

Chapter	Section	Recommended Change	DRAFTED CHANGE TO FACILITY MANUAL	COMMENTS
Table of Contents	Table of Contents	CHANGE to lower case: Chapter 1: How To Use This Manual • 1000 - How To Use This Manual ADD new Chapter 8	Chapter 1: How To Use This Manual • 1000 - How To Use This Manual Chapter 8: Safety and Security • 8000 - Safety and Security	typos/punctuation Add new Chapter 8
FM 1000	1000-2, Informational	1000-2, para 2: CORRECT typos and punctuation para 4: CORRECT sentence structure for clarification para 5: CORRECT capitalization; CHANGE Chapter 4 title to Site Selection and Design para 5: ADD Chapter 8: Safety and Security 1000-3, Chapter 1: How to Use This Manual Paragraph 1, DELETE phrase "a glossary of general APSAFM definitions and abbreviations;" Chapter 1 does not contain a glossary of general definitions and abbreviations.	remove underscores. Add comma after "guidelines." 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. • Chapter 1: How To Use This Manual • Chapter 4: Site Guidelines, Selection and Design • Chapter 8: Safety and Security 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.	typos/punctuation Rename Chapter 4 Add new Chapter 8
FM 1000	1000-4, Informational	1000-4, ADD paragraph 2, "Chapter 8: Safety and Security"	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.	clarification. Oversight in previous revision.
FM 2000	2000-1, Informational	2000-1, para 1: ITALICIZE title of statute for clarification	Arkansas Code Annotated § 6-21-806 entitled <i>Academic Facilities Master Plan Program - School Districts</i> 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.	Title font italicized for clarification
FM 2000	2000-1, Guidelines	Guideline, paragraph 2, INSERT "Chapter 3, Section" clarification/correction	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.	Clarification
FM 3000	3000-1, School Size and Career Education	3000-1, para 1 "School Size": CORRECT punctuation; add comma after "by grade level"	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.	correct typos/punctuation
FM 4000	4000-1, Standards	3000-1, para 3 "Career Education" typo CORRECTION in Career Education third bullet "at least one..." ADD paragraph 1, which invokes the site selection requirements of Act 858 of 2019, amending ACA 6-21-809 (b)(3). 1. 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.	High schools and K-12 combination schools must provide access to at least one Program of Study within each occupational area in grades 9-12. 1. 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.	New standard required by legislation

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FM 4000	4000-2, Guidelines	<p>FM 4000-2 Fencing ADD 3 paragraphs: 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.</p> <p>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.</p> <p>Fencing materials may vary widely, but should be durable and low maintenance.</p> <p>4000 Site Design bullet 16: correct grammar/spelling, 'Sewarage' vs 'Sewage'</p>	<p>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.</p> <p>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.</p> <p>Fencing materials may vary widely, but should be durable and low maintenance.</p>	<p>Recommendations by Advisory Subcommittee on Facility Manual standards and guidelines</p>
FM 4000	4000-5, Guidelines	<p>4000 Site Design bullet 16: correct grammar/spelling, 'Sewarage' vs 'Sewage'</p>	<p>Sanitary/Sewerage-Sewage</p>	<p>Correct spelling</p>
FM 4000	4000-7, Standards	<p>ADD paragraph, page 7: 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.</p>	<p>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.</p>	<p>New standard required by legislation</p>
FM 4000	4000-8, Guidelines	<p>4000-8 Site Utilities ADD bullet: "Utility Services should be placed underground, where possible. Overhead lines, if required, should be placed away from play areas and playgrounds." ADD bullet: "Electrical transformers and other utility apparatuses should be placed away from play areas, playgrounds, and pedestrian walkways, or adequately fenced to prohibit student access."</p>	<p>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 apparatuses should be placed away from play areas, playgrounds, and pedestrian walkways, or adequately fenced to prohibit student access.</p>	<p>New standards recommended by Advisory Subcommittee on Facility Manual standards and guidelines</p>
FM 4000	4000-12, Guidelines	<p>4000-12 Detention Pond ADD bullet: "Stormwater 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."</p>	<p>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.</p>	<p>New standards recommended by Advisory Subcommittee on Facility Manual standards and guidelines</p>
FM 4000	4000-12, Guidelines	<p>4000-12 Sanitary/Sewarage CORRECT grammar/spelling, 'Sewarage' vs 'Sewage'</p>	<p>Sanitary/Sewerage-Sewage The disposal of sanitary sewerage sewage to the local utility should be approved by the local authority having jurisdiction. The disposal of sanitary sewerage sewage to the local utility should be approved by the local authority having jurisdiction.</p>	<p>Correct spelling</p>

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FM 4000	4000-13, Guidelines	<p>4000-13 Playgrounds ADD (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.</p> <p>4000-13 Lighting bullet 1: INSERT "Provide a minimum 10-foot-candle..." and insert "Provide a minimum 5 foot-candle..."</p> <p>bullet 2: AMEND second bullet of this section to: "Light fixtures should incorporate either high-intensity discharge or LED type lamp/fixtures located directly over doors, or recessed in overhangs or soffits located directly over doors. Fixtures shall be designed for exterior use. Wall-mounted fixtures shall be vandal resistant."</p> <p>bullet 3: INSERT "minimum of 0.5..." and "minimum of 0.5...". Last sentence, insert "...parking areas and a minimum of 3.0 foot-candles at bus..."</p>	<p>Playgrounds</p> <ul style="list-style-type: none"> 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. <p>Lighting</p> <ul style="list-style-type: none"> Provide a minimum 10-foot-candle illumination level at main building entrances. Provide a minimum 5-foot-candle illumination level at all entrances except main entrance. Light fixtures should incorporate either high-intensity 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.
FM 4000	4000-14, Guidelines	<p>FW 4000-14 Lighting bullet 4: AMEND the fourth bullet of this section to: "Lighting should 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. 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."</p> <p>ADD bullet: bullet 5: "Site lighting should be coordinated with the architectural outdoor lighting."</p>	<p>Subcommittee recommendation to include new technology in guidelines on lighting, lighting safety and support structures</p>
FM 4000	4000-14, Guidelines	<p>4000-14 Landscaping ADD bullet: bullet 5: "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."</p>	<p>Landscaping 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.</p>
FM 5000	5000-1, Standards	<p>5000-1 Program of Requirements REMOVE link to POR and replace with reference to division website</p>	<p>Advisory subcommittee recommendations for landscape design</p>
FM 5000	5000-1, POR	<p>Program of Requirements - Summary (Excel format) Summary page 1, item E/M/H-AD-15, Health Center: CHANGE standard square footage from 250 to 360 10/17/18: CHANGE formula in cell M69 to remove 5th grade enrollment "if statement 10/17/18: REFORMAT columns to align all cell data</p>	<p>Reference to Division's website in lieu of a hyperlink that may be modified before to next revision</p>
FM 5000			<p>Increase Health Center square footage as recommended by Arkansas Public Schools Health Services Advisory Committee. Correction to formula and standardize formatting.</p>

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FM 6000	6000-1, Introduction	1. Paragraph 1: spelling and grammatical corrections 2. Paragraphs 2,3: REMOVE "bracketing chapter/section" in various places and REPLACE with "Program of Requirements" and/or "Chapter 5".	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 areas in each school level. The purpose is to provide the Design Professionals and School Districts with guidelines to condition, finish, and equip each space.	Correct spelling and grammar. Remove references to "bracketing" in lieu of Program of Requirements (POR)
FM 6100	6103-15, Standards	FM 6103 Elementary Administration 6103-15, Health Clinic spaceplate 6103 E-AD-15, ADD note to cite requirements of ACA 6-20-2517 (b)	The diagram is not intended to fix the size or shape of that room. The size of each space is stated in the bracketing chapter Program of Requirements (Chapter 5). Features noted are desirable, but quantities must be determined in relation to the size and capacity stated in the bracketing section-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 bracketing section Program of Requirements and on the space plate. Example: E-AC-1 (E = elementary, AC = academic core, 1 = space plate #11). 1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)	Change spaceplate standards to incorporate legislation requirements
FM 6200	6203-15, Standards	FM 6203 Middle Administration 6203-15, Health Clinic spaceplate 6203 M-AD-15, ADD note to cite requirements of ACA 6-20-2517 (b)	1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)	Change spaceplate standards to incorporate legislation requirements
FM 6300	6303-16, Standards	FM 6303 High Administration 6303-16, Health Clinic spaceplate 6303 H-AD-16, ADD note to cite requirements of ACA 6-20-2517 (b)	1. Health Center must meet the requirements of Arkansas Code Annotated § 6-20-2517 (b)	Change spaceplate standards to incorporate legislation requirements
FM 6300	6309-3, Standards	FM 6309-3, High Performing Arts 6309-3, Stage Area spaceplate 6309 H-PA-3, ADD note 3 to define a performing arts "stage"	3. Stage: A permanent structure fixed within a building utilized for entertainment or presentations, which includes overhead herring curtains, drop, scenery or stage effects in addition to theatrical lighting and sound systems. Portable, retractable, fold-in, and telescopic platforms are not suitable substitutes.	Define "stage" in the spaceplate standards. Clarification.
FM 7050	7050-1, Standards	7050-1 Components ADD 1 bullet (new section): Bullet #11: Landscape & Irrigation DELETE 1 bullet: Site Lighting	<ul style="list-style-type: none"> • Landscape and Irrigation • Site Lighting 	Site Lighting moved to section 4000
FM 7050	7050-1, Standards	7050-1 General Standards: Para 6, Bullet #5: DELETE "Arkansas Highway and Transportation Department (AHTD)" and INSERT "Arkansas Department of Transportation (ARDOT)"	<ul style="list-style-type: none"> • Arkansas Highway and Transportation Department (AHTD) Materials-Arkansas Department of Transportation (ARDOT) Specifications 	Correction to Department Name and standard

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FM 7050	7050-3, Guidelines	7050-3 Signage and Striping CORRECT spelling; change "safe" to "safe"	Striping and pavement markings should be considered to aid in the safe and efficient movement of vehicles through the site.
FM 7050	7050-3, Standards	7050-3 Site Design Standards ADD new paragraph 7: 7. Fencing - Fencing in and around playgrounds shall conform to ASTM F2049.	7. Fencing - Fencing in and around playgrounds shall conform to ASTM F2049.
FM 7050	7050-3, Standards	ADD new paragraph 8: 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.	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.
FM 7050	7050-3, Standards	7050-3 Pavement Design Standards Para 4, DELETE "Highway and Transportation" and INSERT "Department of Transportation" after "Arkansas".	4. Pavement and base materials shall conform to the Arkansas Highway and Transportation Department of Transportation specifications for materials and pavement design.
FM 7050	7050-5, Standards	7050-5, Grading and Drainage Design Standards Para 9, REPLACE paragraph with: "Stormwater 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." ADD para 10, which is the last sentence of original para 9, regarding slope. RENUMBER subsequent paragraphs (11 and 12)	9. Stormwater detention/retention areas shall be adequately fenced to prohibit accidental student access. Detention 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 areas 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.
FM 7050	7050-5, Guidelines	7050-5 ADD section: Landscape & Irrigation ADD the following 4 new paragraphs: 1. 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. 2. 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. 3. 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. 4. The irrigation system should have its own irrigation meter (separate from the domestic water meter) in municipalities where sanitary fees are calculated based on water usage.	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. The irrigation system should have its own irrigation meter (separate from the domestic water meter) in municipalities where sanitary fees are calculated based on water usage.

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FM 7050	7050-5, Standards	7050-5 Water and Sewer Design Standards para 9, first sentence, REPLACE "trap" with "interceptor" para 9, DELETE "minimum 1000 gallon capacity" and ADD "which complies with Arkansas Plumbing Code Section 1003.3 and Local requirements" ADD second sentence to Para 9, "Grease interceptors shall be placed in a location away from normal pedestrian traffic, but generally accessible for the maintenance/pumping vehicle."	9. All facilities with food preparation shall have a grease interceptor trap (minimum 4000-gallon capacity) which complies with Arkansas Plumbing Code Section 1003.3 and Local requirements. Grease interceptors shall be placed in a location away from normal pedestrian traffic, but generally accessible for the maintenance/pumping vehicle.	Modified the standard to define the intended device terminology and to align the standard with the Plumbing Code and local requirements.
FM 7100	7100-1, Standards	Page 1, paragraph 9, Third bullet: CORRECT punctuation	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.	Correct punctuation
FM 7120	7120-1, Guidelines	7120-1 Exterior Walls Guidelines - Exterior Walls: DELETE bullet #2, "Light-colored exterior walls"	Guidelines - Exterior Walls: • Economical - consider life cycle evaluation • Light-colored exterior walls • Preference given to non-combustible materials	This guideline cannot be adequately defined, and recommended for removal by subcommittee discussion
FM 7120	7120-1, Standards	7120-1 Standards - Exterior Walls para 3: DELETE "minimum R-value of R-13.5," and ADD "As required by Arkansas Energy Code."	3. Thermal resistant - minimum R-value of R-13.5. As required by Arkansas Energy Code. Consider long-term performance.	Align the insulation standard with the Arkansas Energy Code and any changes that may be made to that code
FM 7120	7120-2, Standards	7120-2 Components ADD to eighth bullet: (CMU)	• Concrete masonry units (CMU) (nominal weight)	Acronym added for clarification
FM 7120	7120-2, Guidelines	7120-2 Guidelines - Masonry Veneer Cavity Walls: DELETE bullet 3: "Thorocoat or equal acceptable for required water repellent." ADD NEW bullet 3: "Water repellent" ADD NEW bullet 4: "Use of CMUs containing fly ash is optional"	Guidelines - Masonry Veneer Cavity Walls: • Use mortar drooping control product to prevent blocking of weep holes • For exterior CMU, provide normal weight (CMU) • Thorocoat or equal acceptable for required water repellent • Water repellent • Use of CMUs containing fly ash is optional	Subcommittee recommendation to remove 'thorocoat' (brand identification) from guideline and simplify with the property "water repellent". Added option for CMUs (fly ash)
FM 7120	7120-2, Standards	7120-2 Masonry Veneer Cavity Walls para 8: ADD "unit compressive strength to meet industry standard." DELETE 1900 psi (13.1 MPa) para 9, DELETE entire paragraph. para 10, DELETE "...Minimum R-value of R-13.5." ADD "Thermal resistance as required by Arkansas Energy Code." RENUMBER para 10 as para 9. para 11, CORRECT SPELLING: change 'repellent' to 'repellant'. RENUMBER para 11 as para 10.	8. Concrete masonry: unit compressive strength to meet industry standard - 4900 psi (43.1 MPa). 9. Use CMUs 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 repellent repellant.	Changes to meet industry standards for masonry and align the standard with the Arkansas Energy Code.
FM 7120	7120-3, Guidelines	7120-3 Guidelines - Masonry Veneer Cavity Walls: DELETE bullet 3: "Thorocoat or equal acceptable for required water repellent." ADD NEW bullet 3: "Water repellent"	Guidelines - Masonry Veneer Cavity Walls: • Optional use of CMU's containing fly ash • Maximize recycled content • Thorocoat or equal acceptable for required water repellent • Water repellent • The paper or foil vapor barrier of required insulation should be anchored to the face of the studs.	Update standard as recommended by the Advisory Subcommittee
FM 7120	7120-3, Standards	7120-3 Masonry Veneer on Metal Framing Walls para 6: ADD "to meet industry standard" and DELETE "1900 psi (13.1MPa)". para 8: DELETE "minimum R-value of R-13.5" and ADD "with thermal resistance as required by Arkansas Energy Code"	6. Concrete masonry veneer: unit compressive strength to meet industry standard - 4900 psi (43.1MPa). Provide color and water repellent. 8. Use minimum R-value of R-13.5 fiberglass insulation with thermal resistance as required by Arkansas Energy Code.	Changes to meet industry standards for masonry and align the standard with the Arkansas Energy Code.
FM 7120	7120-4, Standards	7120-4 Pre-Cast Concrete - Insulated Sandwich para 8: ADD "thermal resistance as required by Arkansas Energy Code." DELETE "R-value is R-13.5"	8. Minimum thermal resistance as required by Arkansas Energy Code. R-value is R-13.5	Recommendation from Advisory subcommittee to align standard with the Arkansas Energy Code

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FM 7120	7120-5, Standards	7120-5 Metal Panel on Metal Framing para 9: ADD "thermal resistance as required by Arkansas Energy Code." DELETE "R-value is R-13.5"	9. Minimum thermal resistance as required by Arkansas Energy Code, R13.5	Recommendation from Advisory subcommittee to align standard with the Arkansas Energy Code
FM 7120	7120-6, Standards	7120-6 Masonry Veneer on Wood Framing Walls para 6: ADD "as required to meet industry standard" DELETE 1900 psi (13.1 Mpa) para 8: DELETE "minimum R-value R-13.5" and ADD "fiberglass insulation with thermal resistance as required by Arkansas Energy Code."	6. Concrete masonry veneer: unit compressive strength as required to meet industry standard +900-psi(43-Mpa). Provide color and water repellent. 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.	Changes to meet industry standards for masonry and align the standard with the Arkansas Energy Code.
FM 7130	7130-1, Standards	7130-1 Performance Standards - Roofing Systems Paragraph 2: ADD "thermal resistance as required by Arkansas Energy Code." and DELETE "R-factor for low-slope roof is R-26.0 and steel roof is R-19.0"	2. Minimum thermal resistance as required by Arkansas Energy Code. R-factor for low-slope roof is R-26.0 and steel roof is R-19.0	Advisory subcommittee recommendation to align this standard with the Arkansas Energy Code.
FM 7130	7130-2, Standards	Performance Standards - Single Roofing Systems para 5: DELETE "and weather tightness"	5. Minimum 20 year material and weather tightness warranty by manufacturer	Advisory subcommittee recommendation. Weather tightness is not a reasonable standard for this roofing system.
FM 7150	7150-2, Standards	Construction Standards - Concrete Masonry Walls, Structural Glazed Tile Walls, Ceramic Tile para 1: DELETE "ASTM C190, 1900 psi compressive strength, normal weight aggregate or FM 1500 psi" and ADD "compressive strength to meet industry standard"	1. CMU walls: ASTM C140, 1400 psi compressive strength, normal weight aggregate or FM 1500-psi Compressive strength to meet industry standard.	Update standard as recommended by the Advisory subcommittee to align with industry standard.
FM 7150	7150-3, Standards	7150-3 Construction Standards - Metal or Wood Studs with Gypsum Wallboard, Veneer Plaster over Gypsum Wallboard para 3: ADD "C1396" and DELETE "C36"	3. Gypsum wallboard: ASTM C1396 G46, Type X 5/8 inch thick	Update standard to meet updated industry standard specification
FM 7200	7200-2, Standards	7200-2 Plumbing Site Utilities Add Para 4: "Plumbing system designer shall coordinate location of all site related fixtures, such as grease interceptors, dilution tanks, etc., with site design professional."	4. Plumbing system designer shall coordinate location of all site related fixtures, such as grease interceptors, dilution tanks, etc., with site design professional.	Requirement to coordinate plumbing and site design among design professionals
FM 7200	7200-3, Standards	7200-3 Standards - Potable Water Systems Para 2, ADD sentence 3: "Exception: Cafeteria Kitchen." Para 3, ADD sentence 3: "Appropriately graded polypropylene piping may be substituted in above grade applications."	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.	Advisory subcommittee recommendation to provide exception for impractical standard that doesn't meet functionality or feasibility. Allowance for utilization of new products that meet the function and intent of the currently allowed materials.
FM 7200	7200-4, Guidelines	Complete Water Conditioning with Iron Filters DELETE entire section	Complete Water Conditioning with Iron Filters -Review with school personnel before incorporating water softening in the design-- A whole water softening system, including iron filters, may be necessary in the event the water has high iron content from an on-site well system.	Recommendation of subcommittee to remove this impractical standard
FM 7200	7200-4, Standards	7200-4 Standards - Domestic Hot Water Systems ADD para 6: "Where domestic HW return systems are employed, HW piping shall be routed to within 10 feet horizontally of the fixture being served."	6. Where domestic hot water return systems are employed, hot water return shall be routed to within 10 feet horizontally of the fixture being served.	Subcommittee recommendation to enhance the feasibility of the hot water return systems
FM 7200	7200-4, Standards	7200-4 Standards - Water Conditioning and Softening Systems DELETE entire section	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.	Recommendation of subcommittee to remove this impractical standard

Chapter	Section	Recommended Change	DRAFTED CHANGE TO FACILITY MANUAL	COMMENTS
FM 7200	7200-4, Standards	7200-4 Standards - Sanitary Piping Systems Para 4, ADD to end of sentence 3: "...to meet code requirements."	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 CPVC with solvent cement joints. Acid waste piping in plenum applications shall be fire-rated to meet code requirements. Acid neutralizing sumps shall be located on the exterior of the building with access to grade.	Recommendation to link the standard to outside agency standards and codes
FM 7200	7200-5, Standards	7200-5 Standards - Food Service Areas Systems para 3, sentence 2, ADD "of concrete..."; polyethylene. para 3, DELETE from end of sentence 2: "will be sized for a 500-gallon minimum capacity."	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 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.	Subcommittee recommendation to add polyethylene as an acceptable material for grease interceptors. Remove size requirement.
FM 7200	7200-6, Standards	7200-6 Standards - Plumbing Fixtures and Specialties para 2: DELETE "J" and ADD "or"	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.	clarify the option for "hardwired"; recommendation by subcommittee
FM 7200	7200-6, Standards	7200-6 Standards - Plumbing Fixtures and Specialties Para 7: ADD to end of sentence 2: "...and associated water, gas, and compressed air fixtures, as required."	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.	Addition to the standard to encompass all functionality of science lab table/sink fixtures
FM 7200	7200-7, Standards	7200-7 Standards - Plumbing Fixtures and Specialties Para 21, INSERT "minimum 12 inch"	11. All wall-hung lavatories, water closets, and urinals shall have wall carriers. 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. 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.	Clarification of plumbing fixture requirements
FM 7300	7300-3, Standards	7300-3 Standards - HVAC Outdoor Air Ventilation para 4, first sentence ADD (DDC)	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.	Subcommittee recommendation to include minimum size for the floor drain sinks add "DDC" acronym for reference
FM 7300	7300-6, Standards	7300-6 Standards - HVAC Temperature Control Systems Para 1, DELETE "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." and ADD "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."	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.	Recommendation by subcommittee to clarify the intent of the standard, and to allow less costly system controls in smaller building additions, when programmable thermostats are more feasible
FM 7300	7300-6, Standards	7300-6 Standards - HVAC Piping Para 3: ADD "Schedule 40 or schedule 80 PVC or" and ADD "depending on system selection and design criteria"	3. HVAC condensate piping shall be schedule 40 or schedule 80 PVC of type M or L copper piping depending on system selection and design criteria.	Recommendation to the subcommittee by an independent architect (Lewis) to allow the PVC condensate piping
FM 7300	7300-7, Standards	7300-7 Standards - HVAC Physical Education and Indoor Practice Facility Para 2, ADD to end of sentence: "where facilities are not provided with HVAC systems."	2. Ventilation systems must provide ten air changes per hour in spectator facilities where facilities are not provided with HVAC systems.	Recommendation by subcommittee to clarify the ventilation requirement for PE and Indoor Practice Facilities
FM 7300	7300-7, Standards	7300-7 Standards - HVAC Physical Education and Indoor Practice Facility para 3, ADD period to end of sentence para 4, ADD period to end of sentence	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.	Correction of punctuation

Chapter	Section	Recommended Change	DRAFTED CHANGE TO FACILITY MANUAL	COMMENTS
FM 7400	7400-6, Standards	7400-6, Standards - Technology REPLACE paragraph 1 with: "As a minimum in the base electrical 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."	1. 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.	Recommendation by subcommittee to state minimum technology systems and associated costs, and to tie this requirement to section 7500.
FM 7400	7400-10, Standards	FW 7400-10, School Lighting Levels, Table DELETE "STUDENT DINING" and ADD "PERFORMING ARTS"; (correction to item nomenclature)	STUDENT-DINING PERFORMING ARTS	Correction to error in previous revision
FM 7400	7400-11, Standards	FW 7400 School Lighting Levels 7400-11, footnote #3 CHANGE "4200" to "4000"	(3) Foot-candles shall conform to Sub-section 4200 4000	Correction to footnote reference in previous revision
FM 7500	7500-1, Guidelines	FW 7500 Technology Systems Guidelines - Technology System ADD bullet 2: Each building and or campus building should be connected to a broadband internet service, as is available. It is recommended that each school/campus/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 a hardwired system in a building will not be required.	<ul style="list-style-type: none"> 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 a hardwired system in a building will not be required. 	Recommendation of subcommittee to update/modernize/enhance the schools' internet connectivity hardware
FM 7500	7500-1, Standards	Standards - General - Technology Systems para 1, ADD: "and/or the Institute of Electrical and Electronics Engineers (IEEE) wireless sections of the Standard 802.11 (a-y) that are applicable." Paragraph 2, ADD a ninth bullet: "IEEE 802.11 (a-y)"	<p>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.</p> <p>2. All work shall be performed in accordance with the latest revisions of the following standards and codes:</p> <ul style="list-style-type: none"> 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) 	Recommendation by subcommittee to add the industry IEEE standard to the Technology Systems section
FM 8000	FM 8000, Standards and Guidelines	ADD new Chapter 8, "Safety and Security"	See attached document (Chapter 8, FM 8000)	New Chapter created from recommendations by the Arkansas School Safety Commission