

CHAPTER V  
DESIGN CRITERIA

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"When all else fails, read the instructions."

## CHAPTER V

### DESIGN CRITERIA

#### 1.0. GENERAL INSTRUCTIONS

1.1. All projects shall conform to the criteria contained in the "Scope of Work" unless the A-E is given instructions in writing to the contrary. In cases where a COE review determines criteria has not been followed, the A-E will be required to conform his design to the criteria at his own time and expense, per the appropriate paragraphs of the A-E's contract.

#### 2.0. DATES OF PUBLICATIONS

2.1. To eliminate the need to continually change the dates of the criteria references, dates are not included on the criteria index contained herein. The A-E will be issued the latest copy for all COE publications requested. Since the criteria often changes, the A-E shall discard criteria from any past COE projects and request up-to-date material. For all non-COE references, the A-E shall use those current at the time his contract is signed. If there is any question regarding this issue, it shall be resolved with the PM.

#### 3.0. AVAILABILITY OF CRITERIA

3.1. Publications such as guide specs., TM's, AFM's, DM's, DOD manuals and Sacramento District prepared manuals such as, "COE Standard details for Utilities, Foundations and Railroads", are available on request from the COE PM. Other Government documents which are not available from the COE will be so noted in the criteria list. The A-E is responsible for obtaining these items from the appropriate Government agencies. All other references, such as American Concrete Institute's "Building Code Requirements for Reinforced Concrete", etc., shall be obtained by the A-E from other sources. See A-E Guide, Volume 3, Specifications for source of such references.

#### 4.0. CONFLICTS IN CRITERIA

4.1. In many instances, a subject has more than one criteria reference. These references may give conflicting information on a given point. In all cases, the Government publication will control over non-Government publications and Sacramento District references, unless otherwise stated. If there is any doubt regarding the controlling criteria, the A-E shall contact the COE PM.

#### 5.0. REVISIONS TO CRITERIA

5.1. Periodically, revisions, or "SPK Supplements" will be issued by the Sacramento District to implement new criteria in the format shown in Figure 5. Each "SPK Supplement" will be dated and contain a "cover sheet" with instructions to the designer on implementation. Normally, "routine" will be indicated for those changes that do not incur either re-design effort or schedule slippage; on rare occasions, "special" will be indicated for critical changes officially directed regardless of impact on stage of

design. In addition, an "index supplement" will be issued with each "SPK supplement" to track previous and/or current changes to the same design criteria.

6.0. BASIC DESIGN CRITERIA PACKAGE. Upon notification from the COE PM, the District's Design Quality Assurance (DQA) Section will transmit to the A-E a Basic Design Criteria Package. This package contains criteria that, for the most part, is generic to all designs. It includes such documents as the A-E Guide, Volumes 1, 2, and 3, Standard Details, the Seismic Design Manual (AFM 88-3, Chapter 13) and the Criteria and Standards for Air Force Construction (AFR 88-15) and several Engineer Technical Letters (ETL's). The A-E is requested not to re-request these documents unless absolutely necessary.

#### 7.0. CRITERIA INDEX

7.1. The information that follows has been organized to facilitate the A-E's search for applicable criteria and the subsequent ordering of that criteria through the COE PM. The following pages contain:

7.1.1 DISCIPLINE/SUBJECT LISTING OF CRITERIA. To aid in your search for applicable criteria, this list has been developed with subjects presented in alphabetical order under each major discipline category. Please note that duplicative references to certain criteria may occur from discipline to discipline. Pay close attention to the remarks column. It will tell you if the document is not available from (N.A.F.) the COE.

7.1.2 NUMERICAL CRITERIA INDEX. This can be used as an "order form" simply by making a copy and circling the required documents. This list only contains those documents most frequently requested, therefore the A-E may find it necessary to add document numbers to this list.

7.2. All of the above shall be thoroughly examined by the A-E to make certain that all applicable criteria is utilized and adhered to. For guide specification lists the A-E is directed to the A-E Guide, Volume 3, Specifications.

U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
SACRAMENTO, CA

SUPPLEMENTAL IMPLEMENTATION  
TM 5-811-1/AFM 88-9 Chap 1  
SPK Supplement  
September 1985

TO: Designers

Current changes are listed on the Index Supplement and those issued with this supplement are preceded with an asterisk (\*).

Index Supplement page 1 of 1. Page 8-6.

INSTRUCTIONS TO DESIGNER

ROUTINE IMPLEMENTATION

The attached updated material supplements and/or revises corresponding material furnished for your contract and shall be incorporated into preliminary and final designs unless such incorporation will incur redesign or schedule slippage.

SPECIAL IMPLEMENTATION

The attached updated material supplements and/or revises corresponding material furnished for your contract and shall be incorporated into the design for all Sacramento District work, regardless of the stage of design.

DISCIPLINE/SUBJECT CRITERIA INDEX

CIVIL

<u>SUBJECT</u>	<u>TITLE</u>	<u>CRITERIA REFERENCE</u>	<u>NO.</u>	<u>REMARKS</u>
ARMS RANGES	Arms Range, Small Arms		AFM 50-25	
AIRFIELDS				
Design, General	Airfield Design, General Provisions		TM 5-824-1/ AFM 88-6, Chap. 1	
Design, Flexible	Airfield Design, Flexible		TM 5-825.2/ AFM 88-6, Chap. 2	
Pavement Evaluation	Airfield Pavement Evaluation, Flexible		TM 5-827-2/ AFM 88-24, Chap. 2	
Pavement Evaluation	Airfield Pavement Evaluation, Rigid		TM 5-827-3/ AFM 88-24, Chap. 3	
Pavement Marking	Airfield Pavements, Marking		AFR 88-16	
BACKFILL	Backfill for Subsurface Structures		TM 5-818-4/ AFM 88-5, Chap. 5	
CONCRETE				
Standard Practice	Concrete, Standard Practices for Military Structures		TM 5-805-1/ AFM 88-3, Chap. 6	
Floor Slabs, heavy loads	Concrete Floor Slabs on Grade Subjected to Heavy Loads		TM 5-809-12/ AFM 88-3, Chap. 15	
DEWATERING, GROUNDWATER CONTROL	Dewatering and Groundwater Control for Deep Excavations		TM 5-818-5/ AFM 88-5, Chap. 6	
DD FORM 1391 PREPARATION	Project Development Brochure		TM 5-800-3	
DRAINAGE				
Drainage, Grading	Drainage and Grading		AFR 88-15, Chap. 2, Sec. A & B	
Surface	Drainage, Surface, for Airfields and Heliports.		TM 5-820-1/ AFM 88-5, Chap. 1	
Subsurface	Drainage and Erosion Control Subsurface Drainage Facilities for Airfield Pavements		TM 5-820-2/ AFM 88-5, Chap. 2	
Structures	Drainage and Erosion Control Structures for Airfields and Heliports		TM 5-820-3/ AFM 88-5, Chap. 3	

Areas other than Airfields	Drainage, Areas other than Airfields	TM 5-820-4/ AFM 88-5, Chap. 4	
ENVIRONMENTAL	Environmental Impact	DA PAM 200-1/ AR 200-1	
	Environmental Quality	AR 200-1	
FACILITIES	Facility Requirements, Standard	AFM 86-2	
FENCE	Fence and Details Ty. FE-5, FE-6, FE-7	CEGS-02444 Dwg. # 40-16-08	
FIRE PROTECTION	Fire, Protection for Facilities	MIL-Handbook-1008A	
FOUNDATIONS			
Procedures	Foundation Design, Procedures For	TM 5-818-1	
Expansive Soils	Foundations in Expansive Soils	TM 5-818-7	
GROUTING	Grouting Methods and Equipment	TM 5-818-6/ AFM 88-32	
HAZARDOUS WASTE			
Disposal/Treatment	Harzardous Waste Land Disposal/ Land Treatment Facilities	TM 5-814-7	
INSTALLATION DESIGN	Installation Design	TM 5-803-5/ AFM 88-43	
LANDSCAPING			
Design	Landscape Design and Planting	TM 5-803-13 AFM 126-8	
Ground Cover	Landscaping, Establishment of Herbaceous Ground Cover	TM 5-830-2/ AFM 88-17, Chap. 2	
Planting	Installation Design	TM 5-803-5/ AFM 88-43	
Dust Control	Landscaping, Dust Control	TM 5-830-3/ AFM 88-17, Chap. 3	
Planting Trees,	Landscaping, Planting and Maintenance	TM 5-830-4/ AFM 88-17, Chap. 4	Some installations have lists of trees, shrubs, etc., suitable for their climate. Contact the PM for the appropriate list.
PARKING			
Non organizational vehicle	Installation Design	TM 5-803-5/ AFM 88-43	
Handicapped	Uniform Federal Accessibility Standards (UFAS)	UFAS	

<b>PAVEMENT DESIGN</b>		
Frost	Pavement Design - Seasonal Frost Conditions	TM 5-818-2/ AFM 88-6, Chap. 4
<b>PAVEMENT EVALUATION</b>		
Frost	Pavement Evaluation, Frost Conditions	TM 5-818-3/ AFM 88-24, Chap. 4
<b>PAVEMENTS</b>		
General Provisions	General Provisions and Geometric Design for Roads, Streets, Walks, and Open storage areas	TM 5-822-2/ AFM 88-7, Chap. 5
Soil Stabilization	Pavements, Soil Stabilization, for Road/Streets	TM 5-822-4/ AFM 88-7, Chap. 4
Flexible Pavements	Flexible Pavements for Roads, Streets, Walks, and Open Storage Areas	TM 5-822-5/ AFM 88-7, Chap. 3
Rigid Pavements	Rigid Pavements for Roads, Streets, Walks, and Open Storage Areas	TM 5-822-6/ AFM 88-7, Chap. 1
Concrete	Standard Practice for Concrete Pavements	TM 5-822-7/ AFM 88-6, Chap. 8
Bituminous	Standard Practice for Bituminous Pavements	TM 5-822-8/ AFM 88-6, Chap. 9
Flexible, Airfields	Flexible Pavement Design for Airfields	TM 5-825-2/ AFM 88-6, Chap. 2
Rigid, Airfields	Rigid Pavement for Airfields	TM 5-825-3/ AFM 88-6, Chap. 3
Repair	Repair of Rigid Pavements Using Epoxy Resin Grouts, Mortars, and Concretes	TM 5-822-9 AFM 88-6, Chap. 10
<b>PEST CONTROL</b>	Pest Control Facilities	MIL - HDBK - 1028/8
<b>PLANNING</b>		
Airfields	Airfield Design, General Provisions	TM 5-824-1/ AFM 88-6, Chap. 1
Master	Principles and Procedures, Planning Guide	TM 5-803-1
Airfield and Heliport	Planning, Airfields and Heliport	TM 5-803-10/ AFR 88-33
	Airfield and Heliport Planning Criteria	TM 5-803-7/ AFR 86-14

Land	Land Use Planning	TM 5-803-8	
Sports	Planning and Design of Outdoor Sports Facilities	TM 5-803-10/ AFR 88-33	
Children's Play	Children's Play Areas and Equipment Recreation Facilities	TM 5-803-11/ AFM 88-30	
Master, Air Base	Master Air Base Planning	AFM 86-6	
Airfield	Airfield and Airspace Planning	AFM 86-8	
RAILROADS	Railroad Design and Construction at Army and Air Force Installations	TM 5-850-2/ AFM 88-7, Ch. 2	
SAFETY	Safety and Health Requirements	EM 385-1-1	
SEWAGE	Criteria and Standards for Air Force Construction	AFR 88-15, Chap. 2, Sec. C	
Gravity	Sanitary and Industrial Wastewater Collection - Gravity Sewers and Appurtenances	TM 5-814-1/ AFM 88-11, Vol 1; AFR 88-15, Sec. E&F	
Force Mains	Sanitary and Industrial Wastewater Collection - Pumping Stations and Force Mains	TM 5-814-2/ AFM 88-11, Vol. 2; AFR 88-15, Chap. 15, Sec. E&F	
Treatment	Domestic Wastewater Treatment	TM 5-814-3/ AFM 88-11, Chap. 3, AFR 88-15, Chap. 15, Sec. G	
SIGNAGE	Department of the Air Force sign standards	AFP 88-40	
	Manual on Uniform Traffic Control Devices for Streets & Highways		N.A.F. COE
SOLID WASTES			
General Considerations	Criteria and Standards for Air Force Construction	AFR 88-15, Ch. 15, Sec. G	
Incineration	Sanitary Engineering, Incinerators	TM 5-814-4/AFM 88-11, Chap. 4	
Sanitary Landfill	Sanitary Landfill	TM 5-814-5/ASCE Man. No. 39	
STANDARD DETAILS	Standard Details for Utilities, Foundations, Paving, and Railroads	COE, Sacramento District	

SURVEYING & MAPPING	Sacramento District Design Manual for Surveying & Mapping	DM 4-805-10	
SYMBOLS			
Legends for Drawings	Standard Details for Utilities, Foundations, Paving and Railroads	COE, Sacramento District	
TIE DOWN ANCHOR AND GROUNDING ROD	For Aircraft Aprons	CEGS-02611	
TRAFFIC			
Design	Traffic Engineering for Better Signs and Markings	MTMC Pam 55-14	N.A.F. COE
Design	Traffic Engineering for Better Roads	MTMC Pam 55-10	N.A.F. COE
Design	Mastering Traffic Engineering	MTMC Pam 55-16 Vol. III	N.A.F. COE
US RESERVE FORCES			
Facilities Criteria	Design Guide for US Army Reserve Reserve Facilities	DG 1110-3-107	Army & Air Force
Utility, Services and siting	Criteria and Standards for Air Force Construction	AFR 88-15, Chap. 2, Sec. D	
WATER			
General	Water Supply, General Considerations	TM 5-813-1/ AFM 88-10, Chap. 1	
Army Potable Water	Occupational and Environmental Health. Sanitary Control and Surveillance of Water Supplies at Fixed Installations	TB MED 576	
Distribution	Water Supply, Water Distribution Systems	TM 5-813-5/ AFM 88-10, Chap. 5	
Sources	Water Supply, Water Sources	TM 5-813-2/ AFM 88-10, Chap. 2	
Storage	Water Supply, Water Storage	TM 5-813-4/ AFM 88-10, Chap. 4	
Supply	Criteria and Standards for Air Force Construction	AFR 88-15, Chap. 15, Sec. C	Air Force only. Provides guidance in materials selection for Water Supply Treatment and Distribution facilities Prescribe Water Supply requirements for fire protection at Army and Air Force Installations for anti-aircraft tactical sites, including family housing, Air control and Warning Stations and Reserve Centers

Frost Penetration	Load Assumption for Buildings	TM 5-809-1 Appendix A	
Supply for Fire Protection	Water Supply for Fire Protection	TM 5-813-6/e AFM 88-10, Chap. 6	
Special Projects	Water Supply for Special Projects	TM 5-813-7/ AFM 88-10, Chap. 7	
Treatment	Water Desalination Water Treatment Plant Design Water Supply, Water Treatment	TM 5-813-8 ASCE Manual AFM 88-10, Vol 3.	
WELLS	Types. Hydraulics. Design. Construct Groundwater Standard for Deep Wells Manual of Water Well Construction Practices Water Well Standards	TM 5-813-1 AWWA Manual No. M21 AWWA Standard A100 EPA Manual 570/9-75 -001 State of California Bulletin 74	N.A.F. COE N.A.F. COE N.A.F. COE N.A.F. COE
Swimming Pools	Swimming pools and bathing facilities	TB MED 575	
Ground-water Contamination	Protection of Public Water Supplies from Ground Water Contamination.	EPA 625/4-85/016	N.A.F. COE
Ground-water Restoration, Sampling Tracers; Monitoring Wells.	Ground Water Handbook	EPA 625/6-87/016	N.A.F. COE
Wastewater discharge regulations and treatment processes.	Evaluation Criteria Guide for water pollution prevention, control, and abatement programs.	TM 5-814-8 (No AFM number given)	
Underground storage tanks-removal, replacement.	(a) EPA-Part 280 of Title 40 of the Code of Federal Regulations, published in the Federal Register on September 23, 1988. (b) Applicable Implementing Agency. (EPA, designated State or local agency responsible for carrying out one approved UST Program).	N.A.F. COE N.A.F. COE	

ARCHITECTURAL

<u>SUBJECT</u>	<u>TITLE</u>	<u>CRITERIA REFERENCE</u>	<u>NO.</u>	<u>REMARKS</u>
GENERAL	Criteria and Standards for Air Force Construction		AFR 88-15	
	Design Criteria/Architectural and Engineering Instructions		AEI w/chge 1	Use also on AF jobs where AFR 88-15 is silent. Supplement to AEI
	Construction Criteria for Army Facilities		TM 5-800-1	
	Master Planning for Army Installations		AR 210-20	
	Military Construction Army Program Development		AR 415-15	
CAULKING AND SEALANTS	Caulking and Sealants		TM 5-805-6	
	Caulking and Sealants		CEGS-07920	
CHILD CARE	Joint Services Construction Criteria Document for Military Child Development Centers			
	Child Development Services		AR 608-10	
	Design Guide - Child Care Centers		DG 1110-3-140	
	Children's Play Areas and Equipment		TM 5-803-11	
CHEMICAL FALLOUT	Protection Against Chemical and Biological Agents and Radiological Fallout		TM 5-855-2	
CLEAN ROOMS	Criteria for Air Force Clean Facility Design and Construction		AFM 88-4, Chap. 5	
COLORS	Federal Standard Colors		Fed. Std. 595a	Order from General Services Administration, Washington D.C. 20406
COLOR SELECTION	Check with individual Installation for exterior colors			
COMMISSARIES	Decor Guide for Commissary Store Facilities		D-58 CERL Technical Report	
COMMUNITY CENTERS	Site Planning - Community Centers		TM 5-803-6	

CONSTRUCTION TYPES	Criteria and Standards for Air Force Construction	AFR 88-15	
	Building Construction, Standard Types	NFPA 220	
	Uniform Building Code	UBC	as modified by Mil-HDBK-
	AEI Design Criteria		1008
CONSOLIDATED FACILITIES	Space Planning Guide for TDA Consolidated Facilities	TM 5-841-2	
CONTINUING EDUCATION FACILITIES	Design Guide - Army Continuing Education System Centers	DG 1110-3-112	
COURIER STATIONS	Courier Station Design	TM 5-844-1	
DESIGN AND CONSTRUCTION MANAGEMENT	Design and Construction Management	AFR 89-1	
DINING FACILITIES	Decor Guide for Enlisted Personnel Dining Facilities	D-38 CERL Technical Data Series	
DOORS	Criteria and Standards for Air Force Construction	AFR 88-15	
	NFPA 80, 101		
	Steel Door Institute	SDI 100	N.A.F. COE
EXPLOSIVES STANDARDS	Explosives Safety Standards	AFR 127-100	
	Ammunition and Explosive	DOD 5100.76-M	
FIELD OFFICES	Design Guide - CID Field Offices	DG 1110-3-144	
FIRE AND SMOKE PARTITIONS	Criteria and Standards for Air Force Construction	AFR 88-15	
	Fire Protection for Facilities Engineering, Design and Construction	MIL-HDBK-1008A	
	National Fire Protection Association	NFPA-Life Safety Code	N.A.F. COE
	UBC		
	Underwriters Laboratories (UL) Fire Resistance Directory		N.A.F. COE
FIRE AREA LIMITATION	UBC		UBC N.A.F. COE

FIRE PROTECTION	Fire Protection for Facilities	MIL-HDBK-1008A	
	Engineering, Design and Construction Criteria and Standards for Air Force Construction	AFR 88-15, Chap. 15-H	
	Fire Protection for Facilities Engineering, Design and Construction	MIL-HDBK-1008A	
FIRE SEPARATION OF BUILDINGS	Criteria and Standards for Air Force Construction	AFR 88-15, Chap. 1	
	UBC		
	Fire Protection for Facilities Engineering, Design and Construction	MIL-HDBK-1008A	
FLASHING, SHEET METAL	Architectural Sheet Metal Manual by Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)	SMACNA	N.A.F. COE
HANDICAPPED CRITERIA	Uniform Federal Accessibility Standards UFAS		
HARDWARE, BUILDERS'	Builders Hardware Manufacturers Assoc.	BHMA/ANSI	BHMA material N.A.F. COE
HEALTH FACILITIES	Design and Construction of Air Force Health Facilities	AFR 88-50	
	Army Health Facility Design	TM 5-838-2	
	Construction and Material Schedule for Military Medical and Dental Facilities	MIL-STD-1691a	
INSULATION	Criteria and Standards for Air Force Construction	AFR 88-15	
INTERIOR FINISHES	Criteria and Standards for Air Force Construction	AFR 88-15	
INTERIOR DESIGN	Statement-of-work for Comprehensive Interior Design Requirements Comprehensive Interior Design Requirements	AFP 88-41  DTL 1110-4-20	
LIFE SAFETY	National Fire Protection Association	NFPA 101	
LAUNDRY PLANTS	Laundries and Dry-Cleaning Plants	TM 5-842-2	
MAINTENANCE FACILITIES	Space Planning guide for TOE Maintenance Facilities	TM 5-841-1	
MASONRY WALLS, 'U' VALUES	Masonry Wall "U" Values	DM 4-805-1	

MASTER PLANNING

Master Planning - Principles and Procedures TM 5-803-1

The Overlay - Composite Method of Master Plan Preparation TB ENG-353

Preparation of Master Plans by Negative Engraving and Type Overlay Techniques Including Samples of Master Planning Components TB ENG-353-1

MATERIALS OF CONSTRUCTION

Criteria and Standards for Air Force Construction AFR 88-15

MOBILE HOMES

Convertible Mobile Home Communities TM 5-845-2

Procurement Manual for Mobile Home Community One-Step "turnkey" contract

MUNITIONS PRODUCTION

Safety Regulation to Munitions Production Base Support Construction Program Projects R 385-100

MUSIC CENTERS

Design Guide - Music and Drama Centers DG 1110-3-120

NOISE

Noise and vibration Control for Mech. Equipment TM 5-805-4/  
AFM 88-37

Planning in the Noise Environment TM 5-803-2

NUCLEAR EFFECT

Designing Facilities to Resist Nuclear Weapons Effects TM 5-858-1

OCCUPANCY CLASSIFICATION

NFPA NFPA 101

Fire Protection for Facilities Engineering, Design and Construction MIL-HDBK-1008A

UBC

OCCUPATIONAL SAFETY AND HEALTH

Safety and Health Requirements Manual EM 385-1-1

OSHA

General Industry Standards

OFFICERS CLUB

Design Guide - Commissioned and Non-Commissioned Officers Club DG 1110-3-134

PAINT

Paints and Protective Coatings TM 5-618

Painting New Construction and Maintenance EM 1110-2-3400

PETROLEUM FACILITIES	Petroleum Fuel Facilities	NAVFAC DM-22
PHYSICAL FITNESS CENTER	Petroleum Fuel Facilities Design Guide - Physical Fitness Centers	DM 4-805-9 DG 1110-3-128
PHYSICAL SECURITY	Security, Air Physical Security Program	AFR 207-1
	Physical Security of Arms Ammunition and Explosives	AR 190-11
	Physical Security of Sensitive Conventional Arms Ammunition and Explosives	DOD 5100,76-M
PORTS	Engineering and Design of Military Ports	TM 5-805-9
POWER PLANTS	Power Plant Acoustics	TM 5-800-3
PROTECTIVE DESIGN	Fundamentals of Protective Design	TM 5-855-1
RAISED FLOORS	Raised Floor Systems	TM 5-805-13
RANGE COMPLEXES	Design Information for Multi-purpose Range Complex (Light Infantry)	HNDM 1110-1-8
RECREATION FACILITIES	Planning Design of Outdoor Sports Facilities	TM 5-803-10
	Design of Recreation Areas and Facilities - Access and Circulation	EM 1110-2-410
	Design Guide - Recreation Centers	DG 1110-3-132
	Outdoor Recreation Facilities	TM 5-803-12
RESERVE FACILITIES	Design Guide - U.S. Army Reserve Facilities	DG 1110-3-107
ROOFING DESIGN	Criteria and Standards for Air Force Construction	AFR 88-15
	Built-up Roofing	SPK 7-A
	Roof Deck Systems	TM 5-805-3
	Roofing Design	TM 5-805-14
	Metal Roofing and Siding	TM 5-809-8/ AFM 88-3, Chap. 8
SAFETY	Safety and Health Requirements	EM 385-1-1

Listed in A-E Guide  
Vol. 3-Specs.

SECURITY	Physical Security	NAVFAC DM 13.1	
	Designing for Security	TM 5-853-1	
SERVICE SCHOOLS	Space and Planning Criteria for US Army Service Schools	TM 5-843-1	
	Design Guide - US Army Service Schools	DG 1110-3-106	
SIGN STANDARDS	Sign Standards	AFP 88-40	
STORAGE DEPOTS	Storage Depots	TM 5-840-2	
SWIMMING POOLS	Storage and Materials Handling	DOD 4145.19-R-1	
	Occupational and Environmental Health Swimming Pools and Bathing Facilities	TB MED-575	
TEMPEST SHIELDING	Tempest/EMP Shielding	DM 4-805-4	
UNACCOMPANIED ENLISTED PERSONNEL HOUSING	Enlisted Dormitory Design Guide		specify Air Force
WIND	Design Criteria for Facilities in Areas Subject to Typhoons and Hurricanes	TM 5-809-11	
X-RAYS	X-Ray Shielding	TM 5-805-12	
	Diagnostic X-Ray, etc. Protection	TB MED-62	
VAULTS	Vaults, Arms Storage and Secure Storage Areas	DM 4-805-2	

STRUCTURAL

<u>SUBJECT</u>	<u>TITLE</u>	<u>CRITERIA REFERENCE</u>	<u>NO.</u>	<u>REMARKS</u>
GENERAL DESIGN STRUCTURE	Seismic Design for Buildings		TM 5-809-10/ AFM 88-3, Chap. 13	
	Seismic Design Guidelines for Essential Buildings		TM 5-809-10-1/ AFM 88-3, Chap. 13, Sec A	
	Seismic Upgrading Existing Building		TM 5-809-10-2/ AFM 88-3, Chap. 13.2	Draft Edition Only
	Structures to Resist the Effects of Accidental Explosion		TM 5-1300/AFM 88-3,	Available on loan basis only
	Fundamental of Protective Design		TM 5-855-1	Non-nuclear
	Protection Against Chemical and Biological Agents and Radiological Fallout		TM 5-855-2	
	Explosive Safety Standards		AFR 127-100	
	Vaults, Arms storage and secure storage areas		DM 4-805-2	
	Load Assumptions for Buildings		TM 5-809-1/ AFM 88-3, Chap. 1	Live, lateral, wind and snow loads. Frost penetration determination
	Structural Design - Thin-Shell Construction		TM 5-809-9/ AFM 88-3, Chap. 12	
	Structural Design - Structures other than Buildings		TM 5-809-6	
	Working Stresses for Structural Design		EM 110-1-2101	
	Physical Security		NAVFAC DM 13.1	
FOUNDATION AND SOIL	Procedures for Foundation Design of Buildings and Other Structures (Except Hydraulic Structures)		TM 5-818-1/ AFM 88-3, Chap. 7	
	Standard Details for Utilities, Foundations, Paving and Railroads		C.O.E. Sacramento District	See Plates F1 through F12.
	Foundation in Expansive Soils		TM 5-818-7	

CONCRETE

Concrete Structural Design for Buildings	TM 5-809-2/ AFM 88-3, Chap. 2	Also see TM 5-809-10
Building Code Requirements for Reinforced Concrete	ACI 318	N.A.F. COE Also see TM 5-809-10
ACI Detailing Manual	SP-66	N.A.F. COE Also, see COE Standard Details. Sacramento District
Concrete Floor Slabs on Grade Subjected to Heavy Loads	TM 5-809-12/ AFM 88-3, Chap. 15	
Design Manual for Composite Decks, from Deck, and Roof Decks	Steel Deck Institute	N.A.F. COE
Standard Practice for Concrete Military Structures	TM 5-805-1/ AFM 88-3, Chap. 6	
Design Handbook, Precast and Prestressed Concrete	Prestressed Concrete Institute	N.A.F. COE
Retaining Walls	EM 1110-2-2502	Also see ACI 318
Grouting Methods and Equipment	TM 5-818-6/ AFM 88-32	

MASONRY

Masonry Structural Design for Buildings	TM 5-809-3/ AFM 88-3, Chap. 3	Seismic zones 0 and 1 only. Also, see TM 5-809-10 for other zones
Reinforced Masonry Engineering Handbook	Masonry Institute of America	N.A.F. COE

STEEL

Manual of Steel Construction	AISC	N.A.F. COE Also, see TM 5-809-10
Steel and Aluminum, Structural Design for Buildings	TM 5-809-4/ AFM 88-3, Chap. 4	Also see SDI Design Manual for Steel Deck.
Standard Specifications Load Tables and Weight Tables for Steel Joists and Joist Girders	Steel Joist Institute	N.A.F. COE
Welding: Design, Procedures and Inspection	TM 5-805-7/ AFM 88-4, Chap. 7	
Structural Welding Code - Steel	AWS D1.1	N.A.F. COE
Structural Welding Code - Reinforcing Steel	AWS D1.4	N.A.F. COE
Code-Formed Steel Design Manual	AISI	N.A.F. COE Also, see TM 5-809-10

**WOOD**

**Wood Structural Design for Buildings**

**TM 5-809-5/  
AFM 88-3, Chap. 5**

**MISCELLANEOUS**

**Raised Floor System**

**TM 5-805-13/  
AFM 88-4, Chap. 9**

**Metal Building Systems Manual**

**MBMA**

**N.A.F. COE**

**Metal Roofing and Siding**

**TM 5-809-8/  
AFM 88-3, Chap. 8**

MECHANICAL

<u>SUBJECT</u>	<u>TITLE</u>	<u>CRITERIA REFERENCE</u>	<u>NO.</u>	<u>REMARKS</u>
FIRE PROTECTION	Policy and General Standards Mechanical Fire Protection		AFM 88-15, Chaps. 1 & 15, Sec. H	
	Military Handbook. Fire Protection for Facilities Engineering, Design, and Construction		MIL-HDBK-1008A	
	Fire Protection Criteria		AEI, Chap. 9	
	Mechanical Standard Details		COE, Sacramento District	
	Military Handbook, Covered Storage		MIL-HDBK-1032/2	
HEATING, VENTILATING &	Mechanical; Air Conditioning, Mechanical Ventilation		AFR 88-15, Chap. 15, I & J	
	Air Conditioning, Evaporative Cooling, Dehumidification, Mec. Ventilation and Refrigeration.		AEI w/chge 1	
	High Temperature Water Heating Systems		TM 5-810-2/ AFR 88-28	
	Mechanical Design; Heating, Ventilating, and Air Conditioning		TM 5-810-1	
	Heating Criteria and Mechanical Equipment		AEI w/chge 1	
	Engineering Weather Data		TM 5-785/ AFM 88-29/P-89	
	ASHRAE Guides			As Directed by AFR 88-15 & AEI
	Mechanical Standard Details		COE, Sacramento District	
	American Conference of Government Industrial Hygienist Manual			Special Ventilation applications such as Exhaust Hoods, Paint Spray Booths, Toxic Vapors, etc. Publication N.A.F. COE
	Mechanical Refrigeration and Ventilation in Cold Storage Facilities		TM 5-810-3/ AFM 88-8, Chap. 2	
PLUMBING	Plumbing. Domestic Wastes. Industrial Wastes		AFR 88-15, Chap. 15, Sec. D, E, & F	
	Criteria for Plumbing Equipment		AEI w/chge 1	

	National Standard Plumbing Code		Latest Edition. Army & Air Force. N.A.F. COE
	Plumbing	TM 5-810-5/ AFM 88-8, Chap. 4	
	Federal Specification Plumbing Fixtures (Land Use) (General Specifications)	WW-P-541	Document N.A.F. COE
	Non Industrial Gas Piping Systems	TM 5-810-6/ AFM 88-8, Chap. 5	
	Gas Distribution	TM 5-848-1/ AFM 88-12, Chap. 4	
	High Pressure Gas and Cryogenic System	TM 5-810-7/ AFM 88-10, Vol 3	
	Compressed Air	TM 5-810-4/ AFM 88-8, Ch. 3	
	Water Supply; Water Storage	TM 5-813-4	
	Water Supply; Water Supply for Fire Protection.	TM 5-813-6	
	Sanitary Engineering Incinerators	TM 5-814-4	
	Mechanical Standard Details	COE, Sacramento District U-45 (AF) U-46 (Army)	Rainfall Intensity Tables
	Mechanical Standard Details	COE, Sacramento District	
	ASHRAE Book of Fundamentals		N.A.F. COE Legend and Symbols
HEALTH AND MEDICAL FACILITIES	Criteria for Design and Construction of Air Force Health Facilities	AFM 88-50	Includes Hospitals and Dental Clinics, etc. Additional criteria will be provided on a per project basis.
	Army Health Facility Design	TM 5-838-2	See Remark Above
	Mechanical Standard Details	COE, Sacramento District	
	Plumbing, Hospital	CEGS-15410	Listed in A-E Guide, Vol 3 - Specifications

ENERGY CONSERVATION	Policy and General Standards. Mechanical	AFR 88-15, Chap. 1 & 15	Include economic analysis (LCCA-Life Cycle Cost Analysis), ECIP (Energy Conservation Investment Program), EBF (Energy Budget Figure) etc.
	Energy Conservation	AEI w/chge 1	Same as above
ENERGY BUDGET CALCS	Building Design Energy Budgets	TM 5-810-1 App, "F".	
	Energy Monitoring and Control Systems	TM 5-815-2/ AFM 88-36	Additional guidance on a Project Case Basis
	Mechanical Design; Heating, Ventilating and Air Conditioning - Energy Conservation	TM 5-810-1	
PETROLEUM & FUEL FACILITIES	Air Force Petroleum Fuel Facilities	DM 4-805-9	Sacramento District Design Manual. Developed from NAVFAC DM-22. See ETL 84-3 for AF.
	Handling Aircraft and Automotive Fuels	TM 5-848-2	
	Ground Storage of Coal	TM 5-848-3	
SOLAR ENERGY	Mechanical Design Heating, Ventilating and Air-Conditioning	TM 5-810-1, Appendix H	
	Solar Energy Systems	TM 5-804-2	
	Solar Applications	ETL 86-14	
OCCUPATIONAL SAFETY AND HEALTH	Life Safety Code Handbook	NFPA 101	Most Stringent Criteria Governs NFPA 101 & OSHA Standards N.A.F. COE
	OSHA, General Industry Standards		
	AFOOSH Standards Safety and Health Requirements	AFOOSH 127-66 EM 385-1-1	N.A.F. COE
MISCELLANEOUS ITEMS; MECHANICAL & OTHERS	Seismic Protection		
	Seismic Design for Buildings	TM 5-809-10/ AFM 88-3, Chap. 13	
	Seismic Design Guidelines For Essential Buildings	TM-809-10-1/ AFM 88-3, Ch. 13, Sect. A	
	Seismic Protection for Mechanical, Electrical Equipment	CEGS-15200	Listed in A-E Guide, Vol 3 - Specifications

Pollution	Air Pollution Control for Boilers and Incinerator	TM 5-815-1/ AFR 19-6	
UEPH (Barracks)	AF - Unaccompanied Enlisted Personnel Housing (UEPH)	AFR 88-15, Chap. 15, Sec. H	
	Barracks & BQ's	AEI w/chge 1 & 3	
	Enlisted Dormitory Design Guide,		Specify Air Force or Army
	HVAC Duct Construction Standards	SMACNA	Document N.A.F. COE
Noise/Acoustics	Power Plant Acoustics	TM 5-805-9/ AFM 88-20	
	Noise and Vibration Control for Mechanical Equipment	TM 5-805-4/ AFM 88-37 DM - 3.10	
	Uniform Federal Accessibility	UFAS	
Reserve Facilities	UFAS Reserve Facilities	AFR 88-15	
	Design Guide for U.S. Army Reserve Facilities.	DG-1110-3-107	
Family Housing	Family Housing Facilities Criteria	AEI w/chge 1 & 3	
	Family Housing Design	AFM 88-25	
Kitchens and Dishwashing	Mechanical Design; Heating, Ventilation and Air Conditioning	TM 5-810-1, Chap. 4, Para 4.2.b.	Specific criteria will be provided on a Project Case Basis Air Force: Use TM in conjunction with AFR 88-15, para 15-103, sub-para 3.b.
Dining Facilities	A/C, Mech., Vent., EC, & Dehum.	AFR 88-15, Chap. 15, Section I	
	Enlisted Personnel Dining Facilities	AEI w/chge 1 & 3	
CHILD CARE	Joint Services Construction Criteria Document for Military Child Development Centers.		Document N.A.F. COE
	Child Development Services	AR 608-10	
	Child Development Centers	AEI w/change 1	
TACTICAL VEHICLES	TOE and TDA Unit Maintenance Facilities	AEI w/chge 1	N.A.F. COE

STORAGE FACILITIES

Hazardous Waste Storage Facilities

MIL-HDBK 1005/13

Military Handbook. Covered Storage

MIL-HDBK 1032/2

Storage and Materials Handling

DOD 4145.19-R-1

Storage Depots

TM 5-840-2

COMMISSARY

Commissary Facilities

AEI w/chge 1

ELECTRICAL

<u>SUBJECT</u>	<u>TITLE</u>	<u>CRITERIA REFERENCE</u>	<u>NO.</u>	<u>REMARKS</u>
AIRFIELD LIGHTING	Airfield & Airspace Criteria		AFM 86-8	
	Army Aviation Lighting		TM 5-811-5	
	Visual Air Navigation Facilities		AFM 88-14	
	FAA Runway and Taxiway Lighting Systems Guides		AC 150/5340-24	N.A.F. COE
BONDING GROUNDING, ETC. FOR ELECTROMAGNETIC COMPATIBILITY	Bonding Grounding & Electrical Requirements for Electromagnetic Compatibility		Sam Tech Manual 80.3	N.A.F. COE
	Bonding, Electrical and Lighting Protection for Aerospace Systems		MIL-B-5087B (ASG)	N.A.F. COE
	Electromagnetic Compatibility & Grounding Requirements for Space System Facilities		MIL-STD 1542	N.A.F. COE
	Grounding, Bonding & Shielding for Common Long Haul/Tactical Comm. Systems		MIL-STD 188-124A	N.A.F. COE
	Method of Insertion-Loss Measurement EMC Handbook Vol. 3		MIL-STD-220A	N.A.F. COE
	Grounding, Bonding & Shielding Vol. 1 & 2		MIL-STD-419	
COMMUNICATION SYSTEMS	Elect. Comm. Systems Engr., Inside Plant		TM 11-486-4	N.A.F. COE
	Elect. Com. Systems Engr., Outside Plant wire		TM 11-486-5	N.A.F. COE
	Voice/Data Telephone Systems		TM 5-811-9	
	AFCC Tech. Bulletin on Building Cable and Duct Systems		TB 86-07-EZ	Available from 1842nd EEG/EEICS, Scott AFB, IL 62225-6348
	AFCC Tech. Bulletin on Local Area Network User Requirement Analysis-PCR, Part I		TB 85-02-EC	Available from 1842nd EEG/EEICS, Scott AFB, IL 62225-6348
	AFCC Tech. Bulletin on Local Area		RB 85-04-EC	Available from 1842nd EEG/EEICS, Scott AFB, IL 62225-6348

	AFCC Tech. Bulletin on Broadband Local Area Network, Preliminary Design and Cost Estimating	TB 85-07-EC	Available from 1842nd EEG/EEICS, Scott AFB, IL 62225-6348
	Telephone System-Prewire (SPK Prepared Guide Specification)	CEGS-16710 (Revise-Sep 1986)	Listed in A-E Guide Vol. 3 - Specifications.
CORROSION CONTROL	Cathodic Protection Design	AFM 88-45	
	Electrical Design, Cathodic Protection	TM 5-811-7	
EMERGENCY/GENERATING SYSTEMS	Recommended Practice for Emergency & Standby Power Systems (Orange Book)	IEEE Standard 446	N.A.F. COE
	Motors and Generators	NEMA MG.1	N.A.D. COE
	Criteria & Standards for Air Force Construction	AFR 88-15, Chap. 16,	
EXPLOSIVE SAFETY	Ordinance Safety Manual	DARCOM-R-385/100	N.A.F. COE
	Explosive Safety Standards	AFE 127-100	
	Ammunition & Explosive Standards	TM 9-1300-206	
EXTERIOR ELECTRICAL SYSTEMS	Electrical Power Supply & Distribution	TM 5-811-1/ AFM 88-9, Chap. 1	
	Criteria & Standards for Air Force Construction	AFR 88-15, Chap. 16, Section B	
	Electrical Services	AR 420-43, Chap. 3	
FIRE ALARM SYSTEM 7 FIRE PROTECTION	Criteria & Standards for Air Force Construction	AFR 88015, Chap. 16, Section A	
	Fire Protection for Facilities Engineering, Design and Construction	MIL-HDBK 1008A	
	Life Safety Code	NFPA 101	N.A.F. COE
GROUNDING	Recommended Practice for Grounding (Green Book)	IEEE Standard 142	N.A.F. COE
	Special Systems Grounding	DM 4-805-5	
	Guideline on Electrical Power for ADP Installation	FIPS Pub 94	N.A.F. COE

INTERIOR ELECTRICAL SYSTEMS	Interior Electrical System	TM 5-811-2/ AFM 88-9, Chap. 2	
	Design Criteria for Army Construction	AEI	
	Criteria & Standards for Air Force Construction	AFR 881-5, Chap. 16, Section A	
	Electrical Services	AR 420-43, Chap. 4	
	National electrical Code	NFPA 70	N.A.F. COE
	OSHA Safety and Health Std., General Industry Standard	29 CFR part 190	N.A.F. COE
	Recommended Practice for Elec. Power Dist. for Industrial Plants	IEEE Standard 141	N.A.F. COE
	Recommended Practice for Electrical Systems in Commercial Buildings	IEEE Standard 241	N.A.F. COE
	Recommended Practice for Protection & Coordination of Comm. & Ind. Power Systems	IEEE Standard 242	N.A.F. COE
	Recommended Practice for Power System Analysis (Brown Book)	IEEE Standard 399	N.A.F. COE
INTERIOR INTRUSION PROTECTION SYSTEM (J.SIIDS)	Installation, Operation & Checkout of J-SIIDS	TM 5-6350-262-14/14	
	Intrusion Detection Systems	DM 4-805-6	
	Intrusion Detection Systems	TM 5-811-8	
LIGHTING FIXTURES & LIGHTING	OCE Lighting Fixtures Standard	Standard DWG. N. 40-06-04	
	IES: Office (RP-1), Industrial (RP-7), Roadway (RP-8) & Sports (RP-6) Lighting Manuals	ANSI's	N.A.F. COE
	Illumination CALCS. by Zonal Cavity Method. IES Lighting Handbooks, Vol. I & II	1988 Vol. I & II	N.A.F. COE
LIGHTING PROTECTION	Lightning & Static Electricity Protection	TM 5-811-3/ AFM 88-9, Chap 3	
	Lightning Protection Code	NFPA-78	N.A.F. COE
MEDICAL FACILITIES	Army Health Facilities Design	TM 5-838-2	
	Medical/Dental Facilities	MIL-STD-1691A	

	Criteria for Design & Constr of Air Force Health Facilities	AFR 88-50	
	Standard for Health Care Facilities	NFPA-99	N.A.F. COE
	Recommended Practice for Electrical Systems in Health Care Facilities	IEEE Standard 603	N.A.F. COE
OVERHEAD ELECTRICAL SUPPLY & COMMUNICATION	National Electrical Safety Code	ANSI C2	N.A.D. COE
	Rule for Overhead Elec Line Constr Gen. Ord. 95	G.O. 95	User for Calif Projects Only. N.A.F. COE
PHYSICALLY HANDICAPPED	Uniform Federal Accessibility Standards	UFAS	
RAISED FLOORS	Raised Floor System	TM 5-805-13/ AFM 88-4, Chap. 9	
SAFETY	Safety and Health Requirements	EM 385-1-1	
SECURITY	USAF Resource Protection Program	AFR 125-37	
	AF Physical Security Program	AFR 207-1	
	Design for Security	TM 5-853-1	
	Construction for Secure Conference Rooms	AFP 88-26	
	Physical Security	FM 19-30	
	Vaults, Arms, Storage & Secure Storage Areas	DM 4-805-2	
	Security of Army Property at Unit and Installation Level	AR 190-51	
	Physical Security Standard for Sensitive Compartmented Information Facilities	DIAM 50-3	
	Physical Security of Arms Ammunition and Explosives	AR 190-11	
SEISMIC DESIGN	Seismic Design for Buildings	TM 5-809-10; AFM 88-3, Chap. 13	Refer to Chapters on "Mechanical & Electrical Elements"
	Seismic Protection for Mechanical, Electrical Equipment	CEGS-15200	
STATIC ELECTRICITY	Lightning & Static Electricity Protection	TM 5-811-3/ AFM 88-9, Chap 13	

SYMBOLS	Graphic Symbols for Electricity & Electronics Diagrams	ANSI Y32.2	N.A.F. COE
	Graphic Symbols for Electrical & Wiring and Layout Diagrams	ANSI Y32.9	N.A.F. COE
TEMPEST (RED/BLACK CRITERIA)	Military Standardization Handbook Red/Black Engineer Installation Guidelines	MIL HDBK 232	Classified Material. A/E must have security clearance
	Tempest/EMP Shielding	Dm 4-805-4	
	NEMP/Tempest Protection	TM 5-855-5	
TRAILER PARKS	Convertible Mobile Home Communities	TM 5-845-2	
UNDERGROUND ELEC SUPPLY & COMMUNICATIONS SYSTEMS	National Electrical Safety Code	ANSI C2	N.A.F. COE
	Rules for Underground Electrical Line Construction	G.O. 128	For Calif Proj. only N.A.F. COE
USAF RESERVE FACILITIES	USAF Reserve Facilities	AFR 88-15	
US ARMY RESERVE FACILITIES	US Army Reserve Facilities	DG 1110-3-107	
X-RAY & RF SHIELDING/EMP	Tempset/EMP Shielding	DM 4-805-4	
	X-Ray Shielding	TM 5-805-12	
	Aerospace Medicine	AFM 161-38	

NUMERICAL CRITERIA INDEX

The following is a partial list of frequently utilized criteria. When requesting project specified criteria from the COE Project Manager, the A-E designer shall furnish a similar numerical ordered list.

NUMBER	NUMBER	NUMBER	NUMBER
TM 5-618	TM 5-810-2	(AFM 88-5, Ch 1)	TM 5-838-2
TM 5-785	(AFR 88-28)	TM 5-820-2	TM 5-840-2
TM 5-800-3	TM 5-810-3	(AFM 88-5, Ch 2)	TM 5-841-1
TM 5-803-1	(AFM 88-8, Ch 2)	TM 5-820-3	TM 5-858-1
TM 5-802-1	TM 5-810-4	(AFM 88-5, Ch 3)	TM 5-1300
TM 5-803-2	(AFM 88-8, Ch 3)	TM 5-820-4	TM 5-6350-262-14/14
(AFM 19-10)	TM 810-5	(AFM 88-5, Ch 4)	TM 9-1300-206
TM 5-803-4	(AFR 88-8, Ch 4)	TM 5-822-2	TM 11-685
TM 5-803-5	TM 5-810-6	(AFM 8807, Ch 5)	AFM 50-25
(AFM 88-43)	(AFM 88-8, Ch 5)	TM 5-822-4	AFM 86-2
TM 5-803-6	TM 5-810-7	(AFM 8807, Ch 4)	AFM 86-6
TM 5-803-7	(AFM 88-12, Ch 4)	TM 5-822-5	AFM 86-8
(AFR 86-14)	TM 5-811-1	(AFM 8807, Ch 3)	AFM 88-4, Ch 5)
TM 5-803-8	(AFM 88-9, Ch 1)	TM 5-822-6	AFM 88-14
TM 5-803-10	TM 5-811-2	(AFM 8807, Ch 1)	AFM 88-25
(AFM 88-33)	(AFM 88-9, Ch 2)	TM 5-822-7	AFM 88-45
TM 5-803-11	TM 5-811-3	(AFM 88-6, Ch 8)	AFM 88-50
(AFM 88-30)	(AFM 88-9, Ch 3)	TM 5-822-8	AFP 88-40
TM 5-803-12	TM 5-811-4	(AFM 88-6, Ch 9)	AFP 88-41
TM 5-803-13	(AFM 88-9, Ch 4)	TM 5-822-9	AFR 88-15
TM 5-804-2	TM 5-811-5	TM 5-823-2	AFR 88-50
TM 5-805-1	TM 5-811-6	TM 5-823-3	AFR 89-1
(AFM 88-3, Ch 6.)	TM 5-811-7	TM 5-823-4	AFR 125-37
TM 5-805-3	TM 5-813-1	TM 5-824-1	AFR 127-100
TM 5-805-4	(AFM 88-10, Ch 1)	(AFM 88-6, Ch 1)	AFR 207-1
(AFM 88-37)	TM 5-813-3	TM 5-824-3	DG 1110-3-104
TM 5-805-6	(AFM 88-10, Ch 3)	(AFM 88-6, Ch 3)	DG 1110-3-106
(AFM 88-4, Ch 4)	TM 5-813-4	TM 5-824-4	DG 1110-3-107
TM 5-805-7	(AFM 88-10, Ch 4)	TM 5-825-2	DG 1110-3-112
(AFM 88-4, Ch 7)	TM 5-813-5	(AFM 88-6, Ch 2)	DG 1110-3-119
TM 5-805-9	(AFM 88-10, Ch 5)	TM 5-825-3	DG 1110-3-120
TM 5-805-12	TM 5-813-6	TM 5-825-3-1	DG 1110-3-124
TM 5-805-13	(AFM 88-10, Ch 6)	TM 5-826-1	DG 1110-3-126
(AFM 88-4, Ch 9)	TM 5-813-7	TM 5-826-2	DG 1110-3-128
TM 5-805-14	(AFM 88-10, Ch 7)	TM 5-826-3	DG 1110-3-132
TM 5-807-7	TM 5-813-8	TM 5-826-4	DG 1110-3-134
TM 5-807-10	TM 5-814-1	TM 5-827-2	DG 1110-3-140
TM 5-809-1	(AFM 88-11, Ch 1)	(AFM 88-24, Ch 2)	DG 1110-3-144
(AFM 88-3, Ch 1)	TM 5-814-2	TM 5-827-3	DG 1110-3-150
TM 5-809-2	(AFM 88-11, Ch 2)	(AFM 88-24, Ch 3)	DM 4-805-1
(AFM 88-3, Ch 2)	TM 5-814-3	TM 5-830-2	DM 4-805-4
TM 5-809-3	(AFM 88-11, Ch 3)	(AFM 88-17, Ch 2)	DM 4-805-5
(AFM 88-3, Ch 3)	TM 5-814-4	TM 5-830-3	DM 4-805-9
TM 5-809-4	(AFM 88-11, Ch 4)	(AFM 88-17, Ch 3)	EM 385-1-1
(AFM 88-3, Ch 4)	TM 5-818-7	TM 5-830-4	EM 1110-1-2101
TM 5-809-5	TM 5-820-1	(AFM 88-17, Ch 4)	EM 1110-2-410

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