DEPARTMENT OF THE ARMY
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON DC 20310-0600

DAIM-ZA

17 JUL 2009

MEMORANDUM FOR

Commander, US Army Corps of Engineers (CEMP), 441 G St NW, Washington, DC 20314
Installation Management Command (IMCOM), 2511 Jefferson-Davis Highway, Arlington, VA 22202

SUBJECT: Army Standard for the Aircraft Rinse Facility

1. The enclosed Army Standard for the Aircraft Rinse Facility is approved for implementation. The standards apply to all Army Components. Only the Assistant Chief of Staff for Installation Management has authority to approve exceptions to this standard. Waivers from the Army Standard must be approved in accordance with AR 420-1.

2. These standards are mandatory for Military Construction, Army (MCA) projects in FY12 and beyond. Designs based on these Army Standards, Standard Design, and Standard Criteria will be developed consistent with MILCON Transformation methodologies.

3. The co-chairs for Facilities Design Team (FDT) for the Aircraft Rinse Facility are COL Michael Aid, DCS G-3 (DAMO-AV), michael.aid@hqda.army.mil, 703-614-1431, COL Gary Toney, DCS, G-4 (DALO-AV), gary.toney@hqda.army.mil, 703- 614-1211, and Mr. Claude Matsui, OACSIM (DAIM-ODO), claude.matsui@hqda.army.mil, 703-602-0287.

4. The USACE Center of Standardization POC for the Aircraft Rinse Facility is Mr. Jay Miller, CESAM-E, reece.j.miller@usace.army.mil, 251-694-4056.

Encl

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1DEPARTMENT OF THE ARMY
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Army Standard for Aircraft Rinse Facility

30 June 2009

Description: Air Installation (Army Airfield (AAF) or Army Heliport (AHP)) Aircraft Rinse Facility for the corrosion prevention and recovery of aircraft from deployment, operations, and exercises.

Applicability:

- The Rinse Facility Army Standard applies to the planning, design, and construction of a centralized installation recovery point for aircraft returning from deployment, operations, exercises, or the training area.
- The primary source for determining authorized allowances is the Facility Planning System (FPS) contained in the Real Property Planning and Analysis System (RPLANS).

Waivers:

- Only the Army Facilities Standardization Committee has authority to approve exceptions to these standards.
- Waivers from Army Standards must be requested in accordance with the AR 415-15 and the Army Facilities Standardization Program Charter dated 24 May 06.
- All waiver requests to this Army Standard require Center of Standardization (COS) review and assessment.
- All waiver requests shall include compelling rationale of functional and operational requirements that cannot be met to include substantiating documentation in sufficient detail to assess Army implications of said waiver request.
- Garrison Army Standard waiver request submissions must be received in sufficient time to allow the Facility Design Team to complete review and development of recommendations or courses of action for the Army Facilities Standardization Committee (AFSC).
- All HQDA approved waivers shall be documented in installation master plans thereby serving as the installations modified standards for the HGR Complex.

The Guidance section provides instructions and definitions necessary for the application of the mandatory requirements contained in the tabular section of the Army Standard. As such, they are used in conjunction with the Army Standard in order to ensure the intent and embedded functionality contained herein will meet the Army's mandatory requirements set forth by this standard.

ARMY STANDARD

Item	Mandatory Criteria
Site Selection & Planning	1. The Rinse Facility shall be sited immediately adjacent to the aircraft mass parking apron on Army Airfields (AAF) or Army Heliports (AHP) without physical penetration of controlled airspace or obstruction clearances. 2. When provided at training areas, the Rinse Facility will be sited within visual observation of Range Control at training areas not supported by an AAF or AHP. 3. When land area availability to the aircraft mass parking apron, taxiways will be provided to the nearest accessible point with appropriate clearances for power-on operations. 4. Redundant control systems for the Rinse Facility will be provided at both the Air Traffic Control Tower and Airfield/Heliport Operations on AAF/AHP, or a control system at Range Control when sited at training areas not supported by an AAF or AHP. 5. The Rinse Facility shall not substitute for the Hangar Wash Apron (FCC 113 70) requirement for aircraft maintenance and repair hangars (FCC 211 10 & 211 15).
Physical Security and Safety Zone	The Rinse Facility is wholly contained within the outer boundary for the AAF/AHP or training complex Restricted Area.
Primary Facility Scope (FCC 113 xx)	Rinse Facilities are composed of four elements: the Rinse Apron, taxiways, water dispensing and collection features, and a control system. When a Rinse Facility is provided at a training area without an AAF/AHP, a helipad (FCC 111 30 or 111 31) may be provided. Basis of allocation: – Not More Than (NMT) one (1) Rinse Facility will be provided to either an approved, operational airfield or heliport – NMT one (1) Rinse Facility for separate Major Training Area (e.g., Combat Training Center) or separate Local Training Area (e.g., Pinyon Canyon, Yakima Training Area, Pohakuloa Training Area, etc) that is NLT 100 miles from homestation, **and** supporting aviation training operations ≥ 20 aircraft in excess of 21-days continuous duration See *Guidance Section* below
Rinse Apron (FCC 113 xx)	1. Rinse Aprons will be sized Not to Exceed (NTE) as indicated below. (AAF) – 140’ D x 120’ W (AHP) – 120’ D x 80’ W 2. (Training Areas Only) Rinse Apron will be sized to an AHP configuration. 3. Water dispensing solutions will provide full coverage of airframe height, width, and length including consideration of rotor and/or prop wash affects.

	See *Guidance Section* below
Taxiways (FCC 112 12 & 112 21)	Taxiways will provide one-way ingress/egress to the Rinse Apron directly from the circulation taxiway servicing the AAF or AHP.
Control System	1. Activation and deactivation controls will be provided in both the Air Traffic Control Tower and Airfield/Heliport Operations Building at AAF/AHP or at Range Control for training areas not supported by an AAF or AHP. 2. Activation and deactivation controls will be provided in a manned facility with visual observation of the Rinse Facility operations.
Water Service	Water service shall be sufficient to meet full coverage of the Rinse Apron. Booster pumps may be used where water pressure alone is insufficient contingent upon COS review.

GUIDANCE

General. The following guidance for application of the Aircraft Rinse Facility Army Standard is provided for design agent use in coordination with the Garrison DPW. All design agents shall incorporate the key mandatory design features described herein in close coordination with the USACE designated Center of Standardization for Aviation Facilities (Vertical) (AVN COS). All Army aviation facility projects must be reviewed by the AVN COS and Transportation Systems Mandatory Center of Expertise.

1. This section of the Army Standard is a necessary component for determining the application and implementation of this standard. The AVN COS, in coordination with the Aviation Facilities Facility Design Team (FDT), is the final arbitrator for any conflicts or inconsistencies in the application of these standards as well as a mandatory reviewer prior to submission of any formal waiver requests by the installation. Citing project execution delays is insufficient justification for expedited review or other accelerated dispensation for deviating from meeting the Army Standards contained herein. Late submissions must be substantiated by unforeseen and documented life safety, health and welfare, or compelling mission imperatives that cannot be met without an approved waiver.

2. The Aircraft Rinse Facility is a major recovery point for all installations with Army Airfields (AAF) and/or Army Heliports (AHP) with a primary focus on corrosion repair/cost avoidance, environmental impact avoidance through controlled procedures, and increased lifecycle availability of airframes. Siting and visual observation of aircraft ingress/egress to the Aircraft Rinse Facility is an operational priority as traffic flow and control is managed by either Air Traffic Control or Airfield/Heliport Operations. The need to preclude operational impacts on the obstruction and safety requirements for AAF/AHP is a critical spatial or land use consideration for implementing this Army Standard. At training areas not supported by an AAF or AHP, this responsibility reverts to Range Control.

3. Aviation facilities need substantial airspace and land area for safe and efficient operation and to accommodate future growth or changes in mission support. Facilities in direct support of aircraft operations and maintenance should have sufficient land area for expansion as equipment and technology fielding are implemented as the Modular Force transitions to the Future Force of the 2015 Army.

4. The installation mission area proponent responsible for developing the scope and requirements for Army aviation facilities is usually assigned to the Aviation Division, Directorate of Plans, Training and Mobilization (DPTM) of the garrison staff or the Operations Section (G/S-3) of the senior aviation organization. At locations where there is no DPTM or G/S-3 office, facility planners must coordinate with the commander of the aviation unit(s) to be supported. The DPTM, as primary mission area proponent, is responsible for integrating mission support requirements for aviation facilities, aircraft operations, aviation safety and air traffic control.

5. Space modules, criteria, or components of an Aircraft Rinse Facility shall be used to develop space allowances and/or requirements before consideration for development of unique or specialized space allowances from those set forth in this Army Standard. When space standards and criteria and/or components are not used, the Functional Proponent, ICW the Aviation Facilities FDT and AVN COS, will review and validate functional or operational requirements prior to the development of any unique or specialized space allowance(s) **and** before incorporating into a project programming document or facility design.

General Design Philosophy:

1. Army Transformation depends on the capability to rapidly project forces from homestation. This places significant demands on installations and how functional and operational requirements are "packaged" to maximize maintaining, repairing, training, mission planning and rehearsal, deploying, and sustaining combat power capabilities. At the center of these functional and operational requirements is the Combat Aviation Brigade (CAB).

2. The Aircraft Rinse Facility is a force generation and operational availability multiplier by reducing the cost and time associated with repair or replacement of aircraft components due to corrosion or accelerated mechanical wear and tear. Secondarily, it enhances the environmental posture of an installation by controlling the migration of dirt or other potential contaminants from returning aircraft before proceeding to the aircraft parking apron that is susceptible directly to the installation storm water drainage without benefit of filtering or separation.

3. The Aircraft Rinse Facility Army Standard simultaneously resolves past issues, current needs, and the capability to accommodate future requirements (e.g., such as support for the ARH, LUH, UH-60M, and CH-47 rotary wing airframes; and up to C-37B fixed wing airframes).

Specific MILCON Transformation Design Consideration:

- Make maximum use of natural light so that facilities remain usable during periods of lost utility support
- Economy of construction is a design prerequisite
- Facilities must be durable to withstand the rigors of multiple users
- Pre-fabricated construction components and/or modular construction is encouraged as long as facility durability requirements are satisfied

Application Guidance.

1. Site Selection and Planning. Site selection and real property master planning for all Army Airfields and Army Heliports (AAF/AHP) shall comply with all safety, obstruction, and airspace boundaries as stipulated by AR 95-2 and implemented by the Transportation Systems Mandatory Center of Expertise (TS MCX) for DCS G-3, HQDA. All spatial relationships between the landing surface and operational areas of the AAF or AHP, and airspace boundaries

of the domestic or host nation aviation authority will be met. These operational, safety, and environmental (noise) clearance areas or boundaries ensure that facility siting will not be in violation of clearance areas which could render the facility inoperable. Master planning of the land use areas must also ensure that expansions of operational capabilities are maintained while the encroachment from activities on and off post are minimized. When installations are precluded from meeting these stipulations, alternatives considered and their associated limitations shall be documented in the installation Real Property Master Plan with a summary forwarded to HQ IMCOM (IMAH-PW) for Army-wide implications assessment.

When aviation training areas are not supported by an AAF/AHP or are in excess of 100 miles from aviation unit homestations, the provision of an Aircraft Rinse Facility may be provided. However, its application is limited to maximum training duration for a single aviation unit. Primary justification will be the conduct of aviation unit training of $\geq$ 20 aircraft, conducting training for 21 or more consecutive days, **and** conducted annually for > 30% of the available training days (nominal 242 training days annually) for that training area.

2. Physical Security; and Safety. The Rinse Facility is wholly contained within the outer boundary for the AAF/AHP or training complex Restricted Area.

3. Primary Facility Scope and Capacity (FCC 113 xx). The Aircraft Rinse Facility is comprised of four major elements: rinse apron (FCC 113 xx), Fixed and Rotary Wing Taxiways (FCC 112 12, and 112 21), controlled drainage and distribution, and control systems. The Aircraft Rinse Facility is a major factor in ensuring aircraft availability to meet global mission requirements. As such, it is a major component of the AAF/AHP. When there is a critical need for spatial or landuse consideration for siting and implementing this Army Standard, guidance is provided to minimize or preclude functional and operational impacts on the hangar complex and AAF/AHP operational safety and obstruction clearance requirements.

The Aircraft Rinse Facility shall not substitute for the provision of Aircraft Wash Apron (FCC 113 70) in support of maintenance and repair activities conducted in aircraft hangars.

Environmental considerations in accordance with environmental law must be provided for detergent and oil particulate waste by-products IAW AR 200-1 and AR 200-2. The apron shall be designed to ensure waste water collection is contained (except spray) and centrally distributed to an oil-water separator before entering any storm water system.

Reference Criteria: The designs should use latest editions of the following design criteria:

- UFC 3-260-01, Airfield and Heliport Planning and Design
- AR 95- 2, Air Traffic Control, Air Space, Airfield Flight Facilities and Navigational Aids
- American with Disabilities Act Accessibility Guidelines (ADAAG)
- Uniform Federal Accessibility Standards (UFAS) Federal Standard 795
- Energy Policy Act 2005 (EPACT05)
- Executive Order 132423 (E.O. 13423), “Strengthening Federal Environmental, Energy and Transportation Management”
- Energy Independence and Security Act of 2007 (EISA 07).
- IBC – International Building Code
- AR 420-1, Army Facilities Management
- DA PAM 415-28, Facility Guide To Army Real Property Category Codes
- UFC 3-600-01, Design: Fire Protection Engineering for Facilities
- UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings

- USAISEC Technical Guide for Installation Information Infrastructure Architecture (I3A)
- ETL 1110-3-491, Sustainable Design for Military Facilities
- ER 1110-3-113, Engineering and Design, Department of the Army Facilities Standardization Program