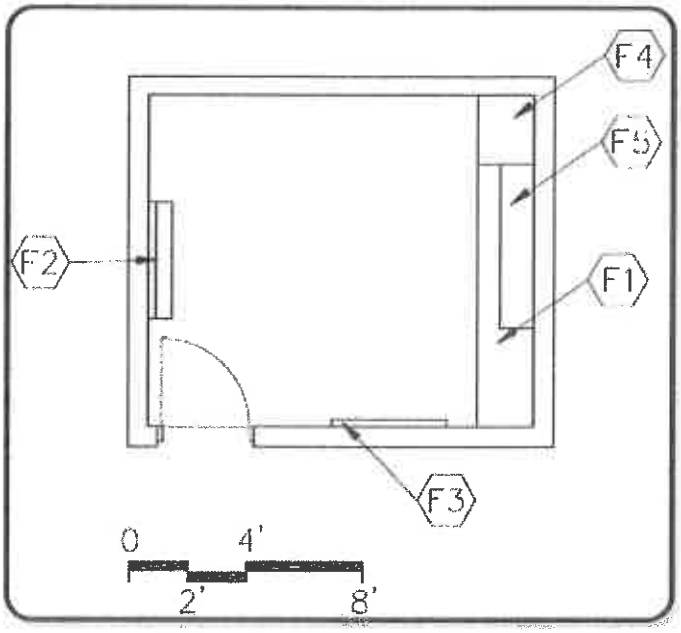
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, voice port & phone at each secretarial station; fax port, data port for printer; clock
3. Miscellaneous - fax machine; printer; computer/typewriter

Principal's Office
E-AD-3

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

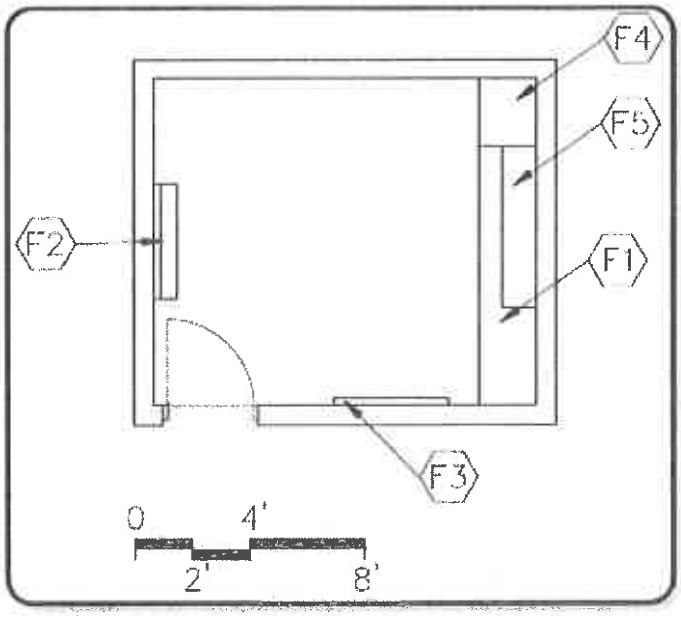
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Assistant Principal's Office
E-AD-4

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes
1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Conference Room
E-AD-5

Features - Fixed Equipment

F1 Marker board
F2 Tack board
F3 Base cabinets

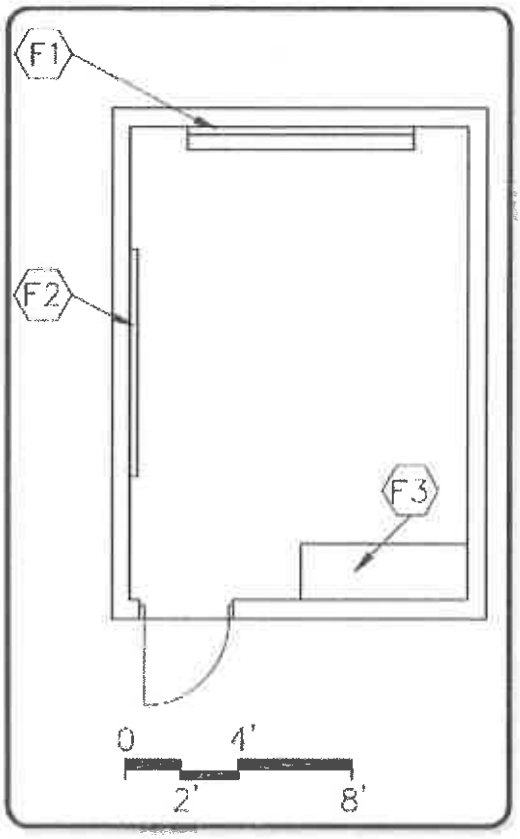
Features - Loose Furnishings

Conference table
Chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

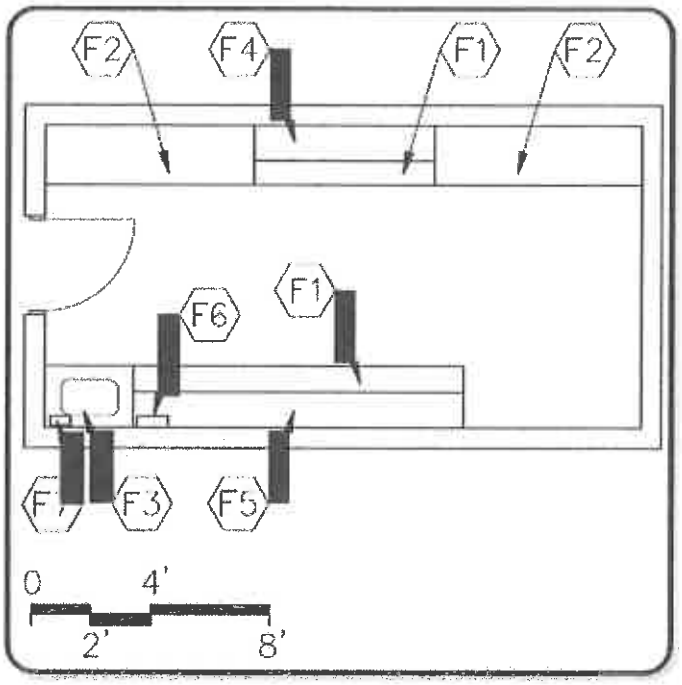
Notes
1. Electrical - duplex receptacles; multi-level switching
2. Technology - data port, voice port & phone; video port and video display device, clock



Mail/Work/Copy Room
E-AD-6

Features - Fixed Equipment

F1 Base cabinets
F2 Tall Storage Cabinet
F3 Sink base cabinet
F4 Mail Cubicle
F5 Wall Cabinets
F6 Towel dispenser
F7 Soap dispenser



Features - Loose Furnishings

Worktable
Wastebasket

Finishes:

Flooring - Resilient
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching; receptacle for copier
2. Technology - voice port & phone; clock
3. Plumbing - sink
4. Miscellaneous - copier

Administrative Storage
E-AD-7

Features - Fixed Equipment

F1 Open metal shelving

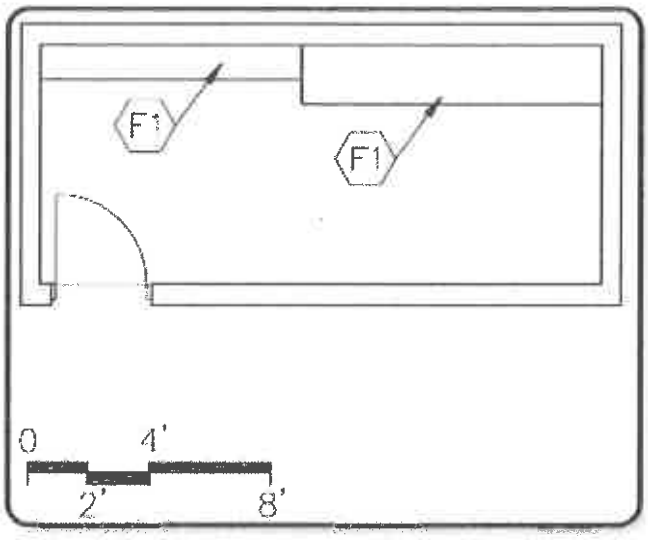
Features - Loose Furnishings

File cabinets

Finishes:

Flooring - Resilient
Base - Resilient base
Ceiling - Suspended, acoustical or painted
Walls - Painted concrete masonry units

Notes
1. Electrical - duplex receptacle; single-level switching



Vaults/Record Storage
E-AD-8

Features - Fixed Equipment

F1 Open Metal Shelving

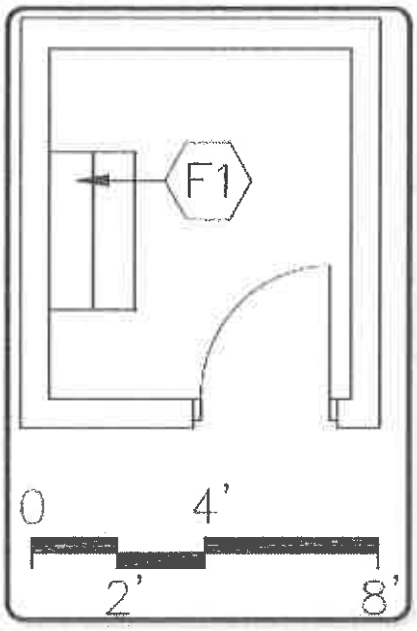
Features - Loose Furnishings

File cabinet
Safe

Finishes:

Flooring - Sealed Concrete
Base - Resilient base
Ceiling - Rated 2 hour construction
Walls - Painted concrete masonry units
Rated 2 hour construction

Notes
1. Electrical - duplex receptacles; single-level switching



In School Suspension
E-AD-9

Features - Fixed Equipment

F1 Base cabinets
F2 Marker board
F3 Tack board
F4 Pencil sharpener support

Features - Loose Furnishings

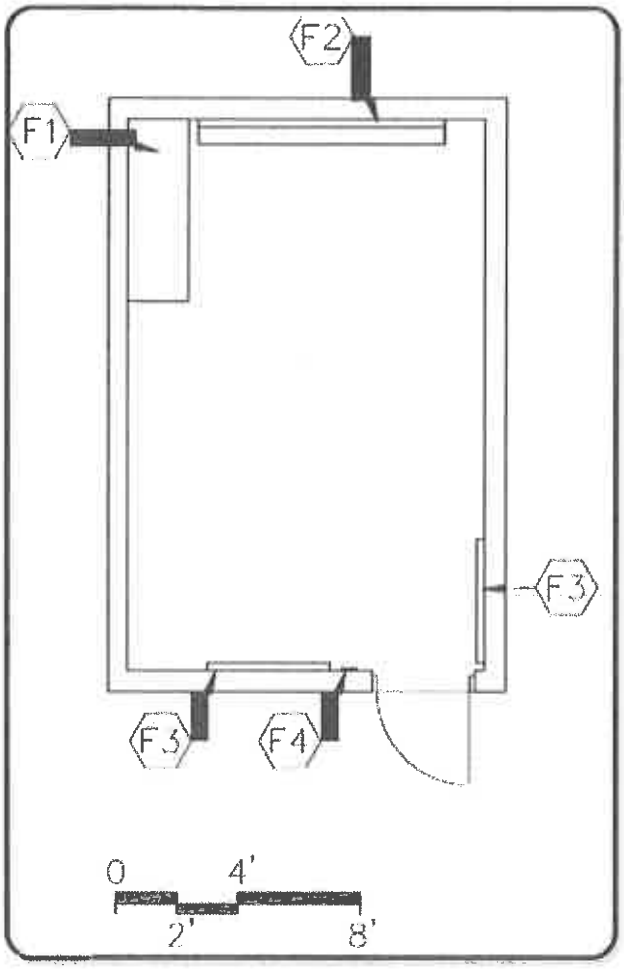
Student carrels and/or desks
Student chairs
Teacher desk and chair
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, data port, voice port & phone; data ports for students; clock



Restroom
E-AD-10

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

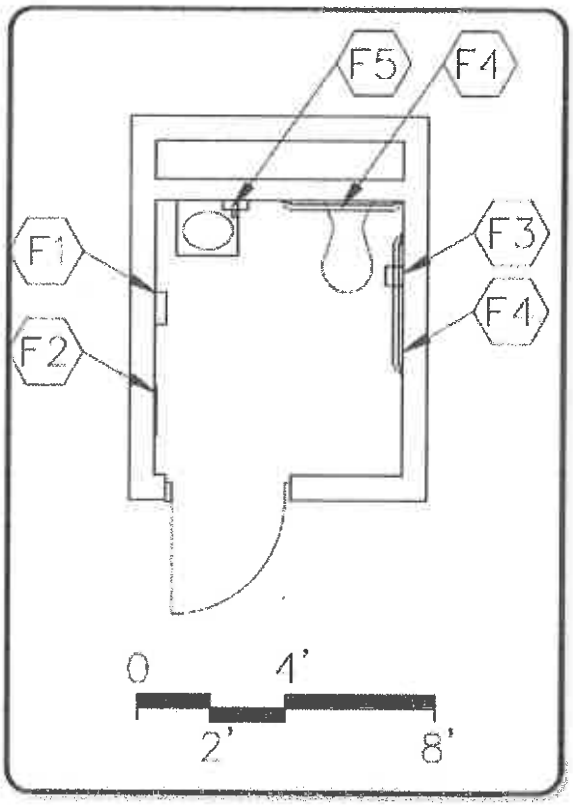
Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

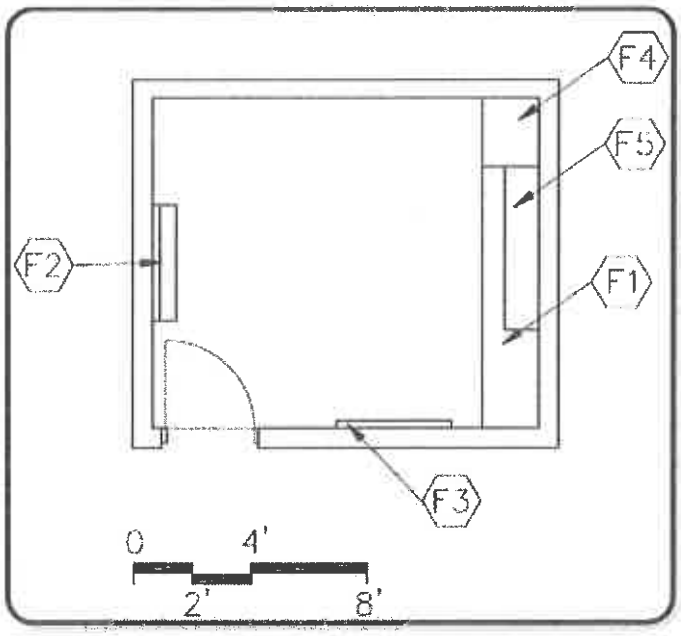
Notes
1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching



Guidance Counselor
E-AD-11

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Guidance Reception Area
E-AD-12

Features - Fixed Equipment

F1 Interior Windows

Features - Loose Furnishings

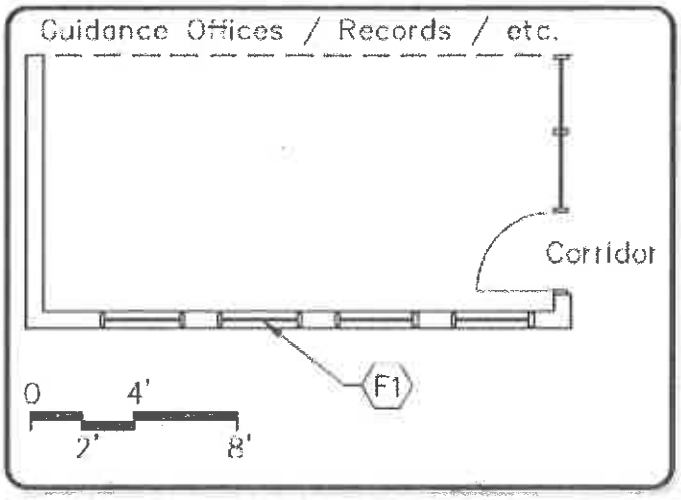
Visitor chairs
End Table
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock



Guidance Records/Storage
E-AD-13

Features - Fixed Equipment

F1 Base and wall cabinets
F2 Tall storage cabinets

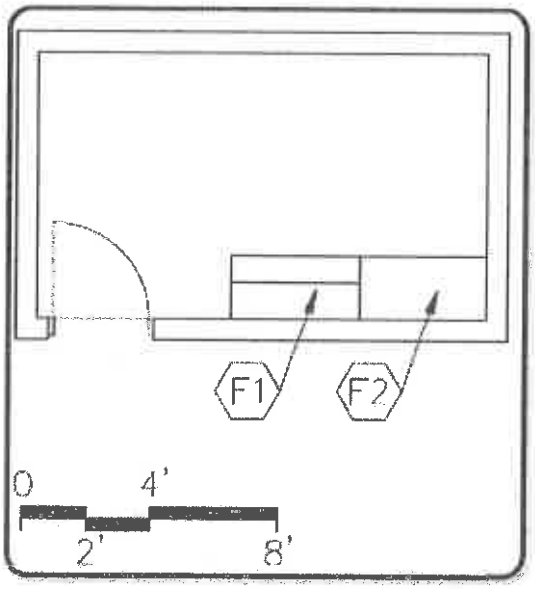
Features - Loose Furnishings

File cabinets

Finishes:

Flooring - Resilient
Base - Resilient base
Ceiling - Rated 2 hour construction
Walls - Painted gypsum wallboard over metal studs; Rated 2 hour construction

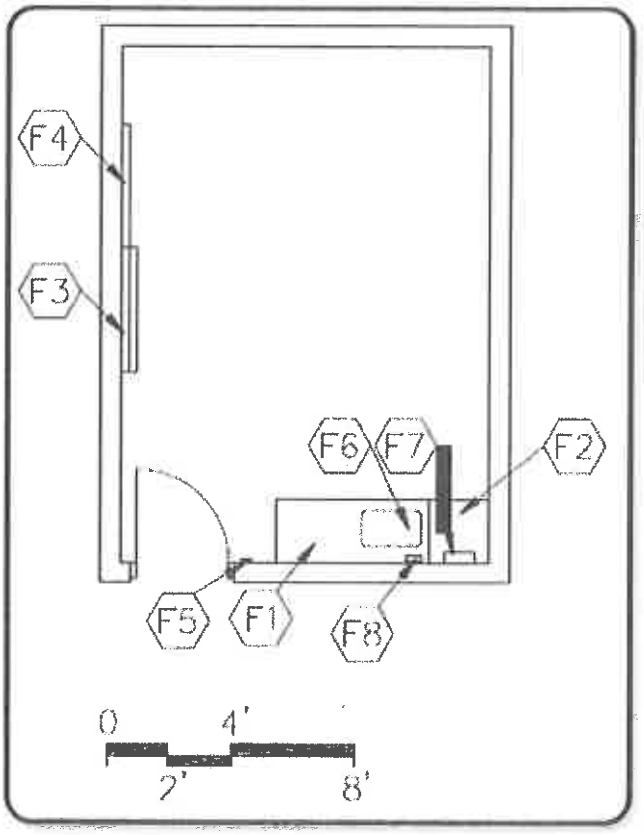
Notes
1. Electrical - duplex receptacles; single-level switching



Parent Center
E-AD-14

Features - Fixed Equipment

F1 Base cabinets
F2 Tall wardrobe
F3 Marker board
F4 Tack board
F5 Pencil sharpener support
F6 Sink base cabinet
F7 Towel dispenser
F8 Soap dispenser



Features - Loose Furnishings

Tables and chairs
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

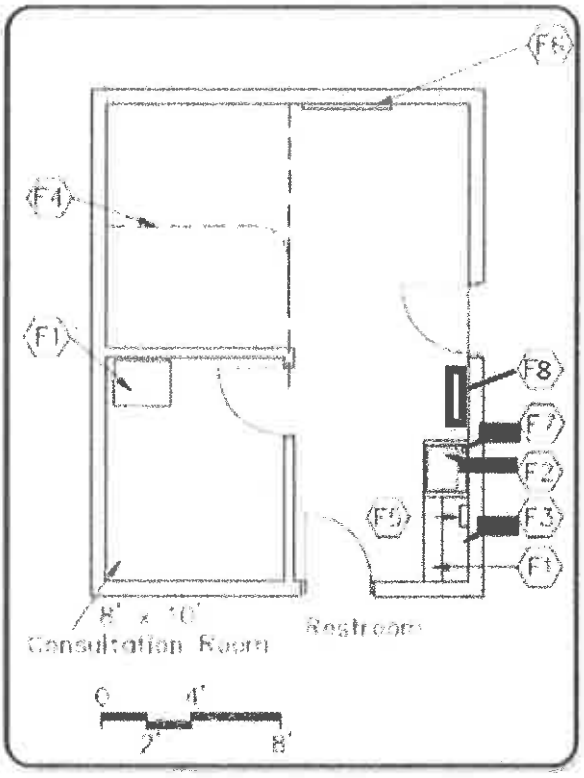
Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes
1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, video display device, voice port & phone; data port; clock
3. Plumbing - sink

Health Clinic
E-AD-15

Features - Fixed Equipment

F1 Base cabinets
F2 Sink base cabinet
F3 Wall cabinets; lockable
F4 Cubicle curtain and track
F5 Towel dispenser
F6 Tack board
F7 Soap Dispenser
F8 Sharps Container



Features - Loose Furnishings

Cots
Refrigerator with ice making capabilities
Desk and chair
Chairs Stool
Wastebasket

Finishes:

Flooring - Seamless sheet vinyl
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

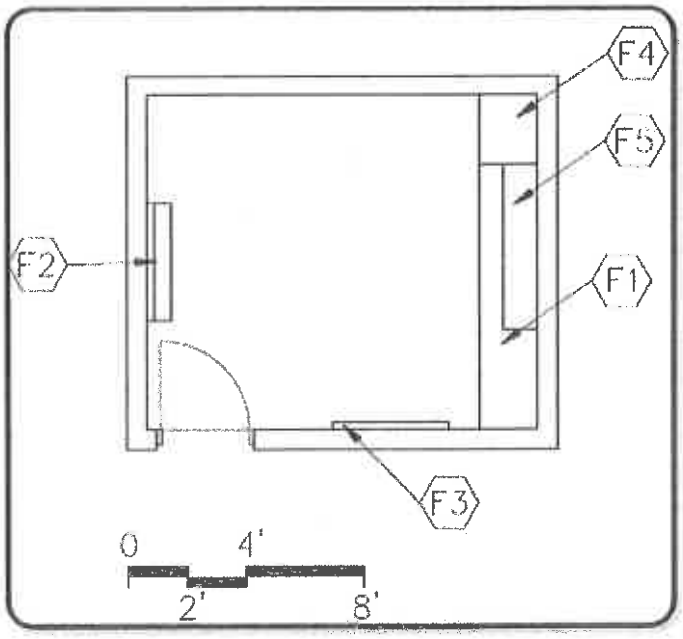
Notes

1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)
2. Electrical - duplex receptacles; single-level switching
3. Technology - voice port & phone; data port; clock
4. Plumbing - sink
5. Restroom must be located adjacent to health clinic with entrance from the health clinic.

Itinerant Personnel Office
E-AD-16

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

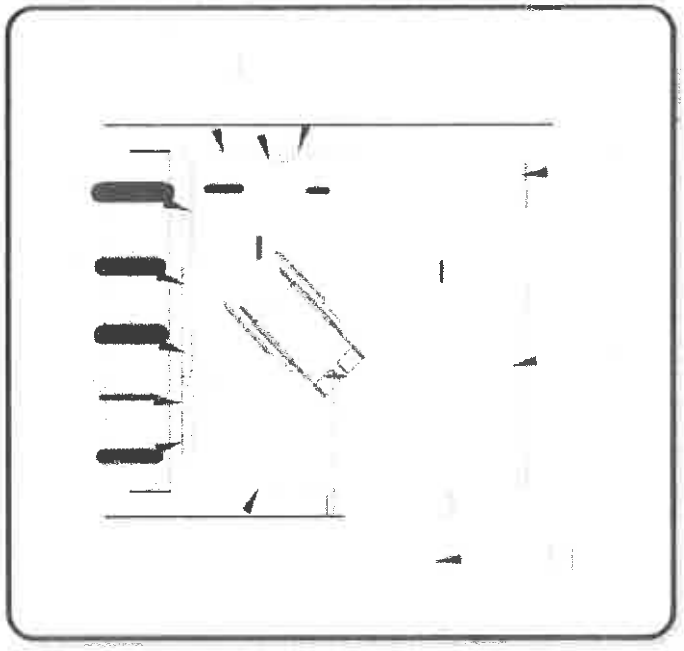
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Family Restroom
E-AD-17

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser
F6 Sanitary napkin dispenser/disposal
F7 Folding utility shelf
F8 Mounted child seat
F9 Adult/child changing station
F10 16" x 24" mirror with shelf
F11 Coat hooks



Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes
1. Plumbing - water closet and lavatory; floor drain
2. Electrical - duplex receptacle; single level switching

Health Center Restr
E/M/H-AD-20

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

Features - Loose Furnishings

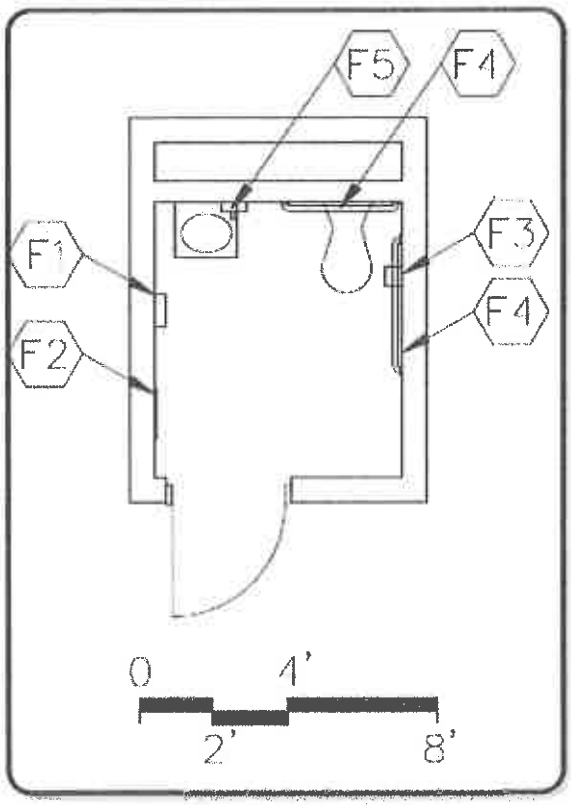
Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

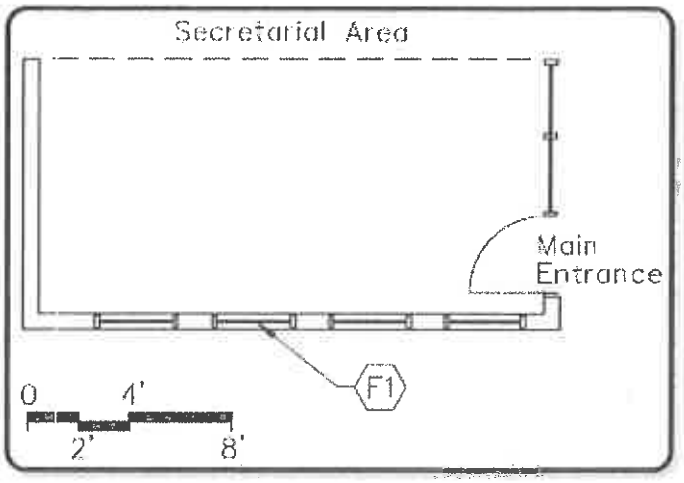
1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching
3. Restroom must be located adjacent to health clinic with entrance from the health clinic.



Reception Area
M-AD-1

Features - Fixed Equipment

F1 Interior windows



Features - Loose Furnishings

Visitor chairs
End table
Wastebasket

Finishes:

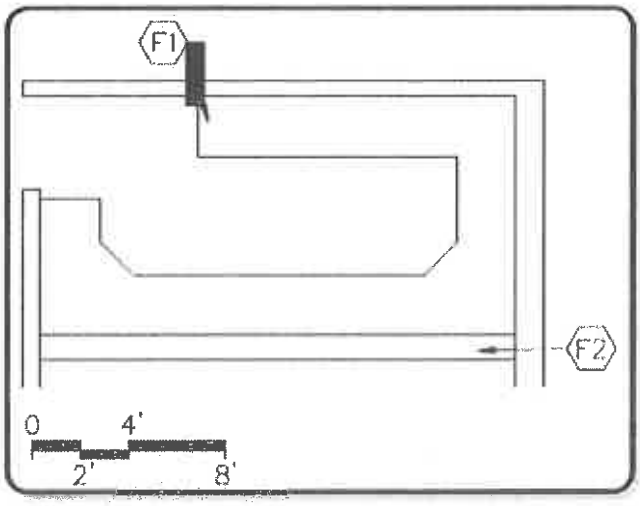
Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes
1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock

Secretarial Area
M-AD-2

Features - Fixed Equipment

F1 Work surface with file drawers
F2 High counter top



Features - Loose Furnishings

Secretarial chair(s)
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

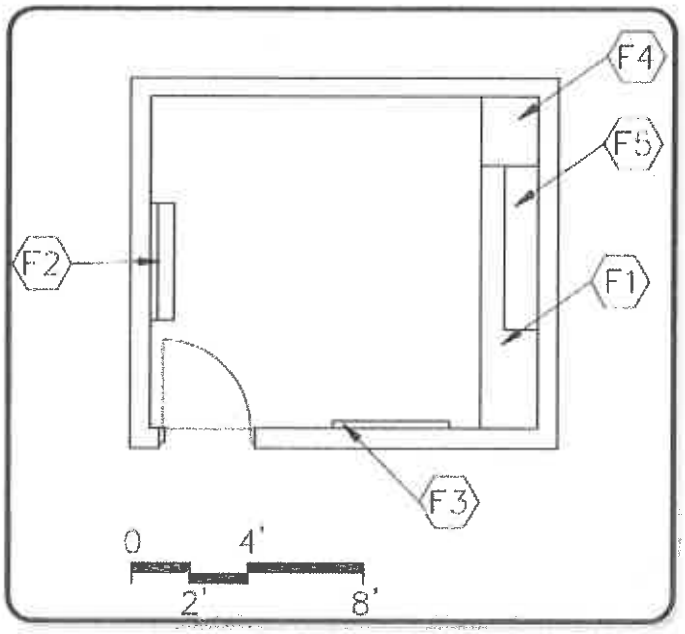
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, voice port & phone at each secretarial station; fax port, data port for printer; clock
3. Miscellaneous - fax machine; printer; computer/typewriter

Principal's Office
M-AD-3

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

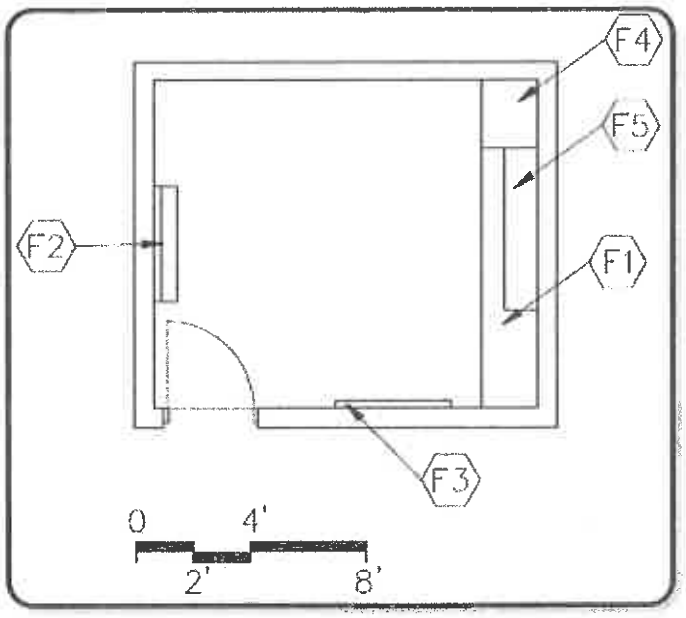
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Assistant Principal's Office
M-AD-4

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

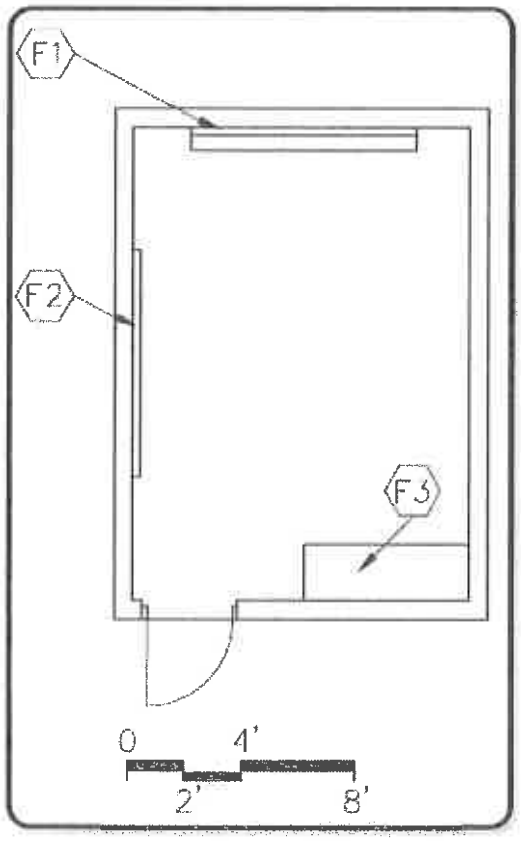
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Conference Room
M-AD-5

Features - Fixed Equipment

F1 Marker board
F2 Tack board
F3 Base cabinets



Features - Loose Furnishings

Conference table
Chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

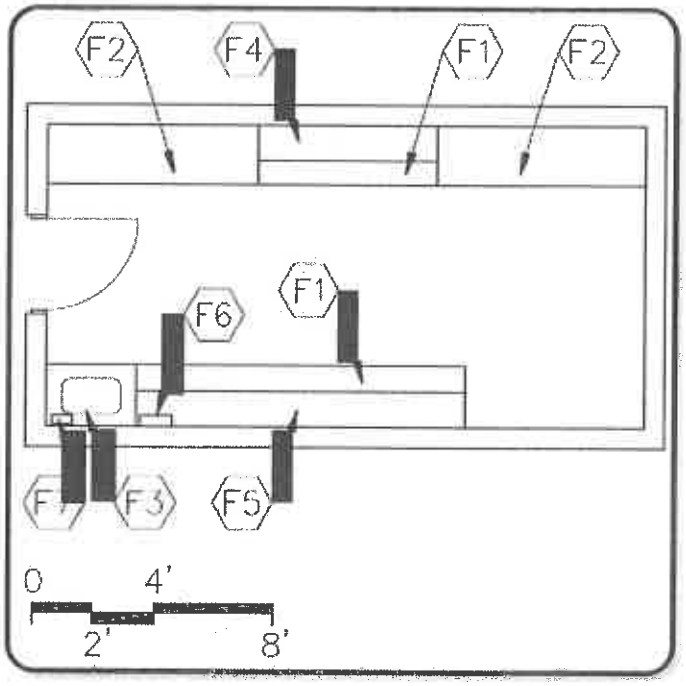
Notes

1. Electrical - duplex receptacles; multi-level switching
2. Technology - data port, voice port & phone; video port and video display device, clock

Mail/Work/Copy Room
M-AD-6

Features - Fixed Equipment

F1 Base cabinets
F2 Tall Storage Cabinet
F3 Sink base cabinet
F4 Mail Cubicles
F5 Wall Cabinets
F6 Towel dispenser
F7 Soap dispenser



Features - Loose Furnishings

Worktable
Wastebasket

Finishes:

Flooring - Resilient
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching; receptacle for copier
2. Technology - voice port & phone; clock
3. Plumbing - sink
4. Miscellaneous - copier

Administrative Storage
M-AD-7

Features - Fixed Equipment

F1 Open metal shelving

Features - Loose Furnishings

File cabinets

Finishes:

Flooring - Resilient

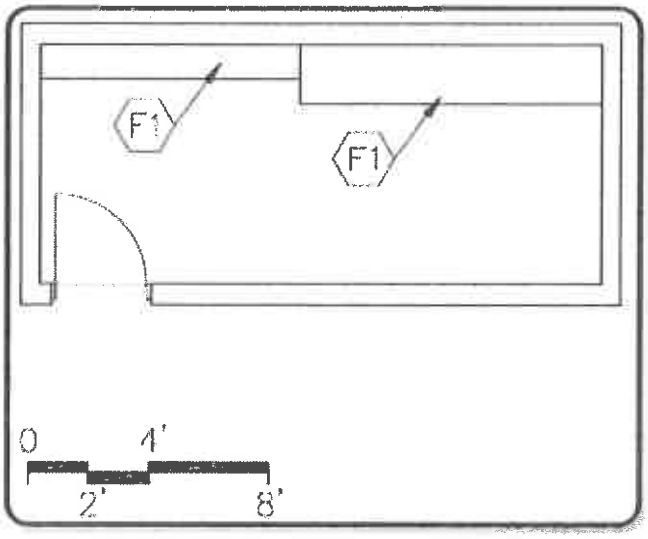
Base - Resilient base

Ceiling - Suspended, acoustical or painted or exposed, painted structure

Walls - Painted concrete masonry units

Notes

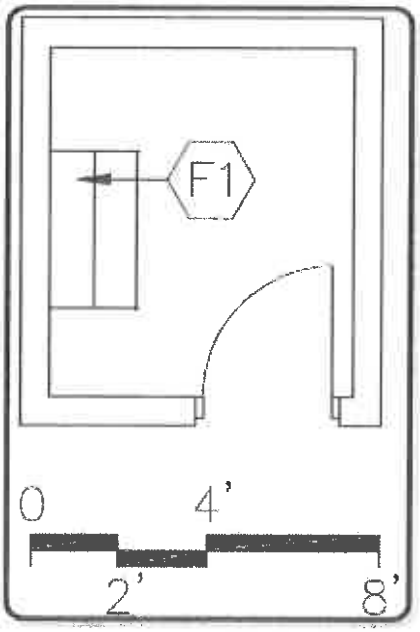
1. Electrical - duplex receptacle; single-level switching



Vaults/Record Storage
M-AD-8

Features - Fixed Equipment

F1 Open Metal Shelving



Features - Loose Furnishings

File cabinet
Safe

Finishes:

Flooring - Sealed concrete
Base - Resilient base
Ceiling - Rated 2 hour construction
Walls - Painted concrete masonry units;
Rated 2 hour construction

Notes
1. Electrical - duplex receptacles; single-level switching

In School Suspension
M-AD-9

Features - Fixed Equipment

F1 Base cabinets
F2 Marker board
F3 Tack board
F4 Pencil sharpener support

Features - Loose Furnishings

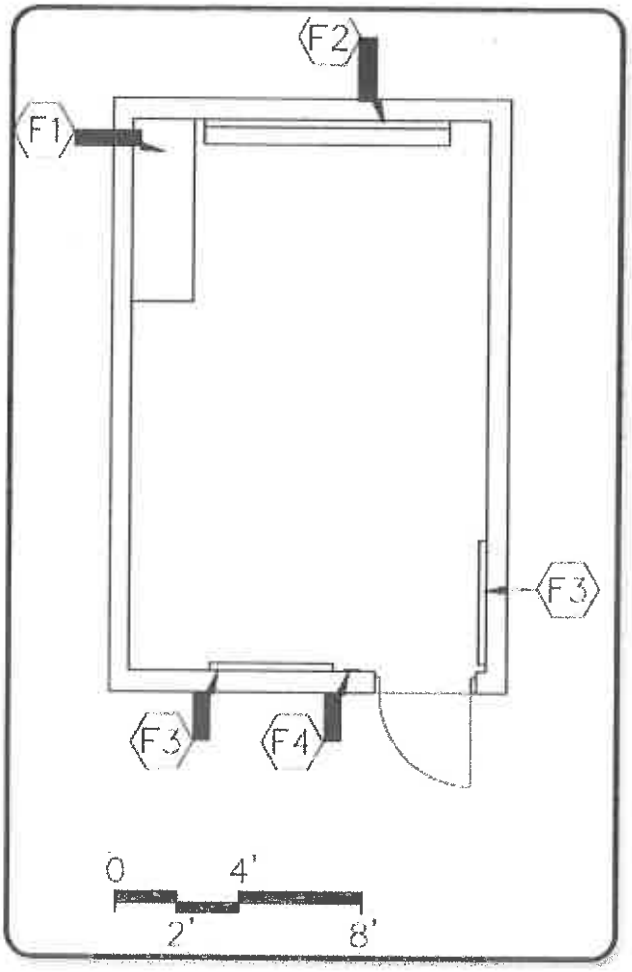
Student carrels and/or desks
Student chairs
Teacher desk and chair
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, data port, voice port & phone; data ports for students; clock



Restroom
M-AD-10

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

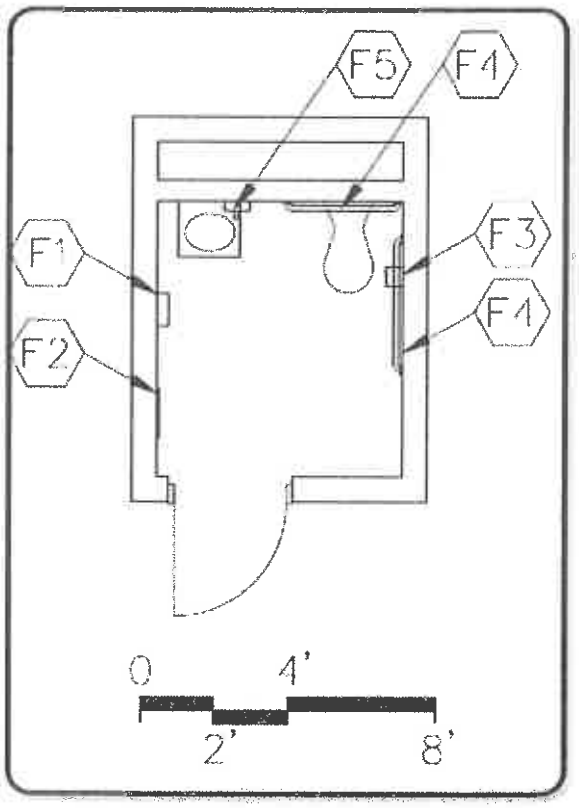
Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes
1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching



Guidance Counselor's Office
M-AD-11

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets

Features - Loose Furnishings

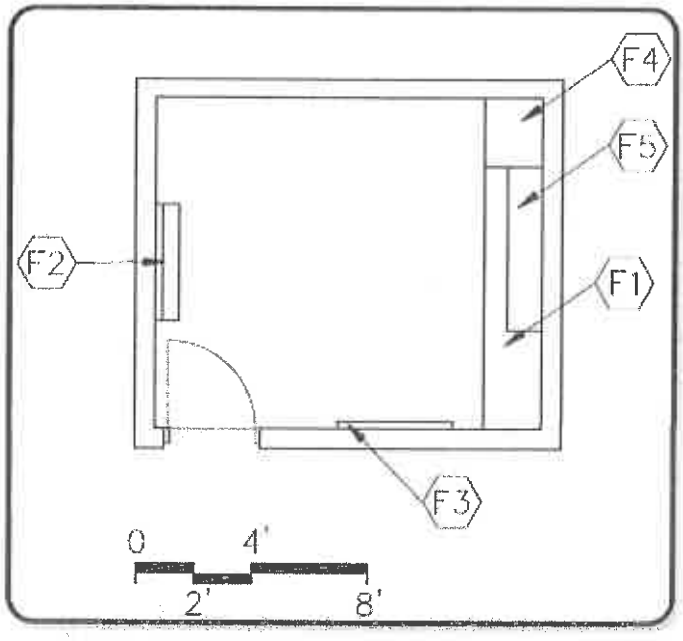
Desk and chair
Computer desk return
Visitor chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

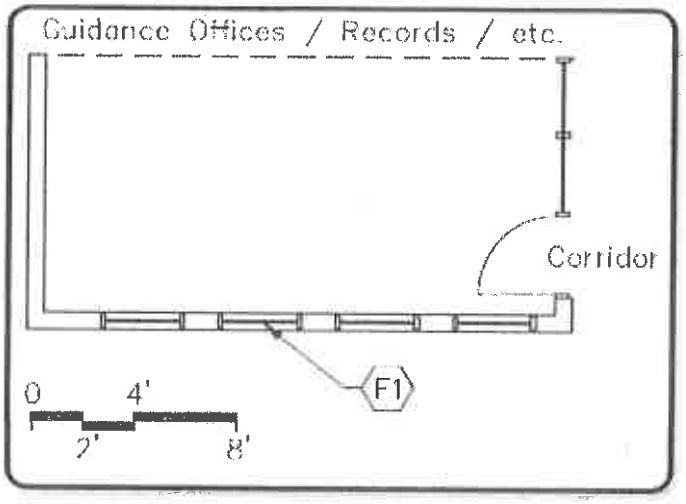


Guidance Reception Area
M-AD-12

Features - Fixed Equipment
F1 Interior Windows

Features - Loose Furnishings
Visitor chairs
End Table
Wastebasket

Finishes:
Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs



Notes
1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock

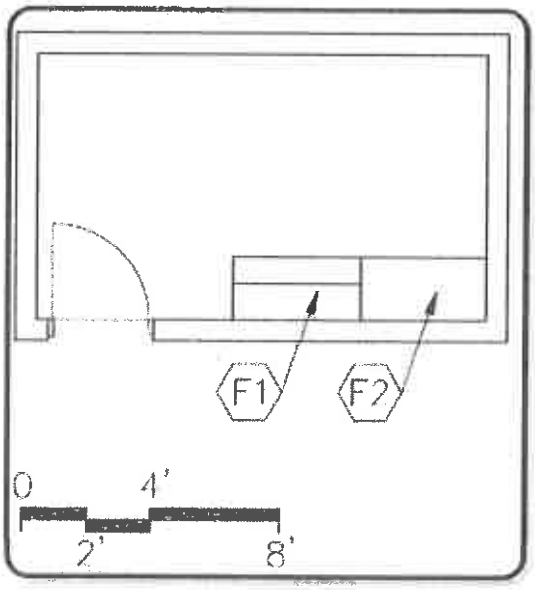
Guidance Records/Storage
M-AD-13

Features - Fixed Equipment
F1 Base and wall cabinets
F2 Tall storage cabinets

Features - Loose Furnishings
File cabinets

Finishes:
Flooring - Resilient
Base - Resilient base
Ceiling - Rated 2 hour construction
Walls - Painted gypsum wallboard over metal studs;
Rated 2 hour construction

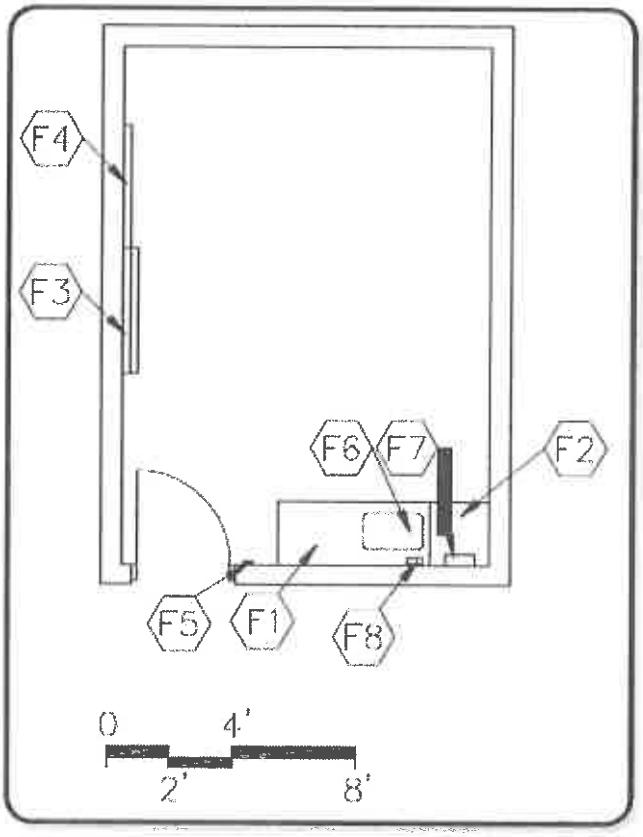
Notes
1. Electrical - duplex receptacles; single-level switching



Parent Center
M-AD-14

Features - Fixed Equipment

F1 Base cabinets
F2 Tall wardrobe
F3 Marker board
F4 Tack board
F5 Pencil sharpener support
F6 Sink base cabinet
F7 Towel dispenser
F8 Soap dispenser



Features - Loose Furnishings

Tables and chairs
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

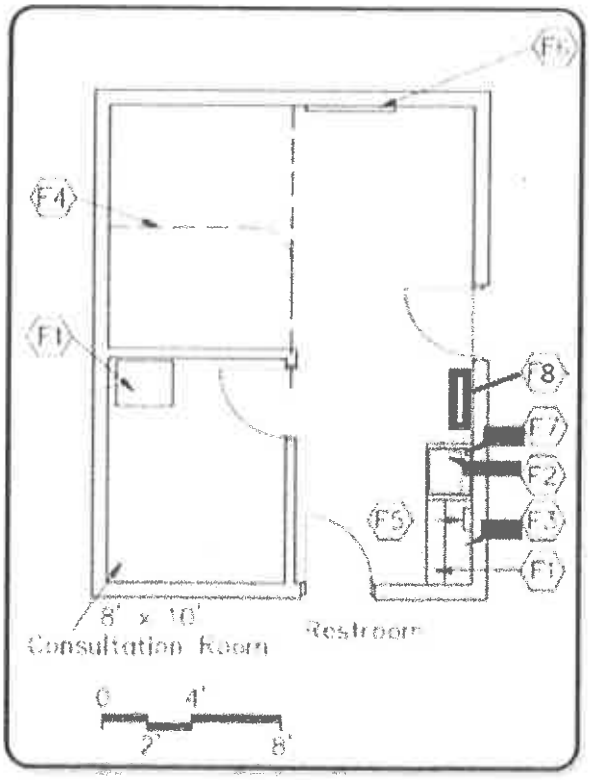
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, video display device, voice port & phone; data port; clock
3. Plumbing - sink

Health Clinic
M-AD-15

Features - Fixed Equipment

F1 Base cabinets
F2 Sink base cabinet
F3 Wall cabinets; lockable
F4 Cubicle curtain and track
F5 Towel dispenser
F6 Tack board
F7 Soap Dispenser
F8 Sharps Container



Features - Loose Furnishings

Cots
Refrigerator with ice making capabilities
Desk and chair
Chairs Stool
Wastebasket

Finishes:

Flooring - Seamless sheet vinyl
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

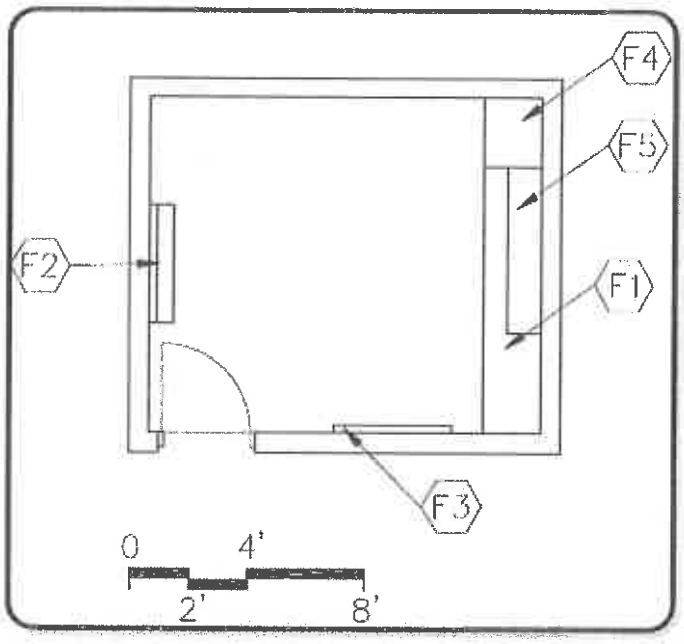
Notes

1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)
2. Electrical - duplex receptacles; single-level switching
3. Technology - voice port & phone; data port; clock
4. Plumbing - sink
5. Restroom must be located adjacent to health clinic with entrance from the health clinic.

Itinerant Personnel Office
M-AD-16

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

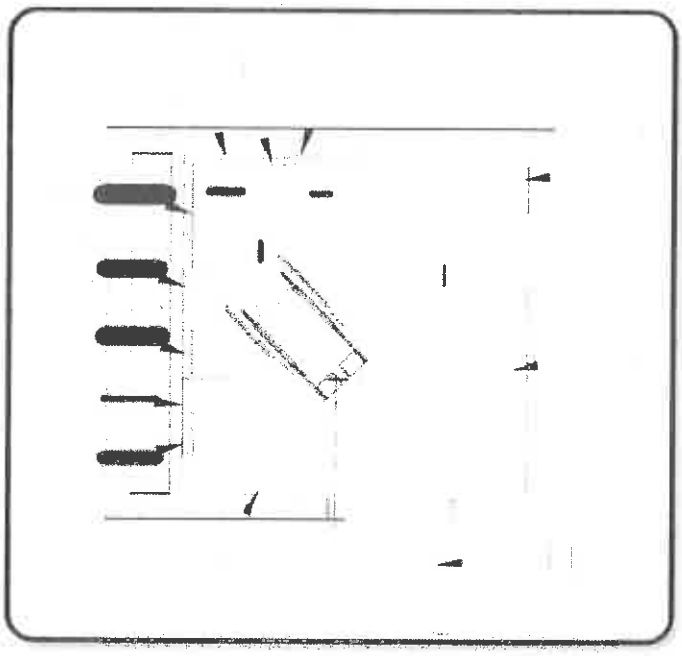
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Family Restroom
M-AD-17

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser
F6 Sanitary napkin dispenser/disposal
F7 Folding utility shelf
F8 Mounted child seat
F9 Adult/child changing station
F10 16" x 24" mirror with shelf
F11 Coat hooks



Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

1. Plumbing - water closet and lavatory; floor drain
2. Electrical - duplex receptacle; single level switching

Health Center Restroom
E/M/H-AD-20

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

Features - Loose Furnishings

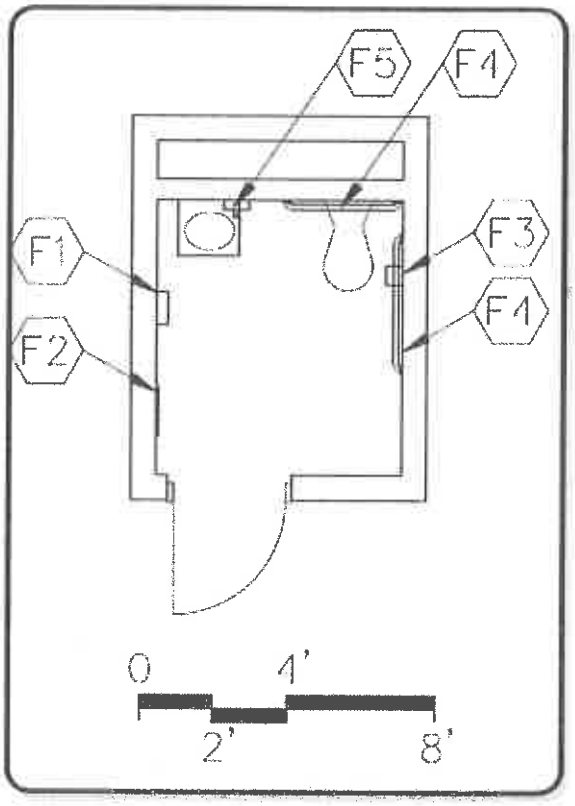
Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

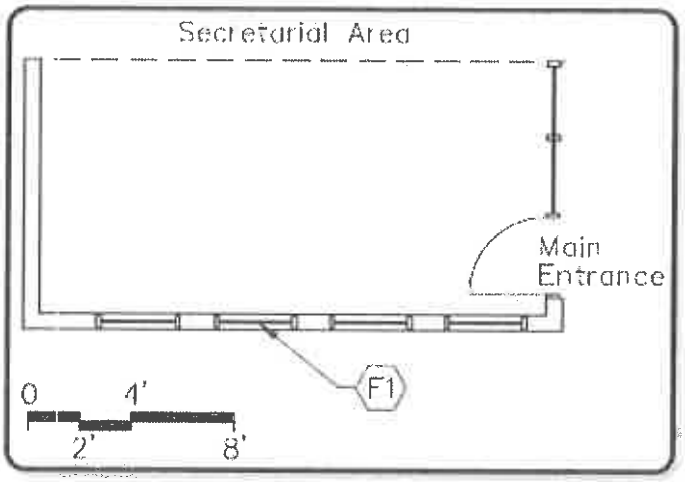
1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching
3. Restroom must be located adjacent to health clinic with entrance from the health clinic.



Reception Area
H-AD-1

Features - Fixed Equipment

F1 Interior windows



Features - Loose Furnishings

Visitor chairs
End table
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

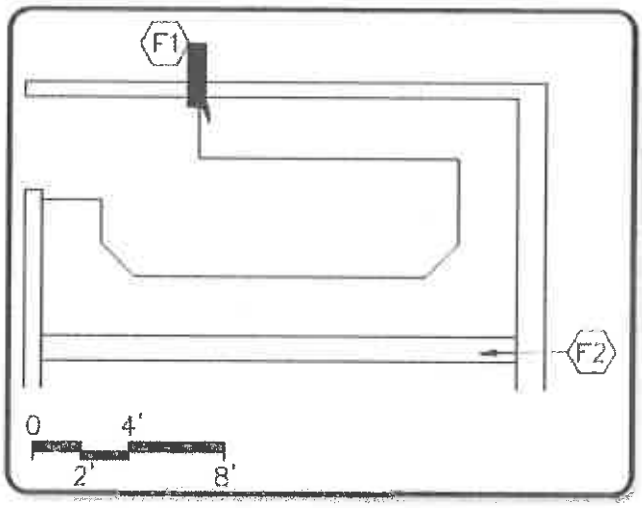
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock

Secretarial Area
H-AD-2

Features - Fixed Equipment

F1 Work surface with file drawers
F2 High counter top



Features – Loose Furnishings

Secretarial chair(s)
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

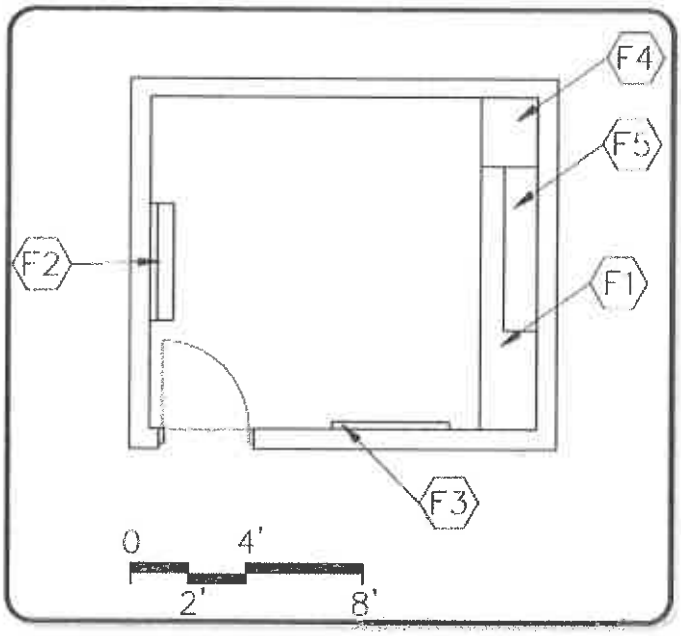
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, voice port & phone at each secretarial station; fax port, data port for printer; clock
3. Miscellaneous - fax machine; printer; computer/typewriter

Principal's Office
H-AD-3

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

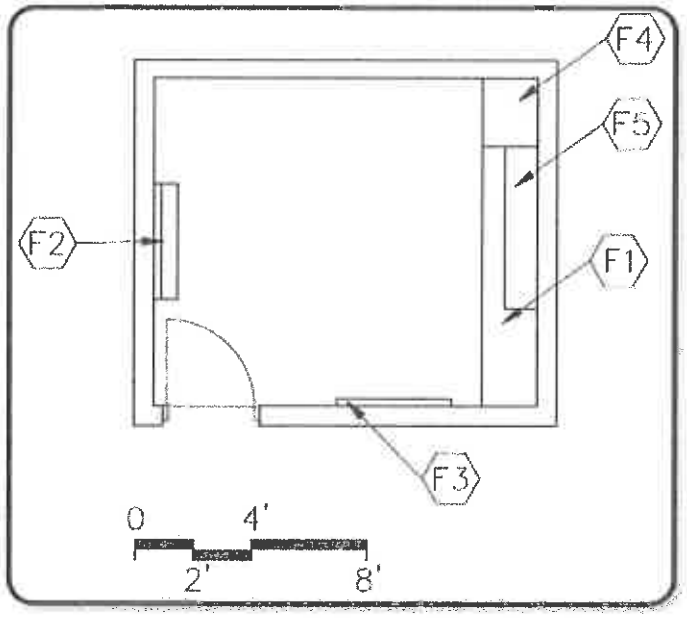
Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Assistant Principal's Office
H-AD-4

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Conference Room
H-AD-5

Features - Fixed Equipment

F1 Marker board
F2 Tack board
F3 Base cabinets

Features - Loose Furnishings

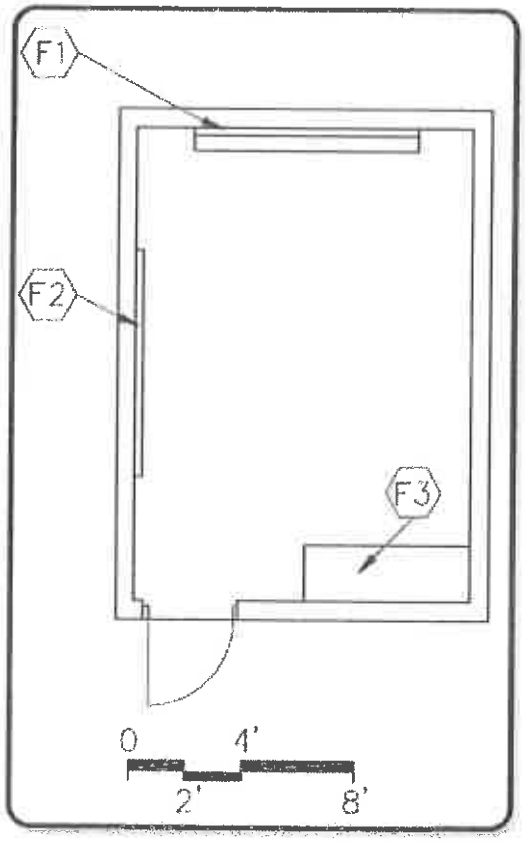
Conference table
Chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

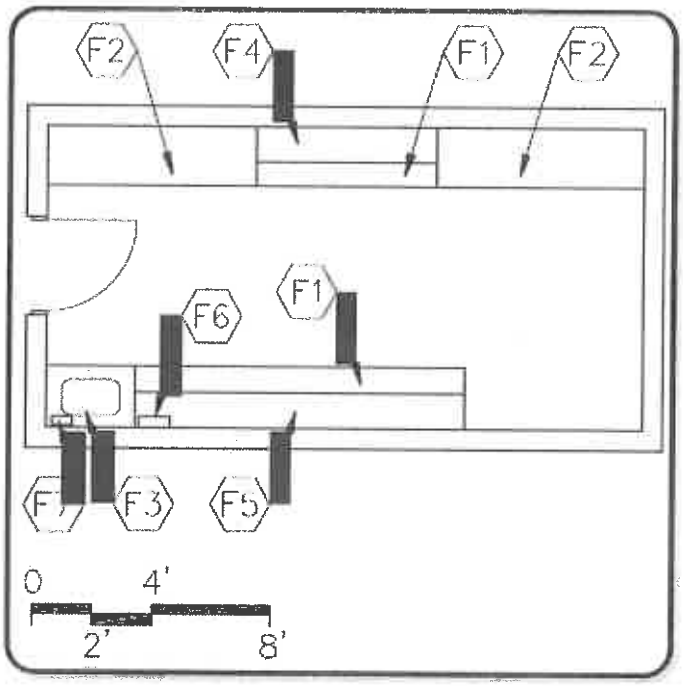
1. Electrical - duplex receptacles; multi-level switching
2. Technology - data port, voice port & phone; video port and video display device, clock



Mail/Work/Copy Room
H-AD-6

Features - Fixed Equipment

F1 Base cabinets
F2 Tall Storage Cabinet
F3 Sink base cabinet
F4 Mail Cubicle
F5 Wall Cabinets
F6 Towel dispenser
F7 Soap dispenser



Features - Loose Furnishings

Worktable
Wastebasket

Finishes:

Flooring - Resilient
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching; receptacle for copier
2. Technology - voice port & phone; clock
3. Plumbing - sink
4. Miscellaneous - copier

Administrative Storage
H-AD-7

Features - Fixed Equipment

F1 Open metal shelving

Features - Loose Furnishings

File cabinets

Finishes:

Flooring - Resilient

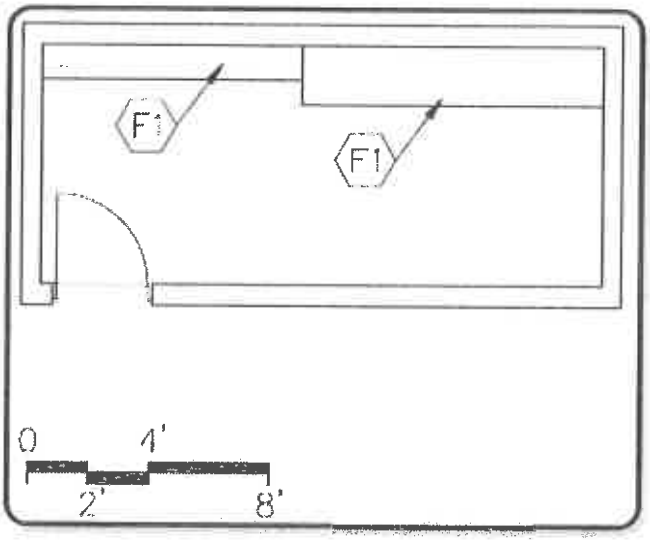
Base - Resilient base

Ceiling - Suspended, acoustical or painted or exposed, painted structure

Walls - Painted concrete masonry units

Notes

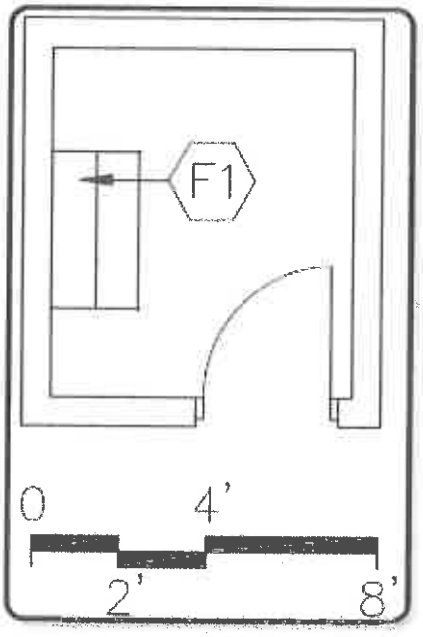
1. Electrical - duplex receptacle; single-level switching



Vaults/Record Storage
H-AD-8

Features - Fixed Equipment

F1 Open Metal Shelving



Features - Loose Furnishings

File cabinet
Safe

Finishes:

Flooring - Sealed concrete
Base - Resilient base
Ceiling - Rated 2 hour construction
Walls - Painted concrete masonry units;
Rated 2 hour construction

Notes
1. Electrical - duplex receptacles; single-level switching

In School Suspension
H-AD-9

Features - Fixed Equipment

F1 Base cabinets
F2 Marker board
F3 Tack board
F4 Pencil sharpener support

Features - Loose Furnishings

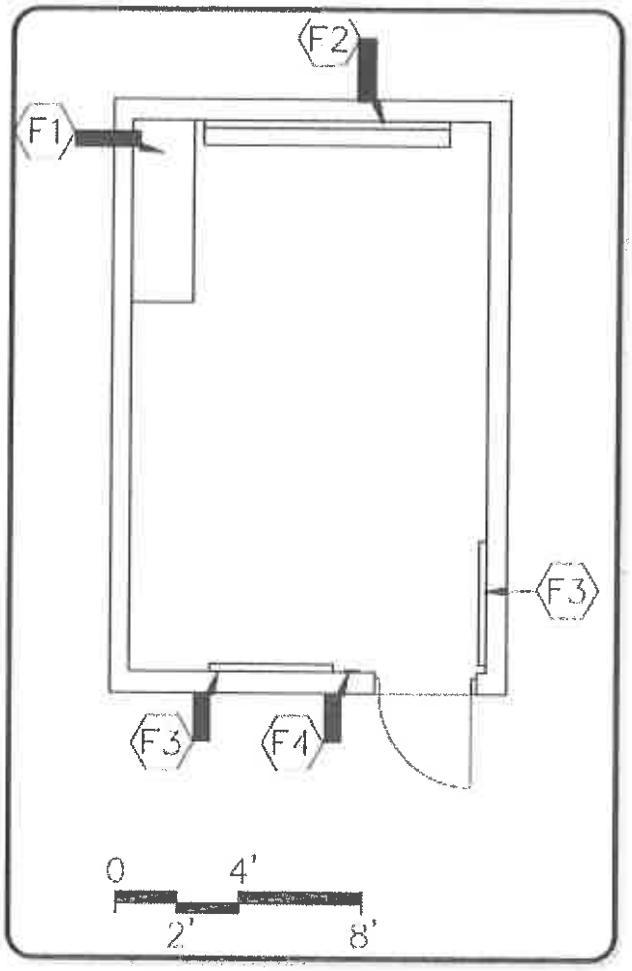
Student carrels and/or desks
Student chairs
Teacher desk and chair
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, data port, voice port & phone; data ports for students; clock



Restroom
H-AD-10

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

Features - Loose Furnishings

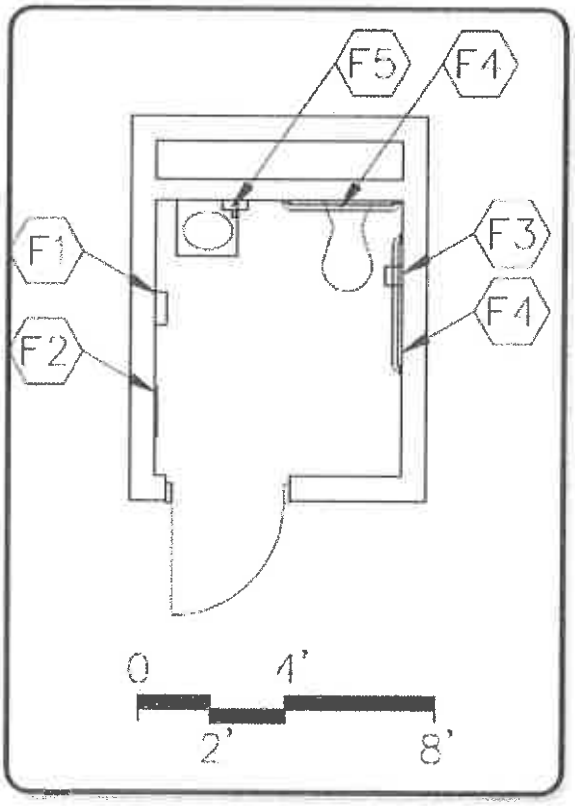
Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical

Walls - Painted concrete masonry units

Notes
1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching



Guidance Counselor's Office
H-AD-11

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets

Features - Loose Furnishings

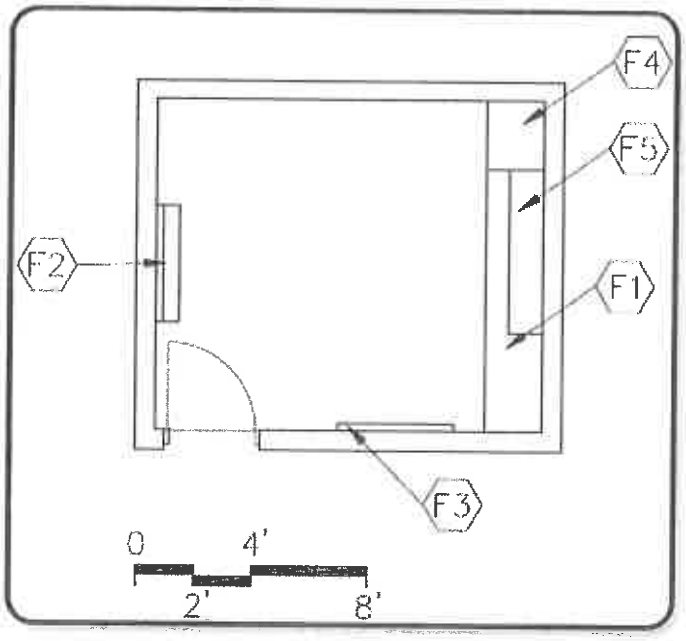
Desk and chair
Computer desk return
Visitor chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock



Guidance Records/Storage
H-AD-12

Features - Fixed Equipment

F1 Base and wall cabinets

F2 Tall storage cabinets

Features - Loose Furnishings

File cabinets

Finishes:

Flooring - Resilient

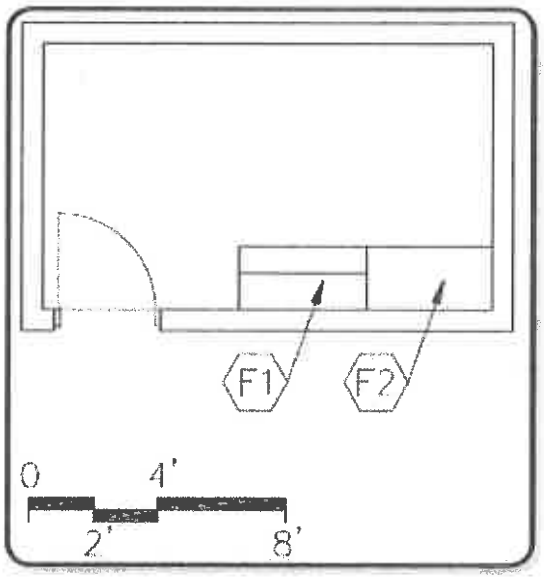
Base - Resilient base

Ceiling - Rated 2 hour construction

Walls - Painted gypsum wallboard over metal studs; Rated 2 hour construction

Notes

1. Electrical - duplex receptacles; single-level switching



Guidance Conference/ Group Procedures Room H-AD-13

Features - Fixed Equipment

F1 Marker board
F2 Tack board
F3 Base cabinets

Features - Loose Furnishings

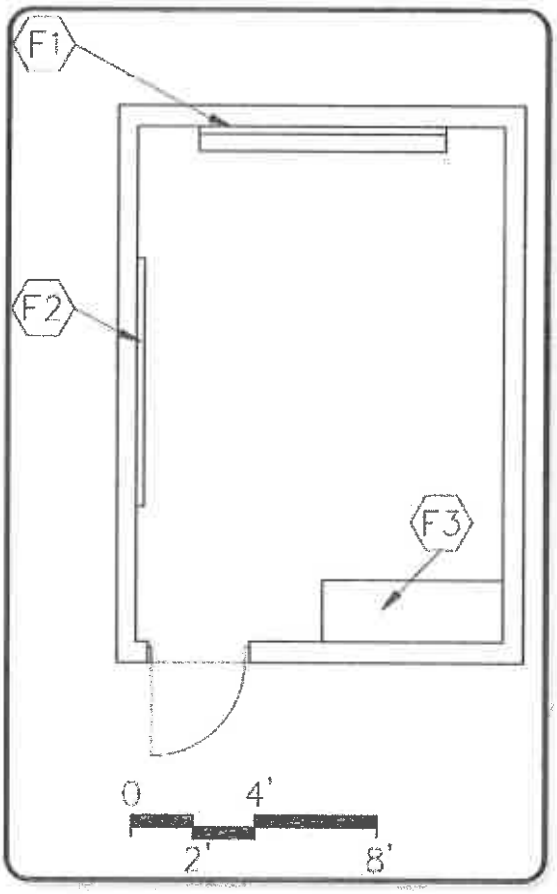
Conference table
Chairs
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs;

Notes

1. Electrical - duplex receptacles; multi-level switching
2. Technology - video port and video display device, voice port & phone; data port; clock



Guidance Reception and Display Area
H-AD-14

Features - Fixed Equipment

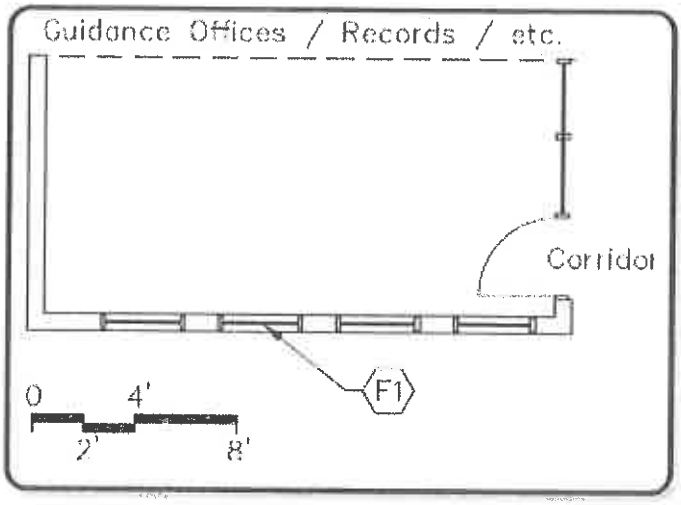
F1 Interior Windows

Features - Loose Furnishings

Visitor chairs
End Table
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs



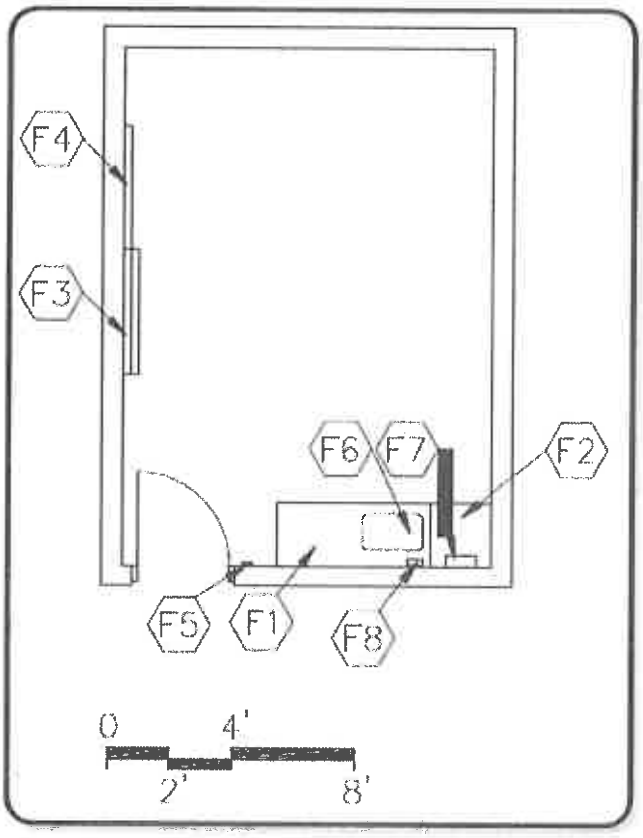
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, voice port & phone; clock

Parent Center
H-AD-15

Features - Fixed Equipment

F1 Base cabinets
F2 Tall wardrobe
F3 Marker board
F4 Tack board
F5 Pencil sharpener support
F6 Sink base cabinet
F7 Towel dispenser
F8 Soap dispenser



Features - Loose Furnishings

Tables and chairs
Computer workstation furniture
Wastebasket
Pencil sharpener

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

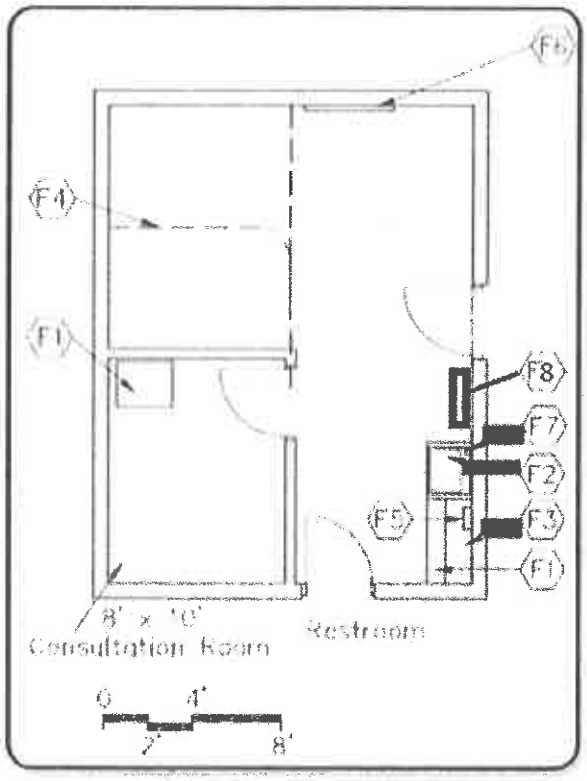
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - video port, video display device, voice port & phone; data port; clock
3. Plumbing - sink

Health Clinic
H-AD-16

Features - Fixed Equipment

F1 Base cabinets
F2 Sink base cabinet
F3 Wall cabinets; lockable
F4 Cubicle curtain and track
F5 Towel dispenser
F6 Tack board
F7 Soap Dispenser
F8 Sharps Container



Features - Loose Furnishings

Cots
Refrigerator with ice making capabilities
Desk and chair
Chairs Stool
Wastebasket

Finishes:

Flooring - Seamless sheet vinyl
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

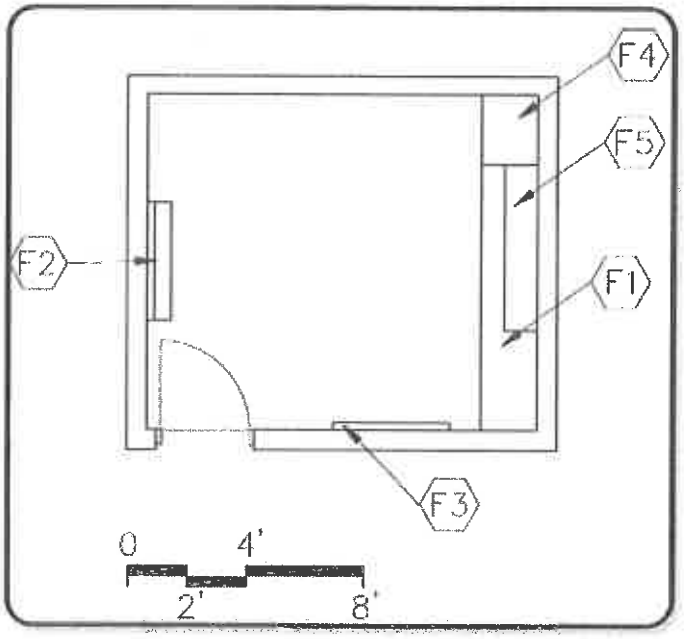
Notes

1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)
2. Electrical - duplex receptacles; single-level switching
3. Technology - voice port & phone; data port; clock
4. Plumbing - sink
5. Restroom must be located adjacent to health clinic with entrance from the health clinic.

Itinerant Personnel Office
H-AD-17

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted gypsum wallboard over metal studs

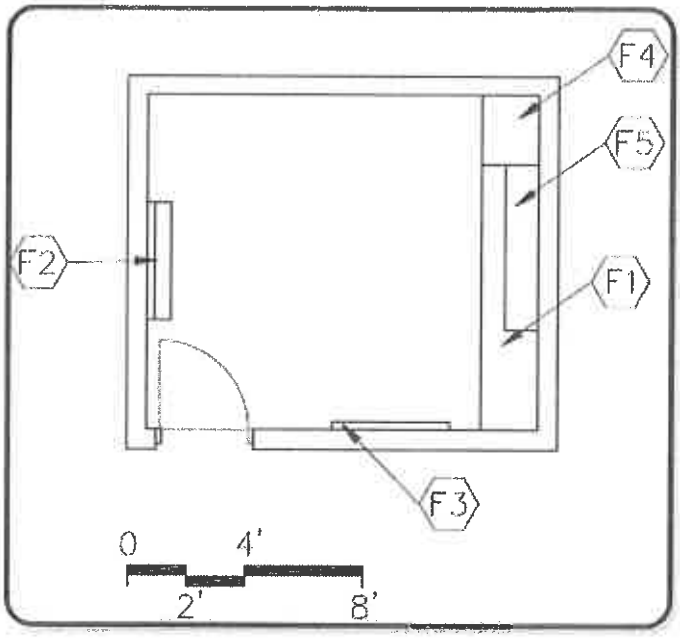
Notes

1. Electrical - duplex receptacles; single-level switching
2. Technology - data port, video port, voice port & phone; clock

Career Center
H-AD-18

Features - Fixed Equipment

F1 Display cabinets
F2 Base cabinets
F3 Marker board
F4 Tack board
F5 Workstation



Features - Loose Furnishings

Work tables and chairs
Workstations
Reading chairs
Small table
Wastebasket

Finishes:

Flooring - Carpet
Base - Resilient base
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

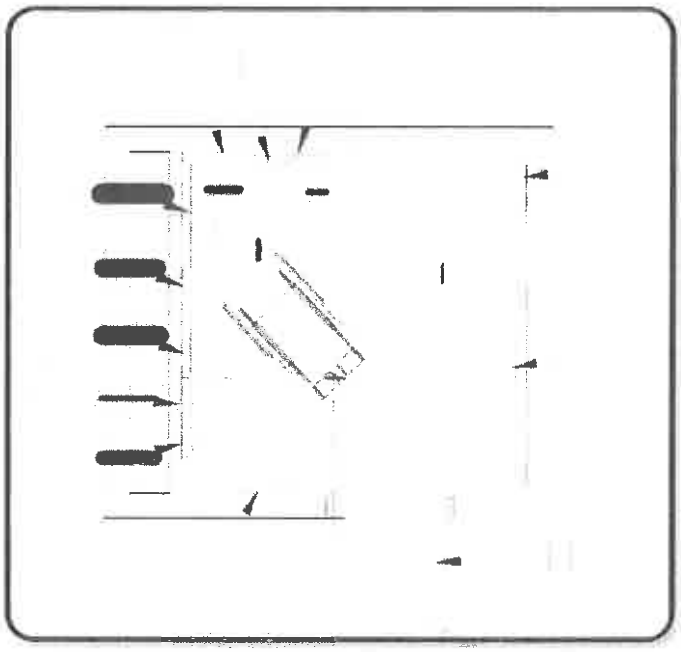
Notes

1. Electrical - duplex receptacles; multi-level switching
2. Technology - video port and video display device, voice port, clock; data ports at workstations

Family Restroom
H-AD-19

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser
F6 Sanitary napkin dispenser/disposal
F7 Folding utility shelf
F8 Mounted child seat
F9 Adult/child changing station
F10 16" x 24" mirror with shelf
F11 Coat hooks



Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes
1. Plumbing - water closet and lavatory; floor drain
2. Electrical - duplex receptacle; single level switching

Health Center Restroom
E/M/H-AD-20

Features - Fixed Equipment

F1 Towel dispenser
F2 24" x 60" mirror
F3 Toilet tissue holder
F4 36" and 42" grab bar
F5 Soap dispenser

Features - Loose Furnishings

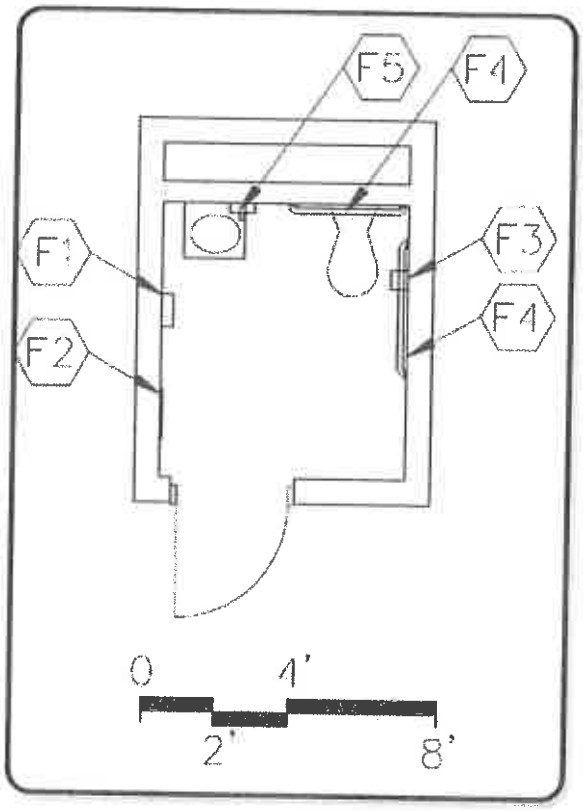
Wastebasket

Finishes:

Flooring - Resilient
Optional - Ceramic mosaic tile, porcelain tile, or terrazzo
Base - Resilient base (optional: CMT, PT, or TER)
Ceiling - Suspended, acoustical
Walls - Painted concrete masonry units

Notes

1. Plumbing - water closet and lavatory
2. Electrical - duplex receptacle; single level switching
3. Restroom must be located adjacent to health clinic with entrance from the health clinic.

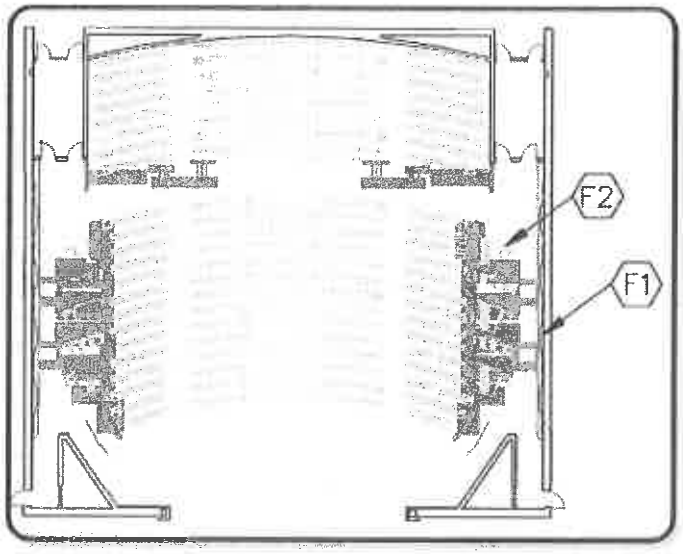


Auditorium
H-PA-1

Features - Fixed Equipment

F1 Acoustical wall treatment

F2 Handicap wheelchair locations;
Lighting catwalk



Features - Loose Furnishings

Fixed auditorium seating

Finishes:

Flooring - Carpet and sealed concrete

Base - Resilient base

Ceiling - Painted, exposed structure; sound baffles

Walls - Brick; painted concrete masonry units; wood trim

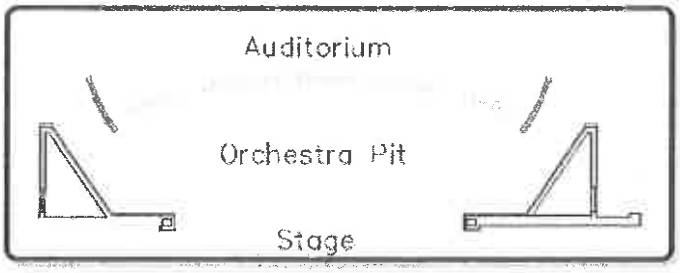
Notes

1. Electrical: Special theatrical sound and lighting systems

Orchestra Pit
H-PA-2

Features - Fixed Equipment

Cover



Features - Loose Furnishings

Music stands
Music chairs
Conductor podium

Finishes:

Flooring - Resilient

Base - Resilient base

Ceiling - Painted, exposed structure

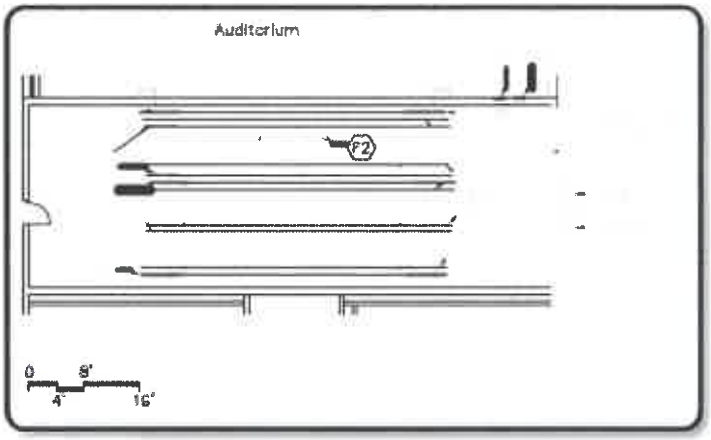
Walls - Painted concrete masonry units

Notes
1. Electrical - special lighting; adequate receptacles for instruments and lighting
2. Technology - each video, voice, data port, audio output

Stage Area
H-PA-3

Features - Fixed Equipment

F1 Front curtain, track, and valance or grand border
F2 Projection screen
F3 Rear curtain with track
F4 Leg curtains, tracks, and/or pivots
F5 Sound control console receptacle
F6 Lighting control console receptacle
F7 Light pipe
F8 Border curtains
F9 Mid-stage traveler



Features - Loose Furnishings

N/A

Finishes:

Flooring - Stage: Softwood
Thrust: Hardwood

Base - Ventilated, resilient base

Ceiling - Painted exposed structure

Walls - Painted concrete masonry units

Notes

1. Electrical: Stage dimming system; theatrical lighting; duplex receptacles; telecommunications grounding
2. Technology: video ports and data ports - 1 on each side of proscenium opening
3. ~~Stage: A permanent structure fixed within a building utilized for entertainment or presentations, which includes overhead hanging curtains, drops, scenery or stage effects, in addition to theatrical lighting and sound systems. Portable, retractable, folding, and telescoping platforms are not suitable substitutes.~~

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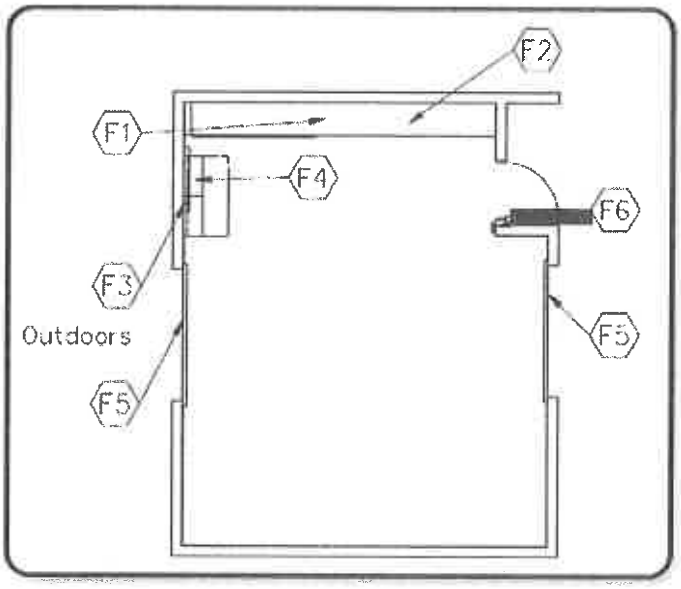
Scene Shop
H-PA-4

Features - Fixed Equipment

F1 Tall, lockable storage cabinets
F2 Tall storage cabinets
F3 Tack board
F4 Work bench
F5 Overhead door
F6 Pencil sharpener support



Features - Loose Furnishings

Work tables
Work bench stools
Waste receptacle
Pencil sharpener

Finishes:

Flooring - Sealed concrete

Base - Restroom - Resilient base

Ceiling - Painted exposed structure

Walls - Painted concrete masonry units

Notes
1. Electrical: duplex receptacles; single-level switching
2. Technology: each video, voice, and data ports; clock

Scene Shop Storage
H-PA-5

Features - Fixed Equipment

F1 Tall, lockable storage cabinets
F2 Tall storage cabinets
F3 Base cabinets
F4 Overhead door

Features - Loose Furnishings

Waste receptacle

Finishes:

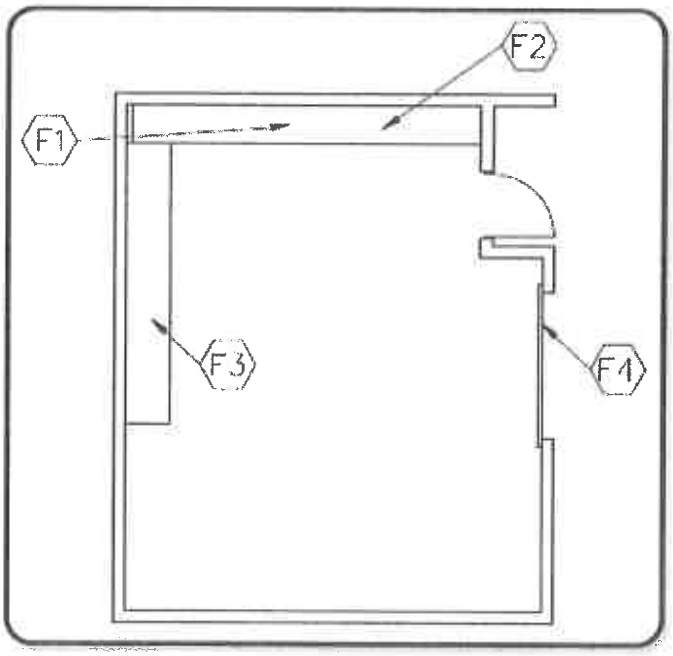
Flooring - Sealed concrete

Base - Restroom - Resilient base

Ceiling - Painted exposed structure

Walls - Painted concrete masonry units

Notes
1. Electrical: duplex receptacles; single-level switching



Make Up/Dressing Room
H-PA-6

Features - Fixed Equipment

F1 108" high costume storage cabinets
F2 Towel dispenser
F3 Soap dispenser
F4 Sink base cabinet
F5 Work surface
F6 48" high make-up mirrors - full length of work surface
F7 20" wide x 60" high dressing mirrors (2 minimum)
F8 Tack board

Features - Loose Furnishings

Chairs
Bench
Mobile costume rack
Wastebasket

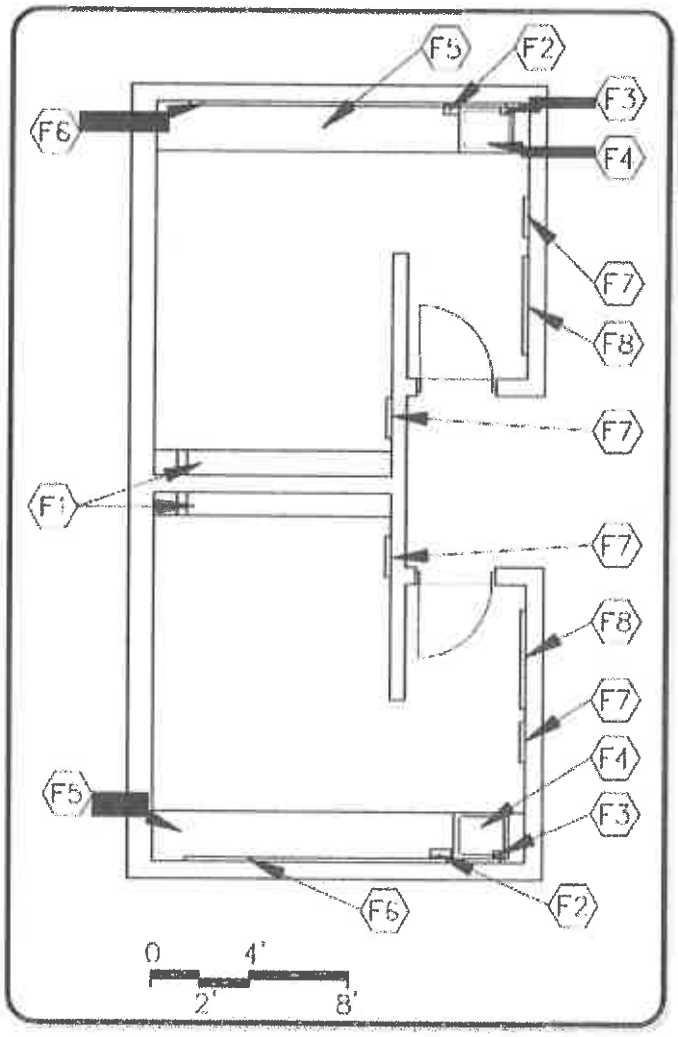
Finishes:

Flooring - Resilient

Base - Resilient base

Ceiling - Suspended, acoustical

Walls - Painted concrete masonry units



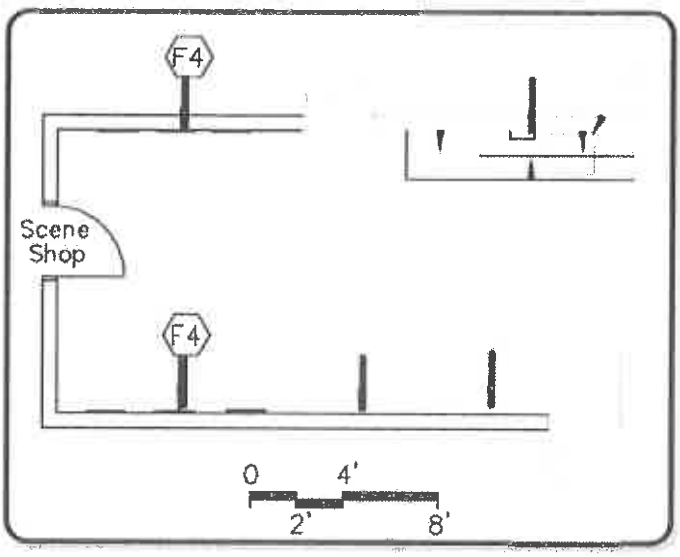
Notes

1. Electrical - duplex receptacles; duplex receptacle at each make-up station under mirror; incandescent lighting over make-up mirrors; fluorescent lighting overhead; single-level switching; telecommunications grounding
2. Technology - clock
3. Plumbing - sink; plumbing connections

Green Room
H-PA-7

Features - Fixed Equipment

F1 Sink base cabinet
F2 Base cabinets
F3 Tall storage cabinets
F4 Mirrors
F5 Marker board
F6 Tack board
F7 Towel dispenser
F8 Soap dispenser



Features - Loose Furnishings

Lounge furniture
Chairs/stools
Wastebaskets

Finishes:

Flooring - Carpet

Base - Resilient base

Ceiling - Suspended, acoustical

Walls - Painted concrete masonry units

Notes
1. Electrical - duplex receptacles; multi-level switching
2. Plumbing -sink; drinking fountain
3. Technology - video ports and monitors; voice port and phone

Costume Storage
H-PA-8

Features - Fixed Equipment

F1 High costume storage cabinets
F2 Mirror

Features - Loose Furnishings

N/A

Finishes:

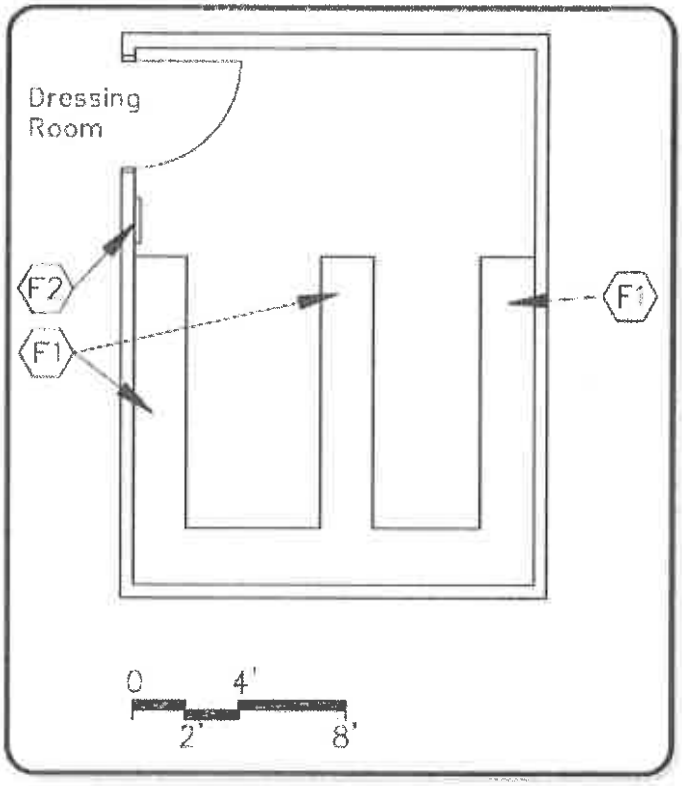
Flooring - Resilient

Base - Resilient base

Ceiling - Suspended, acoustical

Walls - Painted concrete masonry units

Notes
1. Electrical - duplex receptacles; single-level switching



Control Room
H-PA-9

Features - Fixed Equipment

F1 Equipment/work surface
F2 Tack board
F3 Operable windows
F4 Acoustical wall treatment

Features - Loose Furnishings

Chairs
Wastebasket

Finishes:

Flooring - Resilient

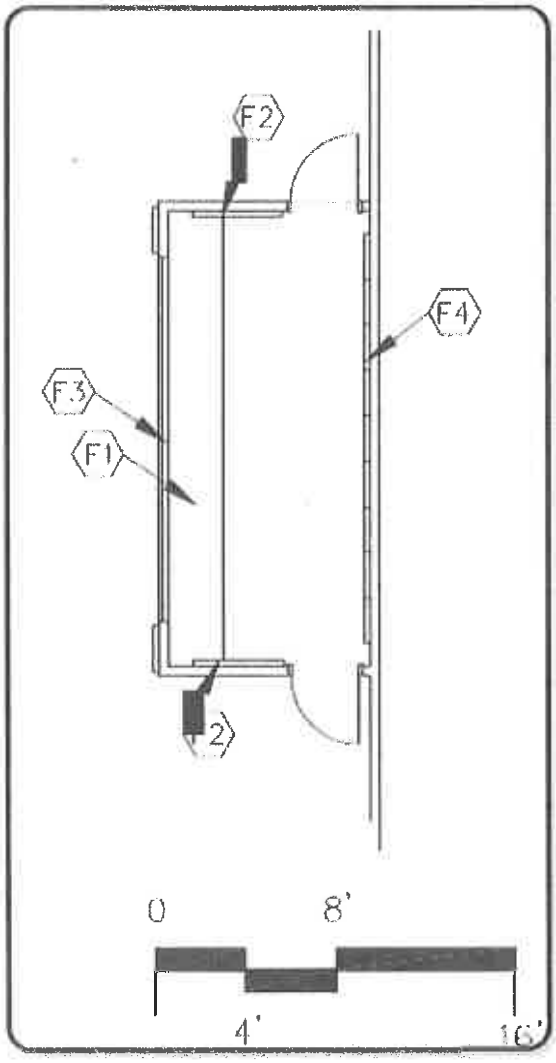
Base - Resilient base

Ceiling - Suspended, acoustical

Walls - Painted gypsum wallboard, acoustical wall treatment

Notes

1. Electrical - duplex receptacles; dimmable incandescent task lighting on work surface; fluorescent lighting overhead; single-level switching; telecommunications grounding; auditorium lighting wired through stage dimmer panel; provisions for hard-wired equipment; empty communications conduit with pull cable from stage for future video projection control; stage dimming system control panel
2. Technology - clock; voice port and phone; video port, data ports



Lobby/Concessions/Gallery
H-PA-10

Features - Fixed Equipment

F1 Base cabinet

F2 Coiling doors

Features - Loose Furnishings

N/A

Finishes:

Flooring - Porcelain tile or terrazzo

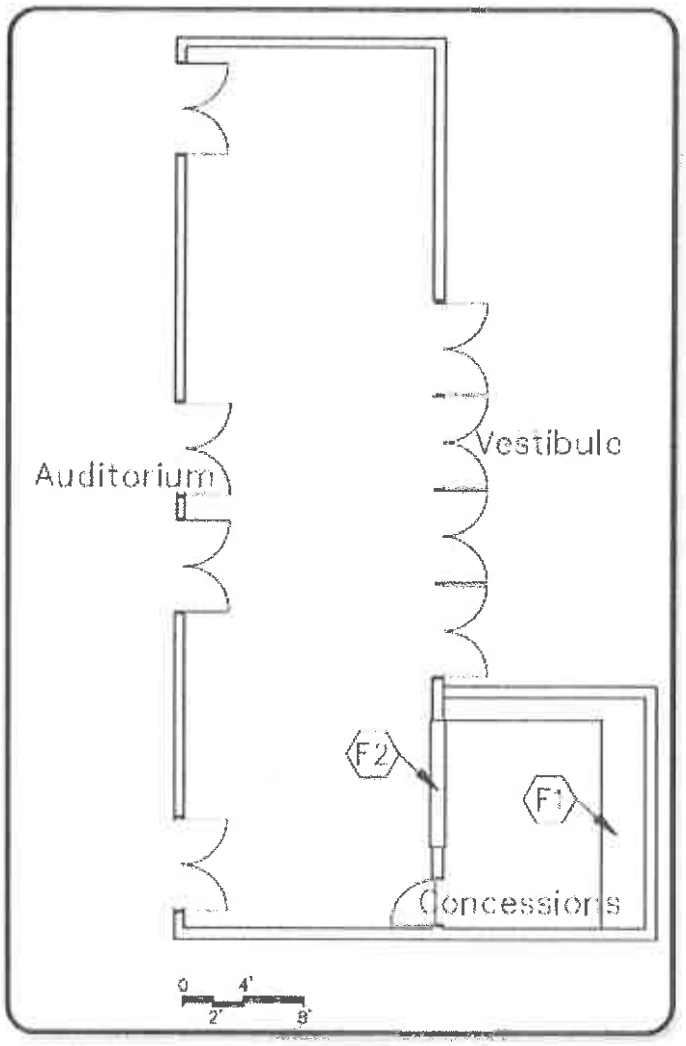
Base - Porcelain tile or terrazzo base

Ceiling - Suspended, acoustical

Walls - Ceramic tile, brick, painted concrete masonry units, acoustical wall treatment

Notes

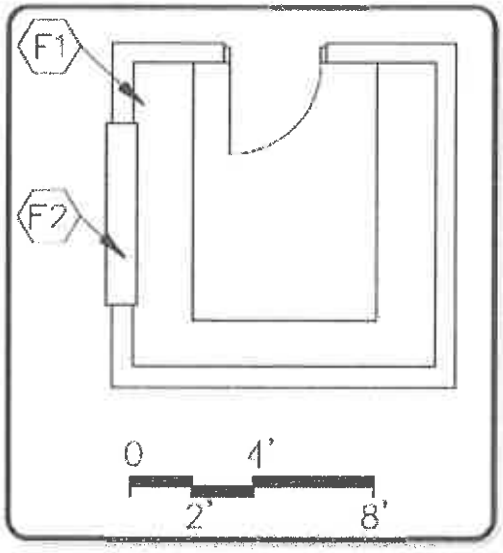
1. Electrical - duplex receptacles; multi-level switching; accent lighting; receptacles for concession equipment



Ticket Booth
H-PA-11

Features - Fixed Equipment

F1 Base cabinet
F2 Coiling door



Features - Loose Furnishings

Wastebasket

Finishes:

Flooring - Resilient

Base - Resilient base

Ceiling - Suspended, acoustical

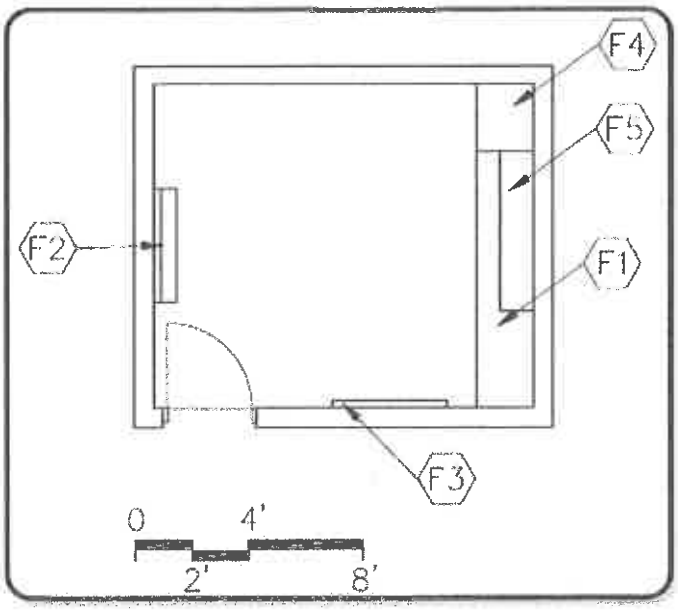
Walls - Painted concrete masonry units

Notes
1. Electrical - duplex receptacles; single-level switching;

Theatre/Drama Office
H-PA-12

Features - Fixed Equipment

F1 Work surface with file drawers
F2 Marker board
F3 Tack board
F4 Tall wardrobe
F5 Wall cabinets



Features - Loose Furnishings

Desk and chair
Computer desk return
Visitor chairs
Wastebasket(s)

Finishes:

Flooring - Carpet

Base - Resilient base

Ceiling - Suspended, acoustical

Walls - Painted gypsum wallboard over metal studs or
Painted concrete masonry units

Notes
1. Electrical: duplex receptacles; single-level switching
2. Technology: each data port, video port, voice port & phone; clock

Storage
H-PA-13

Features - Fixed Equipment

F1 Open metal shelving

Features - Loose Furnishings

N/A

Finishes:

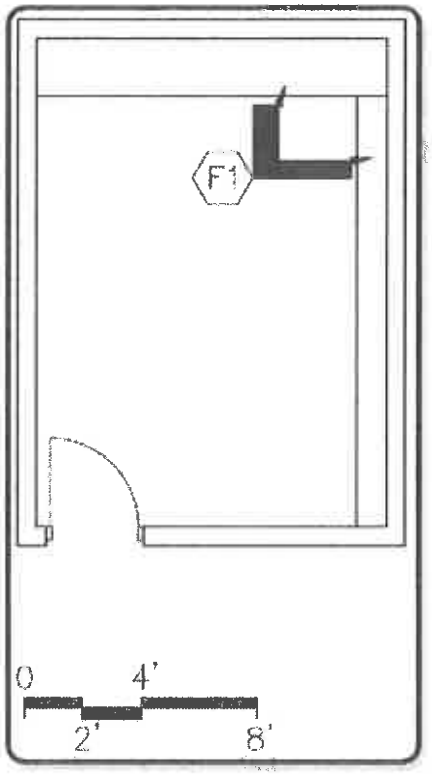
Flooring - Sealed concrete

Base - Resilient base

Ceiling - Suspended, acoustical or
Exposed, painted structure

Walls - Painted concrete masonry units

Notes
1. Electrical: duplex receptacles; single-level switching



Civil Sitework

Components

- Building placement
- Ingress, Egress Routing
- Sidewalk
- Trash Enclosure
- Curbing
- Signage and Striping
- Pavement
- Subgrade, Building Pad
- Grading and Drainage
- Water, Sewer, other Utilities
- Landscape and Irrigation
- ~~Site Lighting~~

General Standards

1. This section establishes the minimum design and construction requirements for civil sitework for new construction and expansions of school facilities.
2. All drawings including surveys and civil plans shall be prepared in AutoCAD DWG or .pdf format.
3. Site design shall be performed under the supervision of a Registered Civil Engineer and all civil related plans, reports and construction documents shall be signed and sealed in accordance with state statutes.
4. All site design shall conform to the applicable codes and to Federal, State, and local requirements of the Authorities Having Jurisdiction (AHJ).
5. A subsurface geotechnical analysis shall be performed by a Registered Geotechnical Engineer to determine soil properties and provide recommendations for design of footings, foundations, pavements and construction techniques.
6. The following publications (latest edition) shall be consulted by the design professional and are hereby included for reference:
   - Americans with Disabilities Act (ADA)
   - American Association of State Highway and Transportation Officials (AASHTO) Design Greenbook
   - Institute of Transportation Engineers (ITE Manual)
   - Manual on Uniform Traffic Control Devices (MUTCD)
   - ~~Arkansas Highway and Transportation Department (AHTD) Materials~~ Arkansas Department of Transportation (ARDOT) Specifications

Site Design Standards

1. Site planning and building placement - The placement of the building shall be closely coordinated with the architect to make good use of the property and ancillary facilities. The various modes of travel (pedestrian, bicycle, cars, buses, delivery vehicles) shall be separated as much as possible to provide safe and efficient access. Special attention shall be given to ingress and egress of

pedestrians, passenger vehicles, and buses, and short term and long term parking locations for each. Pedestrian and vehicular conflicts shall be minimized, as much as possible. Consideration shall also be given for proper drainage of the site during site planning design.

2. Parking - Parking stalls for cars shall be designed at 30°, 45° or 90° angle to the traffic flow direction and shall be a minimum of 9' by 18' in size or per the authorities having jurisdiction (AHJ) requirements, whichever is greater. See Chapter 4 of this manual for number of spaces required for each type of school. All accessible parking shall be designed per the latest edition of the Americans with Disabilities Act (ADA) Federal Guidelines and/or the local codes, whichever is more stringent. Drive aisles between car parking shall be a minimum of 24' for two-way traffic and a minimum of 16' for one-way traffic. Bus parking is recommended at 30° angle to traffic flow direction and oriented so the bus exit door allows students to exit in front of adjacent buses. Bus spaces shall be a minimum of 12' by 40'. Buses should not be required to back up. Drive aisles for buses are recommended to be a minimum of 20'. A parking summary shall be included on the site plan.
3. Sidewalks - Sidewalks shall be designed for access from the parking areas to all entry doors, as well as an accessible path from the street frontage, per ADA guidelines. Sidewalks shall be a minimum of 5' in width and shall be constructed of a minimum of 4" thick Portland cement concrete and minimum strength of 2500 psi.
4. Trash Enclosure - Trash enclosure shall be provided in a location accessible to trash trucks without conflicting with pedestrian routes or bus pick-up/drop-off point. The size of the enclosure may vary by size and number of dumpsters available from the provider. Where practical, recycling may also be staged in the trash enclosure area. The standard enclosure shall have three sides constructed of durable wood, synthetic, or masonry to a minimum height of 6' and capable of screening the dumpster(s) from view. The enclosure will be gated on the "open" side to screen the dumpster interior and provide access. The enclosure shall be positioned so that the "open" side faces a drive entrance with a minimum of 35' direct approach to the enclosure. The trash enclosure shall be constructed on an 8" concrete slab and slab shall extend at least 15' in front of dumpster for the entire opening.
5. Curbing -Curbing shall be provided around the entire pavement perimeter and at all pavement edges. All curbing shall be defined on the site work drawings as to type of curb, size and general location. All permanent curbing shall be concrete. Extruded concrete curbing epoxied to the pavement surface is not permitted. Asphalt curbing shall only be allowed along pavement edges when it is adjacent to a future development area.
6. Traffic Signage and Striping - Traffic signage shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), and at a minimum shall include stop signs where traffic leaves the school property and/or enters a public thoroughfare. The school shall defer to local authorities for proper off-site signage of public rights-of-ways.

Pick-up/drop-off area Sidewalks
Consideration for wider sidewalks in pick-up/drop-off areas and areas leading to main entries are recommended.

Bollards at Trash Enclosure
Bollards are recommended at each corner of the enclosure, where exposed to traffic.

Curbing
Special care should be taken to ensure that all curb radii at entrances, around islands and around curves are sufficiently large enough to accommodate bus turning movements.

Signage and Striping
Additional interior signage, including pedestrian crossings, stop signs, directional arrows, and informational signage may be necessary.

Striping and pavement markings should be considered to aid in the ~~sage~~ safe and efficient movement of vehicles through the site.

7. Fencing - Fencing in and around playgrounds shall conform to ASTM F2049.
8. Vehicular Traffic Security Gates - If the district incorporates vehicular traffic gates (i.e., swinging gates) into the campus ingress/egress sites, the gates shall be designed to be secured in both the open and closed positions to ensure safety for pedestrians and vehicles.

Pavement Design Standards

1. Pavement design shall be based on a minimum design period of twenty (20) years.
2. Pavement design shall be as recommended by the geotechnical engineer and shall consider such variables as the California Bearing Ratio (CBR) of the soil, anticipated traffic volume and vehicle mix (i.e. automobiles, buses, single axle trucks, double axle trucks, etc.) The design professional shall consult the ITE Manual, as well as Chapter 4 of this manual, for determination of anticipated traffic loads for various school types and sizes. The design shall also be based on sound geotechnical practices, existing soil conditions, knowledge of local conditions, and availability of material and pavement performance.
3. Pavement design shall include, at a minimum, the following paving design sections:
   - Standard Duty Asphalt Paving - for use in areas of car traffic and car parking
   - Heavy Duty Asphalt Paving - for use in bus lanes, bus parking, delivery vehicle access, trash truck access, and extreme high use vehicular areas
   - Standard Duty Concrete Paving - for use in areas of car traffic and car parking and/or areas of mixed use traffic
   - Heavy Duty Concrete Paving - for use in bus lanes, bus parking, delivery vehicle access, trash truck access, and extreme high use vehicular areas
   - Heavy Duty Reinforced Concrete Paving - for use in trash enclosure areas, loading docks, truck wells, delivery doors or other areas of extreme loading
4. Pavement and base materials shall conform to the Arkansas ~~Highway and Transportation~~ Department of Transportation specifications for materials and pavement design.
5. Asphalt pavement design shall conform to Superpave specifications and consist of three layers: surface course, binder course, and crushed aggregate base course, resting on a properly prepared subgrade.
6. Concrete paving shall have a minimum strength of 3000 psi.

Subgrade and Building Pad Preparation Standards

1. Site specific recommendations by the geotechnical engineer shall supersede this section.
2. Topsoil shall be stripped from the site and stockpiled (on-site if possible) per the geotechnical recommendations. Topsoil removal shall be to a sufficient depth to remove the layers containing organics. Topsoil may be reused for top dressing of landscape areas or other non-structural fill areas, where applicable.

3. Preparation of the site subgrade shall be per the recommendations of the geotechnical engineer, and may include scarifying and re-compaction, over-excavation, cut, fill, lime stabilization, cement stabilization, dewatering, moisture conditioning, or compaction.
4. Subgrade must be properly shaped to the desired sections and elevation and shall be compacted so that it is firm, hard and unyielding. The subgrade shall be at least 12" thick and free of organic and other deleterious materials. Subgrade under paved areas shall be compacted to 95% maximum dry density Modified Proctor per ASTM D-1557.
5. Subgrade for the "building pad" shall extend 5' beyond the perimeter walls of the building and at least 4' below the floor slab and base layer. Subgrade for the building pad shall have a maximum plasticity index of 20 and a maximum liquid limit of 40.
6. The "building pad" subgrade soils shall have a minimum allowable bearing capacity of 3,000 psf.
7. Structural fill placed in the "building pad" area shall be placed in 8" lifts (max) and shall be compacted to 95% maximum dry density Modified Proctor per ASTM D-1557.

Grading and Drainage Design Standards

1. The site shall be graded to safely and efficiently convey stormwater through and around the site.
2. The site shall be designed to safely convey the 100 year storm event. When stormwater piping is used, piping shall be designed to convey the 25 year storm event, or per the AHJ, whichever is greater. The site shall conform to the AHJ requirements for stormwater detention/retention, if required.
3. The design professional shall set the finish floor elevation of the building at an elevation at least 1' above base flood elevation (BFE), or per the AHJ requirements, whichever is greater.
4. Grading around the building shall slope away from the building at a minimum of 2% slope for at least 10' from the building walls. Care should be taken to ensure that landscaping, mulch, topsoil, sod or other materials do not inhibit proper drainage around the base of the building. Where possible, foundation plantings and irrigation close to the foundation walls should be avoided, in order to reduce the effects of moisture under the footings and slabs.
5. Surface drainage swales through playgrounds and play areas shall be prohibited. Inlets and/or pipe openings in playgrounds and play area shall be avoided, and if unavoidable, shall be adequately designed to prohibit students from access.
6. All paved areas, unless otherwise required by code, shall be designed between a 5% maximum and a 1% minimum slope.
7. All landscape areas shall have a maximum slope of three (3) horizontal to one (1) vertical (3:1) and a minimum slope of 1%.
8. Ponding around drainage inlets in paved areas shall be limited to a maximum of 6" depth.
9. ~~Stormwater detention/retention areas shall be adequately fenced to prohibit accidental student access. Detention~~

Landscape and Irrigation

The landscape and irrigation designer should endeavor to be good stewards of the environment and to conserve water resources through quality design, plant selection, and available technology.

Landscape design should include attention to appropriate plant selection on the basis of: plant hardiness zones, avoidance of hazardous plant material (toxic, poisonous, thorny, etc.), avoidance of plant materials with undesirable litter/fruit dropping, species that are indigenous or well adapted to the region, and plant material that is less susceptible to insect issues. Native species and drought tolerant species should also be considered.

Irrigation should be designed to protect the school's landscape investment. Irrigation systems may include traditional spray head irrigation, drip irrigation, xeriscape, or a combination thereof. Regardless of the system used, care should be taken to ensure that the system is well-planned, well-zoned, well-timed, and efficient in its operation. Irrigation systems should account for plant material precipitation rates and controlled zones to prevent overwatering and/or wasted irrigation. The use of rain sensors should be included in the irrigation system.

Grading at Play Areas

Play areas generally should be sloped at 2% to promote positive drainage and eliminate ponding and puddles.

Stormwater Quality Initiatives

The design professional should consider stormwater quality initiatives, such as filtration strips, bio-swales, and other water quality devices, where applicable.

~~areas should be placed away from play areas and playgrounds.~~ Stormwater detention/retention ponds should be placed away from play areas and playgrounds, where applicable. Safety of the student should be considered to prevent accidental access or accidental drowning. Fencing, landscape barriers, transition zones, or other buffers may be utilized where student safety is a concern. ~~Slopes in and around stormwater detention/retention area shall have a maximum slope of four (4) horizontal to one (1) vertical (4:1) for ease of maintenance.~~

10. Slopes in and around stormwater detention/retention area shall have a maximum slope of four (4) horizontal to one (1) vertical (4:1) for ease of maintenance.
11. All drainage inlets on school sites shall be designed as "child safe" to reasonably prohibit student access into inlets and drainage boxes.
12. All grated inlets shall use "bicycle safe" grates.

Water and Sewer Design Standards

1. Domestic water and sanitary sewer shall conform to the requirements of the Arkansas Department of Health.
2. Domestic water main lines shall maintain at least 10' horizontal separation from sanitary sewer mains. Water and sewer lines shall maintain 18" vertical separation.
3. Design of the water system shall include the necessary domestic and fire protection needs for the site. The civil engineer shall coordinate with the plumbing engineer to ensure the system has the adequate capacity for the needs of the site.
4. Civil design documents shall include design of water and sewer commencing 5' outside the building and continuing to the point of connection at the public main.
5. Water system design shall include all main lines, service lines, and fire lines outside the building, as well as fire hydrants, meter locations, valves and other appurtenances.
6. Water pipe materials may include copper, PVC, and ductile iron conforming to American Water Works Association specifications.
7. Water lines shall be designed for burial below frost depth and of adequate depth to avoid damage during construction.
8. Sanitary service lines shall be a minimum of 4" diameter PVC, and mainlines shall be minimum 8" PVC.
9. All facilities with food preparation shall have a grease interceptor which complies with Arkansas Plumbing Code Section 1003.3 and Local requirements ~~trap (minimum 1000~~ 500 gallon capacity~~)~~. Grease interceptors shall be placed in a location away from normal pedestrian traffic, but generally accessible for the maintenance/pumping vehicle.
10. Utility easements shall be provided where public mains cross private property.
11. Proper trenching and bedding of water and sewer lines shall be required
    - Bedding Material: Provide Class I-A or I-B granular material in accordance with ASTM D 2321 which is free from clay lumps, organic, or other deleterious

material.

- Haunching Material: Provide Class I-A, I-B or Class II granular material in accordance with ASTM D 2321 which is free from clay lumps, organic, or other deleterious material. Haunching is considered the zone from the bottom of the pipe to the spring line of the pipe.

12. Trenching and construction shall comply with all OSHA requirements. The site shall be graded to safely and efficiently convey stormwater through and around the site.

Utility Design Standards

1. Civil engineer shall be responsible for design of site routing of utilities from 5' outside of the building to the point of connection. These may include electric, telephone, gas, and fiber optic routing. The civil engineer shall coordinate with the design team and the utility providers for connection points, service demarcation points, building entry points and load requirements.
2. Utility services shall be placed underground, where possible.
3. Electrical transformers and other utility appurtenances shall be placed away from playgrounds, play areas, and pedestrian walkways, or fenced to adequately prohibit student access.
4. All vaults, meter boxes, and pull boxes in traffic areas shall be "traffic rated H-20".
5. Utility easements should be provided for primary electric service runs to and including the transformer location. Secondary electric service runs typically do not require easements.
6. Empty conduits for future use should be provided under paved entrances and driveways.
7. Proper trenching and bedding of utility lines shall be required.
   - Bedding Material: Provide Class I-A or I-B granular material in accordance with ASTM D 2321 which is free from clay lumps, organic, or other deleterious material.
8. Trenching and construction shall comply with all OSHA requirements.

Foundations and Floor Slabs at Grade

Components

- Spread footings and wall footings
- Trenched footings/turned down footings
- Drilled piers
- Reinforced concrete foundation walls
- Reinforced concrete masonry walls utilizing normal weight masonry units with all cores grouted and reinforced
- Concrete grade beams
- Driven piles and pile caps
- Auger cast piles and pile caps
- Other systems if recommended and acceptable to the geotechnical engineer and the structural engineer
- 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.

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.
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. Do not use calcium chloride in concrete.
8. Sub-slab ventilation in areas with radon or potential soil gas submissions. Requirement for such is to be determined by qualified testing agency.
9. Concrete minimum compressive strength at 28 days to be as required by structural engineer's design, but shall be no less than the following:
   - Foundations - 3,000 psi
   - Floor slabs - 3,000 psi
   - Precast systems - 5,000 psi. Strength of concrete provided is to be tested by independent testing lab, during construction.
10. Concrete reinforcing steel shall be a minimum grade 60 and meet the requirements of the current state building code and structural engineer's design.
11. Project site concrete mixing shall not be used, unless otherwise approved by an independent testing agency.

Fly-Ash
Concrete materials may use 10%-20% fly-ash as replacement, but not addition. Mix design to be done by qualified independent testing agency.

Form Release
Use low- and non-toxic form releases.

12. For classrooms and corridor areas, use no less .than a 4" thick concrete slab with 6x6 - W1.4 x W1.4 welded wire fabric.
13. Under concrete building slabs, place a minimum 10 mil vapor barrier and compact a minimum of 4" of drainage fill material unless geotechnical engineering investigation recommends otherwise.

Exterior Walls

Examples - Exterior Walls

- Masonry veneer cavity walls
- Masonry veneer and metal framing walls
- Masonry veneer and wood framing walls
- Pre-cast concrete insulated panels
- Metal panel on concrete masonry walls
- Metal panel on metal framing walls

- NOTE: Other types of exterior wall construction may be acceptable if type meets or exceeds the above performance standards criteria. More stringent requirements shall be used when required by the current state building codes and fire prevention codes.

Standards - Exterior Walls

1. Exterior Insulation Finish System shall use impact resistant mesh - must resist breakdown from projectiles.
2. Moisture resistant - provide vapor retarder to inside of insulation.
3. Thermal resistant - ~~minimum R-value of R-13.5.~~ As required by Arkansas Energy Code. Consider long-term performance.
4. Required Air Barrier System shall be one of the following:
   - Self-adhering sheets
   - Fluid applied membranes
   - Closed-cell polyurethane insulation
   - Building wrap
5. Air barrier transition tape required at masonry control joints.
6. Minimum maintenance - no routine applied maintenance.
7. Detail roof/wall intersection to provide a continuous air barrier system.

Guidelines - Exterior Walls:

- Economical - consider life cycle evaluation
- ~~Light-colored exterior walls~~
- Preference given to non-combustible materials

Masonry Veneer Cavity Walls

Components

- Exterior finish
  - Exterior stone, clay, or concrete masonry units
- One-inch air cavity
- Cavity insulation
  - Rigid insulation or closed cell polyurethane insulation
- Air barrier system
- Back-up material
  - Concrete masonry units (CMU) (normal weight)

Standards - Masonry Veneer Cavity Walls

1. Impact, moisture, and thermal resistant
2. Fire resistant
3. In-wall flashing - copper fabric laminate; elastomeric thermoplastic; sheet metal
4. Drain cavity with weep holes, 4'0" o.c.
5. Steel reinforcement to meet the requirements of the current state building code, including the seismic provisions where applicable.
6. Rebar shall be minimum grade 60.
7. Face brick veneer: grade SW
8. Concrete masonry: unit compressive strength to meet industry standard. ~~1900 psi (13.1 MPa)~~
~~9. Use CMU's containing fly ash~~
10. Insulation: extruded polystyrene board or spray polyurethane foam. ~~Minimum R-value of R-13.5~~ Thermal resistance as required by Arkansas Energy Code.
11. For exterior CMU veneer: provide water repellant ~~repellent~~.

Component - Air Cavity
- Two-inch air cavity recommended

Guidelines - Masonry Veneer Cavity Walls:
- Use mortar dropping control product to prevent blocking of weep holes
- For exterior CMU, provide normal weight (CMU)
- ~~Thorocoat or equal acceptable for required water repellant.~~
- Water repellant
- Use of CMUs containing fly ash is optional

Masonry Veneer on Metal Framing Walls

Components

- Exterior finish
  - Exterior stone, clay, or concrete masonry units
- One-inch air cavity
- Cavity air infiltration barrier
  - Rigid insulation or closed cell extruded polyurethane insulation
  - Exterior sheathing
  - Air barrier membrane
- Batt/blanket insulation with faced membrane
- Back-up material
  - Cold formed steel framing system
- 5/8 inch gypsum wallboard

Component - Air Cavity
- Two-inch air cavity recommended

Standards - Masonry Veneer on Metal Framing Walls

1. Impact, moisture, and thermal resistant
2. In-wall flashing
3. Drain cavity with weep holes, 4'0" o.c.
4. Mill galvanized wall ties
5. Face brick veneer: grade SW
6. Concrete masonry veneer: unit compressive strength to meet industry standard ~~1900 psi (13.1Mpa)~~. Provide color and water repellant.
7. Steel framing system
   - Light gauge steel studs (minimum 20 gauge) or as designed by structural engineer
   - Pre-engineered steel framing system as designed by structural engineer
8. Use ~~minimum R-value of R-13.5~~ fiberglass insulation with thermal resistance as required by Arkansas Energy Code.
9. Insulation shall be soybean oil-based polyurethane, open- cell, semi-rigid foam or equal.

Guidelines - Masonry Veneer Cavity Walls:
- Optional use of CMU's containing fly ash
- Maximize recycled content
- ~~Thorocoat or equal acceptable for required water repellant~~
- Water repellant
- The paper or foil vapor barrier of required insulation should be anchored to the face of the studs.

Pre-Cast Concrete - Insulated Sandwich

Components

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

Standards - Pre-Cast Concrete - Insulated Sandwich Walls

1. Impact, moisture, and thermal resistant
2. Low maintenance
3. Meet ASHRAE 90.1-2007 (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
7. Concrete mix: 28 day compressive strength, 5,000 psi minimum
8. Minimum thermal resistance as required by Arkansas Energy Code. ~~R-value is R-13.5~~

Guidelines - Pre-Cast Concrete - Insulated Sandwich Walls:

- Fly ash, ASTM C-618, Class C or F, may be substituted for up to 20% of total cementitious materials.

Metal Panel on Metal Framing

Components

- Exterior finish
  - Exterior metal wall panel system
- Weather barrier
- Air barrier system (required)
- Batt insulation with vapor barrier
- Backup materials
  - Cold formed metal framing
- 5/8 inch gypsum wallboard

Standards - Metal Panel on Metal Framing

1. Metal wall panel: 26 gauge 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
4. Weather barrier: composite, self-adhesive, rubberized-asphalt compound flashing product
5. Steel framing system:
   - Steel studs as designed by structural engineer
   - Pre-engineered steel framing system as designed by structural engineer
6. Provide ASTM C665, Type 1, faced mineral fiber insulation blankets
7. Interior surface: painted, 5/8 inch, gypsum wallboard. Use Type X where required.
8. Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam or equal.
9. Minimum thermal resistance as required by Arkansas Energy Code. ~~R13.5~~

Guidelines - Metal Panel on Metal Framing:

- Maximize recycled content

Masonry Veneer on Wood Framing Walls

Components

- Exterior finish
- Exterior stone, clay, or concrete masonry units
- One inch air cavity
- Cavity insulation extruded polystyrene sheathing
  - Closed cell
  - Rigid insulation
- Batt/blanket insulation with vapor barrier
- Backup materials
  - Wood frame system
  - Heavy timber system
- 5/8 inch abuse/moisture/mold resistant gypsum wallboard

Standards - Masonry Veneer on Wood Framing Walls

1. Impact, moisture, and thermal resistant
2. In-wall flashing
3. Drain cavity with weep holes, 4'0" o.c.
4. Mill galvanized wall ties
5. Face brick veneer: grade SW
6. Concrete masonry veneer: unit compressive strength as required to meet industry standard ~~1900 psi (13.1Mpa)~~. Provide color and water repellant.
7. Wood frame systems or heavy timber systems:
   - Engineered in strict compliance with requirements of Arkansas State Fire Prevention Code and Building Code
   - All lumber used for wood framed wall systems shall be #2 grade, kiln dried Southern Pine; #2 grade, kiln dried, Spruce-Pine-Fir; or #2 grade, Hem-Fir or better.
8. Use ~~minimum R-value R-13,5~~ fiberglass insulation with thermal resistance as required by Arkansas Energy Code. The paper or foil vapor barrier should be anchored to the face of the studs.
9. Insulation could be soybean oil-based polyurethane, open-cell, semi-rigid foam or equal.

Guidelines - Masonry Veneer on Wood Framing Walls:

- Optional use of CMU's containing fly ash
- Maximize recycled content

Roofing Systems

Examples - Roofing Systems

- Shingle roof system
- Metal roof with blanket insulation
- Metal roof with rigid insulation
- Built-up asphalt roof system
- Single-ply roof system
- Modified bitumen roofing system

- NOTE
  - All roof system and products shall be designed in accordance with state fire prevention code and state building code

Other Roofing Systems
- Other types of roof systems may be acceptable if system meets or exceeds the "Performance Standards - Roofing Systems"

Performance Standards - Roofing Systems

1. Roofing and flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. Minimum thermal resistance as required by Arkansas Energy Code. ~~R-factor for low-slope roof is R-26.0 and steep roof is R-19.0~~
3. Impact resistant: Class 4 per Underwriters Laboratories (UL) 2218 impact test
4. Fire resistive - meet UL Class "A"
5. Positive slope - minimum slope ¼:12, unless specified otherwise; 1/8:12 for existing buildings
6. Positive drainage to interior drains or exterior collection systems
7. "ENERGY STAR" compliant ratings for surface treatments
8. Minimum 20 year manufacturer's warrantee on materials and system performance
9. Minimum 2 year Contractor guarantee on all materials and workmanship of all system components and accessories
10. Sheet metal flashings shall conform to SMACNA's "Architectural Sheet Metal Manual."

Roofing System Guidelines
- Consider installing "radiant barriers," such as aluminum foil above attic spaces

"SMACNA"
Sheet Metal and Air Conditioning Contractors' National Association

Construction Standards - Roofing Systems

1. Provide pre-roofing conference prior to field installation of Roofing System to comply with the manufacturer's requirements. Provide post installation inspection to comply with manufacturer's requirements.

Shingle Roof Systems

Components

- Asphalt Shingles, UL Class "A", ASTM B108 or UL790
- Roofing accessories
  - Felt Underlayment
  - Self-adhering sheet underlayment
  - Sheet metal drip edge and flashing
- Oriented strand board (OSB) or plywood
- Rigid insulation: extruded polystyrene or polyisocyanurate board
- Vapor barrier, on underside of rigid insulation
- Structural support: steel deck or cementitious deck; or wood deck (lumber, plywood or oriented strand board, OSB) permitted in accordance with Arkansas State Fire Prevention Code and Building Code

Performance Standards - Shingle Roofing Systems

1. Roofing and flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. "ENERGY STAR" compliant surface treatments
5. Minimum 20 year material ~~and weather tightness~~ warranty by manufacturer
6. Contractor furnish 2 year guarantee on materials and workmanship for all system components and accessories

Construction Standards - Shingle Roofing Systems

1. Minimum 3:12 slope
2. Fasten shingles to roof sheathing with nails - not staple fasteners. Staples shall not be used on decking.
3. Metal drip edge: brake formed sheet metal with at least a 2 inch roof deck flange
4. Laminated-Strip Asphalt Shingles: ASTM D3462 laminated, multi-ply overlay construction glass-fiber reinforced, mineral-granule surfaced, self-sealing shingles
5. Felt underlayment 30 pound asphalt-saturated organic felts, non-perforated. Use ice & water shield for slopes less than 4:12.
6. Sheet metal flashings conform to SMACNA's "Architectural Sheet Metal" manual. Includes perimeter edge metal; penetration flashings; valley construction; and apron, step, cricket, or back flashings.
7. Provide pre-roofing conference prior to field installation of Roofing System to comply with the manufacturer's

requirements. Provide post installation inspection to comply with manufacturer's requirements.

Metal Roof with Blanket Insulation

Components

- Standing seam metal roof panels, minimum 26 gauge
  - Profile: vertical, rib, seamed joint
  - Material: aluminum zinc alloy coated steel sheet
  - Exterior finish: fluoropolymer two-coat finish system, 70% PDFY resin
- Insulation: glass fiber blanket (Minimum R-value R-19) with vapor tight edge tabs and faced on under side
- Factory primed or galvanized steel purlins
- Structural support:
  - Steel joist or truss joists
  - Pre-engineered structural framing system
- Sheet metal drip edge and flashing
- Snow guards

Performance Standards - Metal Roof with Blanket Insulation

1. Roofing and flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. System shall have ASTM E1592-94 wind uplift classification
5. No water penetration when tested according to ASTM E1646
6. Air leakage through assembly of not more than 0.06 CFM/sq. ft. of roof area when tested to ASTM E1680
7. "ENERGY STAR" compliant surface treatments
8. Special warranty on panel finishes by manufacturer: 20 years
9. Special weather tightness warranty by manufacturer for standing seam metal roof panels: 20 years
10. Contractor furnish 2 year guarantee on materials and workmanship for all system components and accessories (in accordance with terms and conditions of required manufacturer's warranties)

Construction Standards - Metal Roof with Blanket Insulation

1. Minimum 1:12 slope
2. Provide break 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. Provide pre-roofing conference prior to field installation

of roofing system to comply with the manufacturer's requirements. Provide post installation inspection to comply with manufacturer's requirements.

Metal Roof with Rigid Insulation

Components

- Standing seam metal roof panels, minimum 26 gauge
  - Profile: vertical, rib, seamed joint
  - Material: aluminum zinc alloy coated steel sheet
  - Exterior finish: fluoropolymer two-coat finish system, 70% PDFY resin
- Underlayment (ice and water shield)
- Nail base rigid roof insulation
- Structural support: steel deck or cementitious deck; wood deck (lumber, plywood, or oriented strand board - OSB) permitted in accordance with Arkansas State Fire Prevention Code and Building Code
- Sheet metal drip edge and flashing
- Snow guards

Component - rigid roof insulation

- Required nail base rigid roof insulation may be installed using one or two layers.
  - Recommend that insulation be installed in two layers with joints offset in each direction, to reduce thermal bridging and make the roofing system more energy efficient

Performance Standards - Metal Roof with Rigid Insulation

1. Roofing and flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. System shall have ASTM E1592-94 wind uplift classification
5. No water penetration when tested according to ASTM E1646
6. Air leakage through assembly of not more than 0.06 CFM/sq. ft. of roof area when tested to ASTM E1680
7. "ENERGY STAR" compliant surface treatments
8. Special warranty by manufacturer on panel finishes: 20 years
9. Special weather tightness warranty by manufacturer for standing seam metal roof panels: 20 years
10. Contractor furnish 2 year guarantee on materials and workmanship for all system components and accessories (in accordance with terms and conditions of manufacturer's warranties)

Construction Standards - Metal Roof with Rigid Insulation

1. Minimum 1:12 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. Provide pre-roofing conference prior to field installation

of roofing system to comply with the manufacturer's requirements. Provide post installation inspection per manufacturer's requirements.

Built-Up Asphalt Roof System

Components

- Alternating layers of bituminous sheets and viscous bituminous coatings over an insulated deck

Performance Standards - Built-Up Asphalt Roof System

1. Roofing membrane and base flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. "ENERGY STAR" compliant surface treatment
5. Manufacturer to provide minimum 20 year warranty on materials and system performance
6. Contractor to provide 2 year guarantee on materials and workmanship for all system components and accessories (in accordance with terms and conditions of manufacturer's warranties)

Construction Standards - Built-Up Asphalt Roof System

1. System description
   - BU-I-A-G (4) A (Built up membrane over insulated deck using asphalt with glass fiber ply sheets and aggregate surfacing
   - BU-I-L-G2 (coated base) (4) A (built up membrane over insulated deck using cold liquid applied asphalt with ply sheets and aggregate surfacing)
2. Base sheet (recommended by manufacturer)
3. Ply felt: asphalt impregnated, glass fiber felt, complying with ASTM D2178, Type VI or 28 lb. coated base sheets as required by manufacturer to meet warranty requirements
4. Flashing sheet
   - SBS modified asphalt sheet, mineral granule surfaced, ASTM G162 (composite sheet) or ASTM G164 polyester
   - APP modified asphalt sheet, mineral granule surfaced, ASTM G223 (composite)
5. Asphalt materials
   - Roofing asphalt: recommended by built-up roofing manufacturer
   - Cold applied adhesive
6. Auxiliary membrane materials may include: aggregate surfacing, substrate board, vapor retarder, roof coating, and/or protective walkways.
7. Polyisocyanurate board insulation with a minimum

compressive strength of 20 psi and faced on both top and bottom

8. Provide pre-roofing conference prior to field installation of roofing system to comply with the manufacturer's requirements. Provide post installation inspection per manufacturer's requirements.
9. Minimum slope ¼:12. Reroofs may remain 1/8: 12 if current roof has 1/8:12 slope. Flat roofs are unacceptable.

Single Ply Roof System

Components

- Uniform elastomeric EPDM membrane, PVC or TPO
- ½ inch, rigid cover board
- Rigid insulation
- Vapor barrier
- ¼ inch substrate board
- Structural support: steel deck or cementitious deck or wood deck (lumber, plywood or oriented strand board, OSB)

Component - rigid insulation

- Required nail base rigid roof insulation may be installed using one or two layers
  - Recommend that insulation be installed in two layers with joints offset in each direction, to reduce thermal bridging and make the roofing system more energy efficient

Performance Standards - Single Ply Roof System

1. Roofing membrane and base flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. "ENERGY STAR" compliant surface treatment
5. Manufacturer to provide 20 year warranty on materials and system performance
6. Contractor to provide 2 year guarantee on materials and workmanship for all system components and accessories (in accordance with terms and conditions of manufacturer's warranties)

Construction Standards - Single Ply Roof System

1. Minimum slope 1/4:12 for new construction. Reroofs may remain 1/8:12 if current roof has 1/8:12 slope. Flat roofs are unacceptable.
2. Loose laid/ballasted, fully adhered or mechanically fastened ethylene propylene diene monomers (EPDM), TPO, PVC membrane, 50 mils thick minimum
3. Cover board: ASTM C 1177, glass mat, water resistant gypsum substrate Type X, or ASTM C 272 gypsum wood fiber composite board
4. Insulation: extruded polystyrene board or polyisocyanurate board
5. Vapor barrier: polyethylene retarder, ASTM D 4397, 6 mils (0.15 mm) thick minimum
6. Substrate board: glass mat, water resistant gypsum board
7. Provide pre-roofing conference prior to field installation of roofing to comply with the manufacturer's requirements. Provide post installation inspection per manufacturer's requirements.

Modified Bituminous Membrane

Components

- Roofing system formed with modified bituminous membranes over an insulated deck

Performance Standards - Modified Bituminous Membrane

1. Roofing membrane and base flashings shall
   - remain watertight
   - not permit the passage of water
   - resist uplift pressure calculated according to current version(s) of applicable code(s)
   - resist thermally induced movement
   - not fail when exposed to weather
2. System shall meet Class 4 per UL 2218 impact test
3. System shall meet UL Class "A" for fire resistance
4. "ENERGY STAR" compliant surface treatments
5. Manufacturer to provide a minimum 20 year warranty on materials and system performance
6. Contractor to provide 2 year guarantee on materials and workmanship for all system components and accessories (in accordance with terms and conditions of manufacturer's warranties)

Construction Standards - Modified Bituminous Membrane

1. System description - provide one of the following:
   - MBA(1)-i-(T,M, or L)-G(2)-M or A (modified bitumen APP roofing membrane over insulated deck, mopped or set in cold, liquid-applied adhesive, with glass fiber ply sheet and mineral or aggregate surfacing)
   - MBS(1)-I-(TM, or L)-G(2)-M or A (modified bitumen SBS roofing membrane, over insulated deck, mopped or set in cold, liquid-applied adhesive, with glass fiber ply sheet and mineral or aggregate surfacing)
2. Cap sheet - provide one of the following:
   - SBS modified bituminous cap sheet: SBS modified asphalt sheet, smooth surfaced, dusted with fine parting agent on both sides or granular surfaced; suitable for application method specified; manufacturer's standard thickness and weight; for use of reinforcing type as follows:
     - Use: roof membrane and base flashing
     - Reinforcing: composite woven (ASTM G162) and glass fiber mat
   - APP-modified cap sheet, smooth surfaced: atactic polypropylene modified asphalt sheet, smooth surfaced; suitable for application method specified; manufacturer's standard thickness and weight; for use and of reinforcing types as follows:
     - Use: roof membrane and base flashing
     - Reinforcing: composite woven (ASTM-G162) and

glass fiber mat

3. Auxiliary membrane materials may include: protective surfacing (aggregate surfacing or roof granules); roofing asphalt (as recommended by system manufacturer); substrate board (if required by design professional or roof manufacturer); cold applied adhesive: vapor retarder (if required by project conditions by design professional or manufacturer; and protective walkway materials recommended by system manufacturer.
4. Base sheet: unperforated, asphalt impregnated and coated glass fiber sheet, dusted with fine mineral surfacing on both sides
5. Base ply felts: asphalt coated, glass fiber felt, complying with ASTM D2178, Type VI or 28 lb. coated base sheets as required by manufacturer to meet warranty requirements
6. Polyisocyanurate board insulation with a minimum compressive strength of 20 PSI and faced both top and bottom. Provide tapered insulation, preformed saddles, crickets, tapered edge strips and other insulation shapes as required for "positive drainage."
7. Insulation accessories as may be recommended by the insulation manufacturer and as compatible with membrane roofing including: fasteners; cold fluid applied adhesive; wood nailer strips; and cover board (perlite insulation board or cellulosic-fiber insulation board)
8. Provide pre-roofing conference prior to field installation of roofing to comply with the manufacturer's requirements. Provide post installation inspection per manufacturer's requirements.
9. Minimum slope ¼:12. Reroofs may remain 1/8:12 if current roof slope is 1/8:12. Flat roofs are unacceptable.

Interior Partitions

Examples - Interior Partitions

- Concrete masonry walls (CMU)
- Glazed tile and ceramic tile
- Metal or wood studs with gypsum wallboard
- Veneer plaster over gypsum wallboard
- Operable partitions
- Folding partitions
- Demountable partitions

Performance Standards - Interior Partitions

1. Easy to clean materials
2. Resistant to moisture and inhibits 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)
6. Use materials that meet industry consensus standards for VOC emissions.

Guidelines - Interior Partitions

- Consider the design of a product for disassembly and its parts to be reused, remanufactured, or recycled
- Consider acoustical qualities
- Consider recycled/recyclable
- Local (within 500 miles) materials and products where possible
- Consider renewable materials

Concrete Masonry Walls
Structural Glazed Tile Walls
Ceramic Tile

Construction Standards - Concrete Masonry Walls, Structural Glazed Tile Walls, Ceramic Tile

1. CMU walls: ~~ASTM C190, 1900 psi compressive strength, normal weight aggregate or FM 1500 psi~~ Compressive strength to meet industry standard.
2. Tooled or struck mortar joints for cleanability. Use Type "S" mortar for loadbearing walls and Type "N" 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
7. Control joints required for CMU partition walls per design.

Performance and Benefits - Concrete Masonry Walls, Structural Glazed Tile Walls, Ceramic Tile

- Impact resistant
- Easily cleanable & maintainable
- Good acoustic qualities
- Daylight enhancement qualities

Metal or Wood Studs with Gypsum Wallboard
Veneer Plaster over Gypsum Wallboard

Construction Standards - Metal or Wood Studs with Gypsum Wallboard, Veneer Plaster over Gypsum Wallboard

1. Sound transmission class: Minimum STC of 41 in academic areas
2. Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating
3. Gypsum wallboard: ASTM C1396 ~~C36~~, Type X 5/8 inch thick
4. Type X wallboard required at rated partitions
5. Moisture resistant wallboard to be used in high moisture areas
6. Metal studs: ASTM C645, 20 gauge sheet base metal
7. Provide control joints in partitions 30 feet maximum
8. Veneer plaster: ASTM C58T consisting of separate base coat and finish coat
9. Wood stud grade marked as required by the applicable building code
10. Abrasive and impact resistant materials in high traffic areas

Performance and Benefits - Metal or Wood Studs with Gypsum Wallboard, Veneer Plaster over Gypsum Wallboard

- Economical
- Relatively easy to move or remove
- Accommodates periodic finish color changes
- Good sound barrier when used with acoustical insulation

Operable Partitions, Folding Partitions, Demountable Partitions

Performance Standards - Operable Partitions, Folding Partitions, Demountable Partitions

1. Easily moved from opened to closed (stored) position by manual or electrical operating mechanism.
2. Sound transmission class (STC) as provided below in Construction Standards, or as required to meet the sound isolation requirements for the functional use of the rooms or spaces to be divided, whichever is greater.
3. Options for tack and marker-board surfaces.
4. Overhead structural support with minimal deflection as required for functional operation.
5. Demountable partitions convenient to disassemble and relocate.

Construction Standards - Operable Partitions, Folding Partitions, Demountable Partitions

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

Plumbing

Components - Plumbing

- Site Utilities
- Valving
- Hangers
- Identification
- Testing
- Potable Water Systems
- Domestic Water Heater Systems
- Water Conditioning and Softening Systems
- Sanitary Piping Systems
- Gas Piping System
- Roof Drain and Storm Sewer System
- Food Service Area Systems
- Building Fire Protection Systems
- Plumbing Fixtures and Specialties

Standards - Plumbing

1. This section establishes the minimum design requirements that must be incorporated into the project by the Plumbing Design Professional. Minimum code requirements are the current editions of the Arkansas State plumbing and gas codes. Local codes and standards shall take precedence over these requirements, provided said codes and standards are more stringent.
2. All systems shall be designed in compliance with the current Arkansas Energy Code.

Standards - Plumbing Site Utilities

1. Determination of the available site services with regard to gas service, sanitary systems, storm water systems, domestic water systems, and fire service systems is necessary as a part of the site selection process.
2. The building plumbing system is to be complete to 5 feet outside the perimeter of the building foundation and shall include all piping, fixtures, appurtenances, and appliances in connection with a supply of potable water (except for fire sprinkler systems), sanitary drainage or storm drainage systems within or adjacent to any building, structure, or conveyance on the premises. The connection to a utility water meter or other public water or sewer utility system or other source of potable water or sewage disposal and storm water structures shall be designed by the Site Utility Design Professional from 5 feet outside the perimeter of the building foundation system. Food service grease interceptors, science room acid neutralizing sumps, and gas piping and regulators shall be designed by the Plumbing Design Professional.
3. The Plumbing Design Professional is required to evaluate the anticipated demand and method of supplying gas service to the building. All natural gas piping systems shall be installed in accordance with the Arkansas gas

Design Guidelines - Plumbing Site Utilities

1. Consideration should be given to providing a metering device to measure all water usage for new buildings over 20,000 SF
2. Consideration should be given to providing a metering device to measure all gas usage for new buildings over 20,000 SF

code. The estimated gas loads for operation of the water heating boilers, domestic water heaters, food service equipment, science program usage, and miscellaneous items shall be obtained from the appropriate disciplines by the Plumbing Design Professional and totaled with the inclusion of a growth or safety factor. Discussion with the local gas company is necessary, both to determine potential service costs and to determine the responsibilities of the building owner and the gas company regarding installation. Determine the gas pressure requirements for the equipment in the building and communicate this need to the gas company. The Plumbing Design Professional or Site Utility Design Professional shall design the gas service.

4. Plumbing system designer shall coordinate location of all site related fixtures, such as grease interceptors, dilution tanks, etc., with site design professional.

Liquid Propane

- If natural gas service is not available, the installation of liquid propone gas should be investigated.

Standards - Plumbing Valving

1. Valves will be installed to isolate individual plumbing fixtures and groups of plumbing fixtures to permit shut down of the fixture or equipment without affecting the remainder of the building.
2. The domestic water system valves shall be bronze construction gate valves or valves with a ball-type conventional port.
3. The gas supply to science rooms and art rooms shall have an emergency solenoid-type, automatic shutoff valve with a manual reset. The purpose of the valve is for shut down of the gas in case of an emergency or when the fire alarm system is activated. A solenoid-type, automatic shutoff valve with a manual reset shall be installed to shut the gas off to the appliances under the kitchen hood in the event there is a fire under the hood. The valves are designed normally closed and are held open by an electric solenoid valve. A mushroom-type wall switch shall be located in the room for solenoid activation.

Condensate Discharge

- The plumbing design professional should coordinate with the HVAC design professional and local utility to determine best practice for cooling system(s) condensate discharge.

Standards - Plumbing Hangers

1. Provide hangers for all horizontal, suspended, domestic, water, gas, sanitary, and storm piping with distances as noted in the state and local codes.

Standards - Plumbing Identification

1. Piping shall be identified in mechanical rooms, unfinished spaces without ceilings, above suspended lay-in acoustical ceilings, and crawl spaces for the type of service and direction of flow. Equipment shall be identified with nameplates.

Standards - Testing

1. Domestic water, storm and sanitary sewers, and gas piping shall be tested per state and local codes.

Standards - Potable Water Systems

1. All buildings shall include a potable domestic water system serving all sinks, toilets, showers, food service,

custodial needs, hose bibs, HVAC plant systems, and drinking water coolers/fountains. All municipal domestic water entering the building must pass through a reduced pressure backflow preventer to protect the outside water source from contamination in the building. Whenever possible, the backflow device shall be located inside the building. A main pressure-reducing valve is required if the incoming water pressure exceeds 75 psi. All backflow prevention devices shall be installed and maintained in accordance with the requirements of the Arkansas Department of Health and/or the municipal water purveyor.

2. Water distribution throughout the facility will be through piping systems located above ceiling areas and below insulation. Piping installed under slab areas shall be avoided where possible, unless accessible for maintenance on the system. Exception: Cafeteria Kitchen.
3. Domestic water systems within the building shall be Type K or L copper tubing. The use of polyvinyl chloride, chlorinated polyvinyl chloride, or polybutylene material will not be permitted. Appropriately graded polypropylene piping may be substituted in above grade applications.
4. Water piping and gas piping to island sinks shall be in an accessible trench in the floor with a removable cover except in kitchens and for trap primers and shall be type K copper pipe.
5. The required pressure for operation of the furthest fixture from the incoming service will determine if a pressure booster system will be required. The booster system should be a packaged unit that includes all controls. Provide a constant-speed duplex pump package with bladder-type compression tank to meet the flow requirements. It will be necessary to consider the installation of an emergency power system in order to maintain the operation of the booster system in the event of power outages, if the building is to be used during emergency-type occupancies. Coordination with the Electrical Design Professional will be necessary.
6. Insulate the piping using fiberglass insulation to minimum requirements of current Arkansas Energy Code. Vapor barrier shall be maintained throughout piping system including all valves, hangers and terminations. Seal terminations with proper vapor barrier sealant.

Standards - Domestic Hot Water Systems

1. A hot water return system with a re-circulating pump shall be required if the building hot water piping is more than 100 feet in length.
2. The on/off operation of the 120 and 140 degrees Fahrenheit water circulation pumps shall be controlled by time clock operation and an aquastat.
3. Instantaneous water heaters with a storage tank shall be required for high use applications in buildings with kitchens and/or shower room facilities. Tank-type water heaters shall be considered for use in elementary school applications having no dishwasher facilities and no locker rooms.
4. The use of thermostatic mixing valves is required to maintain hot water temperature consistent with the plumbing code requirement of a maximum of 110 degrees

Fahrenheit water to hand washing sinks and 120 degrees Fahrenheit water to showers. Use a single valve or a high/low valve system based on minimum and maximum flow rates.

5. Provide a building-wide hot water system; instantaneous water heater for remote locations.
6. Where domestic hot water return systems are employed, hot water piping shall be routed to within 10 feet horizontally of the fixture being served.

Standards - Water Conditioning and Softening Systems

1. The water shall be tested for quality to determine the makeup of the water including hardness, mineral content, and chemicals. The installation of a water conditioning/softening system shall be directly related to the results of the water testing. A total hardness of less than 10 grains will not require a softener system.
2. If the grain hardness is above 10 grains per gallon (171 ppm), the water softener shall be sized to reduce the hardness to 10 grains, but never below 6 grains. Soften the hot water only.

Complete Water Conditioning with Iron Filters

- Review with school personnel before incorporating water softening in the design. A complete water conditioning system, including iron filters, may be necessary in the event the water has high iron content from an on-site well system.

Standards - Sanitary Piping Systems

1. Piping materials shall include Schedule 40 polyvinyl chloride with solvent joints; cast iron no hub; or cast iron, hub and spigot. PVC piping in RA plenum is prohibited.
2. Fill material around piping below slab shall be compacted granular material to 95 percent-modified proctor. Piping shall not be installed parallel/directly under walls.
3. Piping above grade shall be cast iron, no hub with approved hanger spacing or schedule 40 PVC except in any plenum.
4. Acid waste piping below grade will be Schedule 40 polypropylene with fusion joints or lab grade CPVC with solvent cement joints. All acid waste piping above grade shall be Schedule 40 polypropylene with mechanical joints or lab grade CVPC with solvent cement joints. Acid waste piping in plenum applications shall be fire- and smoke-rated to meet code requirements. Acid neutralizing sumps shall be located on the exterior of the building with access to grade.
5. Provide information to the Site Design Professional as to the depth of the sewer(s) exiting the building. Provide information to the Structural Design Professional as to the location and depths of the sewer in relationship to footings and columns as they pertain to the project.
6. Insulate sanitary sewer piping carrying HVAC system condensate.

Standards - Gas Piping Systems

1. Gas piping shall be Schedule 40 black steel with screw fittings for piping 2 inches or less and welded fittings for piping 2 1/2 inches or larger.
2. Gas piping in plenums shall not contain valves or unions.
3. A gas regulator shall be provided to maintain the correct inlet pressure to each gas appliance. The inlet and outlet piping to each regulator shall be valved with Arkansas Gas Code approved valves.

4. The maximum gas pressure into the building shall be as established by the local gas company. Provide the gas company with the gas load for each appliance, and the minimum and maximum operating pressures for each appliance early in the design process.
5. Provide a valve, union, and a dirt leg at each appliance connection.
6. LP gas piping shall not be concealed.
7. Natural gas piping to island sinks shall be in an accessible trench in the floor with a removable cover.

Standards - Roof Drain and Storm Sewer Systems

1. Piping materials shall include Schedule 40 polyvinyl chloride with solvent joints; cast iron, no hub or cast iron, hub and spigot.
2. Fill material around piping below slab shall be compacted granular material to 95 percent-modified proctor. Piping shall not be installed parallel/directly under walls.
3. Piping above grade shall be cast iron, no hub, with approved hanger spacing.
4. Provide connections to all roof drains.
5. Provide information to the Site Design Professional as to the depth of the sewer(s) exiting the building. Provide information to the Structural Design Professional as to the location and depths of the sewer in relationship to footing and column pass as they pertain to the project.
6. Insulate the bottom of roof drains and branch lines from drain to downspout.
7. Insulate storm drain piping carrying HVAC condensate.

Standards - Food Service Areas Systems

1. Ware washing system will have a booster heater to provide 180-degree water unless the system utilizes a chemical dishwasher.
2. Provide 3-compartment sink with 110-degree water.
3. Provide a grease interceptor on the sanitary sewer line serving the food service area. The grease interceptor shall be located on the exterior of the building and ~~will be sized for a 500-gallon minimum capacity,~~ constructed of concrete, polyethylene, or cast iron with access to grade. Interceptor shall meet the Arkansas Plumbing Code and Local requirements. Locate the interceptor as close to the building as practical.
4. Provide 140-degree water to all kitchen equipment except hand washing lavatories and sinks.

Standards - Building Fire Protection Systems

1. All buildings shall have a complete fire suppression (sprinkler) system throughout in accordance with NFPA 13, 14 and 20 when dictated by the design professional. Available static water pressure, residual pressure, and water flow must be evaluated as a part of this determination.
2. Installation of a water storage system along with the fire pump installation may be required where insufficient water, flow, and pressure are present.
3. A backflow preventer shall be included on all incoming systems.

Standards - Plumbing Fixtures and Specialties

1. Water closets shall be china, white, hand operated or battery or hardwired infrared flush valve, wall hung or floor mounted, and low water consumption type.
2. Urinals shall be china, white, hand operated or battery~~/~~ or hardwired infrared flush valve, wall hung or floor mounted, and low water consumption type.
3. Lavatories shall be wall or counter mounted china and shall have cast brass hand operated or battery or hardwired infrared faucet. Temperature control shall be integral with the faucet or remote mixed (see Domestic Water Heater System Standards).
4. Showers shall be low water consumption, pressure-balanced type.
5. Drinking water coolers/fountains shall be refrigerated and conform to ADA standards.
6. Sinks shall be 18-gauge, 302 or 304 stainless steel
7. Science lab sinks shall be connected with acid-resistant material. The science casework manufacturer shall provide sinks and associated water, gas, and compressed air fixtures, as required.
8. Large group restrooms shall be provided with lavatories or a comparably sized wash fountain with infrared sensing or manual operation.
9. All plumbing fixtures and trim designed or designated for use by the handicapped shall meet the Americans with Disabilities Act guidelines.
10. Water supply (hot and/or cold) to the lavatories, sinks, and drinking fountains shall have angle stops with loose key handles.
11. All wall-hung lavatories, water closets, and urinals shall have wall carriers.
12. Floor drains shall be installed in each restroom (except single person toilet room), locker room, mechanical room, and kitchen area. Provide a sediment bucket in the floor drain if conditions exist where solids may enter the drain.
13. Sanitary and storm sewer cleanouts shall be installed at 100 feet on center inside and outside the building, and at changes in direction of 90 degrees or more, at the bottom of vertical risers, and as the sewer exits the building.
14. Showers shall have a hot and cold, single lever pressure balancing valve with a vandal-resistant head.
15. Service sinks shall be floor-mounted, molded stone, 10 inches high, with a wall-mounted faucet, except floor sinks, as provided in Item 21.
16. Install a cold water hose bib in each large group restroom, locker room, and mechanical room if a hose bibb is not located within 40 feet of these areas. The hose bibb shall be surface mounted behind a lockable door in restrooms and locker rooms, with access by a removable key handle.
17. Reduced pressure backflow preventers are required on the water supplies to each HVAC makeup water system.
18. A water pressure reducing station requiring 2 pressure reducing valves sized for 1/3 and 2/3 flows shall maintain the water pressure in the building to a maximum of 75 psi, if the incoming water pressure can exceed 75 psi.

Waterless Urinals

- Waterless urinals are optional.

19. Clay traps shall be provided in art rooms to prohibit clay and solids from entering the sanitary sewer. The clay trap shall be accessible to clean out the trap.
20. Trap primers or trap guards shall be required for all traps inside the building. Trap primers or trap guards shall be accessible for repair.
21. Provide minimum 12 inch floor drain sinks with hinged covers in custodial closets and the main mechanical room for emptying of the power floor cleaning units, where those devices are used.
22. Install exterior hose bibbs on all exterior faces of the building.

HVAC

Components - HVAC

- General
- System Selection Life Cycle Cost Analysis
- Outdoor Air Design Values
- Indoor Air Design Values
- Outdoor Air Ventilation
- Welding Ventilation
- Temperature Control Systems
- Ductwork
- HVAC Piping
- HVAC Insulation
- Interior and Exterior Noise Control
- Equipment Accessibility
- Closeout Documents
- Physical Education and Indoor Practice Facility

General Standards - HVAC

1. The heating, ventilating, and air conditioning system design standards criteria denoted as a part of this Facility Manual have been developed or are obtained directly from accepted engineering design references such as the ASHRAE handbooks and standards, the state of Arkansas code references, and good engineering practice. School HVAC system plans and specifications shall be prepared by a licensed professional engineer with a valid Arkansas registration. The HVAC Design Professional shall review each requirement and obtain or develop the necessary information for each specific building before proceeding with the systems design.
2. All systems shall be designed in compliance with ASHRAE Standard 90.1 "Energy Standard for Buildings except Low-Rise Residential Buildings", as modified by the Arkansas Energy Code.
3. All HVAC products shall be rated in accordance with the applicable ARI rating program (where rating has been established) or products manufactured in compliance with policies of the Arkansas HVACR Licensing Board and in compliance with Arkansas Law.
4. All new construction shall include air-conditioning except in some physical education and indoor practice facility spaces as hereinafter defined. Variances will be considered by the Division upon request.

Guidelines - HVAC System Selection Life Cycle Cost Analysis

- Several HVAC systems are applicable to Arkansas Schools. System selection should be based on a life cycle cost analysis of a minimum of three alternative systems. This requirement for System Selection Life Cycle Cost Analysis applies to New Construction, including new buildings and additions to existing buildings, and the replacement to upgrade HVAC units in existing buildings when the cumulative cooling tonnage exceeds 16 tons. The Life Cycle Cost Analysis should be submitted with the project final review documents. This analysis may be considered as an extra service to the design contract.

Guidelines - HVAC System Selection Life Cycle Cost Analysis (continued)

- The following are examples of acceptable programs for use in generating a detailed evaluation of proposed heating, ventilating, and air conditioning systems. Further, the building load calculations necessary for the design of each building will require the use of computer-generated data. Equivalent computer programs that are able to generate the necessary data for evaluation of the proposed heating, ventilating, and air conditioning systems and for generation of the building load data will be considered, but must be submitted for approval prior to use.
  - Trane Trace 700 (or the most recent version of Trane Trace)

    The Trane Trace 700 program is a PC based program used by the HVAC Design Professional for generation of detailed building system air conditioning loads, energy consumption analysis, and economic analysis. The current version can be obtained from the Trane Company, Customer Direct Service (CDS) Network, La Crosse, WI, (608) 787-3926.
  - Carrier HAP (or the most recent version of Carrier HAP)

    The Carrier Hourly Analysis Program is a PC based program used by the HVAC Design Professional for generation of detailed building system air conditioning loads, energy consumption analysis, and economic analysis. The current version can be obtained by contacting the local Carrier equipment representative or by calling (800) 253-1794.
  - DOE-2.E

    The DOE-2.E is a detailed energy analysis program developed through the United States Department of Energy. A number of vendors across the country have developed software that operates to meet the intent of the DOE-2.E program. Contact the Energy Science and Technology Software Center at (865) 576-2606.

Guidelines - HVAC System Selection Life Cycle Cost Analysis (continued)

- Occupancy loads and schedules will mirror the building usage schedules. Input occupancy should be calculated at 90 percent of capacity during normal school hours for classroom areas and the administration area. After hours occupancy can be considered negligible in these areas. Activity areas such as gymnasiums should be calculated at no more than 25 percent of the full load capacity during unoccupied operation.
- Lighting systems should be consistent throughout the building. The lighting load shall be input for consideration as a cooling load only, and should not be used to credit the winter heating load. Lighting loads should comply with the Arkansas Energy Code. The HVAC Design Professional should coordinate and review proposed lighting requirements for each building with the Electrical Design Professional prior to generating a final energy load analysis. Usage of the lighting systems should mirror the occupancy scheduling for each area in the building.
- Computer Locations and expected usage will impact every building designed. All classroom areas will be wired for computers. Include a minimum of 280 watts for each computer station in the building. This load includes the total expected heat gain for a desktop computer and color monitor.

Standards - HVAC Outdoor Air Ventilation

1. Outdoor ventilation rates shall be calculated for each occupied space and shall conform to the requirements of the Arkansas Mechanical Code minimum ventilation rates. The only exception will be an engineered ventilation system design with written approval of exception by the Arkansas HVACR Board.
2. Each system shall include controls for a 100 percent economizer cycle to cool the building when dictated by the Arkansas Energy Code.
3. Energy recovery shall be used as a part of the design for classroom, gymnasium, locker room, and student dining systems to reduce the energy consumption required to provide the necessary outdoor ventilation rates when required by the Arkansas Energy Code.
4. Carbon dioxide levels may be monitored through the direct digital temperature control (DDC) system for proof of system operation to maintain a carbon dioxide level in the building as recommended by ASHRAE Standard 62. The use of space specific carbon dioxide sensors are

Guidelines - HVAC Outdoor Air Design Values

- Summer and winter outside air design values should be derived from standard ASHRAE compiled weather data located in the latest edition of the ASHRAE Fundamentals Handbook. The city nearest the proposed construction project is to be selected for evaluation. Use the 99.6 percent design values for heating design dry-bulb and the 1 percent design values for cooling design dry-bulb and mean coincidental wet- bulb. To determine the maximum ventilation capacity, use the 1 percent design values for Humidification design dew point and mean coincident dry bulb.

recommended for this operation. Return air sensors may be considered when a unit serves multiple spaces provided accurate readings can be obtained. It is not the intention of this paragraph to require the use of carbon dioxide sensors for a reduction of outside air quantities below the calculated minimum air flow requirements.

5. Ventilation air shall be conditioned for temperature and humidity control. Acceptable methods are dedicated OSA units, energy recovery ventilators, hot gas humidity control in packaged units and OSA conditioned in an air handling system. Untempered air shall not be introduced from exterior louvers into return air plenums or duct from the outdoors into the return air ductwork.

Guidelines - HVAC Indoor Air Design Values

- Indoor air temperature design values should reflect the need for energy conservation and should be in accordance with the Arkansas Mechanical Code and the Arkansas Energy Code.
- Design should produce indoor conditions in accordance with ASHRAE Standard 55 "Thermal Environmental Conditions for Human Occupancy."
- Night setback controls should be used for all systems. Temperature should be 55 degrees Fahrenheit. The summer setup temperature shall operate as required to maintain a relative humidity in the building area that does not exceed 60 percent. Maintaining humidity levels below 60 percent will result in periodic operation of the HVAC system during the summer months to reduce the potential for mold and mildew in the building.

Guidelines - HVAC Welding Ventilation

- Different ventilation strategies may be needed in each specific case to remove air contaminants from the welder's breathing zone. General guidelines have been published in CSA W117.2 Safety in Welding, Cutting, and Allied Processes, and ANSI Z49.1 Standard Safety in Welding and Cutting.
- Mechanical ventilation should be required when welding takes place in a space less than 10,000 cubic feet per welder, or in a room with a ceiling height of less than 16 feet. Mechanical ventilation should be at a rate of 2,000 cubic feet per minute per welder. See subsequent items below.

Guidelines - HVAC Welding Ventilation (continued)

- Dependent on the application and associated hazard, ventilation strategies fall into three general categories: Natural Dilution Ventilation, Mechanical Dilution Ventilation, and Local Exhaust Ventilation
- Night setback controls should be used for all systems
- Natural Dilution Ventilation involves introduction of fresh air into the welding area through non-mechanical mean such as opening windows and doors, and the use of exterior wall louvers. This type of ventilation is generally considered the least effective, since there is no control on movement of contaminants through the work area.
- Mechanical Dilution Ventilation involves the use of wall or roof exhaust fans to draw contaminants away from the welder's breathing zone
- Local Exhaust Ventilation involves the use of dedicated exhaust hoods or movable hoods to remove contaminants from the welder's breathing zone. Movable hoods are ducted to a central exhaust system and provide the best removal of contaminants. Local exhaust ventilation is always the preferred method for removing welding fumes and gases.
- Exhaust hoods should provide a minimum velocity of 100 feet per minute
- A downdraft exhaust bench is preferred over an overhead exhaust hood
- Exhaust air velocities higher than 100 feet per minute at the arc or flame may disturb the process or shielding gas.
- Obtain the services of an HVAC design professional for special cases and when welding materials that produce high toxicity levels

Standards - HVAC Temperature Control Systems

1. All temperature control systems installed shall be electronic, direct digital controls. Pneumatic control systems will not be permitted. Each facility will be provided with the means to access the control system software with a desktop or laptop computer. It will be necessary for the HVAC Design Professional to advise the school district of the options for control and management of the building available through the direct digital control

system. ~~Building additions where less than 50% of the square footage is being added to a school campus without a DDC system may utilize 7-day programmable thermostats.~~ Additions to buildings without DDC controls, which comprise less than 50% of the resulting building's total square footage, may utilize 7-day programmable thermostats.

2. Thermostatic zoning shall be developed using good engineering practice. Dissimilar spaces shall not be grouped on the same thermostat. Each classroom shall be an independent zone. Other zones may also be required to be separately thermostatically controlled. Carefully review space requirements for these requirements. Occupied/unoccupied scheduling shall be based on the associated air handling system. Each thermostat zone associated with digital control shall have a means to override the schedule for temporary occupancy.
3. The direct digital control system shall be capable of performing time of day scheduling, night set-back, holiday scheduling and demand limiting.
4. The ventilation system control shall be set through the central direct digital controller based on global outside air temperature and humidity to maintain indoor relative humidity below 60 percent.
5. The direct digital control system shall be designed to place emergency calls to designated school personnel in the event of equipment failure.
6. Options shall be investigated with each direct digital control system for the operation of exterior, corridor, and restroom lighting systems through the energy management computer.

Standards - HVAC Ductwork

1. Duct systems shall be designed, constructed, and installed to provide minimum leakage and air noise, and to minimize system static pressure requirements. Design HVAC professional shall comply with SMACNA standards for construction and leakage standards.
2. Classrooms and other instructional spaces shall be ducted for supply to at least four (4) supply air devices
3. Ductwork shall be 26 gauge minimum
4. Flexible duct shall be rated ETL Class 1 Air Duct, complying to UL 181, with a maximum vapor barrier permeance of 0.05 Perm as measured by ASTM E96, Procedure A
5. Flex duct shall be limited to 6' in length

Standards - HVAC Piping

1. Hydronic piping 2" and below shall be type L copper piping.
2. Hydronic piping 2 ½" and above shall be schedule 40 steel with welded fittings.
3. HVAC condensate piping shall be schedule 40 or schedule 80 PVC or type M or L copper piping depending on system selection and design criteria.
4. Refrigerant piping shall be ACR copper tubing.

Standards - HVAC Insulation

1. Hydronic piping and condensate piping insulation shall be jacketed fiberglass insulation with vapor barrier and preformed fittings per the latest adopted version of the Arkansas Energy code for HVAC.
2. Duct insulation shall be FRK duct wrap and a minimum of 1 ½" with a density of .75 lbs/cf.
3. ACR piping insulation shall be closed cell elastomeric insulation with non-longitudinal seams and butt connection sealant. Provide adequate UV protection for outdoor applications.
4. Maintain vapor barrier throughout the system including hangers, joints and terminations.

Standards - HVAC Interior and Exterior Noise Control

1. The location of exterior mechanical equipment shall be reviewed by the Design Professional for its sound impact, both inside and outside the building.
2. Exterior equipment operation shall not cause indoor sound levels to exceed specified levels for the space.
3. Exterior sound levels shall be in compliance with the local governmental ordinances. When these values are not governed, the sound level created by the equipment shall not exceed 70 dB measured at the property line.

Guidelines - HVAC Interior and Exterior Noise Control

- Interior HVAC acoustic design should not cause indoor sound levels to exceed NC30

Standard - HVAC Equipment Accessibility

1. Access and service space per mechanical equipment shall be in accordance with the Arkansas Mechanical Code.

Standard - HVAC Closeout Documentation

1. The contractor and/or engineer shall provide to the School District an accurate set of as-built plans, showing all construction revisions to the design set.

Guidelines - HVAC Closeout Documentation

- O & M Manuals should be provided in duplicate for the School District
- Manuals should contain approved shop drawings, operations and maintenance instructions and parts manuals for all HVAC equipment

Standards - HVAC Physical Education and Indoor Practice Facility

1. Indoor Practice Facilities shall be heated and ventilated.
2. Ventilation systems must provide ten air changes per hour in spectator facilities where facilities are not provided with HVAC systems.
3. Ventilation systems must provide five changes per hour in non-spectator spaces.
4. The ventilation must provide intake air near playing floor level and exhaust air at the opposite high wall of the space.

Guidelines - HVAC Physical Education and Indoor Practice Facility

- Gymnasiums may be heated and ventilated rather than being provided with mechanical cooling when the HVAC systems are effectively separated from other areas of the building
- Ancillary spaces such as offices and locker rooms should be served by separate HVAC systems

Electric

Components - Electric

- Energy Usage
- Distribution
- Lighting
- Wiring Devices
- Fire Alarm Systems
- Security Systems
- Lightning Protection
- Technology
- Telecommunications Grounding
- Intercom / Bell Systems

Standards - Energy Usage - Electric

1. All systems shall be designed in compliance with the latest version of ASHRAE Standard 90.1 "Energy Standard for Buildings Except Low-Rise Residential Buildings," and the energy usage requirements prescribed by the latest Arkansas adopted version of the Arkansas Energy Code and the Department of Energy.
2. All electrical work shall be in compliance with the latest edition of the National Electrical Code (NEC) as adopted by the State of Arkansas.

Guidelines - Energy Usage - Electric

- Consideration should be given to provide a metering device to measure all electrical usage for new buildings over 6,000 SF

Standards - Electric Distribution

1. Electrical systems distributed throughout the building shall be based upon the 480-volt or 208-volt, three-phase, grounded wye configuration except electrical system extensions in existing buildings, which may match existing criteria where not economically feasible to reconfigure. All attempts shall be made to rectify potentially dangerous voltage configurations.
2. Transient voltage surge protection and lightning arrester devices shall be located on main service distribution equipment.
3. Current carrying conductors shall be a minimum No. 12 American Wire Gauge (AWG), except for systems wiring such as fire alarm, data, telephone, etc. Conductors shall only be copper except aluminum conductors which may be utilized in lieu of copper conductors for wire size 4/0 AWG and larger. Terminations must be listed compression connectors using a compatible oxide inhibitor. A School District shall put in place and submit to the Division a maintenance plan for annual review of all terminations by qualified personnel. Conductor size No. 12 AWG and No. 10 AWG must be solid type, except where flexibility is required, such as at motors. Conductors larger than No. 10 shall be stranded. Aluminum lugs for terminating copper conductors are acceptable, if labeled for that purpose.

4. Current carrying conductors shall be installed in conduit systems conforming to the NEC, latest edition adopted by the State.
5. Continuous equipment grounding conductors shall be installed in all circuits bonded to all ground lugs, bussing, switches, receptacles, equipment frames, etc., per the NEC. The main facility grounding field electrode system to ground shall be 5 ohms or less.
6. Electrical systems main service equipment shall be designed with a minimum 25 percent spare amperage capacity and 20 percent spare space capacity. Panel board loads shall not exceed 75 percent of amperage capacity and each panel shall be provided with a minimum of 6 spare overcurrent protection devices. Provide spare overcurrent protection devices in branch distribution panel boards and main service equipment boards.
7. Electrical energy distribution equipment shall be located in dedicated electrical or mechanical rooms, and mounted at heights in accordance with the "Device Locations" table at the end of this Section 7400. Main electrical service (switchboards) distribution equipment shall not be located in the main heating or cooling generating room. Branch circuit panel boards recessed in corridor walls will not be acceptable. Provide exterior lockable Main Disconnecting means.
8. Coordinate service entrance requirements with local utility service companies for electrical energy, telephone, and cable television.
9. Dry type transformers shall be National Electrical Manufacturers Association (NEMA) TP-1/TP-2 compliant energy efficient type. Dry type transformers shall be floor mounted.
10. Electrical branch circuits to 5 horsepower, 3-phase, and larger motors for air-handling units, exhaust fans, pumps, chillers, and condensing units shall be provided with phase loss protection. Protection shall prevent equipment from single phasing. Phase loss protection equipment shall be integral to starters or variable frequency drives serving the equipment.
11. Voltage drop for feeders between the service entrance equipment and the branch circuit distribution equipment shall conform to the requirements found in the latest State adopted version of the NEC.
12. The intent of connecting emergency power to selected components of the HVAC system is to provide an opportunity to limit damage from freezing weather during a power outage of short duration. The following components are not required to be connected to the emergency power source and are optional within budgets:
    - Air handling unit pre-heat coil (heating coil)
    - Cooling tower basin heaters
    - Chilled water circulating pump, when used for chiller freeze protection
13. Independent, separate raceway, wiring, and transfer switches shall be provided for emergency life safety systems and non-emergency life safety systems.
14. Run all branch circuit and feeder conduits within buildings above ceilings and within walls unless stated below. No

device conduits are permitted in or below slabs unless serving a device or millwork that requires it. Below slab conduit may be used from MDP to the secondary panels only. Conduit shall be ¾" minimum trade size. MC cable may be used for "lighting whips" of lengths less than 6'0". EMT conduit should be used within walls and above ceilings to ease future circuit and technology upgrades.

15. PVC conduit is not allowed except for the underground portion of the incoming utility service to the buildings. It must then be encased in 3" of concrete. All elbows and risers to 6" above finished floor in PVC conduit runs must be rigid steel. PVC elbows are not allowed.
16. MC cable is not allowed for use in walls to devices.

Standards - Lighting

1. Interior instructional spaces shall be artificially illuminated with energy-efficient and high-efficiency light fixtures.
2. High volume spaces such as gymnasiums, student dining, etc., shall be illuminated with high-efficiency, high-intensity discharge lamp type light fixtures; or, an equal or better energy efficient fluorescent luminaire that maintains or increases light levels. Fluorescent luminaires which are at least as efficient as high- intensity discharge fixtures are recommended over seating areas. Quartz restrike options shall be incorporated into some fixtures to provide an average of 2 foot-candles of illumination during the cool- down/warm-up (restrike) period caused by momentary electrical outages.
3. The minimum illumination (foot-candle) levels shall conform to the established Illuminating Engineers Society of North America (IES) guidelines. See the "School Lighting Levels" chart at the end of this Section 7400. Foot-candle calculation shall be developed by using computerized point-by-point analysis of classrooms and other learning spaces. Ceiling, wall, and floor material reflectances shall be verified with the Electrical Design Professional.
4. Emergency means of egress lighting shall be provided per local and NFPA Code requirements. The following areas shall have emergency illumination whether having natural illumination or not:
   - Exits and exit access corridors
   - Small and large assembly areas
   - Locker rooms
   - Student restrooms
   - Main and other dedicated electrical rooms
   - Main mechanical room and other mechanical decks
   - Emergency power equipment location
   - Administration and other building control areas
   - Kitchen/student dining
   - Interior instructional space
   - Rooms with occupant load over 50 people
   - Exterior side of exterior exit doors

   Where the total emergency power load exceeds 8 kW, emergency power shall be delivered by on-site, standby power generator. Generators rated 150 kW and below

shall use gaseous fuel (if available, large units shall be diesel).

5. Light fixtures shall be controlled by switches on a per room basis where fixtures are located. Circuit breakers will not be acceptable for turning lighting "on" and "off". Switches are to be installed in accordance with "Device Locations" table at the end of this Section 7400.
6. Exterior parking areas shall be illuminated with high-intensity, discharge lamp type light fixtures. Do not use high pressure sodium or mercury vapor. Fluorescents or LED lighting shall be used.
7. Computer labs shall be illuminated with fluorescent light fixtures constructed and configured to reduce glare on computer monitors. Minimum Visual Comfort Probability (VCP) in these rooms shall be 80%.
8. Fluorescent lighting in instructional spaces shall be oriented so the long dimension of the fixture is parallel with the chalkboard on the primary instructional wall and switched separately unless design parameters suggest otherwise. Optionally provide wall wash type fixtures to illuminate white-boards or chalk-boards.
9. Provide site lighting to foot-candle levels recommended by the IES.
10. Light fixtures located in gymnasiums and auxiliary gymnasiums shall be equipped with protective wire guards.
11. Exit signs shall be wall mounted, where possible, in lieu of ceiling mounted and be of the LED type.
12. Middle School and High School Art rooms shall be provided with supplemental track lighting that comes as close as possible to the color and quality of daylight, generally in the color temperature range of approximately 5000 Kelvin to 5900 Kelvin.
13. Walk through fluorescent lighting shall be provided to supplement main lighting in gymnasium and auxiliary gymnasiums to illuminate area to 5 foot-candles. Fixtures shall be vandal-resistant type and protected with wire guards. Mount fixture at same level as high intensity discharge lighting. LED or fluorescent lighting shall be used.
14. Options shall be investigated for control of exterior and interior corridor lighting by direct digital control, the energy management system, or occupancy sensors.
15. Interior lighting shall be controlled by occupancy sensors, automatic timed lighting controlled system or a combination of both to comply with ASHRAE 90.1 as required by the Arkansas Energy Code. Exterior lighting shall be controlled by photo sensor or astronomical time clock to comply with ASHRAE 90.1 1 as required by the Arkansas Energy Code to automatically turn lighting off when sufficient daylight is available.
16. Instructional space lighting shall be configured to provide at least two levels of light. One level shall be configured to darken the area around a video or projection screen.
17. Options shall be investigated for providing non-disruptive day-light harvesting in classrooms and other spaces with natural lighting.

Standards - Wiring Devices -Electric

1. Receptacles, switches, and other wiring devices to be installed at heights above finished floor in accordance with the "Device Locations" table at the end of this Section 7400.
2. General purpose use, 120-volt duplex receptacles shall be specification grade, 20 amp standard grounded type.
3. Separate receptacles located within instructional spaces shall be provided for general purpose uses and for computer/video technologies.
4. Instructional spaces shall be provided with a minimum of 8 general use receptacles, as well as double duplex receptacles next to computer/video technologies ports.
5. Each space or room shall be provided with a minimum of one, 120- volt receptacle.
6. General purpose receptacles in corridors shall be spaced a maximum of 50 feet apart and not on classroom circuits.
7. Office areas, conference rooms, and teacher workrooms shall be provided with a minimum of 4 receptacles.
8. Duplex receptacles within 6 feet of plumbing fixture units shall be ground fault protected. These receptacles shall be protected by a local or an integral ground fault device.
9. A maximum of 4 computers shall be on a single 20-amp, 120-volt electrical circuit with a dedicated ground, and neutral. Do not share computer circuit neutrals with other branch circuits.
10. Key-type switches protected with wire guards shall be used to control lighting in gymnasiums, auxiliary gymnasiums, and locker rooms. Non-protected key switches shall be used to control lighting in corridors, large group restrooms, and other public spaces. Instructional type spaces shall be controlled by toggle-type switches.
11. Provide an exterior, weatherproof ground fault protected duplex receptacle outside each main exterior door.
12. Electrical receptacles serving food service equipment not located against walls shall be mounted above the floor line on pedestal-type mountings.
13. Kindergarten classrooms and their auxiliary spaces shall have duplex, tamper-resistant receptacles installed.
14. Receptacles shall be side-wired using pigtails. Back-wiring or thru- wiring on device terminals is not acceptable.
15. A dedicated 20 amp charging station shall be installed per every eight instructional spaces.

Standards - Fire Alarm Systems

1. Fire alarm and fire protection systems shall be installed per the Fire Prevention Code and NFPA 70. System device mounting heights above finished floor provided in the table "Outlet Locations" at the end of this Section 7400.
2. Companies designing, installing or servicing fire alarm systems in Group E occupancies shall be properly licensed by the Arkansas Board of Private Investigators, Private Security Agencies and Alarm Systems Companies.
3. Fire alarm shop drawings shall be prepared in accordance with the Arkansas Fire Prevention Code and approved by the State Fire Marshal's office or their Designee prior to installation.

4. Main control panel shall be located in the administrative area.
5. A Sequence of Operation document shall be provided to the District with each system.

Standards - Security Systems

1. Within the base building electrical system cost, provide the following basic security systems:
   - Provide conduit rough-in and wiring only for key pad locations, motion sensors, door contacts switches, card readers, and control panel
   - System selection, installation and funding shall be by the school district
   - A minimum system design shall include door contact switches at exterior doors, and motion detectors distributed throughout corridors, administrative areas, and in rooms with 6 computers or more

Standards - Lightning Protection

1. Within the design of the base building electrical system, the Electrical Design Professional has the option of including an Underwriter's Laboratory (UL) listed and certified lightning protection system, where calculations indicate the facility may be at elevated risk. Therefore, where calculations indicate the facility may be at an elevated risk, new school buildings shall be protected but additions to existing schools with no history of damage with similar roof elevations may be omitted.

Standards - Technology

1. ~~Within~~ As a minimum in the base ~~building~~ electrical ~~system~~ cost for every construction project, provide a broadband internet connection to the building (or, to each building on the campus) and provide the Technology rough-ins required by this sub-section. Coordinate the placement of all Technology Conduits, boxes and outlets with the Technology Design Professional and in accordance with Section 7500 - Technology Systems.
2. Provide Telecommunications cable tray above corridor ceilings of academic wings. Cable tray depth shall be calculated per NEC requirements.
   - Provide 24" center-hung raceway in main corridors
   - Provide 18" center-hung raceway in secondary corridors
   - Cable tray shall connect between all intermediate closets Telecommunication Rooms (TRs) and the Main Cross- connect (MC)
   - Provide continuous bonding conductor (minimum # No.6 AWG), in accordance with NEC-250 and TIA/EIA-607-B, in all cable trays and bond to associated Telecommunications Grounding Busbar (TGB)
   - NOTE: Cable "D" devices may be used in lieu of cable trays in both main and secondary corridors, providing they are of sufficient size to clearly distinguish individual runs. J-Hooks shall be pre-galvanized, with a static load capacity of 30 lbs., and cable retainers.

- All firewall penetrations shall be appropriately and properly sealed per latest state adopted version of the NFPA

3. Junction boxes used for data/voice/video outlets shall be 2-gang, 3 1/2:" deep boxes and equipped with a minimum of a 1" conduit home run to the associated Telecommunications Cable Tray, except where noted by the Telecommunications Design Professional.
4. Telecommunications Rooms (TRs) shall be provided with a minimum of two (2) 120-volt, 30 Amp circuits for powering rack mounted UPS Units. Each receptacle used for powering UPS units shall be twist lock. Quantity and location of circuits will depend upon requirements of Technology Design professional. If the building has a standby Generator, these circuits shall be attached to the standby power. General use receptacles, as well as double duplex receptacles shall be provided next to computer/video technologies ports.
5. In concert with the "Device Locations" table at the end of this Section 7400, provide power outlets, technology cabling home-run conduits and projector mounting brackets as follows:
   - Provide one (1), 2-gang, 3-1/2" deep box for Technology use (HI station) and a quad power outlet mounted at 18" below finished ceiling for monitors installed in wall or ceiling mounts
     - Provide one (1), home run, 1-1/4" conduit from HI Station box to associated instructor LO Station box
     - Provide one (1), home run, 1" conduit from HI Station box to associated Telecommunications Cable Tray
   - Provide one (1), 2-gang, 3½" deep box for the instructor's LO station and quad power outlet at 18" AFF
     - Provide one (1), 1-1/4" conduit from LO Station box to associated monitor HI Station box
   - For locations with an Overhead Mounted Projector in lieu of a Monitor, provide one (1), 1-gang, 3-1/2" deep box for Technology use (Projector HI station) and a dual power outlet mounted in a finished ceiling tile, projector bracket in the finished ceiling
     - Provide one (1), 1-1/4" conduit from Projector HI Station box to associated instructor LO Station box
     - Provide one (1), home run, 1" conduit from Projector HI Station box to associated Telecommunications Cable Tray
6. Provide a minimum 4-3/4 inch high center divided surface applied metal raceway in computer labs where equipment is located on perimeter of room.
   - Provide one (1), 1-1/4" conduit for every six computer workstation locations stubbed up above the nearest finished ceiling and home run to the Telecommunications cable tray
7. Provide two (2), 2-gang, 3½" deep boxes for the video projector local inputs, with one on the backside of the proscenium wall and one in the control booth.

- Provide one (1) home run 1½" conduit from each box to the video projector in the ceiling. Provide a minimum of one 4" conduit for Wide Area Network (WAN) from the Service Provider (SP) Entrance (DEMARC) to the property line.

8. Provide a minimum of one 4" conduit for Wide Area Network (WAN) from the Service Provider (SP) Entrance (DEMARC) to the property line.
9. Provide one (1), 4" conduit for cable television (CATV) from the Service Provider (SP) Entrance (DEMARC) to the property line.
10. Provide one (1), 4" conduit for the telephone from the Services Provider (SP) Entrance (DEMARC) to the property line.
11. Provide a minimum of two (2), 4" conduits from the Service Provider Entrance (DEMARC) to the Main Cross-Connect (MC) Telecommunications Room (TR). Conduit runs for fiber optic cable have no more than two (2) 90 degree bends without installations of a pull box. All 90 degree bends are to be wide sweep. Pull boxes should be placed in a straight section of conduit and shall not be used in lieu of a bend. Pull box sizing shall be in accordance with TIA-569-C.
12. Provide two (2), 2" sleeves in all classroom walls.
13. All empty conduits shall be provided with a rot, mildew, and tangle resistant pull string.
14. Exterior conduit shall not exceed 600 feet between pull points and shall not contain more than two (2) 90 degree bends. Covers shall be rated per application.
15. Ground floor outlet boxes shall be rated for damp locations with a direct pathway provided under slab to the nearest telecommunications room. All telecommunications copper cabling located under slab shall be OSP rated.
16. Generic telecommunications cabling shall be installed in a hierarchal star topology.

Standards - Telecommunications Grounding

1. Provide Telecommunications Grounding/Bonding System in accordance with NEC-250 and TIA/EIA-607 using Designer approved Grounding Hardware. CAD Weld Bonding Conductors to Building Steel.
2. Provide Telecommunications Main Grounding Busbar (TMGB) in the main cross-connect, and a Grounding Busbar (TGB) in the Telecommunications Rooms (TR).
   - All TMGB and TGB Connections to be made with double- bolted, Compression style, Grounding Lugs, as a minimum. Bond TMGB to following:
     - Building Steel (minimum No. 6 AWG insulated copper bonding conductor). Sizing per TIA-607-B
     - Main Electrical Service Ground (minimum No. 6 AWG insulated copper bonding conductor). Sizing per TIA-607-B
     - Local Service Panel Ground (minimum No. 6 AWG insulated copper bonding conductor). Sizing per TIA-607-B
     - Telecommunications Bonding Backbone (TBB) that connects TMGB to other TGBs (minimum No. 6 AWG

insulated copper bonding conductor). Sizing per TIA-607-B
- Associated Telecommunications Cable Tray(s) (minimum No. 6 AWG insulated copper bonding conductor). Sizing per TIA-607-B
- Telecommunications Conduit(s) Entering TR (minimum No. 6 AWG insulated copper bonding conductor). Sizing per TIA-607-B

3. Provide Telecommunications Bonding Backbone (TBB) between all TGBs and the TMGB
   - The TBB shall be a minimum of No. 2 AWG insulated copper bonding conductor. Sizing per TIA-607-B
   - All TBB Connections to be made with double-bolted, Compression style, Grounding Lugs
4. As a minimum, the Technology Contractor shall bond the following devices to the associated TMGB and TGBs using a minimum No. 6 AWG (sizing per TIA-607-B) insulated copper bonding conductor using compression style lugs:
   - PABX equipment
   - Equipment racks and cabinets
   - TR cable ladder and tray
   - CATV Equipment
   - Lightning and surge protectors
   - Telecommunications devices
   - Coupled Bonding Conductors (CBCs)
   - Backbone cable shields
   - Telecommunication and fiber cable shields
   - Antenna cable shields
   - Raised floors

Standards - Intercom / Bell Systems

1. Provide a complete intercom communication system with call stations and speakers in each occupied space and speakers on the building exterior. Speakers shall be located and sufficiently powered to be clearly heard.
2. The intercom system shall be capable of generating various tone signals to be used in special notification situations.
3. Provide Battery Back-up for operation during a power failure.

School Lighting Levels - 2004

ROOM TYPE CLASSIFICATION	2000 IES FOOTCANDLES	RECOMMENDED DESIGN FOOTCANDLES DIRECT LIGHTING(1)	RECOMMENDED DESIGN FOOTCANDLES INDIRECT LIGHTING
ADMINISTRATIVE			
Offices/Receptionist	50	50	40
Storage Rooms	-	25	25
Restrooms	5	25-30	25-30
Conference/Resource Rooms	30-100	50	40
Health Clinic	50	50	40
Teacher Prep/Workroom	50	50	40
CLASSROOMS-GENERAL	30	50	40
Art Rooms/Kiln	50	50	40
Modular Technology Labs	-	50	40
CADD Labs	30	30	30
Industrial Tech/Production Labs	100	60	60
Computer Labs	30	40	40
Graphics Labs	30-100	50	40
Life Skills Labs	50	50	50
Science Labs	50	50	50
Laundry Rooms	-	25	25
Music Rooms	30-50	50	40
Large Group Instruction Rooms	30	50	40
MEDIA CENTER	-	50	40
Active Areas	30 vertical	50	40
Inactive Areas	5 vertical	40	40
ATHLETIC AREAS			
Gymnasium - Elementary School	100	50	-
Gymnasium - Middle School	100	50	-
Gymnasium - High School	100	60	-
Multi-use P.E. Rooms	-	50	-
Locker Rooms	10	25	25
~~**STUDENT DINING**~~ **PERFORMING ARTS**			
Assembly	10-20	20	-
Stage/Work Lights	30	20	-
Make-up/Dressing Rooms	30-50	50	-

Theatrical Control Room	10-30	30	-
Equipment room with dimmable incandescent lighting offering 10 foot-candles of illumination.			

School Lighting Levels - 2004

ROOM TYPE CLASSIFICATION	2000 IES FOOTCANDLES	RECOMMENDED DESIGN FOOTCANDLES DIRECT LIGHTING(1)	RECOMMENDED DESIGN FOOTCANDLES INDIRECT LIGHTING
STUDENT DINING	10-50	50	40
Cooking	50	75-80 (2)	-
Food Preparation	50	75-80 (2)	-
Serving Line	50	75-80 (2)	-
Ware Washing	10	75-80 (2)	-
CUSTODIAL CLOSETS	10-30	20-30	-
ELECTRICAL ROOMS	30	20-30	-
MECHANICAL ROOMS	30	30	-
PARKING AREA	.2	(1)(3)	-
DRIVEWAYS	.3	.5 (3)	-
CIRCULATION AREAS			
Building Entries	5	5-10 (3)	-
Corridors	5	20	20
Corridors with Lockers	5	20	20
Stairways	5	20	20
(1) Maintenance factor 70% LL/SF = Lamp Lumens per square foot			
(2) Foot-candles shall comply with local health department regulations			
(3) Foot-candles shall conform to Sub-section ~~4200~~ 4000			

Recommended Device Locations

ELECTRICAL OUTLET DEVICE TYPE	Masonry Wall, Base (Starter) Course Height 4 inch Mounting Height Above Floor to Bottom of Outlet (Device) Box	Masonry Wall, Base (Starter) Course Height 8 inch Mounting Height Above Floor to Bottom of Outlet (Device) Box
Receptacle outlets, microphone outlets (jacks), equipment outlets (jacks), television outlets (jacks), portable telephone outlets, computer outlets, etc.		
* General throughout	18"	18"
* Mechanical equipment rooms	52"	48"
* Above counter tops 30"H	36"	40"
36"H	44"	48"
48"H	52"	56"
* Above backsplash top	2" minimum	2" minimum
* Above radiators	6" minimum	6" minimum
* Above or adjacent to lavatories	44"	48"
* Behind domestic refrigerators	52"	56"
* Behind domestic washers and dryers	36"	32"
* Serving domestic dishwashers	2"	2"
* Wall-mounted telephone outlets	44"	48"
* Telephone/video control	44"	48"
Toggle switches	48"	48"
Recessed motor controllers	60"	56"
Electric panels, terminal cabinets, etc., to center of tub or box	50"	48"
Clocks	Near ceiling	Near ceiling
Pull stations (fire alarm)	44"	44"
Volume controls, call-in switches, doorbell buttons	44"	44"
Horn/strobes (fire alarm)	80"	80"

Technology Systems

Components - Technology Systems

- General
- Technology Wiring
- Telecommunications Room Wiring
- Telecommunications Room Interior Environment
- Telecommunications Room Terminations
- Building Technology Wiring
- Telephone Systems
- Data/Communications Network
- Central Sound System/Public Address System
- Gymnasium Sound Reinforcement System
- High School Student Dining Area Sound Reinforcement System
- Student Dining Sound Reinforcement Systems (Cafetoriums only)
- Music Room Sound Reinforcement Systems
- Security Systems (optional)
- Interactive Classroom Design (optional)

Standards - General - Technology Systems

1. A Technology System Plan and Specifications shall be prepared in accordance with the latest edition of the Building Industry Consulting Service International (BICSI) Telecommunications Distribution Methods Manual (TDMM) and/or the Institute of Electrical and Electronics Engineers (IEEE) wireless sections of the Standard 802.11 (a-y) that are applicable.
2. All work shall be performed in accordance with the latest revisions of the following standards and codes:
   - State Building Code
   - Local Building Code
   - Local Electrical Code
   - National Electrical Code
   - EIA/TIA-568-C Commercial Building Wiring Standards
   - EIA/TIA-569-C Commercial Building Standard for Telecommunication Pathways and Spaces
   - TIA 606-B Telecommunications Administration Labeling Standard
   - EIA/TIA J-STD-607-B Commercial Building Grounding/Bonding Requirements Standard
   - IEEE 802.11 (a-y)
3. A Technology System Plan shall consist of the following minimum Telecommunications Drawings, as required:
   - Campus or Site Plans, Exterior Pathways, and Inter-Building Backbones
     - Shows physical and logical connections from the perspective of an entire campus - such as actual building locations, exterior pathways, inter-building backbone cabling on plan view drawings, and major

Guidelines - Technology System

- The Technology System Plan and Specifications should be designed and approved by a Registered Communications Distribution Designer (RCDD).
- Each building and/or campus building should be connected to a broadband internet service, as is available. It is recommended that each district review the application of wireless technology throughout each building (LAN) and/or the use of a WAN for campus applications. If a wireless system is employed, then each District will decide if there is a need to maintain a hardwire connection(s) as herein specified or maintain an empty conduit system for future hardwired connections or delete cables and conduit altogether. Maintenance of both a wireless and a hardwired system in a building will not be required.

system nodes and related connections on the logical system drawings.

- Layout of complete building per floor - Serving Zone Boundaries, Backbone Systems, and Horizontal Pathways
  - The drawings should show the complete building layout per floor and indicate location of serving zones, communication equipment rooms, access points, pathways, and other systems that need to be viewed from the complete building perspective.
- Serving Zone Drawings - Drop Locations and Cable IDs
  - The building is divided up by its serving zones. Drawings to indicate drop locations, communication equipment rooms, access points and detail callouts for communication equipment rooms and other congested areas. All telecommunications labeling shall be in accordance with TIA-606-B.
- Communication Equipment Rooms - Plan Views - Tech and AMEP/Elevations - Racks and Wall Elevation
  - Detailed look at communication equipment room. Drawings should indicate technology layout (racks, ladder-racks, etc.), mechanical/electrical layout, rack elevation, and backboard elevation.

4. The Technology Design shall include the following components:
   - Mandatory Systems
     - Telephone system
     - Continuity of Operations Plan
     - Data / computer network system
     - Central sound / public address system
     - Gymnasium sound reinforcement system
     - High school student dining sound reinforcement system
     - Student dining sound reinforcement system
     - Music room sound reinforcement system
5. The Technology Designer should endeavor to reduce the quantity of Main Cross-Connect Rooms (MCs) by centralizing the MCs and/or using one MC to serve multiple floors or areas. For example, in a 3-story building, place the MC on the second floor and serve the 1st, 2nd, and 3rd floors from the same closet. The Technology Designer shall coordinate the quantity and size of MCs required with the design professional.
6. The Technology Designer should endeavor to centralize as many Technology and Control Systems as possible for the district into one school building or Network Operations Center (NOC), and interconnect the buildings and systems via fiber-optic cables whenever economically feasible. Consider using the savings from the centralization of the systems to offset the cost of the inter-building, fiber-optic cabling.

Guidelines - Technology - Optional System

- The Technology Design may (optional) include a Security System.

Standards - Technology Wiring

1. Media Standards
   - Unshielded twisted pair
     - The minimum standard for horizontal distribution wiring is six (6) cables of category 5e or higher,

4- pair, 24-gauge unshielded twisted pair (UTP) wiring, terminated in each classroom. The standard specifies 100-ohms impedance at one (1) megahertz, satisfying Integrated Services Digital Network (ISDN) and Institute of Electrical and Electronics Engineers (IEEE) 802.3 10BaseT requirements.

- Fiber Optics
  - The media standard for both intra- and inter-building backbones is OM2 50/125 micron graded-index multimode optical fiber cable. A minimum of ten fiber strand cable should be installed for each cable run.
  - Grade of optical fiber cable shall increase based on distance anticipated bandwidth requirements. All optical fiber located outside or in a wet location shall be OSP rated, loose tube construction, and shall comply with ICEA S-87-640 for mechanical properties. Exposed OSP rated cable shall not exceed 50 feet within the building.
- Cross-connect jumpers and patch cables shall be of the same performance or greater and shall be factory manufactured modular cords.
- Comply with NEC and TIA-569-C for separating unshielded copper telecommunications cable from potential EMI sources.
- Install plenum rated cable in environmental air spaces, including plenum ceilings.

Guidelines - Technology Wiring

Media wiring specifications are a minimum of category 5e. When bandwidth is expected to be above category 5e of 1 Gigabit per second (Gb/s or 100 Mhz) then category 6 or 6A for up to 10 Gigabit or 200+ Mhz should be used. From a future proofing perspective, it is always better to install the best cabling available. This is because it is so difficult to replace cabling inside walls, in ducts under floors and other difficult places to access. The rationale is that cabling will last at least 10 years and will support at least four to five generations of equipment during that time. If future equipment running at much higher data rates requires better cabling, it will be very expensive at that later time to pull out category 5e cabling and to install category 6 or 6A cabling. Category 6 250 Mhz minimum is recommended.

Guidelines - Telecommunication Room Wiring

- A telecommunication room (TR) is a local communications equipment room. This should be a dedicated room providing a secure environment for the installation and termination of cable network electronics and other telecommunications equipment, *as specified in the ADE IT Security Policy (ISTP), 2B2.*
- The main cross-connect (MC), the point where the backbones and horizontal distribution facilities intersect, should be located near the center of the area served, preferably in the building core area. Every effort should be made to secure as large an area as possible. When one MC is insufficient to cover a building, additional TRs must be established. The same parameters apply for both TRs and MCs.
- Locate telecommunication rooms *away* from any sources of electromagnetic interference, such as electrical power-supply transformers, motors, and generators. There should be *no water sources* in this area.
- There should be one telecommunications room for each 20,000 square feet zone/wing/building section. The recommended minimum closet size is 8 feet by 9 feet. Closets should be designed with adequate conduit or openings through beams and other obstructions into the accessible ceiling space. Closets should be designed with controls to limit access to authorized personnel only, *as specified in the ADE IT Security Policy (ITSP), 2B2.*
- The MC contains wiring terminations and communications equipment to serve a building. This equipment may include modular fiber distribution panels, wiring termination panels, telephone systems, concentrators/hubs that connect communication lines, routers that connect users on different networks, CATV (cable television) equipment, and equipment racks.

Standards - Telecommunication Room Interior Environment

- Telecommunication rooms require continuous climate control. Air conditioning should maintain temperature in the range of 65 to 75 degrees Fahrenheit, with relative humidity in the range of 40 to 55 percent. Telecommunication rooms require continuous climate control. The temperature and humidity in telecommunication rooms shall meet the requirements for ASHRAE Class B.
- Tile or sealed concrete floors will protect equipment from static electricity and dust.

Standards - Telecommunications Room Terminations

1. Racks must be grounded in accordance with National Electrical Code (NEC) requirements and TIA-607-B. Rack fill shall be in accordance with NEC requirements. Minimum rack clearance requirements shall be a minimum of 3 feet front clearance and 2 feet rear clearance.
2. Terminate the fiber optic cable with ST, SC, LC or pre-terminated high capacity MPO type connectors. The maximum optical attenuation for each mated connector pair must not exceed the connector manufacturer's specifications.
3. Terminate category 5e or higher cable on category 5e or higher RJ45 patch panels in all closet locations.

Standards - Building Technology Wiring

1. **Student Workstation Wiring**
   - Run two cables of category 5e or higher, 4-pair, unshielded twisted pair from each student workstation outlet to the wiring patch panel located in the telecommunication room. The cables must be a *continuous run* and not spliced. The maximum cable length must not exceed 295 feet/90 meters as specified in the EIA/TIA-568-C commercial building wiring standard. The maximum allowable horizontal cable distance is 90m of installed twisted pair cabling, with 100m of maximum total length including patch cords.
   - Each outlet must consist of either flush-mounted or surface-mounted, high-quality category 5e or higher RJ45 modular jacks with IDC-style or 110-style wire T568A or B terminations. Consistency must be maintained throughout the installation. Jacks must meet EIA/TIA-568 recommendations for category 5e or higher connecting hardware.
   - Each outlet must be terminated with two individual cables. One outlet allows for voice and the remaining outlet allows for data. The color stripes on each cable should correspond with the color stripes on the edge connector. Faceplates must match the manufacturer for RJ45 outlets at all locations. Faceplates should be modular.

Guidelines - Telecommunication Room Interior Environment

- Carpet should *not* be installed in closets.
- The major components of the building electrical system should not be co-located in the telecommunications room.
- *Closet space should be dedicated to serving telecommunication needs only.*
- Electrical installations supporting telecommunication functions only should be located in the closet.

Guidelines - Telecommunication Room Terminations

- Each TR should contain at least one universal, self-supporting 19-inch data rack with vertical and horizontal cable managers. Each rack should be securely mounted to the floor and braced to the wall using a section of cable tray.
- If fiber optic cable is to be terminated in the closet, attach a fiber optic patch panel to the uppermost part of the data rack.
- All incoming cables should be routed on the cable tray and neatly dressed down to the patch panels. A cable management panel should be installed directly above and below each patch panel.

Guidelines - Student Workstation Wiring

- Each classroom should have at *least two* student workstation outlets.
- Consideration should be given to placing at least one student workstation outlet on each wall in every classroom.
- A duplex power outlet with ground should be in close proximity to the student workstation outlet.

2. **Teacher Workstation Wiring**
   - Run two cables of category 5e or higher, 4-pair, unshielded twisted pair from the outlet to the wiring patch panel located in the telecommunication room. The cables must be a *continuous run* and not spliced. The maximum cable length must not exceed 295 feet/90 meters as specified in the EIATIA-568-C Commercial Building Wiring Standard. The maximum allowable horizontal cable distance is 90m of installed twisted pair cabling, with 100m of maximum total length including patch cords.
   - Each outlet must consist of either flush-mounted or surface-mounted, high-quality category 5e or higher RJ45 modular jacks with IDC-style or 110-style wire T568A or B terminations. Consistency must be maintained throughout the installation. Jacks must meet EIA/TIA-568 recommendations for category 5e or higher connecting hardware.
   - Each outlet must be terminated with two individual cables. One outlet allows for voice and the remaining outlet allows for data. The color stripes on each cable must correspond with the color stripes on the edge connector. Faceplates must match the manufacturer for RJ45 outlets at all locations. Faceplates should be modular.
3. **Administrative Workstation Wiring**
   - Each outlet must be terminated with two individual cables. One outlet allows for voice and the remaining outlet allows for data. The color stripes on each cable must correspond with the color stripes on the edge connector. Faceplates must match the manufacturer for RJ45 outlets at all locations.
4. **Campus Backbone Wiring**
   - Fiber optic cabling shall be the standard for interconnecting buildings in a campus environment. The fiber optic cable shall contain a minimum of ~~six~~ ten fiber strands and be placed in conduit. The cable must meet or exceed FDDI ANSI Standard X3T9.5 requirements for 1 Gbps transmission.

Guidelines - Teacher Workstation Wiring
- Each classroom should have one teacher information outlet.
- A duplex power outlet with ground should be in close proximity to the information outlet

Standards - Telephone Systems

1. A school telephone system shall be as follows:
   - Provide a 4-pair, minimum Category 5e, CM (CMP where required), UTP cable to all telephone, fax, alarm, elevator, and ancillary voice connections. Provide Multi-Pair, minimum Category 3, CM (CMP where required), UTP, trunk- cables between Telecommunications Rooms and the Main Cross-connect (MC), and between the MC and the Telecommunications Service Entrance Facility (aka DEMARC).
   - Provide telephone jacks and telephones in classrooms, offices, media center, teacher prep areas, workrooms, conference rooms, secretarial areas, telecommunication rooms, elevators, etc., as determined by the District's program needs.
   - Provide fully digital, full-duplex, digital display speakerphones with a minimum of eight (8) programmable function keys in each area where access to the telephone system is needed.
   - Provide a minimum of one fully digital, full-duplex, speakerphone attendant console with multiple programmable function keys and one-touch button calling for all extensions within the building. The attendant console should be located in the main administrative reception area.
   - Provide centralized PABX and phone instrument power with a minimum of four (4) busy-hour standby capabilities for all PABX equipment.
2. Provide personalized programming for each system within the District.
3. Provide personalized training for all users within the District.
4. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA-607-B specifications.

Guidelines - Telephone Systems

- The telephone system should provide TDM or IP-based voice communications both internally and externally throughout the building and the District.
- The PABX should be a fully digital, IP-Enabled PABX or an all-IP- Based PABX. The all-IP-Based system should maintain the same high level of functionality, redundancy, and programmable features as originally specified. Any all-IP system should employ standards-based signaling and instrument powering. All PABX systems should fully support an E911 system.
- The PABX telephone system should provide the capability for a fully digital, non-blocking, voice communications link between all classrooms and offices within the building. A telephone set is not required in each classroom; however, the necessary wiring infrastructure should be installed so as to provide access to the telephone system on an as-needed basis.
- The PABX telephone system should be capable of inter- operating on a District-wide basis using T-1, PRI, or VOIP trunking between buildings. The PABX system should be connected in order to provide a unified system throughout the District. Trunking should be designed on a P=0.01 basis.
- IP-based systems should also be provided with four (4) busy-hour standby capabilities for all powered switches located in each telecommunications room. Connect the central power supplies to building emergency power when available. All IP instruments and power sources should be IEEE 802.3af compliant.

Standards - Data / Computer Network Systems

1. The data network shall consist of the following:
   - A 4-pair, minimum category 5e compliant, CM-rated (CMP where required), UTP horizontal cabling infrastructure, terminated and tested with a level-III cable certification unit, and provided with a manufacturer's 20 year (minimum) lifetime performance-based warranty.
   - A fiber optic-based backbone cabling infrastructure equipped with multi-mode and single-mode fibers between the telecommunication rooms and the main cross-connect. The multi-mode fibers shall be terminated with fusion- spliced, factory-polished, SC or LC pigtails. The single-mode fibers shall be terminated with fusion-spliced, factory- polished, SC LC or MPO pigtails capable of 10 Gbps operation.
   - A minimum of six (6), 4-pair, minimum category 5e compliant, CM (CMP where required) rated, UTP cables from the service entrance facility to the main cross-connect for the extension of special circuits (T-1, PRI, etc.) that are provided by the service provider.
   - A 25 pair (may be more pairs based on facility size) , minimum category 3 compliant, CM (CMP where required) rated, multi-pair telecommunications UTP cable from the service entrance facility to the main cross-connect to be used for the extension of voice, fax, and alarm circuits that are provided by the service-provider. Trunk cables must be sized to accommodate all telephone system requirements. Investigate the possibility of making a single process communication cabling "utility" through the building and/or campus. The result will be a design methodology that allows a standardized cabling system to serve all communications needs throughout the process areas.
   - A minimum of six (6), 4-pair, minimum category 5e compliant, CM (CMP where required) rated, UTP cables from the main cross-connect to each telecommunications room for special data circuits.
   - A minimum of one (1), 25-pair, minimum category 3 compliant, CM (CMP where required), UTP cable from the main cross-connect to each telecommunications room for voice circuits. Trunk cables must be sized to accommodate all telephone system requirements.
   - Review the building design and place data faceplates, equipped with a single minimum category 5e compliant, CM (CMP where required) rated, UTP cable from the associated telecommunications room, below ceilings to support the deployment, by the Owner of 802.11/n wireless ethernet access points and associated wireless network switching devices and phones. Provide proper spacing for adequate coverage of entire facility. Consult with Owner and consider coverage of selected external areas, playgrounds, entrances, parking lots, commons areas,

Guidelines - Data / Computer Network Systems

- The data network should provide a "high speed" ethernet local area network to all buildings within the district, providing a minimum of 100/1000 Mbps switched ethernet connectivity between all computer devices, such as file servers, printers, etc. The backbone should consist of gigabit ethernet links between the telecommunication rooms and the main cross-connect. Inter- building links should consist of a minimum of two (2) parallel gigabit ethernet circuits arranged in a load-sharing, ethernet trunk with properly programmed VLAN and QoS support.
- The system should include all jacks, patch panels, patch cords, connectors, labels, designation strips, and equipment cabinets or racks (with associated fans, grounding/bonding, wire-managers, labels, power strips, etc.)
- The system should include all inter- and intra-building network electronics, including user layer-2 workgroup switches, layer-3 gigabit backbone switches, wireless switches, routers, and file servers.

Guidelines - Data / Computer Network Systems (continued)

- As a minimum, the network may be used to support the following applications on a local and wide area basis:
  - Data networking
  - VoIP telecommunications
  - Wireless access points
  - Video conferencing
  - Video streaming/media retrieval
  - Automation systems
  - Control systems
  - Security systems
- The network system should also include un-interruptible power supplies (UPS) for all primary components. Provide an SNMP management interface in all UPS units. Provide a minimum of 30 minute (4 hours when used for voice support or security system support) standby power for all network electronics. Connect the UPS units to the building emergency generator when available.

etc. (via externally mounted antennas). Wireless design shall be based on centralized, IEEE 802.3af compliant power sources.

1. Provide all required integration services to setup and program the network (IP addresses, VLANs, routing, wireless surveys, etc.).
2. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA J-STD-607-A specifications.

Standards - Central Sound System / Public Address System

1. Provide a building-wide central sound (public address/paging) system providing communications used for "all call" and emergency announcements. This system shall incorporate a master program clock/bell system used to generate tone signals for class change. This system shall be connected to the voice communication (telephone) system installed in all classrooms. The central sound system shall provide two-way communication with the school administrative office.
2. Provide surge-protected, weatherproof exterior horns protected with wire guards/cages, as required, on the outside of the building at playground and bus drop-off/pick-up locations. All volume controlled speakers shall be operated at a predetermined volume upon an all-call event.
3. Provide wall-mounted type horns protected with wire guards/cages, as required, in gymnasiums, auxiliary gymnasiums, and locker rooms. Non-protected, wall-mounted type horns shall be provided in high school student dining areas, technology production labs, vocal rooms, instrumental rooms, mechanical decks, or other spaces with high ambient noise levels.
4. Instructional spaces shall have speakers recessed in ceiling pads in suspended ceilings. Supply wall-mounted volume controls as required.

Guidelines - Central Sound System / Public Address

- Clock design should be based on Power over Ethernet (PoE) devices.
- Consider easily accessible, internally-mounted volume controls for all external paging horns.

Standards - Gymnasium Sound Reinforcement System

1. Provide a separate sound system in gymnasiums for use during instruction periods, student assemblies, public assemblies, and sporting events.
2. Locate main equipment cabinet directly accessible from the gymnasium for ease of adjusting sound levels.
3. Provide a minimum of 2 combination XLR microphone/ auxiliary jacks at opposite ends of space.
4. In buildings where announcements or broadcasts are to be made from bleachers, provide a single microphone and an auxiliary jack in a junction box attached to the bleachers. Provide protective cover plates.
5. Provide a wireless microphone system.
6. Loudspeakers pointed at the bleachers shall provide a maximum 3 decibels difference in sound level across the entire bleacher seating area and 25 decibels over the highest ambient noise level.
7. Provide a feedback elimination system.
8. Provide a portable console/cabinet containing a CD, ~~cassette,~~ and MP3 player unit, mic mixer, mic inputs, and

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associated audio cables for attaching to the permanently mounted microphone and auxiliary input faceplates.
9. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA-607 specifications.

Guidelines - High School Student Dining Area Sound Reinforcement

1. Provide a separate sound system in high school student dining areas for use during media productions, stage productions, student assemblies, or public assemblies.
2. The system shall be designed for a high degree of intelligibility and a full range of stereo music capabilities.
3. Locate the main equipment cabinet in the main high school student dining area control room. Provide a sound reinforcement mixing station in the control room and at the back of the high school student dining area.
4. Locate the main sound reinforcement speakers in a space so all seats are provided with a high degree of intelligibility for both stereo music and speech. Intelligibility shall be a maximum of 3 decibels over the entire seating area and 25 decibels over the highest ambient noise level.
5. Provide a minimum of 2 microphone outlets at locations in the seating area. Locate a microphone patch panel housing XLR microphone/auxiliary inputs on the stage to serve various microphone stands on stage. Provide for on-stage, monitor speakers connected to central amplifier.
6. Provide separate wireless sound systems for both performers and for attendees requiring assistive listening. The assistive listening system shall conform to the Americans with Disabilities Act guidelines.
7. Install speakers used for monitoring this sound system in ready (green) rooms so performers know when to go on stage. Such rooms may include dressing rooms, music rooms, and instrumental rooms. Consider video monitor jack for video monitoring.
8. Provide a wireless stage manager communication system dedicated for use by sound, lighting, and stage manager personnel.
9. Provide a feedback elimination system.
10. When equipped with an FM tuner, connect to an FM antenna mounted externally to the building.
11. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA-607 specifications.

Standards - Cafetorium-only Sound Reinforcement System

1. Provide a separate sound system in the student dining area for use during student assemblies or public assemblies.
2. This system shall be comprised of a permanently mounted cabinet or rack (based on space architecture) for housing production and amplification equipment connected to either ceiling- or wall-mounted speakers conforming to the architecture of the space.
3. Provide a minimum of 2 XLR hanging microphone/auxiliary

jacks at opposite ends of space for use.
4. Provide a wireless microphone system located in the rack/cabinet system.
5. Provide a feedback elimination system.
6. When equipped with an FM tuner, connect to an FM antenna mounted externally to the building.
7. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA-607 specifications.

Standards - Music Room Sound Reinforcement System

1. Provide single (shared) portable sound equipment for the playing and recording of music in the high school instrumental, vocal, and ensemble rooms.
2. Provide the instrumental, vocal, and ensemble rooms with wall-mounted speakers and a minimum of 3 XLR wall-mounted microphone jacks distributed throughout the rooms. Provide a minimum of 2 XLR hanging microphone jacks located on the ceilings.
3. The equipment rack shall be mobile housing amplification equipment.
4. Provide a feedback elimination system.
5. The entire system shall be grounded and bonded in accordance with the latest EIA/TIA-607 specifications.

Standards - Optional Security System

NOTE: The inclusion of a security system is an option available to the District. Security systems, when included in project scope, must meet the following standards. Security system recommendations are available in the adjacent Guidelines items.

1. Every system shall be UL approved and monitoring shall be provided at UL approved central station.
2. Alarm system shall have a battery backup (UPS system) for power of at least 4 hours. Provide SNMP management on UPS system and connect to network. Provide for graceful shutdown of equipment.
3. Every alarm system shall communicate over a dedicated telephone data line.
4. System shall be programmed to accept individual alarm access codes from authorized employees. Codes are not to be shared.
5. Every door, hatch or other port of entry will be fitted with an alarm contact. Each entry point will be backed up by motion detectors.
6. Panic buttons will be installed at reception areas.
7. Each keypad will have a distress code.
8. The systems will be supervised, i.e., power failure, line cut, and communication failure will signal the monitoring station of the problem.
9. Minimum Standard: Access Control Systems
   - The primary security system will be the access control system, consisting of a CPU, software, control modules, wiring, readers, and strikes/locks for selected exterior doors.

Guidelines - Optional Security System

NOTE: The inclusion of a security system is an option available to the District.

Within the building security system allowance designated in Chapter 1, provide as many of the following provisions as possible. The following recommendations represent a reasonable expectation of protection within budget constraints and security needs of the District. The design professional should specify the priority security systems to fit the site/building conditions.

- Access Control System
- Intrusion Detection System
- Closed Circuit Television (CCTV) System

Consideration shall be given to centralizing and integrating the system on a District-wide basis via the wide area network, where available.

- All access control systems shall be a commonly available operating system. If the facility is existing, the operating system shall be compatible with the existing system. Provide SNMP management on UPS system and connect to network. Provide for graceful shutdown of equipment. The controller shall be IP-connected to the network and shall permit viewing and control over the network, via PCs. Connect the central power supplies to building emergency power, when available.
- Doors protected by access control will open for exit by using a crash bar release. Each of these doors will be monitored via the door alarm contact for being propped or stuck open. In an emergency, the protected doors can be seized allowing exit only.
- The system will be on a programmed schedule that automatically unlocks the doors for admittance at the start of the day, locks doors (except the main entrance) during class hours, and locks all doors at the close of the day. This will funnel visitors to the front door where they can be observed and controlled.
- Access controls system shall be interfaced with the building fire alarm.

10. Minimum Standard: Intrusion Detection System
    - Every exterior door has a door contact and backup up by motion detection in the corridors to protect the facility from after-hours intrusion and to summon authorities in an emergency situation.
    - Install motion detectors on all floors of the facility in corridors and all rooms with outside access.
    - The alarm system shall be integrated with the building lighting system and shall activate the corridor lights and other selected areas in the event of alarm activation.
11. Minimum Standard: Closed Circuit Television Systems
    - Cameras: All cameras will be color, CCD chip technology. High contrast areas should use wide dynamic cameras. Those abilities will be designated at the design phase and based on need. All cameras will be equipped with an automatic iris to control light. Compatible lenses specific to each placement and required field of view will be used. Cameras with integral motion detectors are acceptable. Limit internal camera spacing to 150 feet maximum. Provide a dedicated camera for each building entrance. Use appropriate lenses for application.
    - Mount external cameras in an appropriate, environmentally controlled enclosure. Mount internal cameras in smoked-dome enclosures.
    - All cameras shall be capable of being viewed and digitally recorded at the same time.
    - Controllers: Should the design call for cameras that can pan, tilt, and zoom, they will require a controller that can move the cameras. The system shall have a battery backup (UPS system) for power of at least 4 hours. Provide SNMP management on UPS system and

Guidelines - Optional Security System

Access Control System

- The system should have the ability to integrate alarms and video signals into one centralized system.
- The number of doors on the system will vary from building to building; however, a minimum number of doors should be selected for access control devices.
- Card readers should be proximity or biometric readers.
- All other exterior doors should be equipped with fire panic devices to prevent entry while allowing exit. Remove exterior hardware.

connect to network. Provide for graceful shutdown of equipment. The controller shall be IP connected to the network and shall permit viewing and control over the network, via PCs. A separate security VLAN shall be established. Connect the central UPS to building emergency generator when available.

- Recorder: Each recorder shall be digital and provide for a minimum of 30 days of storage. Each recording system shall be equipped with provisions for extracting digital images and transferring to a CD or DVD. The recordings shall contain a digitally encoded date and time for each camera. Each recorder shall be equipped with digital image enhancement capabilities. The recorder shall be network connected and shall be capable of being viewed and controlled remotely from a PC workstation over the data network.
- Camera Power: All cameras will be powered by low voltage wire and transformers connected to central UPS power with a minimum of 4 hours standby. The wire will be run with the copper video transmission cable. Twisted pair cabling shall be limited to 90 meters without the use of a repeater. Category 5e, IP, or Baseband video systems are acceptable. In-line or parallel power is acceptable. Exterior installations shall be OSP rated. The wire must be tied to a support cable if run above the ground, and every camera should be grounded with surge suppressors for lightning strikes. The lightning protectors shall be properly grounded in accordance with NEC and EIA/TIA-607 and connected to the associated telecommunications grounding bus (TGB).
- Exterior Housings: Exterior cameras will be placed in climate- controlled and vandal-resistant housings. Exterior cameras will be placed no more than 1,000 feet apart. Exterior camera housings shall be grounded in accordance with NEC and EIA/TIA-607-B. Provide surge protection for all exterior mounted cameras utilizing conductive cabling.
- Monitors: Systems with 4 or fewer cameras will be monitored with a 13-inch (minimum) color monitor. Systems of 5 cameras or more will be monitored with 20-inch color monitors.

12. An exterior horn and strobe light that signals an alarm break will be part of this system.
13. The alarm company will provide monthly reports detailing alarm system use, including opening, closing, and alarm conditions.
14. Provide security screens for windows if warranted by the specific project location and exposure.

Guidelines - Optional Security System

CCTV System

- Provide exterior cameras and adequate cameras in the corridors, plus the head end equipment (digital recorder, monitors, multiplexer, and power).
  - Cameras may be stationary or they may be pan, tilt, or zoom. Pan zoom tilt (PZT) should be considered for external cameras.
  - PoE IP Cameras should be strongly considered due to migration away from analog camera systems.
  - Exterior cameras should be day/night with IR sensors.
  - The camera system should be equipped with motion detectors for changing the frame per second recording rate, depending on system set up.
- Cable runs exceeding 500 feet may require the use of fiber optic cable. Exterior installations can have the cable above or below ground
- Exterior installations can have the cable above or below ground.
- Recorders: NVR's should be used if network bandwidth allows.
- Monitors: An additional 20-inch (minimum) color monitor should be mounted on the ceiling at the public entrance to show that cameras are being used in the public areas.

Guidelines - Optional Interactive Classroom Design

Videoconferencing classrooms require special attention to ensure that the highest quality sound and visual signals are transmitted and received by participants. The following are recommendations on the building of interactive videoconferencing rooms:

- Location: A quiet, convenient and central location is best. It should be isolated or separated from the sources of loud outside noise. This minimizes the need for sound isolation treatment. The room should be near an area that allows for direct and indirect supervision of the class (for monitoring students, security and liability reasons). Access should be suitable for a person with a physical disability. A ground floor location is preferable. Areas to avoid are those that are located near high traffic areas, lifts, plumbing, workshops, and plant rooms. Care should be taken to diminish the sounds from the air conditioning ducts, the gymnasium, band room, shop, or cafeteria.
- Classroom Size: Classroom size depends on the maximum number of participants you hope to have in your room. We suggest planning for a minimum of 20 participants, but ideally be prepared to accommodate at least 25, with tables and chairs. The space should be approximately 24 feet wide by 30 feet long, with a ceiling of 9 feet minimum, to accommodate compressed interactive equipment along with 20 students, or a majority of the faculty for staff development. For teaching seminar groups involving 100 or more, the system should be placed in a lecture theatre setting. Consideration shall be given for appropriate acoustics.
- Classroom Shape: To reduce acoustic effects, square rooms should be avoided, if possible. An oblong or irregular shaped room is a better shape, as it does not encourage standing waves (and thus echoes).
- Physical Layout: Room layout will depend on the number of participants, the available space and the purpose of the room. Layout is a compromise between clear audio, the best viewing of monitors, interaction, and the space available.

Guidelines - Optional Interactive Classroom Design (continued)

- Acoustics: Audio quality is one of the most critical technical elements in a successful videoconference, and it has implications for the selection and placing of the room, as well as for its construction and treatment. The participants and presenters must hear each other clearly, both locally and remotely, without strain. Some factors influence the quality of the sound in a videoconference; namely, ambient noise, room acoustics and reverberation, and equipment configuration.
  - Acoustic treatment of rooms will need to be executed with materials that satisfy the relevant building regulations, so it is essential that this work be supervised by qualified staff.
  - The internal acoustics of a room are very important. Too much reverberation (echoes in a closed room) will present problems. Rooms should not be too absorbent, as this will present an unnatural and uncomfortable environment for the participants. A room that suffers badly from echoes should have the acoustic treatment applied to the adjacent walls rather than the two opposite ones. This will allow standing waves to be reduced in two dimensions (lengthwise and widthwise).
  - Hard blank walls can be deadened by heavy curtains, which have the added bonus of improving the décor. Carpets and other soft furnishings will improve the acoustics and will generally be more cost-effective than acoustic ceiling tile.
- Windows: The ideal room has NO windows. Windows always cause problems for television cameras due to the changing light levels. Window Treatments: If windows are unavoidable, heavy curtains or drapes should be applied to improve acoustics.
- Entrances: Entrance at rear of the room is the best option. Access should be suitable for a person with a physical disability.
- Flooring: There should be carpet on the floor. Carpets and other soft furnishings will improve the acoustics and will generally be more cost- effective than acoustic ceiling tile.

Guidelines - Optional Interactive Classroom Design (continued)

- Lighting: Fluorescent lighting is the most realistic choice for these rooms. Normal office lighting levels will be adequate, i.e., 500 Lux, and an intermediate or warm fluorescent tube color (equivalent color temperature 3200-4000 Kelvin). There should not be a buzzing sound projected from the lights in the classroom.
  - Install lighting at the front of the room but ensure that it is on a separate switch from the rest of the room lights. As a general practice, it is advised that classroom lighting, even in traditional classrooms, be "zoned" into rows of separately switched lights. These rows should run across the width of the room, not down its length. In this way the front of a room, beside the projection screen, can be darkened to give better contrast to the projected images, but still retain a good level of light over the participant's desks.
    - Recommend using high efficiency T-8 lamps and electronic ballast along with the use of occupancy light sensors to prevent energy waste in unoccupied areas and/or buildings, along with copy/work rooms, rest rooms, etc.
- HVAC: The HVAC should be seen - not heard in the classroom.
- Microphones are sensitive to moving air. The microphone amplifies normal air conditioning and can cause a large amount of background noise in a videoconference. Air conditioning/handling equipment will also require installation by experienced staff to ensure the quality of air is adequate and the temperature, humidity, etc. are of an acceptable standard.
- Communication: There should be a dedicated phone line and phone in the videoconference room. It is also recommended that there be a FAX line in the room. It is suggested that you have at least one phone and an additional phone line, or jack, in the room for a FAX line or expansion in the future.
- Computer: Videoconference rooms should have a minimum of four areas to access a computer and the Internet.

Guidelines - Optional Interactive Classroom Design (continued)

- Electrical: Electrical installations need to comply with current National Electrical Code (NEC) wiring regulations and should be carried out by competent and qualified staff. The equipment used for videoconferencing should be powered from a clean main supply to avoid electrical interference. It should not be on a circuit that is shared by large electrical loads such as plant motors, lifts, workshops, etc.
- Wiring: To minimize hum pickup, signal cables (i.e. sound and vision) should not be run parallel to main supply cables; this is especially important for microphone cables. Also, do not run over or parallel to lighting ballasts.
  - Several cables should be run from the control desk to the picture monitors and loudspeaker/audio mixer and also to the CODEC, wherever these are situated. Some provision must be made for small ducting or conduit to protect these cables.
  - When cable runs across floor spaces cannot be avoided, some form of protection must be provided. Special rubber cable protectors are available that protect the cables and minimize the risk of tripping.
- Room Color: Generally high contrast color is desired. Light Blue or light gray is commonly used. Stay away from dark and vivid colors. One recommendation is Periwinkle Blue, or Slate Gray.
- Furniture: Individual sites will have their own preferences for the type of furniture to be installed. Try to avoid bright, reflective surfaces that may cause unwanted highlights in the picture and distract the viewer from the main subject matter.

Appendix B

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS (POR)
SUMMARY AND REQUIRED SPACES

Form Printed 6/18/2015

SCHOOL DISTRICT		USER DOCUMENTATION -	
SCHOOL NAME		RUN BY:	
PROJECT NAME		DATE:	
PROJECT NUMBER			

1. NUMBER OF STUDENTS Enter maximum projected number of students during next ten years

Kindergarten		Grade 7	
Grade 1		Grade 8	
Grade 2		Grade 9	
Grade 3		Grade 10	
Grade 4		Grade 11	
Grade 5		Grade 12	
Grade 6		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: 0 Gross Square Feet

TOTAL REQUIRED SPACES	0	Square Feet	
SUPPORT SPACE ALLOWANCE	0	Square Feet	
TOTAL REQUIRED + SUPPORT SPACE ALLOWANCE	0	Square Feet	TOTAL SPACES (sum) 0 Square Feet
10% CONSTRUCTION FACTOR	0.10		NEW SPACES (sum) 0 Square Feet
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	45	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-CE 1	Career Education	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-CE	Career Education Program One	Varies	0	0	0	0	0	0	0	0		0
H-CE	Career Education Program Two	Varies	0	Varies								
H-CE	Career Education 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
E-GT-1	Gifted and Talented	850	0	0					0	0	0	0
	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
E/M/H-AD-20	Health Center Restroom	45	1	45								
	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

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS (POR)
SUMMARY AND REQUIRED SPACES

SCHOOL DISTRICT	
SCHOOL NAME	
PROJECT NAME	
PROJECT NUMBER	

USER DOCUMENTATION -
RUN BY:
DATE:

		STANDARD	REQUIRED SPACES		NEW SPACES		EXISTING SPACES (in their final configuration)		TOTAL SPACES (NEW + EXISTING)		REQUIRED SPACES CHECK	
	STUDENT DINING											
E/M/H-SD-1	Student Dining	0	1	0					0	0	-1	0
	FOOD SERVICE											
E/M/H-FS-1	Warming Kitchen	0	0	0					0	0	0	0
E/M/H-FS-2	Kitchen (total)	0	1	0								
E/M/H-FS-2a	Preparation Area	0	1	0					0	0	-1	0
E/M/H-FS-2b	Serving Area	0	1	0					0	0	-1	0
E/M/H-FS-2c	Dry Food Storage	0		0					0	0	-1	0
E/M/H-FS-2d	Cooler/Freezer	0	1	0					0	0	-1	0
E/M/H-FS-2e	Ware Washing	0	1	0					0	0	-1	0
	BUILDING SERVICES											
E/M/H-CU-1	Workroom	125	1	125					0	0	-1	-125
E/M/H-MultiSt	Vertical Circulation	0	0	0					0	0	0	0
E/M/H-BS-1	Large Group Restrooms	92		92					0	0		-92
E/M/H-BS-2	Custodial Closet	50	1	50					0	0	-1	-50
E/M/H-BS-3	Electrical Closet	50	1	50					0	0	-1	-50
E/M/H-BS-4	Telecommunications Room	64	1	64					0	0	-1	-64
E/M/H-BS-5	Corridors/Circulation	613		613					0	0		-613
E/M/H-BS-6	Mech/Elect Space/Decks	169		169					0	0		-169
E/M/H-BS-7	Storage Area	150	1	150					0	0	-1	-150
E/M/H-BS-8	Central Storage Area	150	1	150					0	0	-1	-150
E/M/H-BS-9	Loading/Receiving Area	100	1	100					0	0	-1	-100
E/M/H-BS-10	Main Cross-connect	150	1	150					0	0	-1	-150

NOTES: PLEASE DESCRIBE 1) ANY CONVERSIONS OF SPACE. FOR EXAMPLE, EXISTING 3,000 SF STUDENT DINING CONVERTED TO THREE 4TH GRADE CLASSROOMS.
2) ANY SHARED SPACES WITH OTHER SCHOOLS.

SUITABILITY ANALYSIS

Form Printed
6/18/2015

SUITABILITY ANALYSIS

BY:	0
DATE:	1/0/1900

(CHOOSE CORRECT PROJECT TYPE)

FOR ADDITION PROJECT	YES
FOR NEW SCHOOL IN DISTRICT	NO

SCHOOL DISTRICT	0
SCHOOL NAME	0
PROJECT NAME	0
PROJECT NUMBER	0

	Existing Size (GROSS SF)		POR Allowance (SF)		Difference	
TOTAL SCHOOL/CAMPUS	0		0		0	
SINGLE-PURPOSE AREAS	2008 or Before	After 2008			2008 or Before	
Physical Education			0		0	
Media Center			0		0	
Student Dining			0		0	
Performing Arts			0		0	

TOTAL SUITABILITY NEED (GROSS SF) FOR STATE FINANCIAL PARTICIPATION **0**

NOTES

- District Inputs
- From POR Summary Sheet
- Suitability Analysis Computes
- State Participation Area or Excess Area in Gross SF

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	SUGGESTED SF	Qty	AREA
	ACADEMIC CORE			
E-AC-6	Teacher Prep Area/Workroom	150		
E-AC-7	Individual Restroom	50		
E-AC-8	Instructional Material Storage	100		
E-AC-9	Instructional Multi-purpose	850		
E-MC-2	Media Specialist Office	100		
E-MC-3	Media Center Workroom/Storage	100		
E-MC-5	A/V Storage	50		
E-MC-6	Conference Room	200		
E-VA-2	Kiln/Ceramic Storage	100		
E-PE-2	P. E. Workroom/Storage	100		
M-AC-2	Project Lab/Classroom	1100		
M-AC-3	Teacher Prep Area/Workroom	200		
M-AC-4	Individual Restroom	50		
M-AC-5	Instructional Material Storage	120		
M-AC-6	Small Group Room	150		
M-AC-7	Instructional Multi-purpose Room	850		
M-MC-2	Media Specialist Office	120		
M-MC-3	Media Center Workroom/Storage	150		
M-MC-5	Media Center A/V Storage	80		
M-MC-6	Media Center Conference Room	150		
M-MC-7	Multimedia Production Room	300		
M-VA-2	Kiln/Ceramic Storage	100		
M-MU-3	Music Office	120		
M-MU-4	Music Library	120		
M-CE-2	Career Education Production Lab	1300		
M-CE-3	Career Education Storage	150		
M-FCS-1	Life Skills Lab	1100		
M-FCS-2	Life Skills Storage	100		
M-PE-2	P.E./Athletic Office	75		
M-PE-3	Staff Shower	75		
M-PE-4	Student Locker Room	350		
M-PE-5	Student Restroom/Shower	150		
M-PE-6	Physical Education Storage	200		
H-AC-6	Teacher Prep Area/Workroom	300		
H-AC-7	Individual Restroom	50		
H-AC-9	Small Group Room	150		
H-AC-10	Instructional Material Storage	150		
H-MC-2	Media Specialist Office	120		
H-MC-3	Workroom/Storage	150		
H-MC-4	A/V Storage	75		
H-MC-5	Conference Room	250		
H-MC-6	Multimedia Production Room	400		
H-MC-7	Document Storage	60		
H-VA-2	Kiln/Ceramic Storage	100		
H-MU-3	Instrument Repair Room	100		
H-MU-4	Orchestra Storage	100		
H-MU-5	Instrumental Music Library	120		
H-MU-6	Instrumental Office	120		
H-MU-7	Uniform Storage	100		
H-MU-10	Vocal Music Library	120		

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	SUGGESTED SF	Qty	AREA
H-MU-11	Vocal Office	120		
H-MU-12	Ensemble Room	150		
H-MU-13	Practice Room	80		
H-MU-14	Restroom	50		
H-PE-2	Auxiliary Gymnasium	4,000		
H-PE-5	Physical Education Storage	200		
H-PE-6	P.E./Athletic Office	75		
H-PE-7	Staff Shower	75		
H-PE-8	Athletic Director's Office	120		
H-PE-9	Lobby Services	100		
H-PE-10	Training Room	200		
H-PE-11	Physical Health Classroom	850		
H-PE-12	Multi-use P.E. Room	2,400		
	SPECIAL EDUCATION			
E-SE-6	Storage	80		
M-SE-6	Storage	100		
H-SE-6	Storage	100		
	ADMINISTRATIVE SPACES			
E-AD-1	Reception Area	150		
E-AD-2	Secretarial Area	150		
E-AD-5	Conference Room	150		
E-AD-6	Mail/Work/Copy Room	150		
E-AD-7	Administrative Storage	80		
E-AD-8	Vault/Records Storage	50		
E-AD-9	In-school Suspension	450		
E-AD-10	Restroom	50		
E-AD-12	Guidance Reception	120		
E-AD-13	Guidance Records/Storage	50		
E-AD-14	Parent Center	300		
E-AD-16	Itinerant Personnel Office	100		
E-AD-17	Family Restroom	80		
M-AD-1	Reception Area	150		
M-AD-2	Secretarial Area	150		
M-AD-5	Conference Room	150		
M-AD-6	Mail/Work/Copy Room	150		
M-AD-7	Administrative Storage	75		
M-AD-8	Vault/Records Storage	50		
M-AD-9	In-school Suspension	350		
M-AD-10	Restroom	50		
M-AD-12	Guidance Reception	120		
M-AD-13	Guidance Records/Storage	50		
M-AD-14	Parent Center	400		
M-AD-16	Itinerant Personnel Office	120		
M-AD-17	Family Restroom	80		
H-AD-1	Reception Area	150		
H-AD-2	Secretarial Area	150		
H-AD-5	Conference Room	200		
H-AD-6	Mail/Work/Copy Room	150		
H-AD-7	Administrative Storage	100		

SCHOOL DISTRICT			0	
SCHOOL NAME			0	
PROJECT NAME			0	
PROJECT NUMBER			0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT			
	SUPPORT SPACES (NOT REQUIRED)	SUGGESTED SF	Qty	AREA
H-AD-8	Vault/Records Storage	80		
H-AD-9	In-school Suspension	450		
H-AD-10	Restroom	50		
H-AD-12	Guidance Records/Storage	80		
H-AD-13	Guid. Conference Rm/Group Procedures Rm	250		
H-AD-14	Guidance Reception and Display Area	120		
H-AD-15	Parent Center	450		
H-AD-17	Itinerant Personnel Office	120		
H-AD-18	Career Center	500		
H-AD-19	Family Restroom	80		
	FOOD SERVICE			
E-SD-2	Stage	900		
E-SD-3	Staff Dining	250		
E-SD-4	Table Storage	200		
E-FS-3	Dietician Office	75		
E-FS-4	Restroom	50		
E-FS-5	Locker Room	100		
M-SD-2	Stage	1000		
M-SD-3	Staff Dining	400		
M-SD-4	Table Storage	200		
M-FS-3	Dietician Office	75		
M-FS-4	Restroom	50		
M-FS-5	Locker Room	50		
H-FS-3	Dietician Office	75		
H-FS-4	Restroom	50		
H-FS-5	Locker Room	125		
	PERFORMING ARTS			
H-PA-2	Orchestra Pit [with cover]	300		
H-PA-4	Scene Shop	400		
H-PA-5	Scene Shop Storage	250		
H-PA-6	Make-up/Dressing Room	100		
H-PA-7	Green Room	300		
H-PA-8	Costume Storage	150		
H-PA-9	Control Room	100		
H-PA-10	Lobby/Concessions/Gallery	200		
H-PA-11	Ticket Booth	80		
H-PA-12	Theatre/Drama Office	100		
H-PA-13	Storage	200		
	BUILDING SERVICES			
E-CU-2	Custodial Office	80		
M-CU-2	Custodial Workroom	63		
H-CU-2	Custodial Workroom	125		

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
SCHOOL SUPPORT SPACES (NOT REQUIRED)

Form Printed
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SCHOOL DISTRICT		0	
SCHOOL NAME		0	
PROJECT NAME		0	
PROJECT NUMBER		0	
	ONLY ENTER NEW SPACES INCLUDED IN THE PROJECT		
	SUPPORT SPACES (NOT REQUIRED)	SUGGESTED SF	Qty	AREA
		Total area of support spaces		0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION (Required for 9-12)

SCHOOL DISTRICT	0	9-12 schools must provide a minimum of three
SCHOOL NAME	0	Career Education programs. Each program must
PROJECT NAME	0	contain at least three course offerings. Allowable
PROJECT NUMBER	0	career education total space is shown on Summary sheet.

	CAREER EDUCATION	REQUIRED SIZE	NEW SPACES Qty	NEW SPACES AREA	EXISTING SPACES Qty	EXISTING SPACES AREA	TOTAL SPACES (NEW + EXISTING) Qty	TOTAL SPACES (NEW + EXISTING) AREA
Agribusiness Systems								
CE-AG-1	Agribusiness Lab	1,500					0	0
Agricultural Power, Structural, & Technical Sys.								
CE-AG-2	Ag Mechanics Lab	3,000					0	0
CE-AG-3	Outdoor Covered Work Area	800					0	0
Agricultural Science - Animal or Plant Sys.								
CE-AG-4	Outdoor Animal Science Lab	1,000					0	0
Horticulture / Plant Systems								
CE-AG-5	Greenhouse	1,800					0	0
CE-AG-6	Cold Frame	800					0	0
CE-AG-7	Shade House	300					0	0
CE-AG-8	Hydroponics Lab	250					0	0
Natural Resources / Environmental Service Sys.								
CE-AG-9	Aquaculture Lab	500					0	0
Related Spaces								
CE-AG-10	Classroom	850					0	0
CE-AG-11	Office	120					0	0
CE-AG-12	Restrooms/Locker Rooms	150					0	0
CE-AG-13	Storage	150					0	0
Business Marketing Management								
CE-BM-1	Management Lab	1,500					0	0
Office Administration								
CE-BM-2	Office Administration Lab	1,500					0	0
Hospitality								
CE-BM-3	Hospitality Lab	1,500					0	0
Lodging								
CE-BM-4	Lodging Lab	1,500					0	0
Desktop Publishing								
CE-BM-5	Desktop Publishing Lab	1,500					0	0
Multimedia								
CE-BM-6	Multimedia Lab	1,500					0	0
Programming								
CE-BM-7	Programming Lab	1,500					0	0
Accounting								
CE-BM-8	Accounting Lab	1,500					0	0
Banking & Finance								
CE-BM-9	Banking & Finance Lab	1,500					0	0
Marketing								
CE-BM-10	Marketing Lab	1,500					0	0
Related Spaces								
CE-BM-11	Classroom	850					0	0
CE-BM-12	Office	120					0	0
CE-BM-13	Storage	100					0	0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION (Required for 9-12)

SCHOOL DISTRICT	0
SCHOOL NAME	0
PROJECT NAME	0
PROJECT NUMBER	0

9-12 schools must provide a minimum of three Career Education programs. Each program must contain at least three course offerings. Allowable career education total space is shown on Summary sheet.

	CAREER EDUCATION	REQUIRED SIZE	NEW SPACES Qty	NEW SPACES AREA	EXISTING SPACES Qty	EXISTING SPACES AREA	TOTAL SPACES (NEW + EXISTING) Qty	TOTAL SPACES (NEW + EXISTING) AREA
Family & Consumer Sciences								
CE-FCS-1	Family & Consumer Sciences Lab	1,200					0	0
CE-FCS-2	Food Prep Lab (kitchen units)	600					0	0
CE-FCS-3	Sewing Lab	550					0	0
CE-FCS-4	Fitting Room	150					0	0
CE-FCS-5	Laundry	50					0	0
Consumer Services								
CE-FCS-19	Consumer Services Lab	1,500					0	0
Education & Training								
CE-FCS-6	Education & Training Lab	1,200					0	0
Food Production, Management, & Services								
CE-FCS-7	Food Production, Management & Services Lab	1,200					0	0
CE-FCS-8	Food Prep Lab (kitchen units)	600					0	0
Facilities Management, Maintenance, & Services								
CE-FCS-9	Facilities Management, Maintenance, & Services	1,200					0	0
Child Care Guidance, Management, & Services								
CE-FCS-10	Child Care Guidance, Management, & Services L	1,200					0	0
CE-FCS-11	Laundry	50					0	0
Cosmetology								
CE-FCS-12	Cosmetology Lab	2,500					0	0
Required Spaces in Cosmetology Lab - included in required SF								
CE-FCS-20	Restroom	100						
CE-FCS-21	Reception	250						
CE-FCS-22	Supply	200						
CE-FCS-23	Dispensary	150						
CE-FCS-16	Office	120						
CE-FCS-13	Cosmetology Clinic Area	1,200					0	0
CE-FCS-14	Cosmetology Instruction Area	275					0	0
Related Spaces								
CE-FCS-15	Classroom	850					0	0
CE-FCS-17	Restrooms	150					0	0
CE-FCS-18	Storage	100					0	0
Architecture and Construction Services								
Construction Technology								
CE-ARC-1	Construction Technology Lab	3,000					0	0
HVACR								
CE-ARC-2	HVACR Lab	3,000					0	0
Related Spaces								
CE-ARC-3	Classroom	850					0	0
CE-ARC-4	Office	120					0	0
CE-ARC-5	Storage	200					0	0
ARTS, AV TECHNOLOGY, & COMMUNICATION SPACES								
Advertising Design								
CE-AV-1	Advertising Design Lab	1,500					0	0
Career Communications								
CE-AV-2	Career Communications Lab	1,500					0	0
Commercial Photography								
CE-AV-3	Photography Production Lab	400					0	0

ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION (Required for 9-12)

SCHOOL DISTRICT	0		9-12 schools must provide a minimum of three
SCHOOL NAME	0		Career Education programs. Each program must
PROJECT NAME	0		contain at least three course offerings. Allowable
PROJECT NUMBER	0		career education total space is shown on Summary sheet.

	CAREER EDUCATION	REQUIRED SIZE	NEW SPACES Qty	NEW SPACES AREA	EXISTING SPACES Qty	EXISTING SPACES AREA	TOTAL SPACES (NEW + EXISTING) Qty	TOTAL SPACES (NEW + EXISTING) AREA
CE-AV-4	Photography Workroom	750					0	0
Graphic Communications								
CE-AV-6	Graphic Communication Work Area	1,800					0	0
Performing Arts								
CE-AV-7	Performing Arts Studio	1,800					0	0
CE-AV-8	Dressing Rooms	750					0	0
CE-AV-9	Performing Arts Storage	250					0	0
Radio / TV Broadcasting								
CE-AV-10	Radio / TV Broadcasting Lab	1,200					0	0
Related Spaces								
CE-AV-11	Classroom	850					0	0
CE-AV-12	Office	120					0	0
CE-AV-13	Storage	200					0	0
Government and Public Education Spaces								
ROTC								
CE-GOV-1	ROTC Lab	3,000					0	0
Related Spaces								
CE-GOV-2	Classroom	850					0	0
CE-GOV-3	Office	120					0	0
CE-GOV-4	Storage	200					0	0
Health Science Spaces								
Medical Professions Education								
CE-HSC-1	Clinic Area	500					0	0
Related Spaces								
CE-HSC-2	Classroom	850					0	0
CE-HSC-3	Office	120					0	0
CE-HSC-4	Storage	200					0	0
Law, Public Safety and Security Spaces								
Criminal Justice								
CE-LAW-1	Criminal Justice Lab (forensics)	1,200					0	0
Related Spaces								
CE-LAW-2	Classroom	850					0	0
CE-LAW-3	Office	120					0	0
CE-LAW-4	Storage	200					0	0
Manufacturing Spaces								
Electronics								
CE-MAN-1	Electronics Lab	2,000					0	0
Furniture Manufacturing								
CE-MAN-2	Furniture Manufacturing Lab	3,000					0	0
Industrial Equipment Maintenance								
CE-MAN-3	Industrial Equipment Lab	3,000					0	0
Machine Tool Technology								
CE-MAN-4	Machine Tool Lab	3,000					0	0
Major Appliance Repair								
CE-MAN-5	Major Appliance Repair Lab	3,000					0	0
Welding								

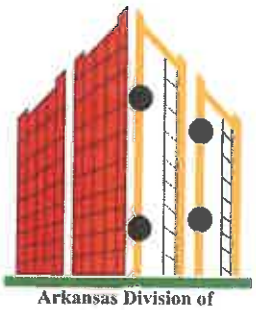
ARKANSAS SCHOOL FACILITY MANUAL
PROGRAM OF REQUIREMENTS
CAREER EDUCATION (Required for 9-12)

SCHOOL DISTRICT	0
SCHOOL NAME	0
PROJECT NAME	0
PROJECT NUMBER	0

9-12 schools must provide a minimum of three Career Education programs. Each program must contain at least three course offerings. Allowable career education total space is shown on Summary sheet.

	CAREER EDUCATION	REQUIRED SIZE	NEW SPACES Qty	NEW SPACES AREA	EXISTING SPACES Qty	EXISTING SPACES AREA	TOTAL SPACES (NEW + EXISTING) Qty	TOTAL SPACES (NEW + EXISTING) AREA
CE-MAN-6	Welding Lab	3,000					0	0
Related Spaces								
CE-MAN-7	Classroom	850					0	0
CE-MAN-8	Office	120					0	0
CE-MAN-9	Storage	200					0	0
SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS SPACES								
Drafting & Design								
CE-ENG-1	Drafting & Design Lab	2,000					0	0
Computer Engineering								
CE-ENG-2	Computer Engineering Lab	1,500					0	0
Geospatial Technology (GIS)								
CE-ENG-3	Geospatial Technology (GIS) Lab	1,500					0	0
Pre-Engineering								
CE-ENG-4	Pre-Engineering Lab	1,500					0	0
Related Spaces								
CE-ENG-5	Classroom	850					0	0
CE-ENG-6	Office	120					0	0
CE-ENG-7	Storage	200					0	0
Transportation, Distribution, & Logistics Spaces								
Automotive Collision								
CE-TDL-1	Automotive Collision Repair Lab	4,000					0	0
Automotive Service Technology								
CE-TDL-2	Automotive Service Technology Lab	4,000					0	0
Aviation Mechanics								
CE-TDL-3	Aviation Mechanics Lab	10,000					0	0
CE-TDL-4	Aviation Technology Lab	1,200					0	0
Diesel Mechanics								
CE-TDL-5	Diesel Mechanics Lab	4,000					0	0
Power Equipment Technology								
CE-TDL-6	Power Equipment Technology Lab	3,000					0	0
Related Spaces								
CE-TDL-7	Classroom	850					0	0
CE-TDL-8	Office	120					0	0
CE-TDL-9	Storage	200					0	0
		TOTALS	0	0	0	0	0	0

	REQUIRED SPACES		
	Space	STANDARD SIZE Square Feet	Notes
	ACADEMIC CORE		
E-AC-3	Kindergarten Classroom	1000	Maximum class size 20 students
E-AC-4	Kindergarten Restroom	45	One per kindergarten classroom
E-AC-5a	Elem Classroom Grades 1-3	850	Maximum class size 25 students
E-AC-5b	Elem Classroom Grades 4-5	850	Maximum class size 28 students
M-AC-1a	MS Classroom Grade 6	850	Maximum class size 28 students
M-AC-1b	MS Classroom Grades 7-8	850	Maximum class size 30 students
M-CE-1	Workforce Development	1,300	Two required for 700 or more students.
H-AC-1	HS Classroom	850	Maximum class size 30 students.
H-AC-2	Science Clrm/Lab-Gen/Physics	1,440	Minimum one plus one per each 500 students
H-AC-3	Science Clrm/Lab-Chemistry	1,440	One per each 500 students above 1,000 students
H-AC-4	Science Clrm/Lab-Biol/Life Sci	1,440	One minimum to 1000 students. Additional for each 500 above 1000 students.
H-AC-5	Science Prep	300	
H-AC-11	Chemical Storage	150	One miminum. Two above 1500 students.
H-AC-12	Multi-Use Room	1,500	
H-AC-13	Instructional Multi-Purpose Rm	850	
H-AC-8	Project Lab/Classroom	1,100	One minimum to 1000 students. Additional for each 500 above 1000 students.
E-MC-1	Reading Room/Circulation	Computed	10% of the student capacity multiplied by 35 SF per student.
E-MC-4	Computer Lab	900	
M/H-MC-1	Reading Room/Circulation	Computed	10% of the student capacity multiplied by 40 SF per student.
M-MC-4	Media Center Computer Lab	900	
E-VA-1	Art Room	1200	Required for 550 or more students.
E-VA-3	Art Material Storage	80	Required for 550 or more students.
E-AC-10	Fine Arts Instruction Room	1,200	Substituted for Art and Music Room in ES with less than 550 students
E-AC-11	Fine Arts Instruction Storage	100	Substituted for Art and Music Storage in ES with less than 550 students
M-VA-1	Art Room	1200	
H-VA-1	Art Room	1200	Minimum one, plus one for each 500 students
M/H-VA-3	Art Material Storage	100	
E-MU-1	Music Room	1,200	Required for 550 or more students.
E-MU-2	Music Storage	100	Required for 550 or more students.
M-MU-2	Music Storage	100	Required for 550 or more students.
M/H-MU-1	Instrumental Room	1,400	Minimum one plus additional room for more than 1000 students.
H-MU-2	Instrument Storage	Computed	Minimum 200 SF. One-half SF per student.
M-MU-8	Vocal Room	1,200	Required for 700 or more students
H-MU-8	Vocal Room	1,200	Minimum one for 500 students plus additional room for more than 2000 students.
H-MU-9	Vocal Storage	150	One per vocal room.
E-PE-1	PE Area	Computed	10 SF per student. Minimum 2,500 SF, Maximum 10,000 SF. Minimum single space size 900 SF.
M-PE-1	PE Area	Computed	15 SF per student. Minimum 4,000 SF, Maximum 10,000 SF. Minimum single space size 900 SF.
H-PE-1	PE Area	Computed	15 SF per student. Min 6,000 SF, Max 30,000 SF. Includes aux gym above 1000 students. Minimum 900 SF.
H-PE-3	Student Locker Room	Computed	Minimum 4 @ 400 SF. Maximum 6 @ 850 SF.
H-PE-4	Student Restroom/Shower	Computed	Minimum 2 @ 150 SF. Maximum 6 @ 350 SF.
H-CE	Career Education Program One	Varies	Total minimum 8,000 SF. Maximum 23,000 SF. 15 SF/student.
H-CE	Career Education Program Two	Varies	
H-CE	Career Education Program Three	Varies	
	SPECIAL EDUCATION		
E/M/H-SE-1	Self-contained Classroom	850	Two required for 1,000 students and above.
E/M/H-SE-2	Workroom/Conference	150	Two required for 1,000 students and above.
E/M/H-SE-3	Restroom/Shower	100	Two required for 1,000 students and above.
E/M/H-SE-4	Special Education/Resource	450	Two required for 1,000 students and above.
E/M/H-SE-5	Speech Therapy	475	Two required for 1,000 students and above.
E/M/H-SE-7	OT/PT	350	Two required for 1,000 students and above.
E-GT-1	Gifted and Talented	850	
	ADMINISTRATIVE SPACES		
E/M/H-AD-3	Principal's Office	150	
E/M/H-AD-4	Assistant Principal's Office	120	Required for 500 or more students.
E/M/H-AD-11	Guidance Counselor's Office	120	Minimum 1. Must maintain ratio of 1:450
E/M/H-AD-15	Health Center	250	
	PERFORMING ARTS		
H-PA-1	Auditorium	Computed	Minimum 1500 SF. 5 SF per 9-12 student.
H-PA-3	Stage Area (includes wings)	Computed	Minimum 600 SF. 2 SF per 9-12 student.
	STUDENT DINING		
E/M/H-SD-1	Student Dining	Computed	One-half of the student capacity multiplied by 15 SF per student.
	FOOD SERVICE		Only one of the two kitchens is to be used - either E-FS-1 or E-FS-2 - not both.
E/M/H-FS-1	Warming Kitchen	Computed	2 SF per student.
E/M/H-FS-2	Kitchen (total)	Computed	Equal to sum of areas for preparation, serving, dry food storage, cooler/freezer, and ware washing
E/M/H-FS-2a	Preparation Area	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 36%.
E/M/H-FS-2b	Serving Area	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 34%.
E/M/H-FS-2c	Dry Food Storage	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 11%.
E/M/H-FS-2d	Cooler/Freezer	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 10%.
E/M/H-FS-2e	Ware Washing	Computed	Student capacity multiplied by 3.5 SF per student multiplied by 9%.
	BUILDING SERVICES		
E/M/H-CU-1	Workroom	Computed	0.5 SF per student. Minimum 125 SF.
E/M/H-MultiSt	Vertical Circulation	Computed	Vertical Circulation for Multi-Story Schools
E/M/H-BS-1	Large Group Restrooms	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 3%
E/M/H-BS-2	Custodial Closet	50	
E/M/H-BS-3	Electrical Closet	50	
E/M/H-BS-4	Telecommunications Room	64	
E/M/H-BS-5	Corridors/Circulation	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 20%
E/M/H-BS-6	Mech/Elect Space/Decks	Computed	Equal to the sum of the program areas, excluding building services, multiplied by 5.5%
E/M/H-BS-7	Storage Area	150	
E/M/H-BS-8	Central Storage Area	150	
E/M/H-BS-9	Loading/Receiving Area	100	
E/M/H-BS-10	Main Cross-connect	150	



Arkansas Division of
Public School Academic
Facilities and Transportation

ACADEMIC FACILITIES PARTNERSHIP PROGRAM

~~September 2011~~

PROJECT AGREEMENT

(Applicable beginning with Partnership Projects for ~~2013-2015~~ 2021-2023 Biennium)

Project Name: Click to enter Project Name.

Project Number: Click to enter Project Number.

This Project Agreement *("Agreement")* is made and entered into by and between the ***Division of Public School Academic Facilities and Transportation*** *("Division")* and the Click to enter District Name ***School District*** *("District")*, Click to enter County. ***County***, pursuant to A.C.A. § 6-20-2507.

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~~ 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 Click to enter Date. and be completed on Click to enter Date..

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~~ District certifies that scope planning and financial planning have been completed prior to the project application submission. No additional aspect of the project will proceed prior to the signing of this ~~agreement~~ Agreement. By signing, the ~~district~~ District certifies that it has not begun the project beyond the steps outlined above. The signing of this ~~agreement~~ 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~~ District further acknowledges by signing that, should it be determined that the Project began prior to the signing of this ~~agreement~~ Agreement, the Commission may exercise one of the following options: (1) ~~Exercise~~ exercise its authority for project disapproval, (2) ~~Declare~~ declare any project aspects undertaken prior to the signing date ineligible for program funds, or (3) ~~Require~~ require the ~~district~~ District to modify any plans and or contracts such that they are in conformance with the provisions of this ~~agreement~~ Agreement. The ~~district~~ District agrees that should any of these options be exercised by the Commission, the ~~agreement~~ Agreement will be amended and the State Financial Participation adjusted accordingly. The Commission also may ~~also~~ exercise ~~their~~ its option to amend the ~~agreement~~ Agreement under any of the following conditions: (1) should the plan review or the approval of a variance request by the ~~district~~ District cause a change in scope; ~~or~~ (2) the final contract price alters the initial State Financial Participation as stated ~~on~~ in the ~~agreement~~ Agreement; (3) should it be discovered that the District submitted any inaccurate information on the project funding application; ~~(4) should it be discovered that the Division calculations resulted in excess Qualified Cost or State Financial Participation;~~ or ~~(5)~~ (4) the District receives a safe room grant from ADEM or FEMA.

Furthermore, if construction of the project has not commenced by *(enter date 18 months from Commission approval)* Click to enter Date, this ~~agreement~~ Agreement is null and void and any monies paid by the ~~state~~ State to a ~~district~~ District shall be subject to immediate recapture by the ~~state~~ State. ~~The project must be completed, as certified by the Division, and final pay requests submitted within four (4) years of the project final approval and funding by the Commission~~. *The project must be completed, as evidenced by a Certificate of Occupancy presented to the Division within four (4) years of funding. A final pay request must be submitted within one (1) year of the presentation of the Certificate of Occupancy.* The parties agree to exercise good faith in the execution of this ~~agreement~~ 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~~ 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:

1. Campus Name: Click to enter Campus Name.

2. Building Name: Click to enter Building Name.

If this is a warm, safe and dry project, give complete description of the system, or systems, being replaced in the detailed scopes of steps 3 and 4.

3. District inserts detail scope of the actual **total** project here:

a. Click to enter actual Total Scope.

(Do not attach the application/funded scope as the total scope)

b. Total project square feet or appropriate unit : Click to enter Project Size.

4. District inserts detailed scope of the **funded** portion of work here:

a. Click to enter Funded Scope.

(Do not attach the application as the scope)

b. Funded project square feet or appropriate unit: Click to enter Funded Size.

B. The ~~division~~ Division and the ~~district~~ 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~~ Division policies and rules, unless a variance is requested and approved by the Division. The ~~district~~ District shall not use any of the project constructed pursuant to this ~~agreement~~ 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 $Click to enter Total Budget..

State financial participation of the total Project budget shall be: $Click to enter State Participation..

State "green building incentive": $Click to enter Green Building Incentive..

Total ~~state~~ State financial participation: $Click to enter Total State Financial Participation..

The District's local share of the total Project budget shall be $Click to enter Districts Local Share of Project. as set forth in Article IV of this Agreement.

D. The ~~district~~ District shall provide to the ~~division~~ Division, at the time of the signing of this ~~agreement~~ 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 in accordance with Appendix B, Part 1 of this ~~agreement~~ Agreement.

III. RESPONSIBILITIES DURING COURSE OF PROJECT

The ~~division~~ Division and ~~district~~ 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 Construction drawings in PDF format and full sized printed copy (*preliminary floor plans for space projects recommended for preliminary review)*	Review for conformance with the Arkansas *Public* School Academic Facility Manual
Site selection and request	Provide recommended guidelines contained in the Arkansas *Public* School *Academic* Facility Manual
Request for variance consideration of the Arkansas Public School Academic Facility Manual	Division plan review and variance determination
Educational program choices	Approval in accordance with design and material choices with current state law and Arkansas *Public School Academic* 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	Verify new buildings are in the MAPPS database and the computerized maintenance management system
Enter new buildings and spaces into the Master Plan Web Tool as prescribed by the Division	

A. 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.
B. 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: ($Click to enter Amount.). *(The ~~school district~~ District is responsible for the administration of the bond sale (if applicable), all necessary notices and cost associated therewith. The proceeds of any such bonds or notes, except any premiums, accrued interest and interest included in the amount of the bonds or notes, shall be used first to retire any bond anticipation notes issued by the District for the Project).*
C. Funded from locally donated contributions: ($Click to enter Amount.).
(To include letters of credit, moneys donated or contributions spent directly by a third party.)
D. Funded from Grant sources: ($Click to enter Amount.).
(Specify origin of Grant and any special conditions that might affect this Project as a result of the grant award.) Includes FEMA/ADEM (safe rooms).
E. Funded from operational fund balances: ($Click to enter Amount.).
(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~~ District, as ~~state~~ 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~~ 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~~ State funds over new Projects for which initial ~~state~~ 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~~ District academic facilities wealth index and basis of ~~state~~ 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~~ State 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~~ State share is limited to the ~~state~~ State financial participation as stated in the ~~agreement~~ Agreement and any amendments.

H. This Agreement is contingent on and subject to the ~~district's~~ 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~~ State funds to the District for the Project that is the subject of this ~~agreement~~ Agreement if the District fails to raise local resources and apply local resources toward the Project as provided under this ~~agreement~~ Agreement.

VII. 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~~ 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~~ State annotated codes, policies or rules governing ~~state~~ State procurement practices and contract administration.

B. The ~~division~~ Division may recommend contract formats for projects of varying size and estimated cost.

C. The ~~division~~ Division may 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 the Architectural Contract Recommendations Document found on the ~~division~~ Division website.

D. The ~~division~~ Division may recommend an Invitation for Bids and Special Clauses for use by the District. The Construction Contract Recommendations Document can be found on the Division website. 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.

E. 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~~ State funds.

F. The District will be responsible for all administrative measures of the bidding procedures.

G. 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~~ District financial balances.

H. The Division will make final payment to the District upon: (1) receipt of the final invoice submitted to the District by the contracted service provider, (2) entry by the District of any new facilities, including detailed space data, into the Master Plan, and (3) final inspection by the Division. 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. All pay requests shall be clearly identifiable and chargeable to the project listed in this ~~agreement~~ Agreement. Combining projects under one master contract is allowed as long as each project is billed separately.

I. 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 District fails to comply with any and all ~~state~~ State laws regarding school construction.

VIII. MAINTENANCE OF COMPLETED FACILITIES

Upon completion of the project and prior to final payment by the Division, the ~~district~~ District will create the preventative maintenance schedules of any new space facility included in the District's overall maintenance plan contained in the ~~district's~~ District's computerized maintenance management system as required by the Academic Facilities Master Plan prior to final payment by the Division.

IX. AGREEMENT CONSIDERATIONS

A. All provisions of this Agreement are contingent upon the ~~district's~~District's full compliance with § 6-20-2501 *et. seq.*, the Partnership Rules and the Commission's determination the Project continues to be a prudent and resourceful use of ~~state~~ State funds, and the ability of the ~~district~~ District to meet required times or obtain appropriate waivers and raise specified local resources to support the Project. Any failure of the ~~district~~ District in these areas shall be grounds for this Agreement to be deemed null and void by the Commission and for the ~~district~~ District to be required to reimburse any partnership funds provided to the ~~district~~ District for any partnership project the ~~district~~ District failed to maintain compliance on.

B. Nothing in this Agreement shall be construed to waive the provisions of ~~Sovereign Immunity~~ sovereign immunity or any other defense or immunity to which the ~~State~~ of Arkansas or its Commissions, Divisions, or Agencies may be entitled.

C. All concerns and issues related to this Agreement are governed by the provisions of §6-20-2501 *et.seq.*

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

In witness whereof, the parties have executed this Agreement on the date(s) set forth below.

By: _____

Superintendent

_____

School District

Date: _____

By: _____

Director, Division of Public School Academic Facilities and Transportation

Date: _____

~~DPSAFT Long Form 1, September 2011~~