

(PRE-FINAL) SEYMOUR JOHNSON AIR FORCE BASE INSTALLATION FACILITIES STANDARDS (IFS)



Installation Elements



Site Development



Facilities Exteriors



Facilities Interiors

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Signature Field

Seymour Johnson Air Force Base IFS

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A. OVERVIEW

Comply with Air Force Corporate Standards for Overview:

<http://afcfs.wbdg.org/index.html>

This Installation Facilities Standards (IFS) document is part of the Air Force Corporate Facilities Standards (AFCFS) program to assist bases in implementing and maintaining facilities standards as appropriate for efficient operations within the respective climate region. IFS fully replaces, consolidates and simplifies existing facilities standards documents, such as the Architectural Compatibility Plan (ACP) or ACGs, FEPs, etc., and organizes information using the same structure, or Table of Contents, as the AFCFS website.

IFS reflects the AFCFS' concepts of "Facility Hierarchy" (categorizing facilities into group numbers) and "Facility Quality" (assigning an appropriate level of quality to each group number) and applies these principles at the base level. Applicable DoD and Air Force criteria such as UFCs, AFIs, Memoranda, and UFGSs (Guide Specs) are referenced and linked within IFS to ensure the document is always current.

Navigating within this IFS is efficient and straightforward. Please use the interactive Table of Contents to locate subject matter, and click on the title of a section to access it. From any page, click on the "Back to Table of Contents" footer to return. Content is organized into 4 major sections: Installation Elements, Site Development, Facilities Exteriors and Facilities Interiors.

This IFS document begins as a fill-in PDF form, which is fully editable, and becomes a "living document" that can be regularly updated by base-level personnel following a format that is consistent across the Air Force. While the format is standardized, IFS content is customized for base operations and the local climate to ensure mission success while emphasizing reduced maintenance and reduced initial costs, life-cycle costs, energy use, and water use.

1. Conformance to Air Force Corporate Facilities Standards (AFCFS) and Installation Facilities Standards (IFS) are required by Air Force Instruction (AFI) 32-1023 and Air Force Memorandum. Please refer to the AFCFS website for links to documentation on current policy.
2. Requests to deviate from any installation facilities standards, that are Unified Facilities Criteria (UFC) requirements, will follow the process outlined in the AFCFS for UFC waivers and exemptions.
3. The IFS is a component plan of the Installation Development Plan (IDP) per Air Force Instruction (AFI) 32-7062 (replacing the Architectural Compatibility Plan). All military construction projects and Non-Appropriated Funds (NAF) facilities are required to comply with the IDP and its IFS component plan by AFI 32-1023. The Base Civil Engineer (BCE) maintains and implements the IDP and its component plans, to include the IFS.
4. Please refer to the AFCFS website as a portal to reference materials and requirements documents for design and construction projects (via links). Specific references to current DoD memoranda and Air Force criteria are updated periodically to provide the most current guidance and requirements. Programming, design and contract documents should list "current edition" for all reference and requirements documents. The documents in force at the date of execution of the design and/or construction contract shall be the governing version.
5. *Advanced Modeling Requirements:*
For all Air Force projects requiring advanced modeling, to include 3D visualization, Building Information Modeling (BIM), facility data, quantity take-off, geospatial, etc., follow the Army standards. Refer to USACE Minimum Model Matrix (M3) and Project Execution Plan (PxP) which outline required model uses. Refer to [CAD BIM Technology Center \(Contract Requirements\)](#) for more information on M3 and PxP.
6. Joint Bases shall implement IFS under their Joint-Base designation with volume numbers for individual installations following the IFS Development Tool template. For example, for Joint Base Langley-Eustis, provide: Vol. 1 Langley AFB and Vol. 2 Fort Eustis.
7. References and Supplementary Documents listed in Appendix G are included in these Installation Facilities Standards by reference and are fully part of this document. Please refer to [Appendix G](#) for a listing of documents, which are available via hyperlink for viewing and downloading.
8. Installations outside the United States: Per UFC 1-200-01 DOD BUILDING CODE, 8 Oct 2019, "All construction outside of the United States is also governed by Status of Forces Agreements (SOFA), Host Nation Funded Construction Agreements (HNFA), and in some instances, Bilateral Infrastructure Agreements (BIA). Therefore, the acquisition team must ensure compliance with the most stringent of the UFC, the SOFA, the HNFA, and the BIA, as applicable." Refer to [Appendix G](#) for applicable agreements. "Use UFC 1-202-01 for design of host nation facilities that support military operations."
<https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc/ufc-1-202-01>

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Main Berkeley Gate Facility at Wright Brothers Avenue



Installation Elements Feature



Forest Setting near Dormitory Area



Native Grasses at Flightline Area

A01. FACILITY HIERARCHY

Comply with AF Corporate Standards for Facility Hierarchy (and subsections):

<http://afcs.wbdg.org/facility-hierarchy/index.html>

A02. FACILITY QUALITY

Comply with AF Corporate Standards for Facility Quality (and subsections):

<http://afcs.wbdg.org/facility-quality/index.html>

A03. FACILITY DISTRICTS

Comply with AF Corporate Standards for Facility Districts (and subsections):

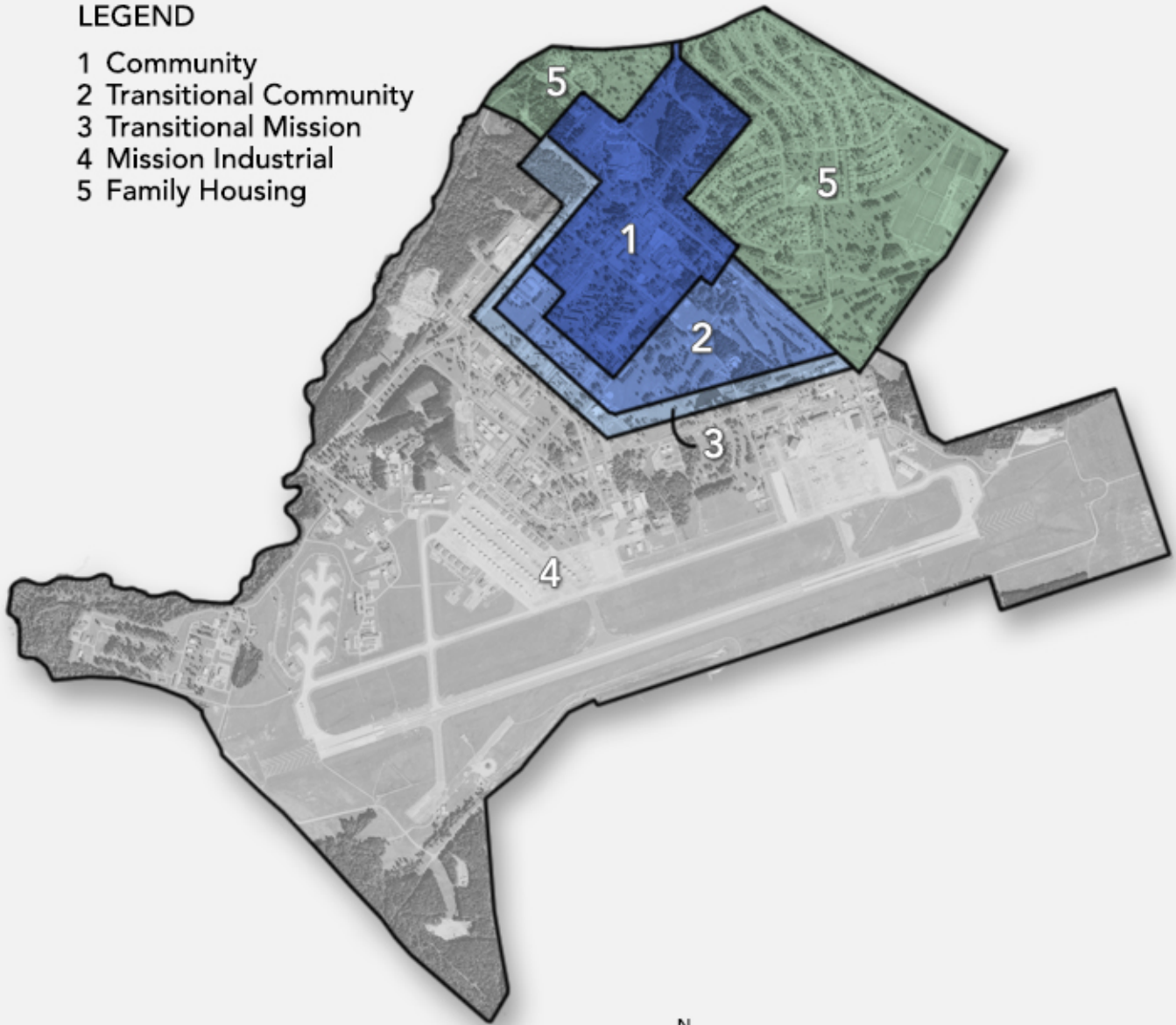
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SEYMOUR JOHNSON AFB FACILITY DISTRICTS MAP

LEGEND

- 1 Community
- 2 Transitional Community
- 3 Transitional Mission
- 4 Mission Industrial
- 5 Family Housing



Note: Apply the base-wide standards in this IFS for Installation Elements, Site Development, Facilities Exteriors and Facilities Interiors (products, materials, color, etc.). Following application of the base-wide standards, refer to the Appendix and apply any additional requirements specifically related to the Facility District.

B. INSTALLATION ELEMENTS

Comply with Air Force Corporate Standards for Installation Elements:

<http://afcs.wbdg.org/installation-elements/index.html>

B01. COMPREHENSIVE PLANNING

Comply with Air Force Corporate Standards for Comprehensive Planning:

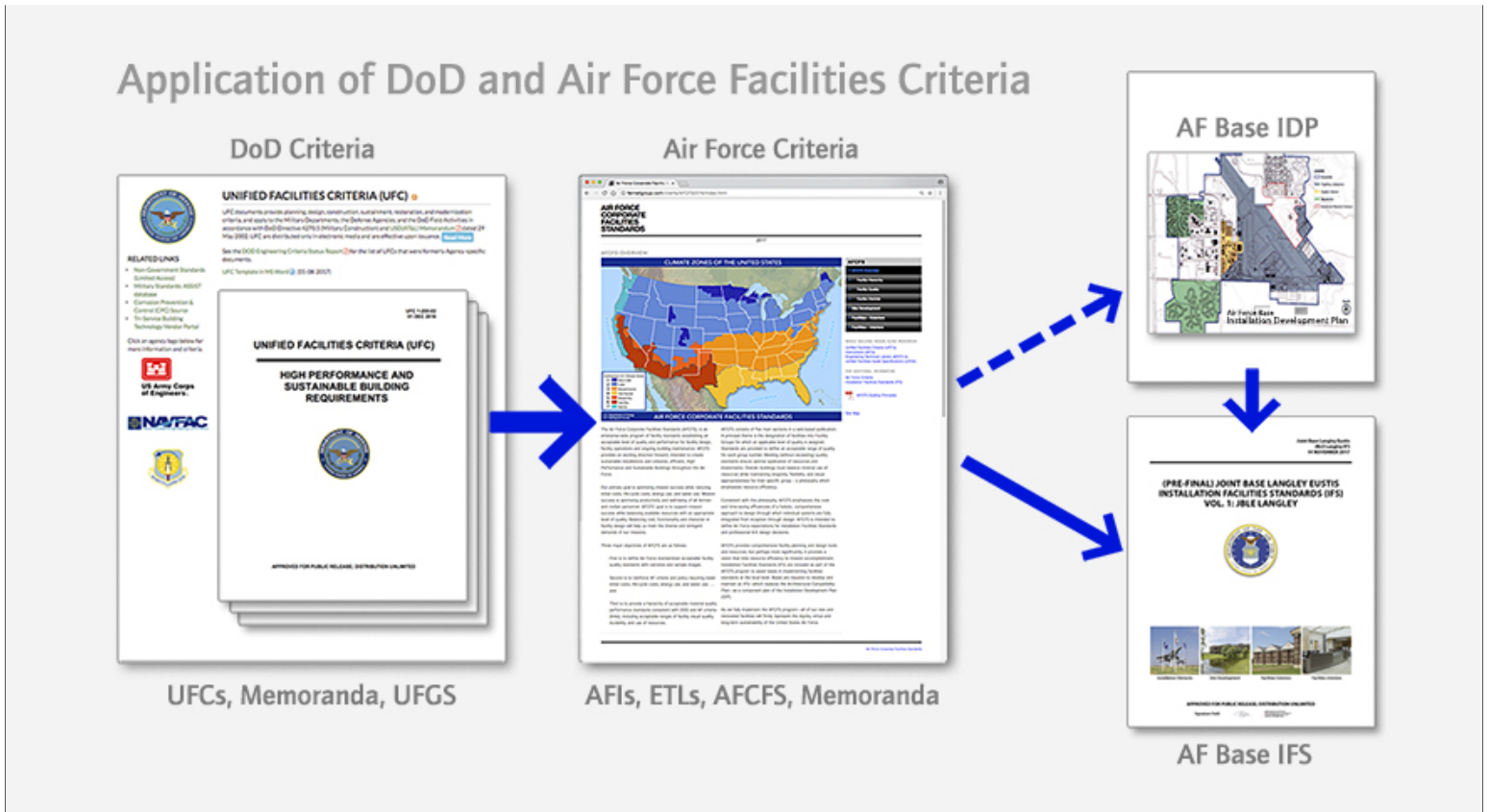
<http://afcs.wbdg.org/installation-elements/comprehensive-planning/index.html>

B01.1. Installation Development Plan (IDP)

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Department of Defense, Department of the Air Force and Air Force Base Criteria

1. The Base Civil Engineer is responsible for developing, maintaining and implementing the installation's Comprehensive Planning documents and to ensure that the Installation Development Plan (IDP) is prepared, maintained, and implemented following AFI 32-7062.

B01.1.1. IFS Component Plan of IDP

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1. Maintain this Installation Facilities Standards (IFS) as a Component Plan of the base's Installation Development Plan (IDP).

2. Consider distributed water heating and cooling systems for new construction for greater flexibility in connecting to future centralized cooling systems or solar thermal heating systems.

3. Implement district or campus infrastructure and distribution systems for cooling following a life-cycle cost analysis (LCCA). Include central plant and ice storage in the analysis.

4. Contact the 4th Civil Engineer Squadron (4 CES) for information on base policies, contractor forms, and base access protocol; contact 4 CES for questions regarding the base standards required in this IFS; and for additional base contact information.”

5. Note: Images in this document are representative and may not fully represent the base standard. Designer are directed to comply with the base standards as written in the IFS.

B01.1.2. Brief History of Base

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P-47 Thunderbolts on the Apron at Seymour Johnson Field in WWII c. 1944



Gateway at Greensboro ORD 1944



Army Air Corps Training during WWII



B-25 Mitchell at Seymour Johnson Field 1944

Seymour Johnson Air Force Base (SJAFB) was established in June 1942, several months after the United States entered World War II (WWII). The installation was then known as Seymour Johnson Field, having been named after Navy Lieutenant Seymour Andrew Johnson, who was killed in an aircraft crash in Maryland in 1941. The initial mission was to conduct technical training under the 333d Base Headquarters (HQ) and Air Base Squadron; however, in 1943, the 75th Flying Training Wing (75 FTW) was established to conduct a secondary mission to oversee the training and deployment of enlisted men and officers. The 75 FTW provided basic military training at its Aviation Cadet Pre-Training School to allow cadets to become technical officers in the Army Air Corps.

The 326th Fighter Group arrived in October 1943 and in January 1944 began training replacement pilots for P-47 Thunderbolt aircraft. In April of that year, the primary mission of Seymour Johnson Field became basic training of P-47 pilots. After WWII, the installation was designated as a central processing station to train and redistribute troops returning to the United States. In May 1946 Seymour Johnson Field was deactivated.

In April 1956 SJAFB was reactivated as a USAF base under the Tactical Air Command. The 4th Fighter-Day Wing (FDW) replaced the 83 FDW in late 1957. The 4 FDW had been reassigned to SJAFB after an extended assignment in Japan after the Korean War. On 1 July 1958, the wing was designated as the 4th Tactical Fighter Wing, renamed the 4th Wing on 22 April 1991, and redesignated the 4 FW on 1 Dec 95.

Today, the 4 FW is the host wing at SJAFB and one of two USAF units that can trace their history to another country. The wing's 4th Operations Group (OG) had its origins in the Royal Air Force's Eagle Squadrons, formed with volunteer pilots from the U.S. during the early days of WWII. In 1942, after the United States entered WWII, they formed the 4th Fighter Group in the U.S. Army Air Forces. Over the years, SJAFB has seen combat in the Korean War, the Vietnam War, and the Persian Gulf Conflict. In World War II the 4th Fighter Group destroyed 1,016 enemy planes, more than any US group or wing in history. This record, and many others, earned the 4 FW the motto "Fourth But First." The 4 FW's four squadrons currently use the F-15E Strike Eagle aircraft; the F-15E formal training unit also is located at SJAFB.

Several tenant units are also assigned to SJAFB. The largest of these units is the 916th Air Refueling Wing (916 ARW). Originally assigned to SJAFB in 1985, the 916 ARW is North Carolina's first Air Force Reserve Command Flying unit and is home to the first KC-135 Active Associate Squadron in U.S. Air Force History. The 916 ARW mission statement is to "Provide Rapid Global Refueling: On Time, Every Time!" In order to do so, the wing operates the KC-135R Stratotanker and supports routine refueling missions for Air Force, Navy, Marine Corps, and allied aircraft.

The 916 ARW is also equipped to provide airlift of cargo and personnel in addition to supporting the aeromedical evacuation mission. On 1 October 2016, the 916 ARW became the first Integrated-Wing (I-Wing) in U.S. Air Force history combining both Active Duty and Reserve Airmen under one wing commander with administrative control, setting the standard for future Total Force Initiatives. In September 2017, the Air Force officially announced that the 916 ARW would be the first Air Force Reserve-led wing to operate the new KC-46A Pegasus scheduled for delivery in fiscal year 2020.

B01.1.3. Future Development

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Aerial Image of Seymour Johnson Air Force Base

1. Follow AFI 32-7062 for Air Force Comprehensive Planning, the Comprehensive Planning Process, Comprehensive Planning Requirements, and Geospatial Mapping. Address all future development under the Installation Development Plan (IDP). Coordinate right-of-way requirements related to district infrastructure with the IDP.

B02. STREET ENVELOPE STANDARDS

Comply with Air Force Corporate Standards for Installation Elements:

<http://afcfs.wbdg.org/installation-elements/index.html>

Comply with AF Corporate Standards for Street Envelope Standards:

<http://afcfs.wbdg.org/installation-elements/street-envelope-standards/index.html>

B02.1. Hierarchy of Streets

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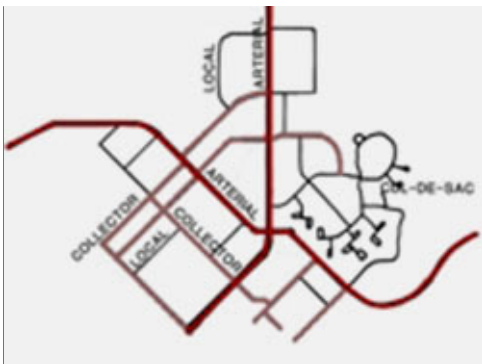
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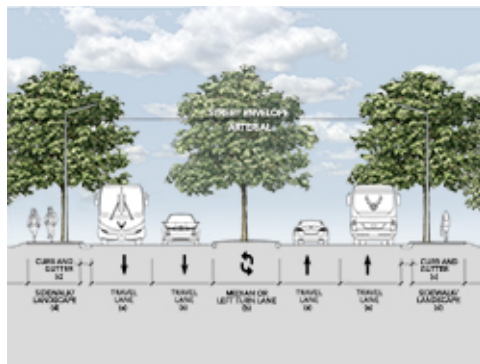
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Divided Arterial: Wright Brothers Avenue



Hierarchy of Streets



Street Envelope Section



Local Street with Axial Building Siting



Truck and Commercial Gate



Group 2 Streetscape



Group 4 Streetscape

1. Develop and evolve a hierarchical transportation network of arterial, collector and local streets following UFC 3-201-01 and its industry references.
2. Provide consistent functionality throughout the installation and a level of visual quality relating to the adjacent Facility Group number.
3. Routes along facilities in Group 1 may have materials, finishes and features with a higher visual quality than Groups 2, 3 and 4. Reduce maintenance requirements by installing highly durable materials and finishes in routes along Group 3 industrial facilities.
4. Special routes may have a visual quality comparable to those along facilities in Group 1.
5. Create and maintain arterials with two lanes of traffic in each direction with landscaped or paved medians as applicable to the local climate and adjacent facility group designation / land use.
6. Minimize stops and turns along arterials. Eliminate on-street parking along arterials and collector streets.
7. Connect arterials to local streets with appropriately scaled collector streets.
8. Provide appropriate landscape setbacks and pedestrian buffers along all streets.
9. Minimize and consolidate curb cuts along streets.
10. Ensure access for emergency and service vehicles.
11. Define bicycle traffic routes in the Installation Development Plan or its applicable component plans.
12. Provide bike lanes where there is a documented need. Provide site furnishings to promote pedestrian use at areas where pedestrian density is sufficient to require the amenities.
13. Develop streetscape elements, as defined in Appendix B of UFC 3-201-02, in heavily used pedestrian areas such as the Community Center District to emphasize pedestrian scale and to encourage use and activity.
14. Install and maintain sidewalks and crosswalks in the Mission/Industrial District to minimize pedestrian and vehicle conflicts.
15. Maintain established utility corridors along aerial streets and bury utilities as required by other sections of this IFS. Locate utility lines within the street right-of-way and following UFC 4-010-01.

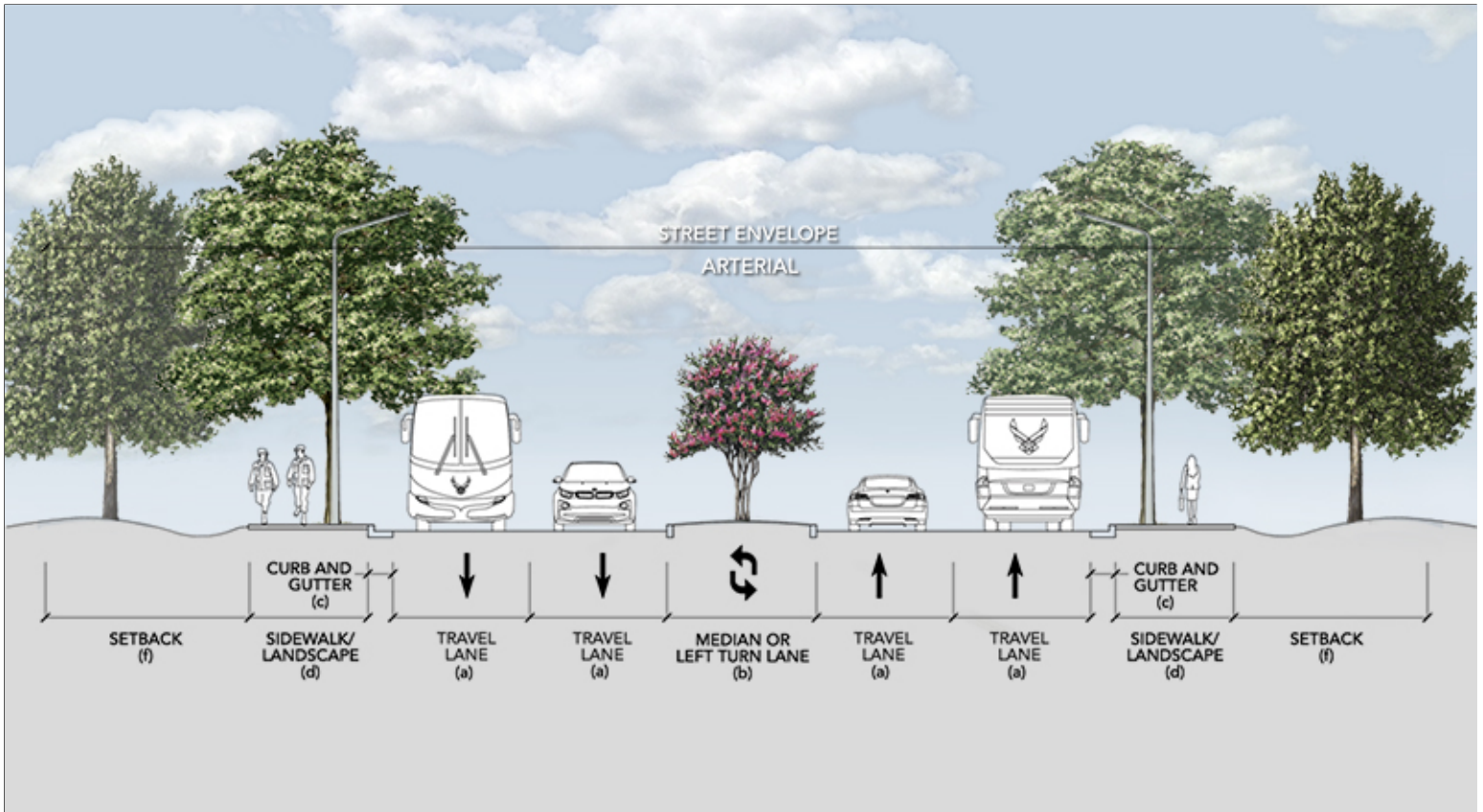
B02.1.1. Arterial Streets

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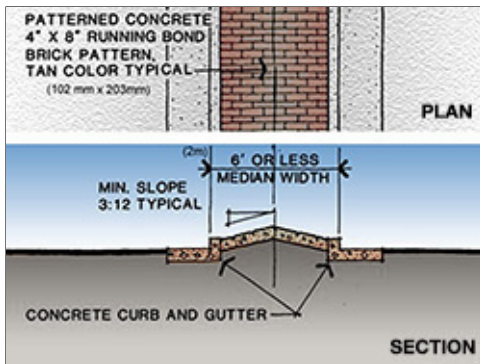
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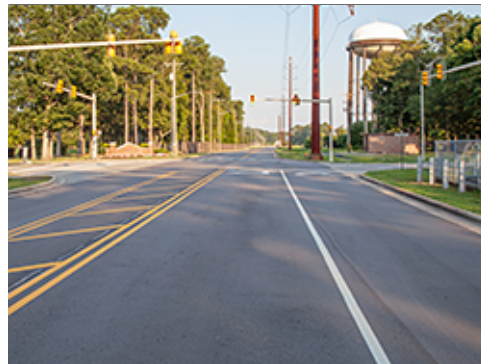
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Travel Lane (a): 12' Median (b): 12' Curb and Gutter (c): 2' Sidewalk / Landscape (d): 12' Setback (f): Min. 35' or per AT



Paved Median



Arterial with Striped Median



Static Display along Arterial

1. Minimize stops and turns and on-street parking will not be allowed at any point along arterial streets.
2. Provide sidewalks on at least one side of arterial streets and both sides of arterial streets in developed areas. Provide a 6-foot buffer between the road and sidewalk where space allows.
3. Limit curb cuts on arterial streets to entries into major facilities, building groups and major parking areas.
4. Reinforce the importance of arterial streets with appropriate signs, plantings and street lighting.

5. Maintain Wright Brothers Avenue, Blakeslee Avenue, Vermont Garrison Street, Humphreys Street, and Peterson Avenue as the main arterials of the base.

6. Provide these elements only where there is a documented need: bike lanes, sidewalks on both sides of the street, frequent street crossings, median islands, and adjacent pedestrian amenities.

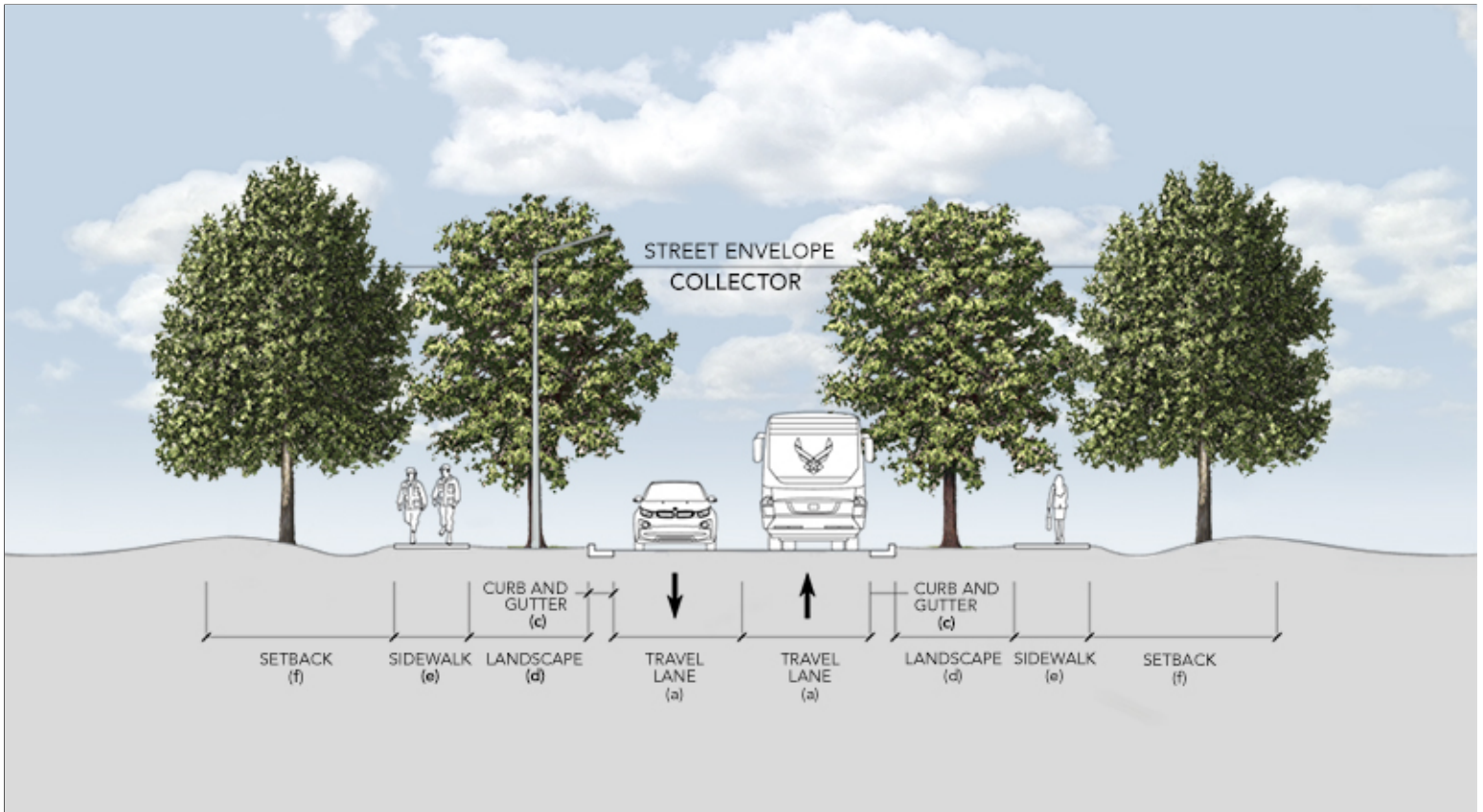
B02.1.2. Collector Streets

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

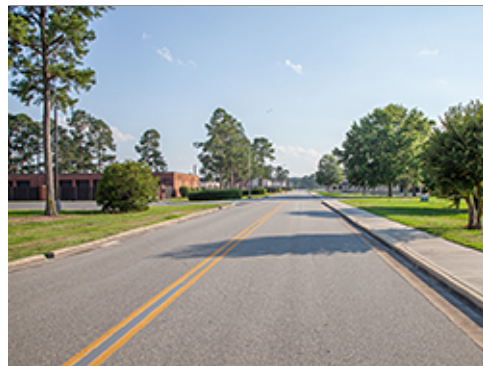
Image Tool 250 x 188



Travel Lane (a): 12' Median (b): N/A Curb and Gutter (c): 2' Landscape (d): 10' Sidewalk (e): 6' Setback (f): Min. 35' or per AT



Adjacent Open Space



Typical Landscape Setback



Grass in Setback at Parking Areas

1. Maintain Langley Avenue, which parallels Wright Brothers Avenue, as a collector recognizing it serves a high volume of traffic.

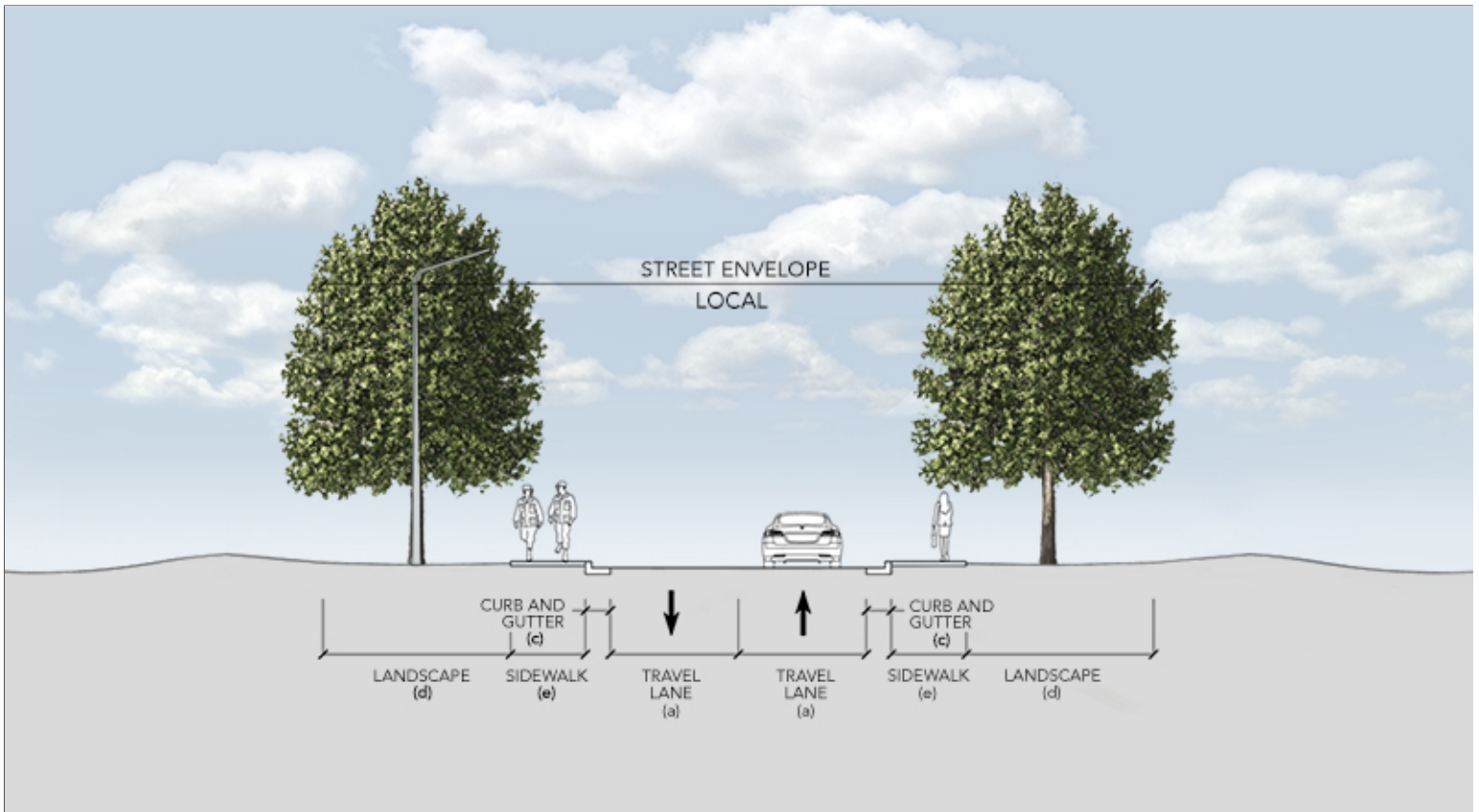
- 2. Frequent traffic stops and low speeds are permitted on collector streets, except along Langley Avenue.
- 3. Provide sidewalks on at least one side of collector streets and both sides of collector streets where functionally required. Buffers are preferred but not required on collector streets.
- 4. On street parking may be allowed on one side where secondary roads are over 28 feet wide but not less than 34 feet wide. Parking will not interfere with intersections or traffic flow.
- 5. Signs, plantings and street lighting should reinforce the designation of "collector" street.

B02.1.3. Local Streets

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1



Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3



Travel Lane (a): 11' Median (b): N/A Curb and Gutter (c): 1.5' Landscape (d): 15' Sidewalk (e): 6'



Local Street at Group 1



Limited Access Street to Group 2



Typical Group 4 Streetscape

1. Frequent traffic stops and low speeds are permitted on local streets.
2. Provide sidewalks on at least one side of collector streets and both sides of local streets where functionally required. Buffers are preferred but not required on collector streets.
3. On street parking may be allowed following UFC industry references.
4. Signs, plantings and street lighting should reinforce the designation of "local" street.
5. Cul-de-sacs are only permitted in family housing areas.

B02.1.4. Special Routes

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Small graphics do not apply



Controlled Access at Berkeley Gate with Integrated Security Features

1. Develop all special routes consistently with those adjacent to Group 1 facilities.

B02.2. Hierarchy of Intersections

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Intersection Adjacent to Group 1



T Intersection with Merge Lane



Signalized Intersection



Intersection at Group 4

1. Provide a hierarchy of intersections to include arterial, arterial-collector, collector, collector-local and local following UFC 3-201-01 and its industry references.
2. Passive systems such as traffic circles are preferred to active systems such as signalized intersections. Aggressively pursue passive systems to lower maintenance requirements and reduce energy use.
3. Use a level of visual quality for an intersection equal to the quality found in the related streetscape, which corresponds to the adjacent Facility Group number.

B02.2.1. Arterials

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Static Displays along Wright Brothers Avenue at Special Intersection



Major Intersection in Community District



Signalized Intersection



Static Display near Group 1

1. At arterial intersections adjacent to Group 1, landscaping of native grasses and shrubs may be provided; trees may be included when maintenance is available. Monuments and static displays may be integrated into arterial intersection designs.

B02.2.2. Arterial/Collector

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Intersection at Wright Brother Avenue and Edwards Street



Intersection along Langley Avenue



South Slocumb Street at Peterson Avenue



Landscaped Median near Intersection

1. At arterial/collector intersections adjacent to Group 1, landscaping of native grasses and shrubs may be provided; trees may be included when maintenance is available.

B02.2.3. Collectors

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Typical Intersection



T Intersection



Preserved Sight Lines

1. At collector intersections adjacent to Group 1, landscaping of native grasses and shrubs may be provided; trees may be included when maintenance is available. Intersections adjacent to Group 2 may be developed similarly, but with less detailing.

B02.2.4. Special Intersections

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Develop all special intersections consistently with those adjacent to Group 1 facilities.

B02.2.5. Street Frontage Requirements

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Coordinated Landscape and Signs



Grass Planting at Controlled Access Point



Monument Sign in Setback

1. Consistently maintain open space buffers following B03.2.3. Preserves.

2. Refer to C06.1.7. Streetscape Landscaping for planting and screen wall requirements along street frontage.

B02.2.6. Sight Lines

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Provide adequate sight lines for an effective and safe traffic operation per American Association of State Highway and Transportation Officials (AASHTO) standards and local municipality guidelines.

B02.3. Street Elements

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Coordinated Street Elements



Consolidated Utility Cabinets



Standard Curb Ramp and Crosswalk

1. Emulate the streetscape area's pre-development hydrology using passive and active design features to help sustain the adjacent regionally appropriate landscape. Coordinate with the base Stormwater Management Plan.
2. Employ systems, materials and techniques to maximize streetscape sustainability. Consider pervious paving and reflectivity of surfaces appropriate for the local climate.
3. Install at-grade curbing and/or raised-profile curb and gutter as applicable to direct stormwater to bioswales and rain gardens as source water for vegetation. Do not paint concrete curbing.
4. Provide all on-site utility service lines and equipment below grade when adjacent to Facility Group 1. In routes along Group 2, 3 and 4, when mounting elements such as utility cabinets, communications equipment and water valves above grade is unavoidable, paint these consistently and provide visual screening following Installation Facilities Standards (IFS).
5. Provide traffic control devices including access control point/entry control facility signs, speed limit signs and street name signs following the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) per UFC 3-120-01.
6. Crosswalk markings will follow the MUTCD for Streets and Highways, current edition. Provide white markings that define the edges of the crosswalk or a tone of lines defining the area of the crosswalk consistent with common practices found in the adjacent municipality.
7. Follow UFC 3-120-01 for directional and wayfinding signs and address both vehicular and pedestrian traffic.

8. Reduce energy consumption and reduce maintenance requirements by providing street lighting only when functionally required to ensure safety and to address antiterrorism following UFC 4-010-01. Ensure the quality and quantities of lighting and fixtures are appropriate for the adjacent Facility Group number.

B02.3.1. Paving

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Standard Bituminous Paving



Operationally Required Concrete Paving



Light Traffic Paving Section

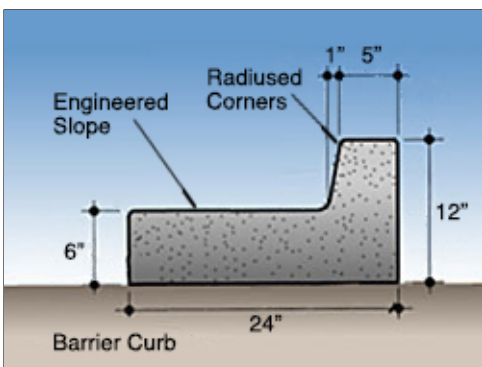
1. Pavement design will comply with UFC 3-250-01. Ensure appropriate analysis and design of subgrade conditions to promote low maintenance, high performance pavements. Apply all applicable best practices from Appendix B of the UFC.
2. Materials for pavements will be specified in accordance with UFC 3-250-01 and must conform to requirements set forth in the Unified Facility Guide Specifications (UFGS) for concrete and bituminous pavement.
3. Avoid utility or other cuts in pavement. Whenever possible use tunneling technologies to go under pavement with conduits or piping.

B02.3.2. Curb and Gutter

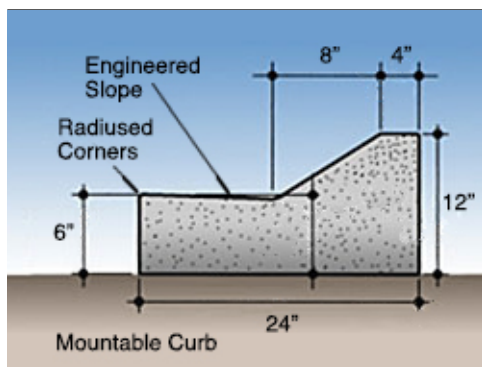
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Image Tool 250 x 188



Standard Curb and Gutter



Group 4 Curb and Gutter

1. Curb all parking, access roads and streets (except remote/isolated).

2. All streets should have integral concrete curbs and gutters. Painted curbs are prohibited because they are very difficult to maintain.

3. Use concrete for sidewalks and curbs. Do not use asphalt curbs.

4. Continuous concrete curbs and gutters will be provided at street edge areas of the installation to:

- Help control drainage
- Deter vehicles from leaving the pavement
- Protect pedestrians
- Delineate the pavement edge
- Present a more finished general appearance
- Assist in orderly and disciplined development of the street system.

5. Use the barrier curb design at arterial streets and at raised central medians. Use the mountable curb design at collector and local streets. Use the header curb design at locations where a permanent, finished edge is required, but where pavement drainage can flow onto adjacent areas such as bioswales and rain gardens.

6. Refer to the Installation Development Plan's "Complete Street" concept. Coordinate use of permeable pavement or gutters and curb cuts to rain gardens within street landscape setbacks to reduce storm water runoff and pollution.

B02.3.3. Utility Service Elements

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Provide all utility service lines below grade when streets are adjacent to Facility Group 1; when mounting elements (such as utility cabinets, communications equipment and water valves) above grade is unavoidable, paint these consistently and provide visual screening following Site Development, Landscaping.

2. In support of campus environments, below grade utility installation can be considered for Facility Group 2.

3. Overhead service lines along streets adjacent to Facility Groups 2, 3 and 4 are discouraged.

B02.3.4. Traffic Signs

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Standard Traffic Device



Standard Placement



Base Standard Sign Back Color

1. Refer to Exterior Signs, Colors and Types for Traffic Control Devices, which includes signs. Note: Command shields and emblems on street signs is prohibited by UFC. Refer to section C08. Signs.

B02.3.5. Street Lighting

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Double Arm Mount at Group 1



Single Arm Fixture at Group 1



Concentrated Placement at Controlled Area



Decorative Street Fixture at Group 4

1. Refer to the Lighting section for appropriate applications along streets.

B02.3.6. Other

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

B03. OPEN SPACE / PUBLIC SPACE

Comply with Air Force Corporate Standards for Installation Elements:

<http://afcs.wbdg.org/installation-elements/index.html>

Comply with AF Corporate Standards for Open Space / Public Space:

<http://afcs.wbdg.org/installation-elements/open-space-public-space/index.html>

B03.1. Plazas, Monuments and Static Displays

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 2

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Concrete Paving with Brick Accents at Group 2



Colored Concrete Paving at Group 2



Brick Paving at Group 1



Stone Marker at Static Display



Dynamic Mounting of Static Display

1. Natural features and culturally or historically significant features or events may be recognized and acknowledged with physical elements such as plazas, monuments and static displays. However, limit these elements on the base to ensure judicious use of resources and to reduce ongoing maintenance requirements.
2. Design highly durable plazas, monuments and static displays with a level of quality comparable to Facility Group 1.
3. Link plazas, monuments and static displays to the pedestrian circulation system. Install landscaping, site furnishings and lighting appropriate for the application and local climate following Installation Facilities Standards (IFS).
4. Select systems, products and materials for paving, walls, and structures following IFS.

B03.1.1. Paved Plazas

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Concrete Plaza at Entrance to Group 1



Brick Pavers Adjacent to Group 1



Concrete Paving at Static Display



Plaza at Installation Flag Array

1. Mitigate heat island by providing high-albedo, shaded plazas. Pervious pavers will be used on all plazas and courtyards in Facility Groups 1 and 2; use pervious concrete in Groups 3 and 4. The designer will incorporate appropriate expansion and construction joints.

2. Pavers in plazas will match the color of pavers used on adjacent sidewalks or will be a red blend in the Community Center District; a red and brown blend may be used elsewhere. Source brick pavers made from local clays and sized typically at 4" x 8".

B03.1.2. Sculptures, Markers and Statuary

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Engraved Stone Marker at Static Display of Aircraft



Engraved Stone Marker



Commemorative Bronze Plaques



Sculptural Display with Decorative Mounting

1. Relate new sculpture, markers and statuary to the base's architectural design theme. Generally limit these elements to frequently used locations adjacent to Facility Group 1 and highly traveled community pedestrian spaces.
2. Consider entry gates as possible sites for new displays.
3. All proposed memorials will follow AFI 36-3108 and be limited to highly deserving individuals or groups as deemed appropriate by the installation leadership. Living memorials (tree plantings / etc.) are discouraged due to added maintenance requirements.

4. When sculpture requires a base, match the materials and / or color palette of adjacent buildings.

5. Use direct or indirect lighting to accentuate features or enhance an intended effect.

6. Ensure that all sculpture, markers and statuary are honorable and inspiring, provide a sense of place, positively contribute to the base's visual quality, and encourage pride for the community and the US Air Force.

B03.1.3. Static Display of Aircraft

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Static Display of Aircraft, Park and Plaza near Group 1 Facilities



Coordinated Landscape



Dynamic Mounting



Forested Setting

1. Follow IFS base-wide standards for all elements of the display area with specific attention to traffic sight lines, pedestrian circulation, site furnishings, signs, and lighting. Address requirements for the Facility District as well.

2. Generally locate concrete base/foundation structures for static displays below grade.

3. At static displays where pedestrian paths are provided, a minimum of one trash receptacle and one bench will be provided. Receptacle and bench design must conform to IFS requirements.

B03.2. Grounds and Perimeters

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Native Trees and Grasses near Slocumb Gate



Perimeter Fence near Flightline



Trees Defining Open Space



Construction Entrance Facilities

1. Provide formal spaces for parade and review functions, recreational areas and parks following the base's Installation Development Plan (IDP) and Installation Facilities Standards (IFS). Refer to the Site Furnishings topic for additional information.

2. Maintain preservation areas following the IDP and IFS.

3. Comply with UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings and UFC 4-022-03 Security Fences and Gates for all elements associated with the base's gates and perimeter fence.
4. Identify and describe base-wide utility corridors in the IDP.
5. Base-wide utility infrastructure will be inconspicuous. Bury utility service lines below grade when adjacent to Facility Group 1 and when economically feasible for Facility Groups 2, 3 and 4. When service lines are located above grade, create an ordered, coordinated appearance.
6. Follow the requirements of this IFS regarding all utility structures and service lines located above grade that visually impact the installation.
7. Where screening of utility equipment and structures is provided, allow adequate and proper clearance for safety and maintenance.
8. Reduce visual clutter and visual impact of the following items through a combination of careful placement, screen walls, landscaping and painting:
 - Electrical switch-stations.
 - Sewage lift stations.
 - Water well pumps, storage tanks and/or related structures.
 - Gas piping, meters and similar incidental items.
 - Above ground fuel storage tanks.
 - Any ground-mounted freestanding utility item exposed to view.
9. Larger structures such as electrical switch-stations, sewage lift stations, fuel storage tanks and mechanical/electrical equipment will be screened from view, using materials, forms, and colors in the screen walls which match those respective design elements present at adjacent buildings.
10. Paint above-ground equipment and associated components such as electrical piping or exposed plumbing lines dark bronze.
11. Maintain currently buried utility service lines as a visual asset.
12. Bury the following exposed above-grade items in future projects when economically feasible:
 - Electrical power grid and service lines.
 - Telephone lines.
 - Cable TV lines.
 - Communications lines.
 - Exterior lighting service lines.
 - Any similar system of above-ground lines serving the base.
13. Consolidate and enclose service utility lines in underground utility corridors consistently following the IDP.
14. When feasible bury utility lines within the Neuse Planning District and Ammo Planning District per the IDP.
15. Underground utilities are encouraged in areas 3A and 3C of the Stoney Creek Planning District and in the Housing District. Underground utilities are not required in area 3D of the Stoney Creek planning District per the IDP.
16. All development of open space requires prior coordination and approval from 4 CES.

B03.2.1. Parade Grounds

- Applicable N/A Large graphics do not apply
- Applicable N/A Small graphics do not apply

1. Follow UFC 3-201-02, Appendix B for the planning and design process and criteria for parade grounds.

2. Establish and maintain parade grounds only where there is a confirmed need and provide landscape materials appropriate for the locale following IFS.

3. Bleachers may be installed only when there is a documented requirement at parade grounds. Nonferrous metals that do not require painting or going maintenance are preferred. The Base Civil Engineer will determine quantities, sizes, and products on a case basis.

B03.2.2. Parks

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Park in Family Housing



Playground in Forested Setting



Splash Park

1. Bleachers may be installed only when there is a documented requirement at parks and fields for recreational events. Follow guidance under Parade Grounds.

2. Picnic pavilions may be provided in parks where there is a documented need.

3. Prohibited picnic pavilion materials include wood, concrete masonry units (CMU) or metal pre-manufactured storage sheds. Use only materials and detailing that are low maintenance and endure with minimal weathering.

4. When picnic pavilions are permitted near facilities, generally match the architecture of the adjacent facility and provide a level of quality of the adjacent facility group number.

B03.2.3. Preserves

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Preserve areas adjacent to runways, taxiways, aprons, golf course roughs, storage areas, antenna facilities, and ammunition storage areas, as open space.

2. Provide minimal maintenance with mowing as needed for controlling bird behavior for airfield safety, or eliminating fire hazards.

B03.2.4. Perimeter Fence

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Fencing at Group 1 Berkeley Gate



Fencing Detail with Outriggers



Brick Pier and Metal Fencing



Integrated AT Elements

1. Design, install and maintain the base's perimeter fence following UFC 4-022-03. Stringently comply with AT requirements following UFC 04-010-01 for all spaces adjacent to the base's perimeter fence and all gates.
2. Fencing, gates and other elements associated with the main gates will be a level of quality equivalent to Facility Group 1.
3. Maintain a positive visual quality along the traffic corridor on both sides of the main gates. Specifically address pedestrian access, circulation and common areas.

C. SITE DEVELOPMENT

Comply with Air Force Corporate Standards for Site Development:
<http://afcs.wbdg.org/site-development/index.html>

C01. SITE DESIGN

Comply with Air Force Corporate Standards for Site Development:
<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Site Design / NEPA:
<http://afcs.wbdg.org/site-development/site-design-nepa/index.html>

C01.1. Site Design Considerations

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Small graphics do not apply



Coordinated Facilities, Site Systems and Site Elements

1. Collect documentation to validate approvals and completion of the NEPA process.
2. Ensure site design compliance with the Installation Development Plan (IDP) and its component plans and Installation Facilities Standards (IFS).
3. Promote integrated design with on-site solutions such as engineered small-scale hydrologic controls versus base-wide infrastructure; consider open space, natural features, bioswales, building roofs, streets, and paved surfaces.
4. Limit the impact of development on land and water resources. All site elements and infrastructure shall reinforce an image of sustainability, with reduced energy demand, renewable-energy usage, and water conservation.

5. Consider energy conservation during site design for the following categories: building and site lighting, auxiliary systems and equipment (refrigerators, elevators, etc.), building envelope, electric power and distribution, HVAC systems and equipment, service hot water, energy management (metering, EMCS).
6. Coordinate on-site renewable-energy systems and components to minimize area requirements and maximize efficiencies. Appropriately buffer and screen these and other mechanical systems and equipment.
7. New building projects should preserve open space and protect natural habitat.
8. Conform to existing topography to the greatest extent possible and use slopes to increase site and building efficiencies. Design sites to minimize irrigation and impacts to stormwater runoff.
9. Carefully study new project sites to identify the character of adjacent buildings, streets, landscaping, and site design elements. Reinforce the existing character in new site design.
10. Consider relationships to adjacent facilities and district / centralized heating and cooling infrastructure and cost effectively connect building systems to harvest heat, grey water or other beneficial byproducts.
11. Minimize existing and planned obstructions from landscaping, structures, topography, and adjacent developments to preserve solar access and natural ventilation.
12. Purposefully integrate service access, receiving and storage areas to eliminate the need for visual screening.
13. Appropriately connect to the base network of streets, sidewalks and trails using drive aisles, parking areas, walkways, paths, and bicycle routes addressing both vehicles and pedestrians.
14. Applicably coordinate heat island mitigation in paving and roof designs when implementing an integrated approach to stormwater management.
15. Consider the location of "Designated Tobacco Areas."
16. Arrange buildings in tight groupings, which share parking and encourage people to walk between buildings.
17. Where possible, integrate new buildings into existing groupings. Design areas between buildings as exterior pedestrian spaces.
18. Use building forms, landscaping, and existing topography to define and connect outdoor spaces.
19. Configure sites to separate service zones from parking area and pedestrian spaces. Screen service areas from major streets with landscaping in the absence of screen walls.

C01.2. Building Orientation

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

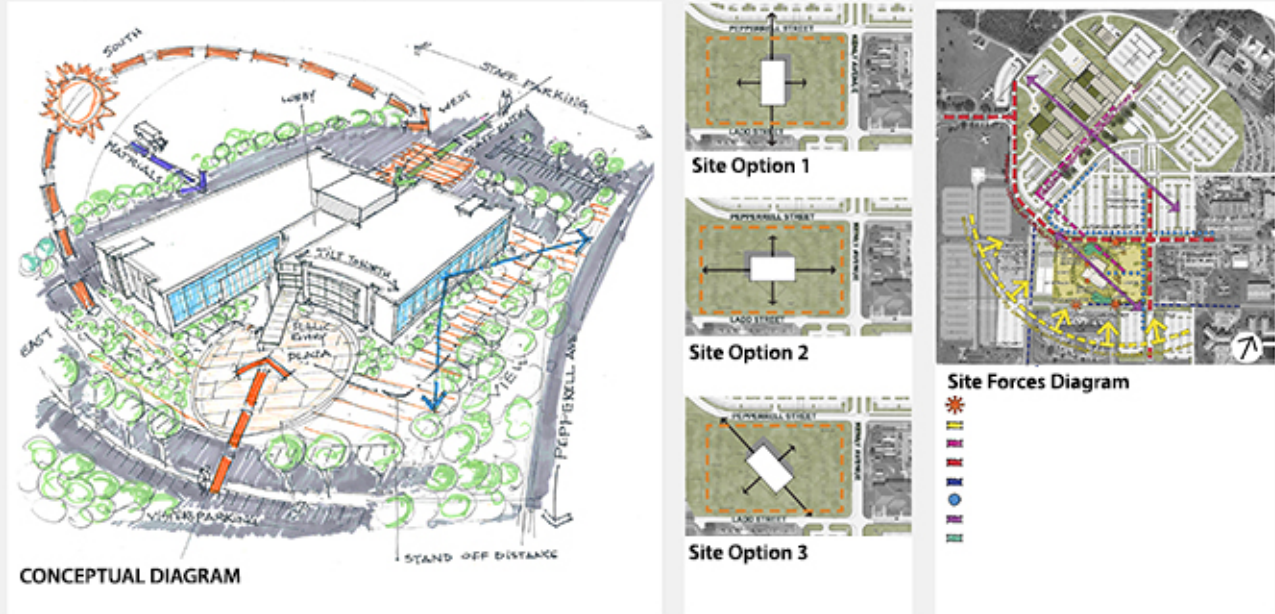
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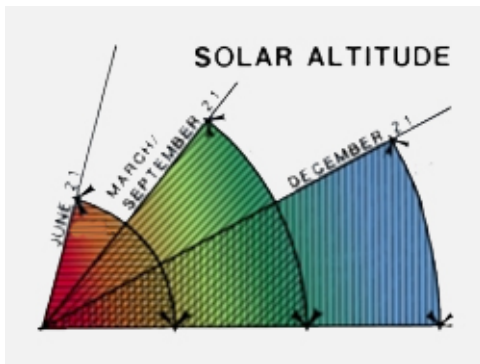
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DRIVING FACTORS

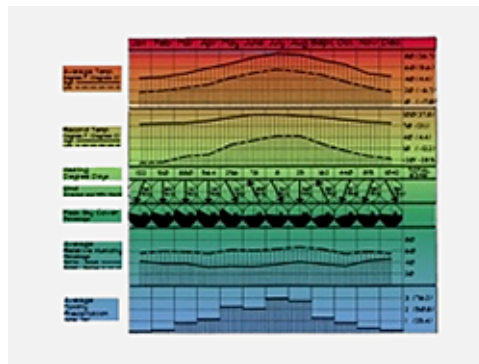
- | | | | |
|--|--|--|---|
| • Optimal solar orientation of the building. | • Maximize the daylight & desirable views. | • Meet the required AT/FP standoff distance | • Create a unified campus |
| • Main entrance from Pepperrell street. | • Saving existing vegetation and trees | • Separation between staff/public/materials entrance | • Outdoor healing environment |
| • Addressing the orientation of the future ACC | • Visibility of the new facility from main roads | • Required parking spaces for public and staff | • Implementation of landscape zones A, B, C & D |



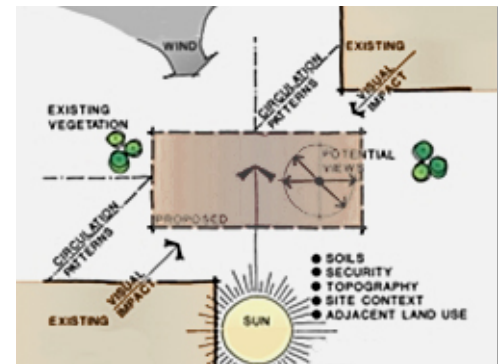
Conceptual Site Analysis and Site Design Diagram



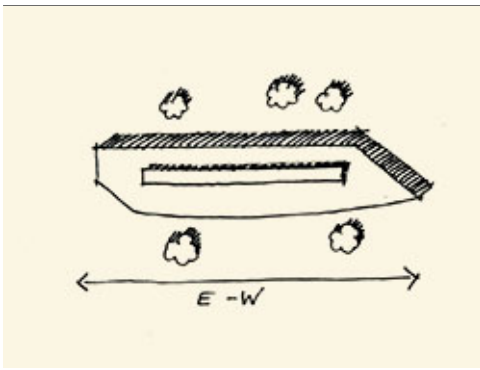
Local Solar Data



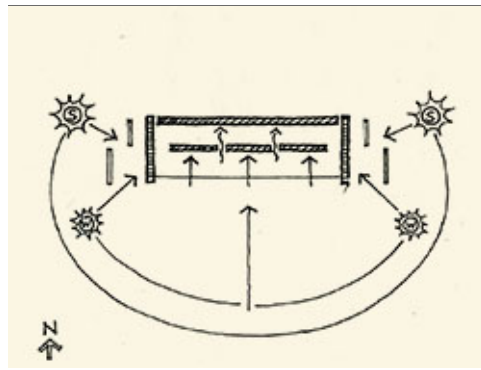
Local Climate Data



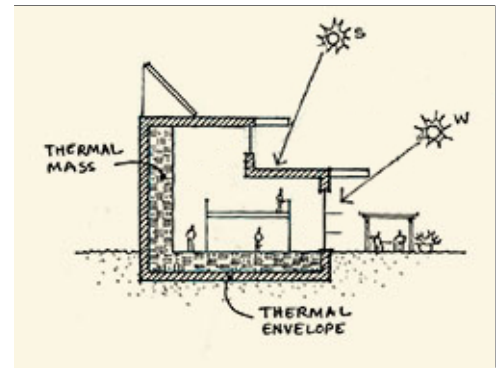
Site Data



East-West Axis



Optimum Solar Control



Maximized Shading

1. Ensure the site will accommodate optimum requirements for building orientation, which is with the long axis parallel to the east/west direction for rectilinear CONUS buildings.
2. Meet Installation Facilities Standards (IFS) requirements for the locations of the building's passive and renewable-energy systems—including geothermal and solar systems—and exterior shading systems.
3. Locate the building(s) and permitted ancillary structures to promote solar gain, solar shading, natural ventilation, rainwater harvesting, wind buffering and other beneficial passive systems. Consider natural ventilation during the design of HVAC systems.
4. Consider relationships to adjacent sites and their facilities and infrastructure, and cost effectively integrate building systems to harvest heat, grey water or other beneficial byproducts.
5. Consider the "public side" of the building, its views and the location of the main entrance.

C02. UTILITIES

Comply with AF Corporate Standards for Site Development:
<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Utilities:
<http://afcs.wbdg.org/site-development/utilities/index.html>

C02.1. Utility Components

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Underground Service Lines at Group 1



Fire Service Line and Hydrant



Buried Electric Service and Cabinet

1. Provide all on-site utility service lines below grade for Facility Group 1; when mounting elements (such as utility cabinets, communications equipment and water valves) above grade is unavoidable, paint these consistently and provide visual screening following Installation Facilities Standards (IFS).
2. Provide installation of utility infrastructure to support near term and future electric vehicle charging stations.
3. Define all service entry points into the building and route distribution below grade into an interior space within the facility; exposed conduits, cables and wires on exterior walls are not permitted for Facility Group 1.
4. Include consideration of appropriate placement of meters in support of Automated Revenue Management Services (ARMS).
5. Limit exterior mechanical distribution systems such as exterior steam, chilled water, and hot water distribution to Group 3 facilities; when required for Group 1 and 2 facilities integrate with the architecture and provide visual screens following IFS.
6. Direct roof drainage to underground collection when feasible or provide splash blocks / paved channels to intercept roof drainage at grade.

C03. PARKING AREAS

Comply with AF Corporate Standards for Site Development:

<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Parking Areas:

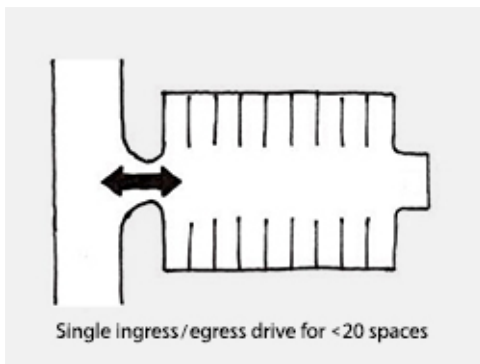
<http://afcs.wbdg.org/site-development/parking-areas/index.html>

C03.1. Configurations and Design

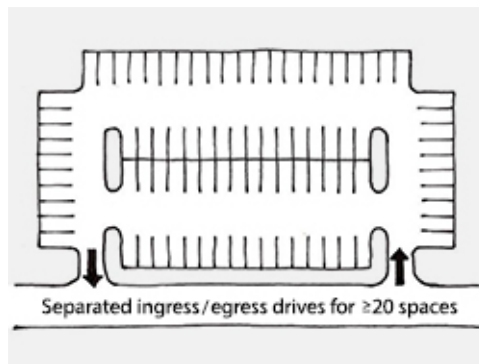
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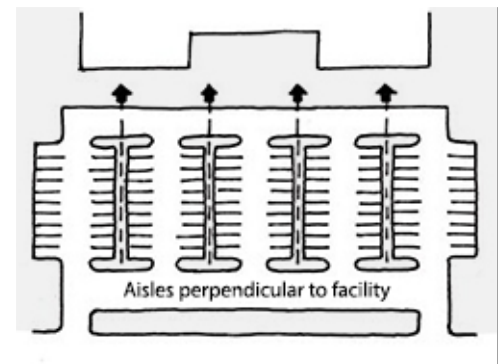
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Small Lot Configuration



Large Lot Configuration



Facility Group 1 Configuration

1. Evaluate adjacent sites and cost-effectively consolidate parking areas to maximize efficient use; ensure that all areas meet accessibility guidelines.
2. Generally envision on-site parking as a series of small connected singular areas selectively placed around the facility served, rather than a single large area; buffer parking areas from the facility main entrance with a transition space and provide drop-offs to decrease close-in parking. Comply with IFS standards while meeting AT requirements.
3. Coordinate sustainable, green infrastructure design elements and low-impact development (LID) elements with the base stormwater management plan and with parking lot design.
4. Integrate at-grade and raised-profile curbing, permeable paved areas, and parking islands with the stormwater system and direct stormwater to bioswales and rain gardens as source water for regionally appropriate native vegetation.

5. Define pedestrian access with approved hardscape and provide shading along the primary path from the parking area to the main entrance of the building.
6. Coordinate suitable landscape or barriers integrated with walls and fences to ensure adequate force protection.
7. Provide accessible parking spaces and accessible routes to the building following the Americans with Disabilities Act (ADA), in conformance with UFAS and referencing UFC 3-201-01 and its references including SDDCTEA Pamphlet 55-17. Mark these spaces according to UFC 3-120-01 and its references in ABAAS and the MUTCD.
8. Consider locations and requirements of near term and future electric vehicle charging stations.
9. Designate preferred parking spaces for electric vehicles and carpools near the main entrance.
10. Consider cost-effectively integrating solar photovoltaic arrays into covered parking structures.
11. Reserved parking is discouraged except for Facility Group 1.
12. On-street parking is discouraged except in multi-use areas. When used, provide approved on-street parking configurations following UFC 3-201-01.
13. Access and service drives should accommodate the largest vehicle serving the facility.

C03.1.1. Paving and Striping

Applicable N/A Large graphics do not apply

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Image Tool 250 x 188



Standard Bituminous Paving, White Striping



Group 3 Paving and Striping



Approved Double Striping



Operationally Required Concrete Paving



Standard Striping



Concrete Driveway at Group 4

Facility Group 1 paving materials shall be as follows.

Primary: Bituminous Paving

Secondary: Concrete

Accent: Optional: Colored Pavers May Define Walkways

Facility Group 2 paving materials shall be as follows.

Primary: Bituminous Paving

Secondary: Concrete

Accent: N/A

Facility Group 3 paving materials shall be as follows.

Primary: Bituminous Paving / Concrete

Secondary: Concrete

Accent: N/A

Facility Group 4 paving materials shall be as follows.

Primary: Concrete Driveways

Secondary: N/A

Accent: N/A

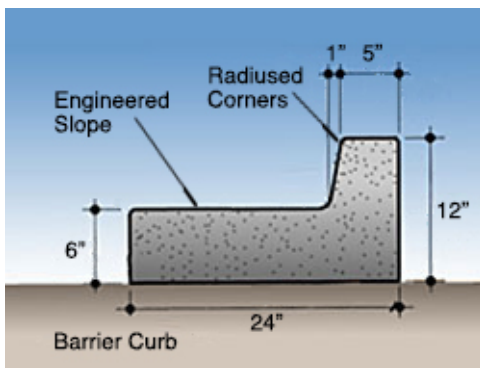
1. All new parking lots in Groups 1 and 2 shall be constructed of bituminous pavement paving.
2. Porous paving may be considered on a case basis.
3. Cost-effectively provide light-colored concrete to reduce heat island effect; otherwise install asphaltic concrete paving. Dirt, gravel, and grass lots are not allowed.
4. Use consistent striping, angles and stall sizes in all parking areas.
5. All parking shall be marked with white stripes of paint or applied vinyl coatings. Red or yellow markings shall only be used for safety purposes and must be kept to a minimum. All lines shall be four inches (4") wide.

C03.1.2. Curbing

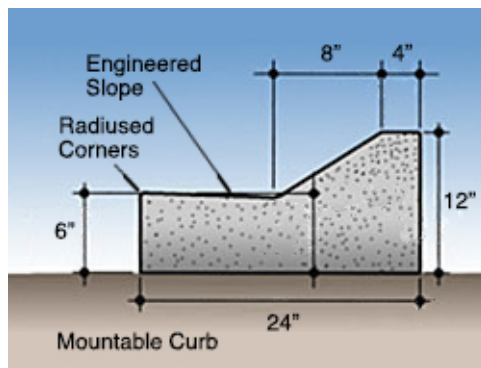
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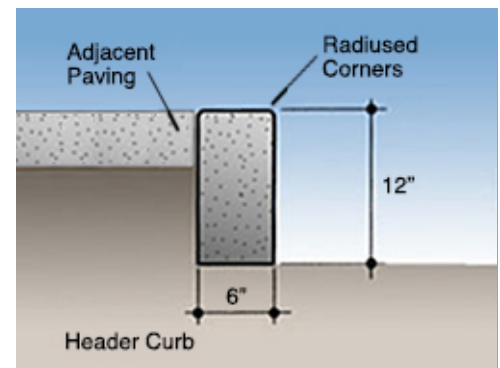
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"Barrier" Curb



"Mountable" Curb



Header Curb

Facility Group 1 curbing / edging materials shall be as follows.

Primary: Concrete

Secondary: N/A

Accent: N/A

Facility Group 2 curbing / edging materials shall be as follows.

Primary: Concrete

Secondary: N/A

Accent: N/A

Facility Group 3 curbing / edging materials shall be as follows.

Primary: Concrete

Secondary: N/A

Accent: N/A

Facility Group 4 curbing / edging materials shall be as follows.

Primary: Concrete

Secondary: N/A

Accent: N/A

1. Define all parking lots with either raised profile or at-grade curbing to promote drainage and protect paving edges. All raised curbs shall be the rolled (mountable) type.
2. Integrate curbing to direct stormwater to bioswales and rain gardens as source water for regionally appropriate native vegetation.
3. Wheel stops are not permitted except at locations where vehicle bumpers could contact adjacent items such as poles, signs or pedestrians.

C03.1.3. Internal Islands and Medians

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Central Median with Native Grass



Tree Planting with Mulch



Island Plantings with Trees and Shrubs

1. Install landscape islands and medians as visual breaks, to reduce heat island effects and to accommodate trees, bioswales and rain gardens. Coordinate suitable landscape or barriers integrated with walls and fences to ensure adequate force protection.
2. When lighting is necessary, contain fixture bases within medians or internal landscape islands.

C03.2. Parking Structures

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Parking structures are encouraged in land-constrained locations when economically feasible.
2. Consider near term and future electric vehicle charging stations and renewable energy generation development during the analysis and design.
3. Consider opportunities for integrating parking structures into multi-use developments with pedestrian-oriented uses located on the ground floor and parking on upper levels; ensure AT guidelines are fully addressed.
4. Structures may be constructed below grade with roofs serving as vegetated areas or plazas.

C03.3. Connectivity

Applicable N/A Large graphics do not apply

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Direct Link to Entrance



Clearly Defined Connection



Link to Sidewalk System

1. Refer to the Installation Development Plan (IDP) for locations of transit stops and pedestrian and cycling networks; provide appropriately sized sidewalks and bike paths to connect facilities and users to these networks.
2. Provide amenities such as rain and shade shelters, trees, and benches to encourage and facilitate use of public transportation.
3. Evaluate the IDP for the current and planned network of roads and optimally develop vehicular access to and from the site.

C04. STORMWATER MANAGEMENT

Comply with AF Corporate Standards for Site Development:

<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Stormwater Management:

<http://afcs.wbdg.org/site-development/stormwater-management/index.html>

C04.1. Stormwater Requirements

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Drainage Basin Maintained as an Amenity



Native Grasses Stabilizing Soils



Trees and Shrubs Stabilizing Slope



Standard Storm Drainage Element

1. Design all stormwater systems including retention ponds, detention areas, channels, etc. as on-site amenities that are consistent with natural systems and drainage patterns, that help sustain the base landscape with beneficial functionality and that provide aesthetic appeal; coordinate with the base Stormwater Management Plan.

2. Incorporate bioswales into the design of all roadway, parking and facility roof systems to enhance water quality and support the overall stormwater system.

3. Include sustainable, green infrastructure design features, such as low-impact development (LID) design solutions for stormwater management that are appropriate to the local climate in new parking lot development.

4. Permeable paving may be used in areas that are not subjected to severe freeze-thaw cycles.
5. Provide rainwater harvesting and storage that is attached to the building's roof drain systems to support grey water irrigation; consider winter temperatures in the design.
6. When underground drainage systems are required establish a maintenance program to include removal of sediments and debris; inspect joints seasonally for alignment to prevent leakage and the development of voids and surface failures.
7. Cost-effectively integrate stormwater systems with AT measures.

C05. SIDEWALKS, BIKEWAYS AND TRAILS

Comply with AF Corporate Standards for Site Development:

<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Sidewalks, Bikeways and Trails:

<http://afcs.wbdg.org/site-development/sidewalks-bikeways-trails/index.html>

C05.1. Circulation and Paving

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 6

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Standard Sidewalk at Group 1



Concrete Paving at Secondary Entrance



Decorative Control Joints at Group 2



Brick Edging at Group 2



Recreational Trail with Approved Paving



Wide Sidewalk in Dormitory Area



Concrete Sidewalk in Group 4

Facility Group 1 sidewalks, plazas, and courtyards paving materials shall be as follows.

- Primary: Pervious Pavers
- Secondary: Concrete Paving and Edging
- Accent: Colored Concrete (Optional)

Facility Group 2 sidewalks, plazas, and courtyards paving materials shall be as follows.

- Primary: Pervious Pavers
- Secondary: Concrete Paving and Edging
- Accent: Colored Concrete (Optional)

Facility Group 3 sidewalks, plazas, and courtyards paving materials shall be as follows.

- Primary: Concrete Paving
- Secondary: N/A
- Accent: N/A

Facility Group 4 sidewalks, plazas, and courtyards paving materials shall be as follows.

- Primary: Concrete Paving
- Secondary: N/A
- Accent: N/A

1. Maintain efficient geometry and accessibility to connect building entrances to adjacent parking areas and activity areas and to the base transportation system following AT. Efficiently use materials to optimize life-cycle costs and to minimize maintenance.
2. Generally conform horizontal layouts of sidewalks to the geometric configuration of adjacent buildings, streets, parking lots, and other adjacent related site amenities. Occasional meanders and/or jogs may be included to capture views, to coordinate with landscaping or accommodate site constraints.
3. Walks in parking areas shall provide a direct path using "safe islands" and "peninsulas" to encourage safety. Walks parallel to streets shall follow streetscape guidelines. Clearly mark pedestrian crossings at vehicular routes.

4. Mitigate heat island by providing high-albedo, shaded sidewalks. Pervious pavers shall be used on all sidewalks, plazas and courtyards in Facility Groups 1 and 2; use pervious concrete in Groups 3 and 4. The designer shall incorporate appropriate expansion and construction joints.
5. Only experienced contractors will install pervious pavements.
6. Consider an integrated approach that could include stormwater management (permeable surfaces) and complement the design of the storm drainage system when appropriate.
7. Pedestrian paths should be at least 5' in width to allow for comfortable side-by-side walking.
8. Sidewalks leading to a building main entrance and at the interior of parking lots shall be a minimum width of 6'. Walks greater than 10' wide may be used at high-density pedestrian areas where volumes of traffic justify added material.
9. Where cars park adjacent and head-in to the sidewalk and wheel stops are not used, such perimeter walks shall be increased to a minimum width of 8' to accommodate overhangs of the parked vehicles.
10. All sidewalks shall have positive drainage to prevent ponding of water with slopes ranging from 2.1% to 4.2%. Walks with a slope greater than 4.2% shall be designed as ramps following accessibility guidelines. All walks shall have a minimum cross slope of 2.1%.
11. Pavers shall conform to the following range of color: red brick made from local clays in the Community Center District and red and brown brick made from local clays in other areas. Pavers used on walks shall typically be 4" x 8" in size.
12. Connect to the bicycle circulation system and provide bicycle parking with a suitable means for securing bicycles following IFS. Consider changing/shower facilities for use by cyclists.
13. Refer to the Installation Development Plan for future trails, bicycle paths, and sidewalks.
14. Provide lighting where there is a documented need to promote safety.
15. Integrate bike lanes into street cross-sections with acceptable widths and markings or integrate bike lanes with jogging trails, only when there is a documented need.
16. Follow street design cross-sections and provide setbacks for sidewalks from streets that are acceptable for the adjacent use and facility group.
17. When there is a documented need, install sidewalks on both sides of the street along existing and new roads.

C05.1.1. Ramps and Stairs

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Integrated Ramp and Railing



Stair and Landing



Grade Accommodated with Sidewalk

1. Use ramps instead of stairs for sidewalks, bikeways and trails and at all buildings where possible. Where steps are unavoidable, follow UFC 1-200-01 and its references to the International Building Code.

C05.1.2. Lighting

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Pedestrian Scaled Fixture



Sidewalk and Area Light Fixture



Lighted Bollard on Group 4

1. Provide lighting for all stairs and landings where traffic warrants.
2. Refer to the Lighting section for path lighting along sidewalks, bikeways and trails.

C06. LANDSCAPE

Comply with AF Corporate Standards for Site Development:

<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Landscape:

<http://afcs.wbdg.org/site-development/landscape/index.html>

C06.1. Climate-based Materials

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Native Grasses with Native Trees for Shading and to Define Space



Native Tree Species



Indigenous Shrubs and Trees



Native Ornamental Trees

1. Use only native, naturally occurring, drought tolerant indigenous plant species (including grasses) appropriate for the locale to promote energy efficiency and water conservation, preserve drainage patterns, inhibit erosion, improve air quality, lower maintenance, and add beauty.

2. Follow details and specifications of the American Standard for Nursery Stock, current edition.

C06.1.1. Landscape Design Concept

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Deciduous Trees Located to Provide Shading on Building Facades



Predominant Use of Grasses with Trees



Shaded Streets



Native Grasses in Open Space

1. Develop, maintain and implement a climate-based plant list with landscape features using a regionally appropriate palette of materials to promote energy efficiency, preserve drainage patterns, inhibit erosion, improve air quality, lower maintenance and add beauty. Follow UFC 3-201-02 Landscape Architecture.

2. Landscaping is required for all newly developed sites and facilities; preserve existing native landscape where possible and avoid overplanting.
3. Concentrate landscaping in Facility Group 1 and along major thoroughfares and integrate these landscaped areas into the base's stormwater management plan. Refer to the Streetscape Envelope Standards in this IFS.
4. All Facility Group 1 and 4 sites shall be landscaped at their entire perimeter; limit formal planting arrangements to formal spaces typically associated with Group 1. Landscape public spaces near the main entrances of Group 1 facilities.
5. Facility Group 2 and 3 sites may have a native undisturbed landscape except at the main entrances of Group 2, which should be newly landscaped.
6. Facility plantings shall follow the Installation Facilities Standards (IFS) plant list, which is based on the specific microclimates created by the adjacent building; shadow areas, protected areas, zones adjacent to thermal mass, and availability of rainwater and/or grey water.
7. Provide open spaces as transitions between developed and native areas that promote quality of life and provide visual relief and allow walkable connections to the transportation system.
8. Return suitable areas to a natural state to minimize and, whenever possible, eliminate ground maintenance requirements; expand prairie areas where appropriate with native plants to eliminate mowing and maintenance requirements.
9. In tree clusters replace grass with naturalized shrub beds and leaf litter mulch to eliminate mowing requirements.
10. Use plantings in open spaces to reinforce the space as a visual asset.
11. Consider landscape windbreaks when suitable for the local climate.
12. Integrate security requirements into the landscape design. Coordinate the heights of trees and shrubs and note restrictions for plantings following UFC 4-010-01.
13. Berms may be used as an integral part of the overall landscape strategy for screening, security and/or visual interest.
14. Use deciduous trees on the south, east, and west sides of buildings and along circulation routes to shade facades and sidewalks during the summer but to allow sun in the winter months. When planting along south walls use species with a scale and form that maximizes winter sunlight.
15. Plant shade trees along the north sides of buildings to reduce the adjacent air and ground temperatures and to reduce light reflected into interiors.
16. Incorporate foundation plantings of low growing evergreen shrubs along north-facing walls as a thermal buffer.

C06.1.2. Xeriscape Design Principles

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Xeric Feature at Group 1



Naturally Mulching Landscape at Group 2



Xeric Perennials at Group 4

1. Apply xeriscape principles following UFC 3-201-02, Appendix B, and Air Force Corporate Facilities Standards.
2. Facility plantings are encouraged to use native plant species and to consider specific microclimates created by the adjacent building: shadow areas, protected areas, zones adjacent to thermal mass, and availability of rainwater and/or grey water.

C06.1.3. Minimizing Water Requirements

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Drought Tolerant Grasses



Mulched Planting Beds



Xeric Plant Species

1. Reasonably reduce demand on potable water while seeking opportunities to increase alternative water sources for irrigation. Reduce or eliminate the use of potable/domestic water for purposes of landscape architecture maintenance, consistent with existing legal or contractual obligations, and prohibit potable-water irrigation in new construction beyond establishment following current DoD and Air Force policy.

C06.1.4. Plant Material Selection

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Ornamental Species in Mulched Beds at Group 1 Used to Define Space



Trees Providing Shade on Buildings



Low Water Requirements



Accent Color in Landscape

1. Use only native, naturally occurring plant materials including grasses or turf suited for the local climatic conditions in the landscape design; potable-water irrigation systems are discouraged beyond the establishment period.
2. New facilities are encouraged to use native plant species as indicated on the base plant list available from 4 CES.
3. Trees should be the focus of landscape plantings and, where possible, should be a mix of deciduous and evergreen species for variety; provide tree grates when appropriate and use tree guards on smaller trees.

4. Due to high maintenance requirements, sheared hedges and annual/perennial flowerbeds will be limited in size and quantities and used only at Group 1.
5. Reduce maintenance by selecting acceptable species for a space. The mature size of the plant should fit the space to negate the need for pruning.
6. Ground covers are only recommended when minimal maintenance is required.
7. Turf areas should be limited to those that can be sustained by natural rainfall or grey water (non-potable) irrigation systems; turf may be defined by at-grade concrete mow strips to lessen maintenance.
8. Analyze soils and provide organic amendments as needed to improve plant growth and conserve water.
9. All plant material shall have one-year warranty and is subject to approval by the Base Landscape Architect.

C06.1.5. Water Budgeting (Hydrozones)

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Small graphics do not apply



Rock Mulch, Concrete Edging and Xeric Planting in Group 1 near Flightline

1. Comply with DoD and Air Force policy on potable-water irrigation systems.
2. Provide irrigation systems in new construction to establish plant materials following “Water for Landscaping” in UFC 1-200-02. Note the climate zone and annual rainfall for the locale.
3. New buildings shall cost-effectively integrate a grey-water reclamation system following UFC 1-200-02, which provides source water for an automatic drip irrigation system; connect adaptive plantings adjacent to facilities to a grey-water irrigation system when available and discontinue the use of potable water for irrigation after the establishment period.

4. Provide irrigation design following UFC 3-201-02. Install drip irrigation products and components following UFGS Section 32 84 24 Irrigation Sprinkler Systems. Match the color of valve box lids to the adjacent ground treatment (i.e. green at turf & native seed areas, brown at wood mulch & rock areas).

5. Life cycle cost-effectively equip irrigation systems to sense soil moisture, rainfall and wind to minimize unnecessary watering; incorporate drip irrigation systems as the primary source.

C06.1.6. Base Entrance Landscaping

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

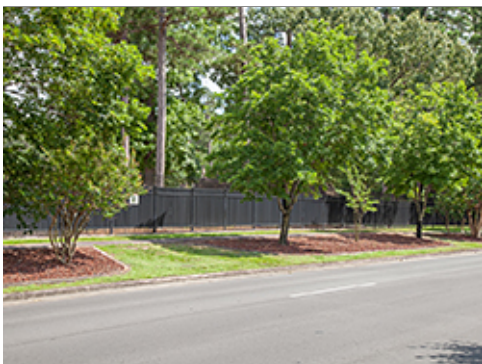
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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Native Grasses and Trees with Accents of Xeric Shrubs



Coordinated Street Tree Planting



Integrated Low Wall and Planting



Low Height Xeric Species

1. At the main gate, reinforce a sense of arrival through a well-designed concentration of landscape elements consistent in visual quality with Facility Group 1.
2. Ensure landscaping has seasonal features with spring and fall color and a combination of evergreen and deciduous trees and shrubs for winter interest.
3. Integrate base signs and street and pedestrian lighting whenever feasible.

C06.1.7. Streetscape Landscaping

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Trees Set Back from Street



Trees Used for Screening



Predominant Use of Grasses

1. Provide landscape designs with plant materials appropriately representing the level of quality of the adjacent Facility Group number. Refer to the Installation Elements section.
2. Select a variety of regionally appropriate streetscape plantings and grading to create a visual interest.
3. Formal street tree planting design should use trees of the same species spaced at regular intervals.
4. Plant complementary trees of a different species at regular intervals within the grouping to break monotony.
5. Provide planting areas as defined under section B02. Street Envelope Standards. Generally trees should be no closer than 5 feet to the sidewalk.
6. Maintain clear sight lines at intersections, crosswalks, parking lots, and driveways following section B02.2.6. Sight Lines.
7. Coordinate tree species selection with utility lines, signage, visual clearance requirements, and other man-made constraints.
8. Provide a mulched area between tree trunks and adjacent grass to prevent damage from mowers and string trimmers.
9. Where possible, divide main entrances with landscaped traffic medians between entry and exit lanes.

C06.1.8. Pedestrian Circulation Landscaping

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Trees Used to Define Space



Trees for Shading and Definition of Space



Accent Planting



Raised Planting Bed at Group 1

1. Define walkways with landscaping where appropriate.

2. Provide rest areas along the pedestrian circulation network with human-scaled deciduous shade trees. Supplement tree plantings with finely textured shrubs when appropriate for the climate.

3. Provide wind breaks where required.

C06.1.9. Parking Lot Landscaping

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Landscaping Providing Scale and Definition



Island with Rock Mulch and Tree Planting



Trees at Perimeter for Shading

1. Integrate acceptable landscaping elements into parking areas to visually soften the appearance at a minimum rate of 10 percent of the total area.
2. Select rounded, high-branched, dense, and relatively fast-growing trees in islands and at perimeters. Tree species must tolerate harsher conditions such as sun, glare, heat, and reduced water supply.
3. Avoid trees with low-growing branches and that litter the parking area with branches, sap, fruit, or nuts, and use long-lived species; keep trees trimmed, removing dead and dying trees or branches.
4. Provide planting in islands within parking lots for shade and appeal following IFS and the base stormwater management plan.
5. Rain garden islands shall be landscaped to receive rainwater runoff from adjacent impervious parking areas to be absorbed into the ground/planting bed. Native plants and groundcovers are recommended within the rain garden areas, which can survive without supplemental irrigation once established.
6. Screen parking areas from view of major streets through the use of natural topography, earth berms and vegetation.
7. Use a combination of trees and shrubs to provide both a visual screen and shade.
8. Parking areas should be set back from streets. Setbacks a minimum of 20 feet wide will allow adequate space to incorporate planting for effective screening.
9. Provide landscaped islands in parking areas to add shade, articulate vehicular circulation and visually break up large expanses of paving.
10. Plantings must be low maintenance and suitable for harsh conditions present in parking areas.
11. At parking lot entrances and intersections, design landscaping to preserve clear sight lines when plants reach mature sizes.

C06.1.10. Screen/Accent Landscaping

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

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Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

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Accent Landscaping at Family Housing Entrance Sign



Ornamental Planting near Group 2 Entrance



Landscape Screening of Utility Cabinet



Landscape Screening of Mechanical Elements

1. Provide complimentary accent landscaping at monuments and static displays.
2. At Facility Group 1, provide landscaping adjacent to all freestanding signs without distracting from the written communication.
3. Provide landscape screening of utility elements adjacent to Facility Group 1.
4. Providing landscaping as visual screening is preferred to the construction of walls and fences; berming and mounding may supplement landscape screening.

5. Use landscape materials to visually soften long fence lines.
6. Screen family housing from adjacent primary or secondary roadways with planting and/or earth berms.
7. Retain existing natural habitat as a buffer between housing and commercial or industrial uses.
8. Refer to section C07.1. Furnishings and Elements for screen wall and fencing.
9. Maintain required airflow and maintenance clearances between plant materials and screened equipment.
10. Plantings around masonry enclosures or metal screens will help integrate these elements with the surrounding site.

C06.1.11. Other

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Group 1 Entrance Landscape



Entrance and Foundation Planting



Xeric Planting at Entrance

C06.1.11.1. Building Entrances, Courtyards, and Foundation Planting

1. Use landscaping to enhance the entry sequence from the street or parking area to the building’s main entrances.
2. Use mass plantings to define outdoor spaces.
3. Create landscape patterns that accentuate building entrances.
4. Design courtyard landscaping to give building users relief from summer heat.
5. Use foundation plantings to visually integrate the building with the site.
6. Landscape around the building perimeter to help direct pedestrian movement.
7. To achieve a natural appearance and layer planting designs, place groundcovers in front, followed by small shrubs, with tall shrubs or small trees planted at the rear of the planting bed.

C07. SITE FURNISHINGS

Comply with AF Corporate Standards for Site Development:
<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Site Furnishings:
<http://afcs.wbdg.org/site-development/site-furnishings/index.html>

C07.1. Furnishings and Elements

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 6

Image Tool 250 x 188



Bollards Compatible with Facility



Flag Poles



Picnic Table



Designated Tobacco Area



Dumpster Enclosure



Trash and Ash Receptacle

1. Provide a coordinated consistent inventory of site furnishings to positively contribute to the visual environment, image, and identity of the base; ensure durability, low maintenance, reduced visual clutter, and compatibility with the adjacent architecture.
2. Remove poorly located or redundant litter / ash receptacles, newspaper and bicycle racks, telephone booths, vending machines, walls and fences to reduce visual clutter and to lessen the requirements for maintenance.
3. Group 1, 2, and 3 site furnishings shall be powder coated metal. Site furnishings in parks may be made of composite materials with recycled content. Generally match the site furniture of adjacent facilities and the facility district.
4. Install needed outdoor seating (benches and low walls) in public gathering spaces near main and secondary building entrances. Low walls shall match facility architecture.
5. Benches in Groups 1, 2 and 3 shall be powder coated metal. Benches in Group 4 and parks may be made of composite materials with recycled content.
6. Integrate functional bicycle racks with the design of the building's main entrance grounds in Facility Groups 1 and 2 while meeting AT requirements.
7. Limit the use of bollards, but when necessary for force protection use powder coated aluminum in Groups 1, 2 and 3; bollards in Group 4 and parks and trails and illuminated bollards may be used as approved by 4 CES on a case-by-case basis.
8. Locate architecturally coordinated containers for recycling, litter, ash, vending, etc., to minimize visual clutter and not visible from the building's main entrance. Minimize the use of freestanding planters.

9. Generally limit picnic tables, barbeque grills and drinking fountains to lodging, dormitories, housing areas, parks and recreation areas following IFS.
10. The Installation Flagpole location shall comply with the guidance for the display of flags in AFI 34-1201. Each Air Force installation is authorized to fly one United States Flag, normally in front of the installation headquarters. Waivers for non-authorized locations must be submitted in accordance with AFI 33-360 and approved waivers (AF Form 679) must be maintained by the installation protocol office.
11. Refer to the Overview Section "Facility Hierarchy" topic of this AFCFS for guidelines regarding ancillary structures such as pavilions and shade shelters.
12. Bus shelters shall be provided only where there is a documented need and when approved on a case basis. Generally emulate the designs of adjacent shelters using black anodized aluminum framing and laminated plastic glazing.
13. Monuments and static displays shall be limited. New elements are generally discouraged unless these are fully vetted through the base's approval process and designed following IFS.
14. When visual screening is necessary, consider landscaping as the first option; screen walls are permitted only in Group 1 finished with masonry to match the adjacent building.
15. For fencing, apply the standards for "Products, Materials and Color" in the following section. Limit those with the highest visual quality to Facility Group 1 where there is sustained maintenance. Define all levels of security and visual quality.
16. Do not use chain-link fencing at Group 1, 2 or 4 facilities; Limit the use of barbed-wire outriggers on chain-link fencing at industrial sites, unless required for additional security or protection of assets.
17. Wood fencing may be used in Facility Group 4 and in recreation areas following IFS for material and finish when there is sustained periodic maintenance.
18. Provide trash dumpster enclosures for Group 1 and 2 with red blend brick to match adjacent facilities and for Group 3 with beige CMU; all gates shall be metal factory finished medium bronze. Wall height will be a minimum of 6" greater than dumpster height. Provide concrete slab and 6" diameter medium bronze concrete filled pipe bollards for wall protection.
19. Screen wall materials will be red blend brick or beige CMU to match adjacent facilities that do not require painting or maintenance beyond periodic cleaning.
20. Group 1, 2 and 3 picnic tables and seating will be concrete or powder coated steel. Group 4 and recreational areas will have powder coated or recycled content picnic tables and seating. Generally limit picnic tables, barbeque grills and drinking fountains to lodging, dormitories, housing areas, parks and recreation areas.
21. Limit the use of freestanding planters to areas with ongoing maintenance.
22. Provide kiosks only where there is a documented need for visual communication of posted messages. When used, match adjacent facilities in materials and detailing and consolidate kiosks with other site furnishings within 30 feet of major pedestrian paths. Limit kiosks to facility Groups 1 and 2 and parks.
23. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers. Note: all sample images are only representative and may not be sourced from Seymour Johnson AFB; all written base standards must be followed.

C07.2. Site Furnishings Products, Materials and Color

Note: Apply the below base-wide standards for Site Furnishings (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

C07.2.1. Barbeque Grills

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Charcoal**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Most Dependable Fountains, Inc.

Color: Black or natural stainless steel

Finish: Powder coats or mill stainless

Model #: Pedestal Mount BBQ Grill

Other: Concrete pier or slab, coordinate with Base Architect

UFGS: N/A

Type: **Natural Gas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: BBQ Coach

Color: Natural stainless steel

Finish: Mill

Model #: 32" 4-Burner

Other: Built-in Concrete or masonry, coordinate with Base Architect

UFGS: N/A



C07.2.2. Benches

Applicable N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Concrete Slab Bench**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Materials, Inc.

Color: Weatherstone Gray

Finish: Standard Finish (Smooth)

Model #: Mesa, Rectangular design

Other: N/A

UFGS: N/A



Type: **Metal Slat Bench**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoors

Color: Bronze, brown or beige as approved by 4 CES

Finish: Powder coat

Model #: Wilmington Collection

Other: 6 feet length

UFGS: N/A



Type: **Recycled Content Plank Bench**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoors

Color: Dark bronze base, wood tone slats

Finish: Factory

Model #: Horizontal slat, contoured seat and back

Other: N/A

UFGS: N/A

C07.2.3. Bike Racks

Applicable N/A

Number of base standards 2



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Brandir International Inc.

Color: Medium bronze or galvanized

Finish: Factory

Model #: The Ribbon Bike Rack, RB-07

Other: N/A

UFGS: N/A



Type: **Grid Rack**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoor

Color: Black

Finish: Powder coat

Model #: Grid Bike Rack Side Sided

Other: N/A

UFGS: N/A

C07.2.4. Bike Lockers

Applicable N/A

C07.2.5. Bollards

Applicable N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Lighted Round Flat Top**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Lithonia Lighting Products

Color: Dark bronze

Finish: Powder coat

Model #: 6 inch round

Other: 3000K LED Lamp, 360° downlighting

UFGS: N/A



Type: **Lighted Round Dome Top**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Lithonia Lighting Products

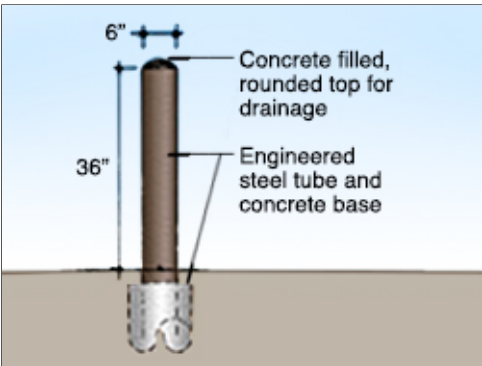
Color: Dark bronze

Finish: Powder coat

Model #: 6 inch round

Other: 3000K LED Lamp, 360° downlighting

UFGS: N/A



Type: **Building Protection, steel**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: (Bollard Cover) Reliance Foundry

Color: Brown cover may be field painted dark bronze

Finish: Factory

Model #: 6" Steel pipe, concrete filled, Cover: R-7173

Other: A 1" (25.4 mm) rigid conduit and box with shroud may be provided at top of bollard with a receiver/key switch application

UFGS: N/A

C07.2.6. Bus Shelters

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Metal**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoors

Color: Dark bronze

Finish: Powder coated

Model #: Dome Top Open Front

Other: Provide concrete slab and integral aluminum bench

UFGS: N/A

Type: **Framing and Cementitious Siding**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Off white

Finish: Factory

Model #: Open front, gable roof

Other: Provide concrete slab and integral bench

UFGS: N/A



C07.2.7. Drinking Fountains

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Pedestal**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Most Dependable Fountains, Inc.

Color: Natural

Finish: Stainless Steel

Model #: MDF 440 SMSS

Other: Accessible

UFGS: N/A

C07.2.8. Dumpster Enclosures / Gates

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **1: Brick and Steel**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Red brick blend, dark brown doors

Finish: Face brick, powder coated doors

Model #: Match adjacent building

Other: Steel gates and hardware, dark brown, dumpsters shall be painted dark brown, off white precast column cap and coping

UFGS: Section 04 20 00 Unit Masonry



Type: **2: CMU and Steel**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Medium beige CMU, dark brown doors

Finish: Split face CMU, powder coat doors

Model #: Custom

Other: Steel gates and hardware, dark brown, dumpsters shall be painted dark brown, off white precast column cap and coping

UFGS: Section 04 20 00 Unit Masonry

C07.2.9. Fencing

Applicable N/A

Number of base standards 5

Image Tool 250 x 188



Type: **Style A Barrier: High Security, High Visibility**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Black or dark brown

Finish: Powder coat

Model #: Steel posts, rails and pickets (vertical, bent outward at top)

Other: Posts, rails, and pickets in heights, lengths and gauges as required; provide engineered foundation and continuous concrete curb; brick or CMU piers to match adjacent buildings may be provided

UFGS: Section 32 31 13 Chain Link Fences and Gates

Type: **Style B Barrier: High Security, High Visibility**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Black or dark brown

Finish: Powder coat

Model #: Masonry piers, steel posts, rails and pickets, bent outward at top

Other: Posts, rails, and pickets in heights, lengths and gauges as required; provide engineered foundation and continuous concrete curb; provide brick or CMU piers to match adjacent buildings

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Style C Barrier: High Security, High Visibility, Privacy Panels**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Black or dark brown

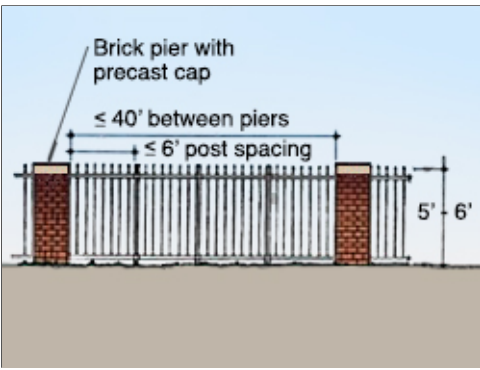
Finish: Powder coat

Model #: Steel posts, rails and pickets (vertical, bent outward at top)

Other: Provide privacy screen; posts, rails, and pickets in heights, lengths and gauges as required; provide engineered foundation and continuous concrete curb; provide brick piers to match adjacent buildings

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Style D Barrier: Low Security, High Visibility**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Red brick blend, dark brown fencing

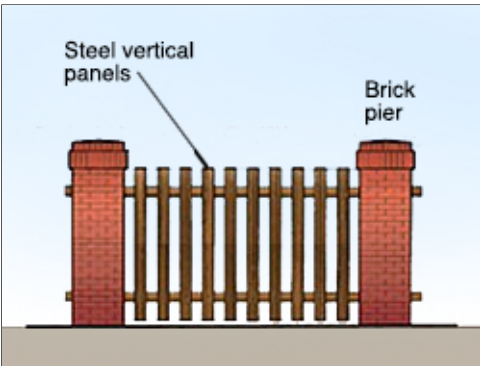
Finish: Face brick, powder coated metal

Model #: Brick Piers with steel posts, rails and pickets

Other: Brick: 2'x2' (Height as required, equally spaced 12' to 40'), Steel posts: 4"x4" (equally spaced), Rails: 2"x2", Pickets: 1"x1" (6" o.c.); close all ends of tubing

UGFS: Section 04 20 00 Unit Masonry, Section 05 50 13 Misc. Metal

Type: **Style E Barrier: Low Security, High Visibility**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Red brick blend or CMU to match adjacent, dark brown fencing

Finish: Powder coated metal

Model #: Brick or CMU piers with steel posts, rails and alternating panels

Other: Piers: 2'x2' (Height as required, equally spaced 8' to 40'), Steel posts: 4"x4" (equally spaced), Rails: 1-1/4"x1-1/2", vertical steel panels spaced alternately on each side of the rails; matching gates; close all ends

UGFS: Section 04 20 00 Unit Masonry, Section 05 50 13 Misc. Metal

C07.2.10. Flagpoles

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Eder Flag

Color: Natural aluminum

Finish: Satin Lustre

Model #: ECL30 IH, Internal Halyard

Other: 5" Butt Dia. 33' H (30' Exposed)

UFGS: N/A

C07.2.11. Lighting – Landscape / Accent

Please refer to the Lighting section.

C07.2.12. Litter and Ash Receptacles

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Style 1: Precast Concrete Litter Receptacle**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoor

Color: Weatherstone, gray

Finish: Smooth

Model #: 30, 45 or 53 Gallon Square Concrete Trash Receptacle

Other: Exposed aggregate, rigid plastic internal liner

UFGS: N/A

Type: **Style 2: Metal Ash Receptable**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: National Outdoor Furniture

Color: Black or as approved

Finish: Powder coat

Model #: Round top and side access ash receptacle

Other: With dome top

UFGS: N/A

C07.2.13. Picnic Tables

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Metal, Rectangular**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Belson Outdoors

Color: Black base, brown or green top as approved by 4 CES

Finish: Powder coat

Model #: Rectangular Steel Picnic Table Diamond Pattern

Other: N/A

UFGS: N/A



Type: **Metal, Round or Square**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Wabash Valley

Color: Black base, brown or green top as approved by 4 CES

Finish: Factory vinyl coated

Model #: Signature Series, 46" Round or Square Pedestal Tables with 4 Seats

Other: Perforated Pattern, at grade or in-ground mount

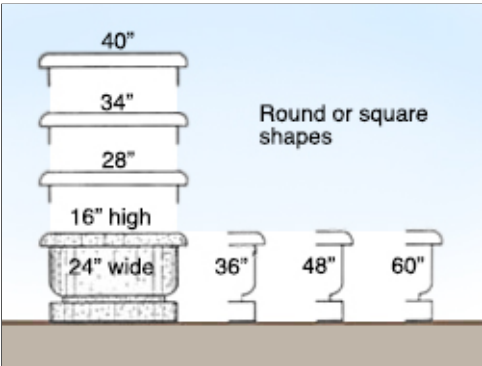
UFGS: N/A

C07.2.14. Planters

Applicable N/A

Number of base standards 1

[Image Tool 250 x 188](#)



Type: **Precast concrete**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Materials, Inc.

Color: Weatherstone Gray

Finish: Smooth

Model #: Santa Fe

Other: N/A

UFGS: N/A

C07.2.15. Play Equipment

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Steel**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Little Tikes Commercial

Color: Varies

Finish: Powdercoated Steel

Model #: N-R-G Freestyle

Other: Coordinate with Base Architect

UFGS: N/A

C07.2.16. Screen Walls

Applicable N/A

Number of base standards 4

Image Tool 250 x 188



Type: **Masonry and Steel Slats, Partial Screening**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Red brick blend or CMU to match adjacent, dark brown fencing

Finish: Masonry to match adjacent, powder coated metal

Model #: Masonry piers and metal rails and slats; off-white precast cap on piers

Other: Piers: 2'x2' and/or steel posts: 4"x4" (equally spaced), Rails: 1-1/4"x1-1/2", vertical metal slats spaced alternately on one side of the rails; matching gates; close all ends

UFGS: Section 04 20 00 Unit Masonry, Section 05 50 13 Misc. Metal



Type: **Masonry and Steel Slats, Full Screening**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Red brick blend or CMU to match adjacent, dark brown fencing

Finish: Masonry to match adjacent, powder coated metal

Model #: Masonry piers and metal rails and slats; off-white precast cap on piers

Other: Piers: 2'x2' and/or steel posts: 4"x4" (equally spaced), Rails: 1-1/4"x1-1/2", vertical metal slats spaced alternately on both sides of the rails; matching gates; close all ends

UFGS: Section 05 50 13 Misc. Metal



Type: **Steel Posts and Slats, Partial or Full Screening**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Dark brown posts, rails and fencing

Finish: Powder coat

Model #: Metal posts, rails and slats

Other: Steel posts: 4"x4" (equally spaced), Rails: 1-1/4"x1-1/2", vertical metal slats spaced alternately on one or both sides of the rails; matching gates; close all ends

UFGS: Section 05 50 13 Misc. Metal

Type: **Cementitious Board Screen Wall**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: James Hardie Building Products

Color: White

Finish: Factory

Model #: Plank

Other: Custom wall built of cement plank components; coordinate concrete foundation; Note: Vinyl siding is not an approved material under AFCFS.

UFGS: Section 06 20 00 Finish Carpentry

C07.2.17. Tree Grates

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Cast Iron**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Neenah Enterprises, Inc.

Color: Natural cast iron

Finish: Cast

Model #: 2-Piece, round or square

Other: N/A

UFGS: N/A

C07.2.18. Other

Applicable N/A

C08. EXTERIOR SIGNS

Comply with AF Corporate Standards for Site Development:

<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Exterior Signs:

<http://afcs.wbdg.org/site-development/exterior-signs/index.html>

C08.1. Colors and Types

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Directional Sign



Installation Identification Sign



Raised "Standout" Letters

1. Provide concise functional signs as a visually unifying element with consistent colors and types for all Installation and Gate Identification Signs; Building Identification Signs; Traffic Control Devices; Directional and Wayfinding Signs; and Informational and Motivational Signs.
2. Provide signs with the lowest overall life cycle costs considering initial cost, ongoing maintenance and lifespan while meeting quality standards. Follow IFS for specifications appropriate for the local climate to withstand weathering.
3. Reduce the number of signs, reduce visual clutter and provide only essential signs required for identification, directions, instructions, and customer service following UFC 3-120-01. Remove non-conforming signs during renovation projects.
4. Use clear concise terms for content consistent with UFC 3-120-01.
5. Display of emblems on building exterior walls or other permanent structures is prohibited by UFC.
6. Raised "standout" letters and numbers may be used for Group 1 with approval on a case basis.
7. Group 2 and 3 facilities shall have wall mounted facility signs with sizes and layouts following UFC 3-120-01. Signs are not permitted for Group 4 facilities.
8. Only one identification sign is permitted at each building entrance. Include a building address consistent with US Postal Service protocols following UFC 3-120-01.
9. Traffic Control Devices, which regulate vehicular traffic on the installation, shall conform to the standards in the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration. Coordinate street signs with this IFS.
10. Provide Directional and Wayfinding Signs and address both pedestrian and vehicular traffic following UFC 3-120-01 for size, layout and content.
11. Reserved parking signs should be kept to a minimum. When approved, provide post-mounted sign faces in base standard materials and colors. Consider "bracketing" a designated area with a single sign at each end.

12. Parking lot identification signs may be used to identify areas or rows within large lots.
13. Follow the guidelines and requirements in ABAAS and the MUTCD for accessible parking signs.
14. Follow UFC 3-120-01 for Informational and Motivational Signs for size, layout and content.
15. Symbols or pictographs (graphic expressions of actual objects) may be used to indicate service, mandatory / prohibitory, sports, and recreation when rapid communication is necessary.
16. Force Protection signage may be applied to glass doors using white vinyl lettering.
17. Refer to UFC 3-120-01 for prohibited signs, which include those with animated, blinking, chasing, flashing, or moving effects.
18. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

C08.1.1. Materials and Color Specifications

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Refer to UFC 3-120-01 for Materials and Color Specifications.
2. Fence mounted sign panels may be attached with exposed fasteners.
3. All signage shall follow Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) using standard colors. Refer to MUTCD color specifications, which provide cross-referenced Pantone Matching System (PMS) numbers.
 - a. Standard Blue
 - b. Standard Dark Bronze (also Federal Standard Color 30040)
 - c. Standard Red
 - d. Standard Black (non-reflective)
 - e. Standard White
 - f. Standard Brown

Materials and Color Specifications

Applicable N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Typical Sign Fce**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

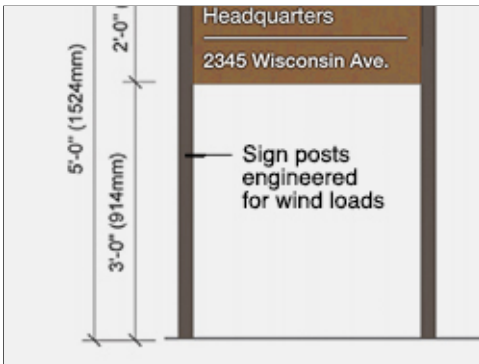
Color: Medium bronze

Finish: Matte vinyl

Model #: Aluminum flat sheet

Other: Mount to square posts. Provide sizes following UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Typical Sign Post**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Dark bronze, powder coat finish

Finish: Matte

Model #: Extruded aluminum with capped top ends

Other: Square posts and squared ends. Provide engineered sizes.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Typical Sign Base**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

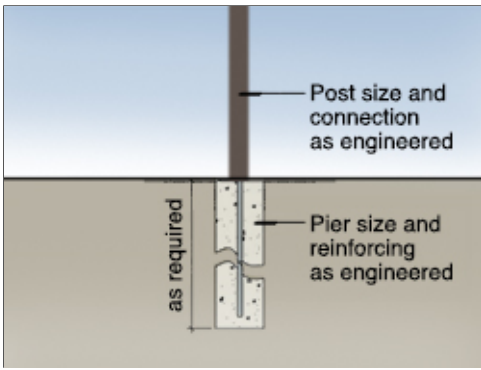
Color: Natural Gray

Finish: Sonotube-formed

Model #: 24" height x 12" diameter, as engineered.

Other: At grade with 3/4" chamfer. Provide engineered sizes.

UFGS: UFGS 03 30 00 Cast-in-place Concrete



C08.1.2. Installation and Gate Identification Signs

Applicable N/A Number of base standards 1

Image Tool 250 x 188

Type: **Primary, Secondary and Tertiary (Uses per UFC)**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Dark bronze, brushed aluminum, accents per UFC

Finish: Powder coat or vinyl sign face

Model #: Metal frame and panels, buff stone base

Other: White vinyl lettering. Provide dimensions per UFC. Secondary signs shall match primary sign's materials, but shall be smaller in size per UFC. Tertiary signs shall follow the UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

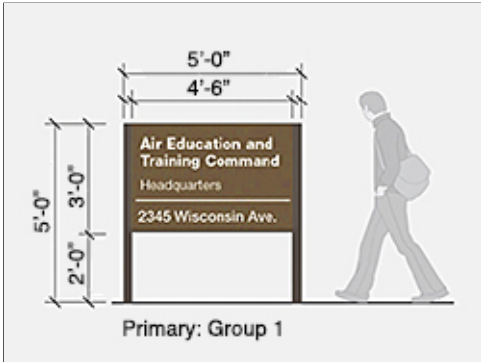


C08.1.3. Building Identification Signs

Applicable N/A

Number of base standards 5

Image Tool 250 x 188



Type: **Freestanding Primary Sign (Sizes and Uses per UFC)**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

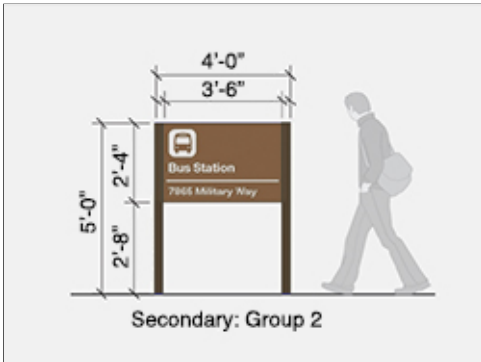
Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Freestanding Secondary Sign (Sizes and Uses per UFC)**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Freestanding Tertiary Sign (Sizes and Uses per UFC)**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

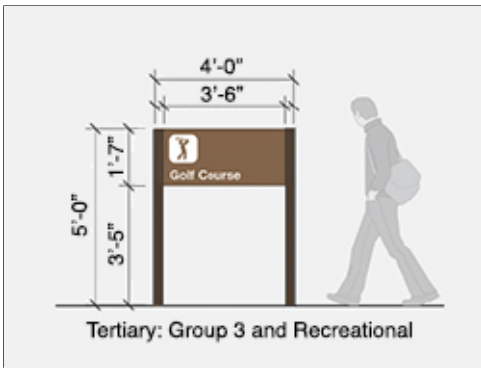
Mfr: Custom

Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.



UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Wall Mounted**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

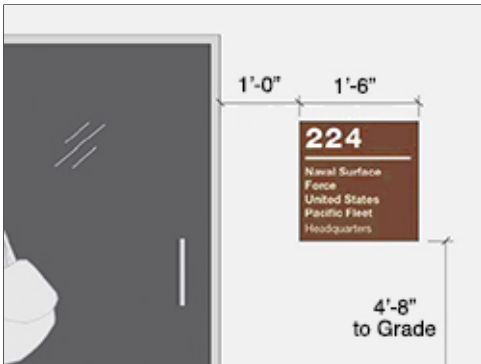
Mfr: Custom

Color: Medium brown, white lettering

Finish: Satin vinyl applied to aluminum sheet

Model #: Aluminum sheet with vinyl face and vinyl lettering

Other: Provide layout and sizes following UFC.



UFGS: N/A

Type: **Glass Mounted**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: White vinyl lettering

Finish: Matte vinyl

Model #: Machine-cut sheet vinyl

Other: Apply vinyl lettering to glass. Provide sizes following UFC.

UFGS: N/A

C08.1.4. Traffic Control Devices (Street Signs)

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Street Signs**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: White reflective lettering on a Standard Brown background

Finish: Powder coat or vinyl sign face

Model #: Aluminum sign face, control arm or pole mounted

Other: Mount 7' above grade minimum, pictographs and logos are prohibited on street name signs per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

C08.1.5. Directional and Wayfinding Signs

Applicable N/A Number of base standards 2

Image Tool 250 x 188



Type: **Vehicular**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Medium brown face, dark bronze posts, white reflective lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Conform to the requirements of the MUTCD and its DoD Supplement. Provide types and sizes where required by UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Pedestrian**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

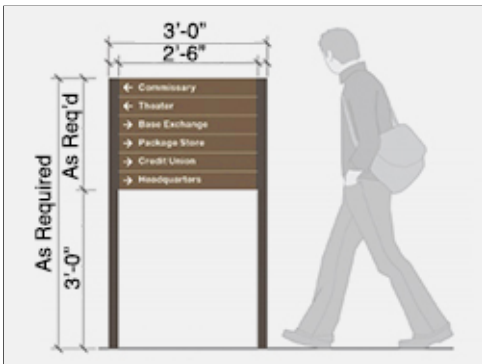
Color: Medium brown face, dark bronze posts

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: White vinyl lettering. Provide types and sizes where required by UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



C08.1.6. Informational Signs

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Minimize informational signs such as static display signs, hours of operation, and project signs to reduce visual clutter.
2. Static display signs must be approved by the 4 CES.
3. Hours of operation signs shall have a level of quality equivalent to the Facility Group number.

4. Temporary / Project Signage shall be judiciously placed to avoid visual clutter. Schedule and arrange for the removal of these signs prior to installation.

C08.1.7. Motivational Signage

Applicable N/A Large graphics do not apply

Applicable N/A Small graphics do not apply

1. Provide professionally produced motivational signs as important elements of campaigns to boost morale, improve safety, aid in recruiting, and accomplish other motivational objectives. Consolidate this signage to reduce visual clutter.

2. Motivational signs shall be limited to an electronic "marquee" type changeable sign near each gate. Temporary signs are not permitted. Motivational information may also be posted in a small, printed format on kiosks in specified, high pedestrian use areas. Refer to kiosks under Site Furnishings.

3. Follow UFC 3-120-01 for color and layout. Note that animated, blinking, chasing, flashing, or moving effects are prohibited by the UFC.

4. Mount marquee signs on reinforced concrete bases with colors and materials consistent with the architectural standards for the applicable Facility Group number.

C08.1.8. Parking Lot Signs

Applicable N/A

1. Follow UFC 3-120-01 and its industry references for guidance.

C08.1.9. Regulatory Signs

Applicable N/A

1. Regulatory signage, which restricts, warns and advises, shall be limited to those mandated under Highway/Traffic, Government Warning, and/or Parking Regulation. Follow UFC 3-120-01 and its industry references for color and layout.

2. Provide a comprehensive, systematic approach to regulatory signage to avoid clutter and confusion from "over signage."

3. Maintain base warning signs for safety and security at the base perimeter and at specific secure areas. Use these to notify visitors of restrictions governing conduct on the base, as well as other security procedures.

C08.1.10. Other

Applicable N/A

C09. LIGHTING

Comply with AF Corporate Standards for Site Development:
<http://afcs.wbdg.org/site-development/index.html>

Comply with AF Corporate Standards for Lighting:
<http://afcs.wbdg.org/site-development/lighting/index.html>

C09.1. Fixtures and Lamping

Applicable N/A Large graphics do not apply

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Street Lighting at Group 1



Pedestrian Lighting at Group 1



Lighted Bollard

1. Create a unified appearance on base by selecting light fixtures of a consistent design and lamp type.
2. Provide, coordinate and efficiently install street, parking lot, sidewalk and facility lighting with acceptable luminaires, lamping, placement and spacing following UFC 3-530-01 and Installation Facilities Standards (IFS); ensure the level of quality is consistent with the adjacent facility group number. Pole-mounted, wall-mounted and bollard fixtures are permitted.
3. Integrate controls to automatically reduce lighting power during periods of non-activity; automatically turn off power when sufficient daylight is available.
4. Ensure continuity and consistency of lighting elements. In new construction generally match post types, fixture types, styles, heights, sizes, materials, colors, and lamp types of adjacent facilities and the facility district. Fixtures shall be low maintenance and vandal resistant. Light poles must be designed to withstand 122 mph wind speed.
5. Economically provide renewable-energy power sources such as solar photovoltaic when feasible.
6. Use appropriately designed or shielded luminaires to direct light downward to minimize light pollution and intrusion onto adjacent sites and to facilitate night training.
7. Calculate illuminant levels for all lighting applications following UFC 3-530-01 and ensure compliance with pre-curfew maximum brightness level requirements.
8. Sufficiently address environmental factors to prevent corrosion and weathering of fixtures, plinths and other components.
9. Wall mounted fixtures should respond to the architectural character of the facility.
10. Efficient accent lighting of architectural and landscape features may be provided for Group 1, lodging and historical applications with approval of 4 CES. Accent lights in ground-mounted locations may be provided for static displays and signs when these do not conflict or cause hazards with overhead aircraft.

11. Comply with UFC 3-530-01 for light source technology and lamp types. High efficiency lamping such as LED is preferred for most applications.
12. Street light poles will be clear anodized, round tapered seamless aluminum. Lamping will be LED; coordinate lamping and color with 4 CES.
13. Parking lot and area lighting should be LED, rectangular shape.
14. Sidewalk and trail light fixtures shall be 12' to 15' in height and consistent with adjacent fixtures.
15. Install lighted bollards only at Group 1 and high-traffic Group 2 facilities. Generally match materials, colors and shapes of adjacent facilities and the facility district.
16. Install natural gray color, smooth finished concrete bases for all poles in heights appropriate for the facility group and application. Generally Groups 1, 2 and 4 will have at-grade bases. Group 3 will have taller bases for added durability.
17. When parking lot lighting is necessary, provide an illuminated path to the building's main entrance. Pole bases should be contained within an internal landscape median or island.
18. Consistently install lighting for sidewalks, bikeways and trails to match adjacent facilities.
19. Landscape accent lighting may be used in public gathering spaces and in Group 1 facilities. Coordinate the design, luminaire selection, and placement with the location of trees, shrubs, and site furnishings.
20. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

C09.2. Light Fixture Types

Note: Apply the below base-wide standards for Light Fixtures (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

C09.2.1. Street Lighting

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **LED Street**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Hubbell, Beacon Viper luminaire

Color: Gray smooth or clear anodized as approved by BCE

Finish: Factory

Model #: VPL/ 80NB-180/4K/T3/UNV/GYS

Other: Lamp LED. Roadway – Poles shall be 25' clear anodized, round tapered seamless aluminum with matching 8' up swept mounting arm, brushed aluminum finish. Pole shall be rated for 100 MPH wind with a 1.3 factor

UFGS: N/A

C09.2.2. Parking Lot Lighting

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **LED Parking Lot**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Hubbell, Beacon Viper luminaire

Color: Dark bronze or clear anodized as approved by BCE

Finish: Factory

Model #: Rectilinear or Round Cutoff, Single Arm or Dual Arm Mount

Other: Lamp: LED. Parking Lot – Poles shall be 25' square straight extruded aluminum, 5" cross section, with 6" matching mounting arm, dark bronze anodized finish. Pole shall be rated for 100 MPH wind, 1.3 factor

UFGS: N/A

Type: **Parking Lot Fixture Base**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

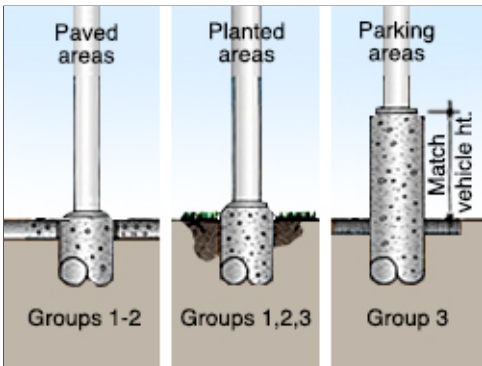
Color: Natural gray

Finish: Trowel

Model #: Form-cast, round

Other: N/A

UFGS: Section 03 33 00 Cast-In-Place Architectural Concrete



C09.2.3. Lighted Bollards

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Lighted Round Dome Top or Flat Top**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Lithonia Lighting Products, or equal

Color: Dark bronze

Finish: Anodized aluminum

Model #: KBA or KBR

Other: Flared cone, 3000K LED Lamp. Follow manufacturer's recommendations for fixture base; 42" tall, 8" round aluminum bollard, anodized bronze finish. Provide anchor bolt base and covers

UFGS: N/A

C09.2.4. Sidewalk Lighting

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **LED Sidewalk, Direct**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Hubbell, Kim Lighting

Color: Dark bronze anodized (or clear anodized as approved by BCE)

Finish: Anodized aluminum

Model #: Rectilinear Cutoff, Single Arm or Dual Arm Mount

Other: Lamp: LED. Follow manufacturer's recommendations for fixture base.

UFGS: N/A

Type: **LED Sidewalk, Indirect**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Lithonia

Color: Dark bronze

Finish: Anodized

Model #: MRP LED 1 63B530/50K SR5 MVOLT MRPT25 PER DDBXD

Other: N/A

UFGS: N/A

C09.2.5. Walls / Stairs Lighting

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **LED Wall Pack**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: TBD

Color: Dark bronze anodized

Finish: Smooth

Model #: Standarad Wall Pack

Other: Lamp: LED

UFGS: N/A

C09.2.6. Other

Applicable N/A

D. FACILITIES EXTERIORS

Comply with Air Force Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exteriors/index.html>

Applicable N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1

Image Tool 800 x 440

Applicable N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

Image Tool 250 x 188



Group 1 Headquarters Facility with Red Brick and Metal Roof



Group 2 Dormitory



Group 2 with Group 3 Beyond at Flightline



Group 4 Officer Housing

D01. SUPPORTING THE MISSION

Comply with AF Corporate Standards for Supporting the Mission:

<http://afcs.wbdg.org/facilities-exteriors/supporting-the-mission/index.html>

D02. SUSTAINABILITY

Comply with Air Force Corporate Standards for Sustainability:

<http://afcs.wbdg.org/facilities-exteriors/supporting-the-mission/index.html>

D03. ARCHITECTURAL FEATURES

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcfs.wbdg.org/facilities-exteriors/index.html>

Comply with AF Corporate Standards for Architectural Features:

<http://afcfs.wbdg.org/facilities-exteriors/architectural-features/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D03.1. Orientation, Massing and Scale

1. Orient new buildings to maximize energy efficiency, passive solar and daylighting potential of the building; narrow buildings oriented along an east-west axis are preferred to minimize heat gain in the summer months and maximize heat gain in the winter months resulting in less overall energy usage.
2. Provide orthogonal geometry for principal building form; angular geometry may be used sparingly for Group 1 and used only for emphasis at specific areas such as building entrances and stairwells.
3. Maintain a human scale and reduce the visual scale of large buildings with sub-massing related to interior functional operations; create consistent form and scale in adjacent buildings with compatible profiles or silhouettes.
4. Reserve monumental scale for ceremonial buildings, such as worship centers and headquarters complexes. Large glazed areas at entrances and oversized fenestration elements may be used to create this scale; refer to the library building as an appropriate use of a monumental scale.
5. Interrupt and articulate large walls with horizontal banding such as water tables, belt courses or wainscots to create a human scale. Variations in material, texture or color may be used as acceptable for the facility group number. Relief in materials may be used for Group 1. Refer to section D03.1. for standards related to materials scale and articulation.
6. Comply with the Form-Based Planning Standards Table in the Seymour Johnson AFB Installation Development Plan (IDP) available from the 4th Civil Engineer Squadron (CES). Users with access to .mil web pages may use the following URL:
https://seymourjohnson.eim.acc.hedc.af.mil/4th_fw/MSG/ces/CEP%20Flight/CEPD%20Programs%20Element/Shared%20Documents/Forms/AllItems.aspx
7. Combine functions where practical to avoid a proliferation of small, independent structures.
8. Use and coordinate shading devices with orientation and for function.
9. Whether large or small, additions should not appear as obvious add-ons. Match form, massing and scale to make the addition and the original structures appear as parts of a new, unified whole.

D03.2. Architectural Character

1. Develop architectural features, materials and detailing appropriate for the Facility Group designation. Refer to Building Entrances, Wall Systems and Roof Systems.
2. Respond to the local climate and regional influences with environmentally functional architectural features.
3. For new facilities design generally maintain consistency and visual unity in the character of the adjacent buildings through compatible architectural features: repeated use of similar forms such as roofs, and through recurring elements such as doors, windows, materials and colors.
4. Reinforce the regional vernacular theme with architectural features expressive of innovation and technology that represents the current mission.
5. All facilities will express sustainability through their orientation, massing, shape, form, materials, and detailing. Provide louvers, fins and other shading devices to control heat gain and glare and to and improve energy efficiency.
6. Strive for economical construction without compromising a high-quality, professional appearance.

D03.3. Details and Color

1. Provide a palette of earth-tone colors related to the native landscape in brick, block, and powder-coated metals. Refer to section D05. Wall Systems for colors of wall materials.
2. Relate the level of architectural detailing to the Facility Group number.

3. Use only integrally colored materials as the predominant exterior building material; do not use materials that require field painting and ongoing maintenance.
4. Provide consistent and compatible colors for every exterior building feature, including walls, roofs, doors, windows, gutters, downspouts, utility and mechanical elements, and other visible elements.
5. Accessory buildings (e.g., sheds) should be compatible in color, form, and materials with the adjacent buildings.
6. Noncorrosive metals with factory applied color finishes are required.
7. Combine details and color with orientation, massing, scale and architectural character to maintain base compatibility.
8. Generally match the materials palette, detailing and color of adjacent buildings acceptably for the facility group number. Refer to section D05. Wall Systems for colors of wall materials.
9. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D03.3.1. Climate-based Data and Life-Cycle Cost-Effective Passive and Natural Design Strategies:

- Climate dominated by mechanical cooling
- Climate dominated by mechanical heating
- Climate with similar mechanical cooling / heating needs
- Climate with minimal mechanical cooling / heating needs

- Climate with high humidity
- Climate with moderate humidity
- Climate with low humidity

- High Solar Insolation
- Moderate Solar Insolation
- Low Solar Insolation

- Soils with High Thermal Conductivity
- Soils with Average Thermal Conductivity
- Soils with Low Thermal Conductivity

Other: Consider the potential for high winds and corrosion

Other:

Facility: Narrow buildings along E-W axis are required

Wall: Integral shading features and devices / interior masonry thermal mass walls (for cooling)

Doors: Recessed are preferred

Windows: Functional shading is required for all windows, maximize windows on south facades with shading

Roof: High to medium albedo, moderate slope for all buildings except hangars / large industrial facilities

Structure: Do not expose ferrous metals. Provide factory finished non-ferrous metals or concrete

MEP: Ground-source and solar photovoltaic following LCCA

Other: Adapt shading devices for each exposure to ensure performance

Other: Internal thermal mass walls may be used following LCCA

Note: Apply the below base-wide standards for Architectural Features (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

D03.3.2. Natural Ventilation System

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Aluminum Windows**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Kawneer (or equivalent)

Color: Clear anodized

Finish: Anodized

Model #: 2x4, slider or awning type

Other: Provide thermally broken frames; use of lower durability medium bronze, or other color, must be approved by the BCE

UFGS: Section 08 41 13 Aluminum-Framed Entrances and Storefronts

D03.3.3. Thermal Mass

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Interior Wall Material**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom, TBD

Color: Red brick blend

Finish: Light texture

Model #: Coursed unit masonry

Other: Brick is preferred. Concrete block may only be used in Group 3 when approved by the BCE.

UFGS: Section 04 20 00 Unit Masonry

D03.3.4. Thermal Shading

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Wall Devices**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Kawneer (or equivalent) or custom

Color: Dark bronze

Finish: Factory, to match frames

Model #: Louver

Other: Shading devices may be attached to frames or structure

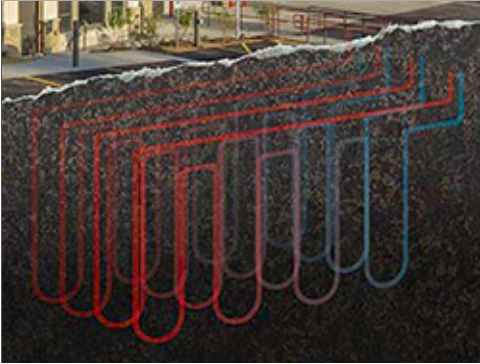
UFGS: Section 08 41 13 Aluminum-Framed Entrances and Storefronts

D03.3.5. Renewable Heating/Cooling

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Geothermal (Ground Source)**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Climate Master

Color: N/A

Finish: N/A

Model #: N/A

Other: Vertical ground loop well field

UFGS: Section 23 81 47 Water-Loop and Ground-Loop Heat Pump Systems

D03.3.6. Solar Photovoltaic System

Applicable N/A

D03.3.7. Solar Thermal System

Applicable N/A

D04. BUILDING ENTRANCES

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exteriors/index.html>

Comply with AF Corporate Standards for Building Entrances:

<http://afcs.wbdg.org/facilities-exteriors/building-entrances/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D04.1. Primary Entrances

1. Emphasize the primary entrance in the overall building design with a projecting or recessed covering for weather protection and shade, and vertical appearance that provides a strong indication of pedestrian access following Installation Facilities Standards (IFS) for Facility Group designations.
2. Provide vestibules at entries in Groups 1, 2 and 3 unless used infrequently or serving unconditioned space following ASHRAE 90.1.
3. Fully integrate all elements including the design of handicap ramps in the overall design of the primary entrance in an organized uncluttered appearance.
4. Install paved transitional spaces sized for the building function and occupancy.
5. Install appropriate lighting and site furniture following AT and IFS.
6. Protect entrances in cold climates from falling ice and snow.
7. Provide porte cocheres or covered drop-offs when justified for lodging and medical facilities; do not use for prestige or architectural accents.

D04.2. Secondary Entrances

1. Provide vestibules at entries in Groups 1, 2 and 3 unless used infrequently or serving unconditioned space following ASHRAE 90.1; use of stair towers as vestibules for multi-story buildings is encouraged when building and / or energy codes are satisfied.
2. Reflect the character of the primary entrance to a lesser extent with a smaller scale.
3. Include a recess or projection for weather protection and shading.
4. Integrate service and egress doors and loading areas with the building design by matching the materials and detailing and reflect the overall quality of the facility.
5. Incorporate egress structures such as stair towers into the facility design.
6. Canopies may be used for service and loading areas; weather protection beyond weatherstripping is not required at doors used only for life safety egress.
7. Develop building massing and orientation to minimize the appearance of service and loading areas; physically and visually separate these from primary entrances.
8. Loading areas must be organized, orderly and have an uncluttered appearance.

D05. WALL SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exterior/index.html>

Comply with AF Corporate Standards for Doors and Windows:

<http://afcs.wbdg.org/facilities-exterior/wall-systems/index.html>

Comply with AFCFS Recommended Materials:

<http://afcs.wbdg.org/facilities-exterior/wall-systems/materials/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D05.1. Hierarchy of Materials

1. Generally maintain compatibility with adjacent buildings and within a facility district. Integrate base-wide standard materials palettes as applicable to the facility group number.
2. Group 1 facilities may have more refined detailing than Group 2 and Group 2 may have more definition than Group 3.
3. Group 1 and 2 facilities may be predominantly red brick with off-white mortar; Group 1 may use accents of off-white architectural precast and horizontal banding with red brick relief coursing. Window systems may be developed as elements within the wall.
4. When matching adjacent facilities in Group 1 and 2, beige CMU with off-white mortar may be used as the primary material with accents of CMU in a contrasting color or texture; refer to section D05.4.11. for types. Refer to Appendix F for special requirements of Facility Districts.
5. Group 3 facilities may be insulated metal panel systems with a CMU wainscot. One-story facilities may be entirely CMU. Accents of translucent wall panels may be used for daylighting when accompanied by an acceptable shading system.
6. Group 4 facilities will be a combination of red brick veneer and vinyl siding in accordance with terms and conditions established under the current Privatized Housing agreement. Note: vinyl siding is not an approved material under AFCFS.
7. Multi-story Group 1 facilities may include a transition in material, color or detailing to create a visual base. Limit brick veneer to a single color on all facilities.
8. Refer to section D03.1. for standards related to scale and articulation of facades.
9. Create a human scale in large monolithic brick facades with water tables, belt courses or wainscot; relief and alternate coursing or color may be used that is acceptable for the facility group number. CMU walls may use similar features in complementary textures or color.
10. Locate water tables approximately one-third the overall height of the wall, such as on the existing Dining Hall. At larger structures, such as hangars, the proportion should be approximately one-fifth the overall wall height.
11. Consider pilasters, vertical glazing features and downspouts in the composition of facade designs, acceptable for the facility group number, to articulate large expanses of masonry.
12. Use high-performance building envelopes following UFC 1-200-02.
13. Use detailing not subject to excessive weathering. Provide wall accents consistently throughout the base.
14. Use integrally colored materials and factory-finished metals. Do not paint concrete block.
15. Translucent wall panels may be used in Facility Group 1, 2, and 3 when protected from direct solar gain. Provide insulating panels and shading appropriate for the orientation and exposure.
16. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D05.2. Layout, Organization and Durability

1. Organize wall components including doors, windows, accents, shading devices, control joints, etc., to provide an ordered, professional appearance.
2. Integrate shading devices into the overall composition of the wall.
3. Integrate fixed shading devices as at all exterior glazing exposed to summer UV heat gain as a passive design measure to reduce energy use. Ensure adequate shading at west entrances. Deciduous trees may be used for shading.

4. Minimize solar heat gain through windows in summer months. Ensure shading solutions are appropriate for the building's orientation and confirm during design that shading systems for east and west exposures are acceptable. Coordinate with landscape shading solutions.
5. Shading systems may be included as part of a manufacturer's window system or may be custom systems integrated into the wall.
6. Provide appropriate transitions between dissimilar materials to mitigate effects of thermal expansion and galvanic action.
7. All joint sealants will be slightly darker than adjacent surfaces.
8. Materials requiring regular maintenance are not permitted; do not use exposed structural steel or other materials that require painting.
9. Refer to C07.2.16. Screen Walls for materials and colors of freestanding walls.
10. Refer to D07. Roofs for downspouts.

D05.3. Equipment, Vents and Devices

1. Arrange all mechanical, electrical, fire alarm, lightning protection and other system components to create an orderly appearance that integrates with the wall system.
2. Do not expose conduits, cables, piping, lightning protection components, etc. on exterior walls; if unavoidable in renovations, finish these elements to match the adjacent wall surface.
3. Avoid visual clutter and where surface-mounted elements are required they will match the wall color.

D05.4 Wall Systems Materials

Facility Group 1 wall materials shall be as follows.

- Primary: Modular Red Brick or Beige CMU
- Secondary: Precast with Brick, Alt. Texture/Color CMU
- Accent: Vertical Storefront Windows Systems

Facility Group 2 wall materials shall be as follows.

- Primary: Modular Red Brick or Beige CMU
- Secondary: Precast with Brick, Alt. Texture/Color CMU
- Accent: Vertical Storefront Windows Systems

Facility Group 3 wall materials shall be as follows.

- Primary: Metal Panels or Sheeting
- Secondary: Beige CMU
- Accent: N/A

Facility Group 4 wall materials shall be as follows.

- Primary: Modular Red Brick or Lap Siding
- Secondary: Modular Red Brick or Lap Siding
- Accent: Trim in Alternate Color

Note: Apply the below *base-wide standards* for Wall Systems (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

D05.4.1. Flat Metal Panels

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Insulated Wall Panel System**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Firestone

Model #: UNA-CLAD / UNA-FOAM

Color: Off white or light beige per approval by CES

Finish: Powder coated

Other: Route and Return Dry Seal

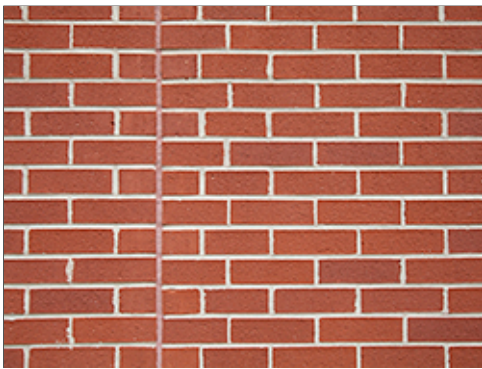
UFGS: Section 07 42 13 Metal Wall Panels:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 42 13.pdf>
Section 07 42 63 Fabricated Wall Panel Assemblies:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 42 63.pdf>

D05.4.2. Brick Veneer

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Modular Face Brick – Red Blend**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Pine Hall

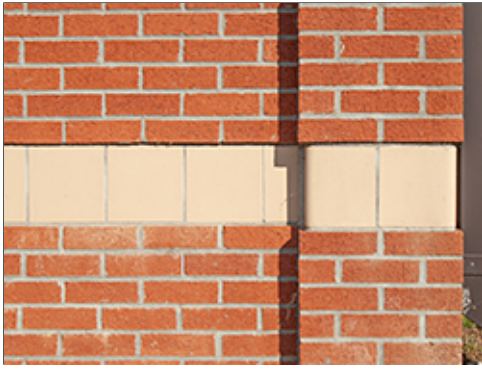
Model #: Modular Face brick, 2.6x4x8 nominal

Color: Old Colony/Light Range, Mortar: Adams A815W, Ivory

Finish: Straight edges, smooth texture

Other: SW, FBX; other colors only with CES approval

UFGS: Section 04 20 00 Unit Masonry:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 04 20 00.pdf>



Type: **Modular Face Brick – Beige Blend**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Pine Hall

Model #: Modular face brick, 2.6x8x8 nominal

Color: Light beige, Mortar: Adams A815W, Ivory

Finish: Straight edges, smooth texture

Other: SW, FBX

UFGS: Section 04 20 00 Unit Masonry:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 04 20 00.pdf>

D05.4.3. Architectural Precast

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Coursed Precast Units**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Adams Oldcastle APG

Model #: Smooth casting

Color: Ivory

Finish: Very light texture

Other: N/A

UFGS: Section 03 45 00 Precast Architectural Concrete:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 45 00.pdf>

D05.4.4. Stucco Over Sheathing

Applicable N/A

D05.4.5. Curtain Wall

Applicable N/A

D05.4.6. Cast-In-Place Concrete

Applicable N/A

D05.4.7. Tilt-Up Concrete

Applicable N/A

D05.4.8. Ribbed Metal Sheeting

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Lap Seam Metal Panel System**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Allied or equivalent

Model #: Standard Purlin Bearing Rib (PBR) Panel with all Closures

Color: White, snow or tan as approved by 4 CES

Finish: Factory standard, smooth

Other: 24 gauge steel; 36" wide, 12" o.c. rib spacing; exposed fastening system

UFGS: Section 07 42 13 Metal Wall Panels:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 42 13.pdf>

D05.4.9. EIFS

Applicable N/A

D05.4.10. GFRC

Applicable N/A

D05.4.11. Concrete Block

Applicable N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Concrete Masonry Units (CMU) – Split Face**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Adams Oldcastle APG

Model #: Standard CMU, 8x8x16 nominal, face and corner units

Color: Old Colony/Light Range, Mortar: Adams A815W, Ivory

Finish: Straight edges, smooth texture

Other: SW, FBX; running bond; other colors only with CES approval

UFGS: Section 04 20 00 Unit Masonry:

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 04 20 00.pdf>



Type: **Concrete Masonry Units (CMU) – Ground Face**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Adams Oldcastle APG

Model #: Standard CMU, 8x8x16 or 8x8x8 nominal, face and corner units

Color: Off-white or light beige, Mortar: Adams A815W, Ivory

Finish: Straight edges, smooth texture

Other: Running bond or stack bond; other colors only with CES approval

UFGS: Section 04 20 00 Unit Masonry:

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 04 20 00.pdf>



Type: **Concrete Masonry Units (CMU) – Fluted Face**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Adams Oldcastle APG

Model #: Standard CMU, 8x8x16 nominal, face and corner units

Color: Old Colony/Light Range, Mortar: Adams A815W, Ivory

Finish: Straight edges, smooth texture

Other: Running bond; other colors only with CES approval

UFGS: Section 04 20 00 Unit Masonry:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 04 20 00.pdf>

D05.4.12. Fiber Cement Siding

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: James Hardie Building Products, Inc.

Model #: Horizontal lap siding, shingle siding

Color: Earth tones

Finish: Wood texture

Other: Hardie Plank, Hardie Shingle

UFGS: SECTION 074646 Fiber Cement Siding:
(Not Available on UFGS)

D05.4.13. Other

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Insulated Translucent Wall Panels**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Kalwall

Model #: 4" Wall Panel Unit System

Color: Off-white

Finish: Factory

Other: N/A

UFGS: Section 08 45 23
(Not Available on UFGS)

D06. DOORS AND WINDOWS

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exterior/index.html>

Comply with AF Corporate Standards for Doors and Windows:

<http://afcs.wbdg.org/facilities-exterior/doors-and-windows/index.html>

Comply with AFCFS Recommended Materials:

<http://afcs.wbdg.org/facilities-exterior/doors-and-windows/materials/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D06.1. Types

1. Clear anodized aluminum doors, windows and frames with thermal breaks are preferred for Facility Groups 1-3 because they show less wear and weathering than dark anodized finishes; match the color of the door and frame. For renovation projects the color of new windows, doors and frames may match the existing ones.
2. Aluminum clad wood windows are preferred for Facility Group 4.
3. Standard-sized hinged doors are preferred. Use sliding, folding, overhead, sectional and other door configurations only to support mission operations.
4. Automatic doors are allowed only where functionally necessary.
5. Limit hollow metal doors and frames to security doors, utility rooms and mechanical rooms in Groups 1 and 2 and to any application in Group 3 facilities.
6. Passive thermal comfort methods of ventilation are encouraged where life cycle cost justified.
7. Windows must meet force protection requirements.
8. Adjacent joint sealants should be slightly darker than the frame color.

Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers. Note: all sample images are only representative; all written base standards must be followed.

D06.2. Layout and Geometry

1. Visually and functionally compose openings in walls for the climate-specific exposure.
2. Consistently use opening type, size, placement, mullion pattern, and color to reinforce the overall architectural design.
3. Openings shall augment interior lighting and space conditioning needs.
4. Protect against vandalism, intrusion and coordinate sound ratings.

D06.3. Glazing and Shading

1. Tinted, energy-efficient, low-e, double-pane glazing is encouraged; provide triple-pane glazing in extreme environments.
2. Glazing color shall follow Installation Facilities Standards (IFS).
3. Translucent wall panels may be integrated into wall systems.
4. Do not use mirrored glazing.
5. Fully integrate applicable shading designs for overhangs, louvers, light shelves and grilles.
6. Where appropriate, install window screens to take advantage of natural ventilation.
7. Comply with Solar Heat Gain Coefficient (SHGC) values for glazing to meet the overall requirements of UFC 1-200-02 including its industry references such as ASHRAE 90.1. Provide confirmation of compliance to 4 CES.

D06.4. Hardware

1. Provide hardware appropriate for the Facility Group while considering activity and frequency of use and local climate; hardware may be of higher visual quality for Facility Group 1.
2. Ensure hardware will perform throughout the facility's lifespan without showing extreme wear.

3. Select finishes that will not degrade by intensity of operation or exposure to the elements.
4. Use consistent finishes and color on window and door systems throughout a facility. For renovation projects the color of new hardware may match the existing hardware.
5. Design building systems to eliminate the need for security screens whenever possible.

D06.5. Doors and Windows Materials

Note: Apply the below base-wide standards for Doors and Windows (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

D06.5.1. Anodized Aluminum

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Anodized Aluminum Doors, Windows and Frames**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Kawneer (or equivalent)

Color: Dark Brown Anodized

Finish: Matte

Model #: 2x4

Other: Provide thermally broken frames

UFGS: Section 08 41 13 Aluminum-Framed Entrances and Storefronts:
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 41 13.pdf>

D06.5.2. Hollow Metal

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Hollow Metal Doors and Frames**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Hollow Metal Doors, Windows and Frames

Color: Dark Brown

Finish: Powder Coated, Satin

Model #: 2x4 frame

Other: Provide thermally broken frames

UGFS: Section 08 11 13 Steel Doors and Frames:
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 11 13.pdf>

Type: **Sectional Overhead Doors**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Wayne-Dalton or equivalent

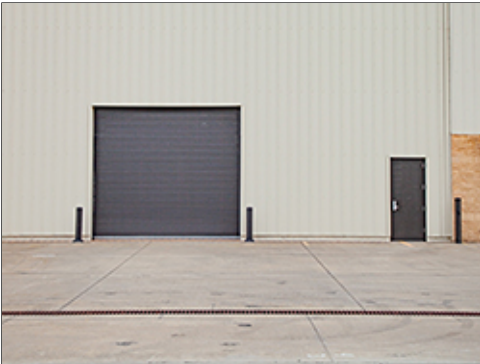
Color: Dark bronze

Finish: Powder coat

Model #: Insulated sectional steel door

Other: Coordinate section thickness, insulation and sizing with functional requirements

UGFS: Section 08 11 13 Steel Doors and Frames:
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 11 13.pdf>



D06.5.3. Aluminum-clad Wood

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Aluminum-clad Residential**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Marvin

Color: White or Earth tones

Finish: Powder coated, satin

Model #: Aluminum-clad wood windows

Other: Double hung

UGFS: Section 08 14 00 Wood Doors

<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 14 00.pdf>

D06.5.4. Other

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Specialty Hardware**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Baldwin

Color: Brass

Finish: Polished

Model #: Exterior handle set with thumb latch, interior lever and hinges

Other: Provide matching deadbolt

UGFS: Section 08 71 00 Door Hardware

D07. ROOF SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exterior/index.html>

Comply with AF Corporate Standards for Roof Systems:

<http://afcs.wbdg.org/facilities-exterior/roof-systems/index.html>

Comply with AFCFS Recommended Materials:

<http://afcs.wbdg.org/facilities-exterior/roof-systems/materials/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D07.1. Roof Type and Form

1. Use proven, cost-effective roof systems with high durability, weather resistance, and low maintenance that are compatible with Installation Facilities Standards (IFS) and requirements for the designated Facility Group.
2. Generally match the roof type and form of existing adjacent facilities in new construction.
3. Group 1 and 2 buildings shall use hip or gable roof forms with sloped standing seam metal roofing. Minimal-slope roofs may be used as approved on a case by case basis.
4. Provide screens for roof-mounted appendages and equipment of the same materials, which are used predominantly in the building's roof systems.
5. Roof translucent panels are permitted only for Group 1 roof and only in clerestories or similar applications where panels are installed on a vertical plane. Ensure acceptable detailing to prevent leaking.
6. Group 1, 2 and 3 buildings of simple geometry will use sloped standing seam metal roofs, with hipped or gabled ends. Large building footprints, and those of complex geometries, will use low sloped mechanically seamed metal roofs. Minimal sloped membrane roofs with parapets and curvilinear roofs are permitted only with approval of the 4th CES.
7. Group 4 facilities shall have gabled or hipped composite shingle roofs.
8. Roof eaves shall extend beyond the exterior wall for roof drainage and shading. Provide overhangs for shading in response to local climatic conditions, sized and proportioned to the height of the facility and to the window openings being shaded.
9. South-facing eaves shall coordinate with adjacent wall-mounted shading devices.
10. The color, shape and slope of the eave and soffit shall be compatible with adjacent facilities.
11. Keep roofs uncluttered and minimize penetrations.
12. Diminish massive roofs into coordinated smaller components consistent with adjacent facilities; avoid random, arbitrary changes.
13. Increase the insulation value of existing roofing systems during renovations if supported by life cycle cost and structural analysis.
14. Roofs shall be maintained for the life of the system and replaced in accordance with UFC 3-110-04 and AFI 32-1051. A warranty is required on all new roofs.
15. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D07.2. Roof Slope

1. Group 1 and 2 buildings shall use sloped roofs, min. 3:12.
2. Large buildings, such as hangars, can have a more minimal slope of 1:12 if an appropriate structural type standing-seam metal roof is provided.
3. Low-sloped roofs are allowed for larger structures or to match existing conditions on renovation projects. Minimal-sloped roofs may also be used for Group 3 facilities in high-visibility areas. If low-slope roofs are used, a white membrane roof with high solar reflectivity should be used in order to help reduce the heat island effect and utility usage.
4. Group 4 facilities shall use 4:12 to 6:12 roof slopes.
5. Ensure adequate drainage and connect to the subsurface rain collection system where available.
6. Provide roof slopes to accommodate solar photovoltaic, solar thermal, passive systems and daylighting when applicable following UFC 1-200-02.

7. Provide underlayments as required for the roofing type as directed by the UFC.

D07.3. Parapets and Copings

1. Extend wall materials vertically above the roof line and provide metal copings to match the wall. Ensure copings are properly flashed and detailed to avoid roof leaks.

D07.4. Color and Reflectivity

1. Standing seam metal roofs in Groups 1 and 2 and smaller facilities in Group 3 shall match Petersen Aluminum Corporation (PAC-CLAD) "Dark Bronze" to match adjacent facilities and follow requirements of IFS.

2. All minimal-slope membrane roofs shall use only use high-albedo, high reflectivity color to help decrease the temperature around the buildings and minimize damage to human and wildlife habitat.

3. Sloped roofs in Group 4 shall be composite architectural shingles in Earth tone colors.

4. Comply with UFC 3-110-03 and ASHRAE 90.1 for Solar Reflectance Index (SRI) and thermal requirements.

5. All roof flashing shall match the color of the predominant background material.

D07.5. Gutters, Downspouts, Scuppers, Drains

1. All sloped roofs shall use gutters and downspouts. Gutters shall be outside the fascia.

2. Internal roof drainage systems are not permitted in new construction. Minimal-sloped roofs shall be sloped to drain to the building perimeter through scuppers into downspouts.

3. All gutters and fascias shall match the roof color.

4. Size the roof drainage system per IBC and SMACNA for the region.

5. Use scuppers as required in parapet walls. Arrange scuppers in an orderly manner consistent with other elements of the wall system.

6. When open scuppers are connected to downspouts, provide transitions consistent with adjacent facilities.

7. Integrate downspouts with the architectural details of the wall system and arrange in an orderly, non-prominent appearance. Generally blend downspouts with the color of the wall (not contrasting it).

8. Fabricate downspouts from non-corrosive materials such as aluminum or zinc-coated steel. Provide powder-coated finishes in medium bronze.

9. All downspouts shall be solid.

10. Provide angled transitional pieces for downspouts to fit closely against the wall for their entire length.

11. Coordinate locations of downspouts to conceal control joints in masonry walls when possible.

12. Place downspouts away from building entries. Water discharged should not run across sidewalks.

D07.6. Roof Vents and Elements

1. Minimize and consolidate roof penetrations into a single, inconspicuous point whenever possible.

2. On sloped roofs clad pipe penetrations to match the roofing material.

3. Avoid the use of rooftop mechanical equipment, however for renovations and unavoidable configurations ensure units are screened.
4. Provide access points and service routes to equipment that protect the roof.
5. Screen all large vents.
6. Ensure attic spaces are properly vented at ridges and soffits.
7. Match roof color for all exposed equipment and vents.
8. Avoid roof-mounted antenna systems.
9. Arrange Lightning Protection Systems (LPS) components in an ordered, uncluttered, inconspicuous appearance and integrated into the organization of the roof and wall systems.
10. Ensure that LPS roof mounting systems are approved by the roofing manufacturer.
11. Additions to a roof shall not interfere with LPS or other rooftop systems that may be required.
12. Permanent fall protection shall be included with any addition to a roof with a slope above 3:12 per UFC 3-110-03 to a roof with a slope above 3:12 per UFC 3-110-03.

D07.7. Clerestories and Skylights

1. Clerestories are permitted in Group 1 facilities. These are allowed in Group 3 facilities only when serving passive systems and are justifiable by life-cycle analysis.
2. Clerestories are preferred to skylights to avoid roof penetrations. Skylights are not permitted.
3. Design clerestories using the same principles for seasonal shading that are required for walls and roof overhangs.
4. Translucent panel systems are preferred in clerestory applications due to lack of window cleaning.
5. Clerestories must comply with UFC 4-10-01.

D07.8. Vegetated Roof

1. Not applicable. Vegetated roofs may be considered by 4 CES on a case by case basis.

D07.9. Roof Systems Materials

Note: Apply the below base-wide standards for Roof Systems (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

D07.9.1. Standing Seam Metal

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Berridge

Color: Dark bronze

Finish: Matte

Model #: Tee-Panel

Other: Shed, gabled or hipped standing seam metal

UFGS: Section 07 61 14 Steel Standing Seam Roofing
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 61 14.00 20.pdf>

D07.9.2. Membrane Single-ply

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Carlisle Systems

Color: Off-white

Finish: Smooth

Model #: TPO single-ply, "flat" minimal slope

Other: N/A

UFGS: Section 07 53 23 Ethylene-Propylene-Diene-Monomer Roofing
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 53 23.pdf>
Section 07 54 50 TPO Thermoplastic Single-Ply Roofing
(Not Available on UFGS)

D07.9.3. Built-up Multi-ply

Applicable N/A

D07.9.4. Concrete Tile

Applicable N/A

D07.9.5. Clay Tile

Applicable N/A

D07.9.6. Slate Shingles

Applicable N/A

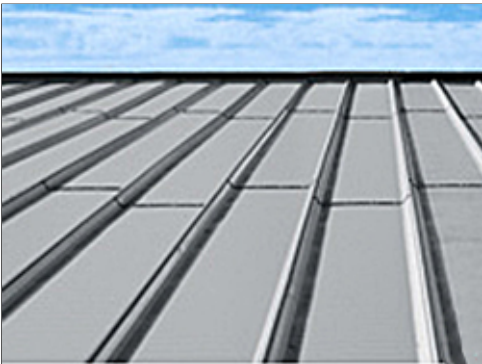
D07.9.7. Vegetated System

Applicable N/A

D07.9.8. Ribbed Metal Sheetting

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Berridge

Color: Galvalume

Finish: Factory

Model #: High Seam Tee-Panel

Other: 24 gauge steel, Width: 16" Batten height: 1-3/4"

UFGS: Section 07 41 13.19 Batten-Seam Metal Roof Panels
(Not Available on UFGS)

D07.9.9. Composite Shingles

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Architectural Laminated Shingles**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Tamko

Color: Earth Tones

Finish: Factory

Model #: Heritage

Other: Gabled or hipped with transverse gable or hipped features; shingles may be used on single story DV quarters

UFGS: Section 07 31 13 Glass-fiber-reinforced Asphalt Shingles
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 07 31 13.pdf>

D07.9.10. Other

Applicable N/A

D08. STRUCTURAL SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exteriors/index.html>

Comply with AF Corporate Standards for Structural Systems:

<http://afcs.wbdg.org/facilities-exteriors/structural-systems/index.html>

Comply with AFCFS Recommended Materials:

<http://afcs.wbdg.org/facilities-exteriors/structural-systems/materials/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D08.1. Systems and Layouts

1. Pre-engineered structural steel framing may be used for Groups 1, 2 and 3 facilities; Installation-appropriate thermal envelopes, materials and detailing are required.
2. Select economical structural systems that integrate roof and wall systems.
3. Narrow buildings 60' or less in width with column-free interiors are preferred for office, administrative and personnel spaces; when interior columns are required optimize the structural grid layout for open-plan arrangements.
4. Fully coordinate structural grids with exterior window systems to align columns with window frames or wall systems.
5. When structure is exposed provide an organized appearance and coordinate with mechanical, electrical, plumbing, fire protection, information technology, and communications systems.
6. Limit the use of specialty systems (such as space frames, vaults or domes) and of structure as a visual feature.
7. Cost-effectively design interior bearing walls as thermal mass.
8. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D08.2. Structural Systems Materials

Note: Apply the below base-wide standards for Structural Systems (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

D08.2.1. Concrete

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Cast-In-Place**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Custom

Color: Natural Gray

Finish: Light texture

Model #: Post and beam and/or waffle slab

Other: N/A

UFGS: Section 03 30 53 Miscellaneous Cast-In-Place Concrete
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 30 53.pdf>
Section 03 33 00 Cast-In-Place Architectural Concrete
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 33 00.pdf>
Section 03 47 13 Tilt-Up Concrete
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 47 13.pdf>

D08.2.2. Insulated Concrete Forming (ICF)

Applicable N/A

D08.2.3. Steel

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Rigid Framing**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: US Steel

Color: Shop primed

Finish: Matte

Model #: Structural steel shapes

Other: N/A

UFGS: Section 05 12 00 Structural Steel

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 05 12 00.pdf>

D08.2.4. Pre-Engineered Steel

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Moment Frame**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Behlen Building Systems

Color: Factory primed

Finish: Matte

Model #: Moment Frame

Other: Draped insulation may be used behind wall system;
Behlen standing seam roof system may be used for Group 3

UFGS: Section 13 12 00 Steel Building Systems

(Not Available on UFGS)

Section 13 34 19 Metal Building Systems

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 13 34 19.pdf>

D08.2.5. Masonry

Applicable N/A

D08.2.6. Heavy Timber

Applicable N/A

D08.2.7. Light-gauge Steel

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Steel Framing**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Steelrite

Color: Factory

Finish: Galvanized

Model #: Structural framing shapes

Other: N/A

UFGS: Section 05 45 00 Light Gauge Steel Framing System
(Not Available on UFGS)

D08.2.8. Lumber Framing

Applicable N/A

D08.2.9. Other

Applicable N/A

D09. MECHANICAL, ELECTRICAL AND PLUMBING

Comply with AF Corporate Standards for Facilities Exteriors:

<http://afcs.wbdg.org/facilities-exteriors/index.html>

Comply with AF Corporate Standards for Mechanical, Electrical and Plumbing:

<http://afcs.wbdg.org/facilities-exteriors/machanical-electrical-and-plumbing/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D09.1. Passive and Active Systems

1. Fully integrate passive heating and cooling systems into facility designs whenever practical for the local climate prior to the design of active mechanical systems.
2. Provide optimized passive and active systems; design active mechanical systems to supplement thermal mass walls and floors.
3. Develop renewable energy systems including geo-exchange (ground source heat pumps) when life cycle cost effective.
4. Performance display screens, which report energy performance and utility savings, are encouraged; when provided locate these in building lobbies or common areas.
5. Solar domestic hot water systems are required when life cycle cost effective for the climate.
6. Integrate shading into building exteriors to reduce solar heat gain during hot seasons.
7. Consider distributed water heating and cooling systems for new construction for greater flexibility in connecting to future centralized cooling systems or solar thermal heating systems.
8. Implement district or campus infrastructure and distribution systems for cooling following a life-cycle cost analysis (LCCA). Include central plant and ice storage in the analysis.
9. Use Heating, ventilation, and air conditioning (HVAC) economizers and CO2 monitors, which perform demand-controlled ventilation (DCV) when spaces are lightly staffed, following an LCCA.
10. Provide only water-cooled air conditioning systems following an LCCA. Develop efficient heating systems to complement cooling systems.
11. Consider ground-source following an LCCA only when provided under an energy savings performance contract in which the developer/ designer is responsible for the optimized performance of the system.

D09.2. Functionality and Efficiency

1. Fully coordinate mechanical, electrical, plumbing (MEP) and fire protection systems with each other and with the building structure, enclosure, thermal envelope and interior design.
2. Ensure direct exterior access is provided (for CE) to main mechanical and electrical rooms.
3. Screen exterior equipment from primary views (landscape, building masses, screen walls) and comply with AT requirements.
4. Keep equipment away from main building entrances; locate service area/yard on least visible side of a building.
5. Coordinate the location of all exterior meters, equipment and devices to provide convenient access and an overall coordinated and orderly appearance.
6. Design emergency generator systems integrally with all other building systems and avoid incompatible building additions; locate generators near service areas and ensure they are not visible from primary entrances.
7. When structure is exposed as a finished ceiling, fully integrate MEP and fire protection systems to provide an organized uncluttered appearance.
8. Conceal ducts, piping, conduits, devices, etc., when permanent walls, suspended ceilings or raised floors are provided; locate sprinkler heads in orderly configuration.
9. Limit interior wall-mounted equipment in occupied personnel spaces; avoid surface-mounted conduit and pipes.
10. Provide efficient utility rooms with layouts to facilitate system performance and maintenance; provide convenient access to controls, clearly label systems and include operating and maintenance instructions.

11. Separate mechanical and electrical and communications rooms.
12. Integrate recessed and wall-mounted fixtures such as fire standpipe cabinets and drinking fountains within permanent walls.
13. Mechanical, electrical and plumbing fixtures should be painted with colors that match the facility or background with which they are associated.

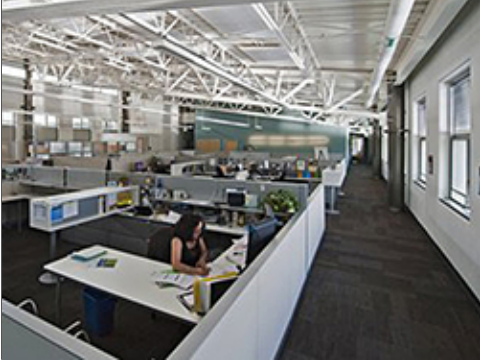
E. FACILITIES INTERIORS

Comply with Air Force Corporate Standards for Facilities Interiors:
<http://afcf.wbdg.org/facilities-interiors/index.html>

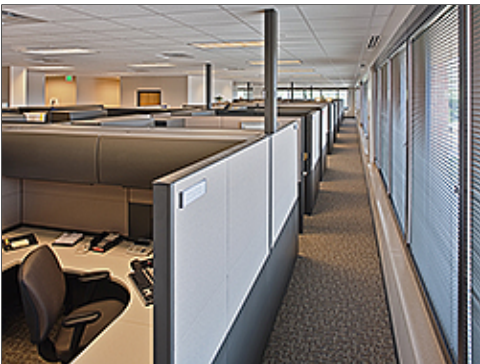
Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



E01. Building Configurations

Comply with Air Force Corporate Standards for Building Configurations:

<http://afcfs.wbdg.org/facilities-interiors/buildings-configurations/index.html>

1. Provide open-plan configurations for office, administrative, operational and related activities and spaces for maximum flexibility. Use a “core and shell” approach in which all building systems, infrastructure and permanent interior partitions anticipate two or more uses (operations) during a facility’s life span.
2. Create flexible interior configurations using Furniture, Fixtures & Equipment (FF&E) and limit private offices and private rooms. Refer to AFMAN 32-1084 for space requirements. To the greatest extent, limit permanent partitions to core areas such as toilet rooms, stairs, mechanical and utility rooms.
3. Use more durable long-lasting finishes in core areas for walls, ceilings, floor coverings and built-in casework. Coordinate interior FF&E layouts with structural grids during space planning.
4. Provide high-performance building configurations following UFC 1-200-02. Ensure passive design strategies are cost effectively incorporated before active mechanical systems are designed.
5. Comply with UFC 1-200-01, general building requirements. UFC 1-200-01 provides applicability of model building codes and government unique criteria for typical design disciplines and building systems, as well as for accessibility, antiterrorism, security, high performance and sustainability requirements, and safety.
6. Meet security and force protection requirements in UFC 4-010-01: DoD Minimum Antiterrorism Standards for Buildings.
7. Comply with AFCFS for supporting mission requirements, addressing human comfort and well being, and creating highly flexible interiors while satisfying metrics for high performance and sustainable buildings.
8. Provide a level of quality for interior features, materials and finishes that is appropriate for the Facility Group number. Group 1 may receive higher quality than Groups 2 thru 4. Refer to Facility Hierarchy.
9. Through open-plan configurations, preserve all passive and natural design strategies and fully integrate facility interiors with overall building systems.
10. Professional interior designers, or architects with significant interior design experience, must accomplish the design and review of applicable new construction, renovations and maintenance projects.
11. Consult with the State Historic Preservation Officer (SHPO) and base-level Historic Preservation offices regarding proposed changes to properties listed on or eligible for listing on the National Register of Historic Places. Follow requirements of The National Historic Preservation Act and Secretary of the Interior Standards for the Treatment of Historic Properties.
12. Maintain architectural compatibility following AFCFS and this Installation Facilities Standards (IFS) document to create continuity while avoiding monotony.

E01.1. Layout and Common Areas

Comply with Air Force Corporate Standards for Layout and Common Areas:

<http://afcfs.wbdg.org/facilities-interiors/buildings-configurations/layout-and-common-areas/index.html>

1. Create open-plan interior environments to accommodate changes.
2. Limit interior partitions, private offices and rooms; use furniture or modular systems to provide privacy and acoustic control.
3. When partitions are functionally justified such as for conference rooms, use systems furniture and moveable (demountable) floor-to-ceiling wall systems for acoustical or visual privacy.
4. Proportion lobbies and common spaces based on type of function, activity and facility group.
5. Allow no direct sight lines into restrooms.

6. Situate utility and core areas to minimize impact on daylighting and to maximize use as thermal buffers.
7. Ensure electrical, lighting and communications system can be adaptable to configuration changes.
8. Avoid power poles to the maximum extent; when poles are necessary minimize the number and coordinate locations with furniture placement and other elements.
9. Avoid sloping floors to maintain flexibility and eliminate future structural changes.
10. Special consideration may apply to Sensitive Compartmented Information Facilities (SCIFs).

E01.1.1. Interior Design Process

1. Comply with UFC 3-120-10 for the Comprehensive Interior Design (CID,) which includes both Structural Interior Design (SID) and Furniture, Fixtures & Equipment (FF&E) design services.
2. Use a collaborative, integrated planning and design team, composed of user, government support staff, and appropriate professionals. Integrate architectural features using simple detailing to create a professional appearance; avoid extravagant or excessive detailing.
3. Ensure interior designs satisfy the functional requirements within the context of flexibility, sustainability and the building's energy performance.
4. Base space planning on square foot allocations from AFM 32-1084. Identify special requirements if any, such as privacy separation, VIP areas, gathering spaces and storage. Note: The occupant's rank and position will influence the square footage and selection of materials.
5. Provide clear circulation and pathway finding for both horizontal and vertical directions that accommodate the number of personnel in the facility.
6. Maximize efficiencies in the space plan for functional relationships and adjacencies for all facility users. Efficiently create and situate rooms and support rooms such as conference / meeting rooms and break rooms.
7. Provide interior design building-related illustrations, drawings, schedules, materials selections, specifications and cost estimates as listed in UFC 3-120-10. Refer to Furnishings in this IFS also.
8. SID Format shall follow UFC 3-120-10.
9. Base the FF&E package on the furniture footprint developed in the SID. Identify all new or existing equipment needed and its users within each facility or each area of the facility. Provide specific information on: equipment sizes, electrical requirements, ventilation requirements, weight (if heavy), quantity, and security level if required. Presume all administrative spaces have computers and supporting equipment.

E01.1.2. Codes and Regulations

1. Refer to UFC 1-200-01 for modifications to the International Building Code (IBC) to determine applicable sections of the IBC. Both the IBC Chapter 3 and UFC 3-600-01 govern "Use and Occupancy Classification" for example.
2. Fire code requirements shall be as defined in the International Building Code (IBC) and must be used where dictated by UFC 1-200-01 DoD Building Code (General Building Requirements) except where noted in UFC 3-600-01 (Fire Protection Engineering For Facilities).
3. National Fire Protection Association (NFPA) 101 must be utilized to determine the occupancy classification as it relates to fire/ smoke resistance rating of interior non-load bearing partitions (other than occupancy separation), means of egress, interior finish, features of fire protection (including vertical openings) and associated requirements.

E01.2. Quality and Comfort

Comply with Air Force Corporate Standards for Quality and Comfort:
<http://afcs.wbdg.org/facilities-interiors/buildings-configurations/quality-and-comfort/index.html>

1. Include durability in the life-cycle cost analysis for best-value material selections with long life expectancies that do not show excessive wearing.
2. Select long-lasting materials and finishes for permanent core areas such as lobbies, restrooms and stairs.
3. Select low-maintenance materials and products that reduce ongoing servicing and repair and that are easy to clean.
4. Relate the visual quality of finishes to the Facility Group number.
5. Building and interior configurations should address both operations and climatic responses.
6. Convey a professional image; avoid trendy patterns and textures.
7. Use materials and finishes that provide a healthy indoor environment.
8. Orient interior spaces toward views while maintaining cost-effective building performance and efficiency.
9. Promote air movement and daylighting for human health and wellbeing.

E02. Floors

Comply with Air Force Corporate Standards for Floors:
<http://afcs.wbdg.org/facilities-interiors/floors/index.html>

E02.1. Floor Materials

Facility Group 1 floor materials shall be as follows.

Primary: Prepared Slabs (Ground, Polished)
Secondary: Porcelain tile
Tertiary: Carpet, Rubber Stair Treads

Facility Group 2 floor materials shall be as follows.

Primary: Prepared Slabs (Ground, Polished)
Secondary: Ceramic tile
Tertiary: Carpet, Rubber Stair Treads

Facility Group 3 floor materials shall be as follows.

Primary: Prepared Slabs (Ground)
Secondary: Prepared Slabs (Sealer)
Tertiary: N/A

Facility Group 4 floor materials shall be as follows.

Primary: Carpet
Secondary: Ceramic tile
Tertiary: N/A

1. Natural stone and terrazzo flooring may be used in high traffic areas of Group 1 as approved on a case by case basis.
2. Resilient and rapidly renewable flooring may be used in low traffic areas in Group 1, 2 and 4.
3. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

Note: Apply the below base-wide standards for Floors (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

E02.1.1. Prepared Slabs

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Style 1, Ground and Polished**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Natural gray cement, light to dark beige aggregates

Finish: Fine polished texture

Model #: Medium to small aggregate

Other: N/A

UFGS: Section 03 35 45 Polished Concrete Finishing
(Not Available on UFGS)

Type:

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Natural gray cement, light to dark beige aggregates

Finish: Medium polished texture, slip resistant

Model #: Medium to small aggregate

Other: N/A

UFGS: Section 03 35 45 Polished Concrete Finishing
(Not Available on UFGS)

E02.1.2. Natural Stone and Terrazzo

Applicable N/A

E02.1.3. Quarry Tile

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Daltille

Color: Earth tones

Finish: Matte, slip resistant

Model #: N/A

Other: Use in commercial kitchen flooring.

UFGS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 30 10.pdf>

E02.1.4. Ceramic Tile

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Style 1 Porcelain**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Daltille

Color: Earth tones

Finish: Matte, slip resistant

Model #: Porcelain tile

Other: Use in high traffic areas. Epoxy grout is recommended.

UFGS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 30 10.pdf>

Type: **Style 2 Ceramic**



Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Daltile

Color: Earth tones

Finish: Matte, slip resistant

Model #: Ceramic tile

Other: Use in low traffic area toilet rooms.

UFGS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 30 10.pdf>

E02.1.5. Resilient Floor

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Stair Treads**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Roppe

Color: Neutral tones

Finish: Factory

Model #: Raised design rubber tread

Other: Stair treads material

UFGS: Section 09 65 00 Resilient Flooring
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 65 00.pdf>

E02.1.6. Carpet

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Mohawk Group

Color: Neutral multi-colored tones/patterned/solid

Finish: Yarn: Nylon 6 or 6.6/cut pile or loop pile

Model #: Broadloom, 6' wide rolled, carpet tiles, entry walk-off carpet

Other: N/A

UFGS: UFGS 09 68 00 Carpeting

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 68 00.pdf>

Type: **Style 2**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Mohawk Group

Color: Earth tones

Finish: Factory

Model #: Broadloom, residential loop, "Smartstrand"

Other: N/A

UFGS: UFGS 09 68 00 Carpeting

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 68 00.pdf>

E02.1.7. Rapidly-Renewable Products

Applicable N/A

E02.1.8. Other

Applicable N/A

E03. Walls

Comply with Air Force Corporate Standards for Walls:
<http://afcs.wbdg.org/facilities-interiors/walls/index.html>

E03.1. Wall Materials

Facility Group 1 wall materials shall be as follows.

Primary: Brick (or other as approved by the BCE)
Secondary: Gypsum board (painted)
Tertiary: Ceramic tile (restrooms)

Facility Group 2 wall materials shall be as follows.

Primary: Brick
Secondary: Gypsum board (painted)
Tertiary: Ceramic tile (restrooms)

Facility Group 3 wall materials shall be as follows.

Primary: Ground face block, sealed (do not paint)
Secondary: N/A
Tertiary: Ceramic tile (restrooms)

Facility Group 4 wall materials shall be as follows.

Primary: Gypsum board (painted)
Secondary: N/A
Tertiary: Ceramic tile (restrooms)

1. Follow UFC 3-450-01 (Vibration and Noise Control) for acoustic design issues including speech privacy, sound isolation or sound masking.
2. Select and apply paint with sheens (gloss levels) appropriate for the application following UFGS Section 09 90 00 Paints and Coatings.
3. Provide ceramic tile on wet walls of kitchens, toilet rooms, locker rooms, etc., in all facility groups.
4. Neutral split-face or ground-face integrally colored block with a clear sealer may be used in Group 3. Do not paint block.
5. Provide rubber base on drywall partitions in Groups 1 and 2.
6. Hardwood base may only be used in Group 1 as approved on a case basis.
7. Hardwood chair rails / bumper rails may be used in high-use areas of Groups 1 and 2; aqueous clear finishes are preferred to reduce maintenance; plastic chair rails are permitted only in medical applications.
8. Decorative moldings may be used only in Group 1 when approved on a case basis.
9. Corner guards are permitted only in high traffic spaces with wheeled or cart use such as private service areas in Groups 1 and 2; stainless steel corners guards with a brushed finish may be judiciously used in Group 3.
10. Group 4 may use painted composite wood base.
11. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

Note: Apply the below base-wide standards for Walls (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

E03.1.1. Concrete

Applicable N/A

E03.1.2. Masonry

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Modular Face Brick**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Red blend

Finish: Light texture

Model #: Coursed unit masonry

Other: Brick is preferred. Concrete block may only be used in Group 3 when approved by the BCE.

UGFS: Section 04 20 00 Unit Masonry

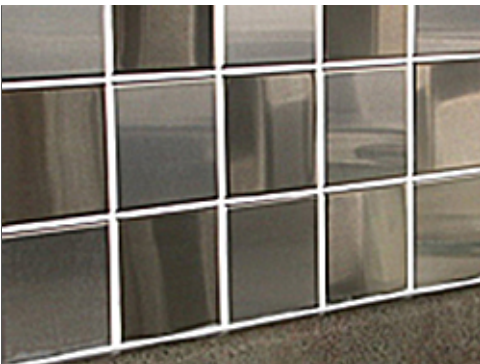
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 04 20 00.pdf>

E03.1.3. Ceramic Tile

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Daltile

Color: Earth tones

Finish: Gloss, Semi-gloss

Model #: Ceramic wall tile

Other: Located on wet walls in restrooms

UGFS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling

<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 09 30 10.pdf>

E03.1.4. Gypsum Board

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: US Gypsum

Color: Solid Earth tone colors

Finish: Paint (Sheen per UFGS)

Model #: Tapered edge

Other: N/A

UFGS: Section 09 29 00 Gypsum Board
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 29 00.pdf>
Section 09 90 00 Paints and Coatings
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 90 00.pdf>

E03.1.5. Metal Panels

Applicable N/A

E03.1.6. Wood Paneling

Applicable N/A

E03.1.7. Rapidly-Renewable Products

Applicable N/A

E03.1.8. Other

Applicable N/A

E04. Ceilings

Comply with Air Force Corporate Standards for Ceilings:
<http://afcs.wbdg.org/facilities-interiors/ceilings/index.html>

E04.1. Ceiling Materials

Facility Group 1 ceiling materials shall be as follows.

Primary: Exposed Framing (Roof / Floor Structure Above)
Secondary: Grid and Acoustical Tile
Tertiary: Gypsum board (painted)

Facility Group 2 ceiling materials shall be as follows.

Primary: Exposed Framing (Roof / Floor Structure Above)
Secondary: Grid and Acoustical Tile
Tertiary: Gypsum board (painted)

Facility Group 3 ceiling materials shall be as follows.

Primary: Exposed Framing (Roof / Floor Structure Above)
Secondary: Exposed Framing (Roof / Floor Structure Above)
Tertiary: Gypsum board (painted)

Facility Group 4 ceiling materials shall be as follows.

Primary: Gypsum board (painted)
Secondary: N/A
Tertiary: N/A

1. Accent ceiling materials such as metal, wood, and rapidly renewable may be used in Group 1 as approved on a case basis.
2. Follow UFC 3-450-01 (Vibration and Noise Control) for acoustic design issues including speech privacy, sound isolation or sound masking.
3. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

Note: Apply the below *base-wide standards* for Ceilings (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

E04.1.1. Exposed Framing (Roof / Floor Structure Above)

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Vulcraft

Color: Neutral colors reviewed on a case basis

Finish: Field painted (Sheen per UFGS)

Model #: Formlok floor and roof decking

Other: N/A

UFGS: Section 05 30 00 Steel Decks
http://www.wbdg.org/FFC/DOD/UFGS/UFGS_05_30_00.pdf

E04.1.2. Exposed Concrete

Applicable N/A

E04.1.3. Grid and Acoustical Tile

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Armstrong

Color: White

Finish: Factory

Model #: 2'x2' Tegular with reveal edge and fine texture, grid 15/16"

Other: Performance characteristics are Class A; NRC-0.70; CAC-40; LR-0.86; minimum recycled content 82%.

UFGS: Section 09 51 00 Acoustical Ceilings
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 51 00.pdf>

E04.1.4. Gypsum Board

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: US Gypsum

Color: Solid neutral colors

Finish: Paint (sheen per UFGS)

Model #: Tapered edge

Other: N/A

UFGS: Section 09 29 00 Gypsum Board
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 29 00.pdf>
Section 09 90 00 Paints and Coatings
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 90 00.pdf>

E04.1.5. Metal Panels

Applicable N/A

E04.1.6. Wood

Applicable N/A

E04.1.7. Rapidly-Renewable Products

Applicable N/A

E04.1.8. Other

Applicable N/A

E05. Doors and Windows

Comply with Air Force Corporate Standards for Doors and Windows:

<http://afcs.wbdg.org/facilities-interiors/doors-and-windows/index.html>

E05.1. Doors and Windows and Frames Materials

Facility Group 1

door (frame) and window frame materials shall be as follows.

Primary: Aluminum, clear anodized

Secondary: Hollow metal (painted)

Tertiary: N/A

Facility Group 1

door (leaf) materials shall be as follows.

Primary: Hardwood veneer

Secondary: Hollow metal (painted)

Tertiary: N/A

Facility Group 2

door (frame) and window frame materials shall be as follows.

Primary: Aluminum, clear anodized

Secondary: Hollow metal (painted)

Tertiary: N/A

Facility Group 2

door (leaf) materials shall be as follows.

Primary: Hardwood veneer

Secondary: Hollow metal (painted)

Tertiary: N/A

Facility Group 3

door (frame) and window frame materials shall be as follows.

Primary: Hollow metal (galvanized, painted)

Secondary: Hollow metal (galvanized, painted)

Tertiary: N/A

Facility Group 3

door (leaf) materials shall be as follows.

Primary: Hollow metal (galvanized, painted)

Secondary: Hollow metal (galvanized, painted)

Tertiary: N/A

Facility Group 4

door (frame) and window frame materials shall be as follows.

Primary: Wood

Secondary: N/A

Tertiary: N/A

Facility Group 4

door (leaf) materials shall be as follows.

Primary: Wood solid core

Secondary: Composite solid core

Tertiary: N/A

1. Hardwood casings may be provided over metal frames in Group 1 as approved on a case basis.
2. Paneled textured doors are preferred in Group 4.
3. Do not use hollow-core wood doors.
4. Generally match original hardware in renovations.
5. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

Note: Apply the below *base-wide standards* for Doors and Windows (products, materials and color). Then refer to the Appendix and apply any additional requirements specifically related to the Facility District in which the project is located.

E05.1.1. Aluminum

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Kawneer

Color: Clear anodized

Finish: Factory

Model #: InFrame Interior Framing, (2x4 nominal framing)

Other: Satin stainless steel hardware

UGFS: Section 08 41 13 Aluminum-Framed Entrances and Storefronts
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 41 13.pdf>
Section 08 71 00 Door Hardware
<https://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 71 00.pdf>

E05.1.2. Hollow Metal

Applicable N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Steel Doors**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Steelcraft

Color: Neutral colors

Finish: Paint (Sheen per UFGS)

Model #: Hollow metal, 2" w. frames, 16 gauge (welded corners) grouted solid

Other: Provide in Group 3 and in utility areas of Group 1 and 2. Provide A25 "galvannealed" coating. All interior steel doors shall have a factory applied primer finish. Provide satin stainless steel hardware.

UGFS: Section 08 11 13 Steel Doors and Frames
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 11 13.pdf>
Section 08 71 00 Door Hardware
<https://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 71 00.pdf>

Type: **Steel Frames**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

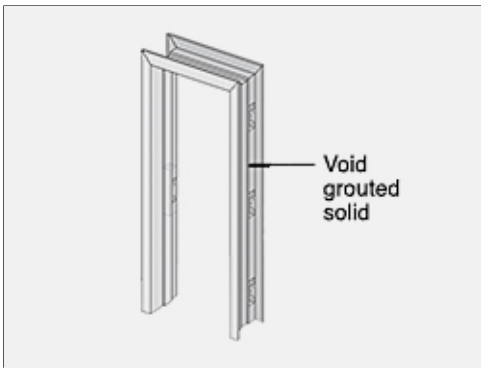
Mfr: Steelcraft

Color: Neutral colors

Finish: Paint (Sheen per UFGS)

Model #: Hollow metal, frame grouted solid

Other: Satin stainless steel hardware



UFGS: Section 08 11 13 Steel Doors and Frames

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 11 13.pdf>

Section 08 71 00 Door Hardware

<https://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 71 00.pdf>

E05.1.3. Wood

Applicable N/A

Number of base standards 2

Image Tool 250 x 188

Type: **Style 1, Administrative**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Simpson

Color: Natural hardwood veneer

Finish: Clear Sealer, satin (aqueous)

Model #: 3'x7'x 1 3/4", solid core

Other: Satin stainless steel hardware, Glass lites may be used. Stained birch veneer face, 5 ply construction, rotary cut finish.



UFGS: Section 08 14 00 Wood Doors

<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 14 00.pdf>

Section 08 71 00 Door Hardware

<https://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 71 00.pdf>

Type: **Style 2, Residential**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Simpson

Color: Natural hardwood veneer or paint grade

Finish: Clear Sealer or paint, satin (aqueous)

Model #: Full slab or panels

Other: Satin nickel hardware



UGFS: Section 08 14 00 Wood Doors
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 14 00.pdf>
Section 08 71 00 Door Hardware
<https://www.wbdg.org/FFC/DOD/UGFS/UGFS 08 71 00.pdf>

E05.1.4. Other

Applicable N/A

E06. Casework Systems

Comply with Air Force Corporate Standards for Casework Systems:

<http://afcfs.wbdg.org/facilities-interiors/casework-systems/index.html>

E06.1. Casework Materials

1. Select casework systems and materials considering durability, maintenance requirements and LCCA.
2. Natural stone and cast stone countertops may only be used in Group 1 with approval on a case basis.
3. Metal cabinets and countertops shall be provided in heavy-use operations and in Group 3.
4. Refer to AFCFS for approved materials.
5. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

E06.1.1. Plastic Laminate

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, Low Use Areas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Formica

Color: Medium Earth tones and neutral tones

Finish: Light textured

Model #: High pressure laminate

Other: Combine with matching solid-surface banding on casework edges.

UFGS: Section 06 41 16.00 10 Plastic-Laminate-Clad Architectural Cabinets
http://www.wbdg.org/FFC/DOD/UFGS/UFGS_06_41_16.00_10.pdf

E06.1.2. Solid Polymer Surface

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, High Use Areas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Corian

Color: Medium Earth tones and neutral tones

Finish: Light textured

Model #: Solid Surface

Other: Faces and edge banding

UFGS: Section 12 36 00 Countertops
http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_36_00.pdf

E06.1.3. Rapidly-Renewable Products

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1 Moderate Use Areas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Plyboo

Color: Natural or amber

Finish: Satin

Model #: Flat grain bamboo plywood

Other: FSC® Certified 100%.

UFGS: Section 12 32 00 Manufactured Wood Casework

[http://www.wbdg.org/FFC/DOD/UFGS/UFGS 12 32 00.pdf](http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_32_00.pdf)

E06.1.4. Metal

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Steel Sentry

Color: Natural stainless steel or neural colors (steel)

Finish: Mill (stainless) or Powder coated (steel)

Model #: Lab, workbench, computer workstation

Other: Provide highly durable fabrications and finishes in Group 3 which are subjected to heavy use.

UFGS: Section 12 31 00 Manufactured Metal Casework

[http://www.wbdg.org/FFC/DOD/UFGS/UFGS 12 31 00.pdf](http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_31_00.pdf)

E06.1.5. Other

Applicable N/A

E06.2. Countertop Materials

E06.2.1. Plastic Laminate

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, Low Use Areas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Formica

Color: Medium Earth tones and neutral tones

Finish: Light textured

Model #: High pressure laminate

Other: Only use rounded half or full bullnose and integral backsplash. Do not use plastic laminate edge banding on front edges.

UFGS: Section 06 41 16.00 10 Plastic-Laminate-Clad Architectural Cabinets
http://www.wbdg.org/FFC/DOD/UFGS/UFGS_06_41_16.00_10.pdf

E06.2.2. Solid Polymer Surface

Applicable N/A Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, High Use Areas**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Corian

Color: Medium Earth tones and neutral tones

Finish: Light textured

Model #: Solid Surface

Other: Faces and edges

UFGS: Section 12 36 00 Countertops
http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_36_00.pdf

E06.2.3. Natural Stone

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, Group 1 High Visibility, Heavy Use**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Neutral tones

Finish: High polish, sealer

Model #: Custom cut slabs

Other: N/A

UFGS: Section 12 36 00 Countertops

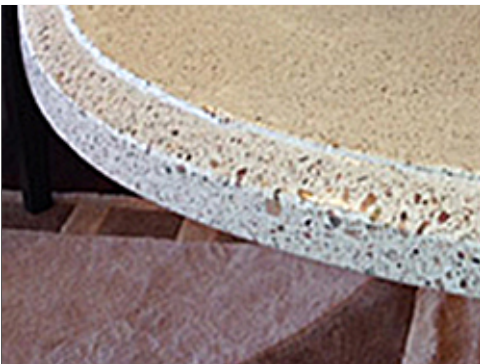
[http://www.wbdg.org/FFC/DOD/UFGS/UFGS 12 36 00.pdf](http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_36_00.pdf)

E06.2.4. Cast Stone

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1, Group 1 High Visibility, Heavy Use**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Neutral tones

Finish: High polish, sealer

Model #: Custom cast or cut slabs

Other: N/A

UFGS: Section 12 36 00 Countertops

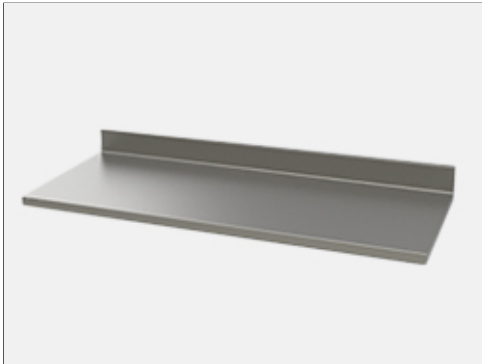
[http://www.wbdg.org/FFC/DOD/UFGS/UFGS 12 36 00.pdf](http://www.wbdg.org/FFC/DOD/UFGS/UFGS_12_36_00.pdf)

E06.2.5. Metal

Applicable N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Metal Countertop with Integral Backsplash**

Applies to: Group 1 Group 2 Group 3 Group 4 Other

Mfr: Local (TBD)

Color: Natural stainless steel

Finish: Mill

Model #: Custom fabricated countertops

Other: Provide integral fronts, sides and backsplash

UGFS: Section 12 31 00 Manufactured Metal Casework
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 12 31 00.pdf>

E06.2.6. Other

Applicable N/A

E07. Furnishings

Comply with Air Force Corporate Standards for Furnishings:
<http://afcs.wbdg.org/facilities-interiors/furnishings/index.html>

E07.1. Durability and Serviceability

Comply with AF Corporate Standards for Durability and Serviceability:
<http://afcs.wbdg.org/facilities-interiors/furnishings/durability-and-serviceability/index.html>

E07.2. Accessories

Comply with AF Corporate Standards for Accessories:
<http://afcs.wbdg.org/facilities-interiors/furnishings/accessories/index.html>

1. Refer to AFCFS.

E08. Interior Signs

Comply with Air Force Corporate Standards for Interior Signs:
<http://afcs.wbdg.org/facilities-interiors/interior-signs/index.html>

E08.1 Types and Color

Comply with Air Force Corporate Standards for Types and Color:
<http://afcfs.wbdg.org/facilities-interiors/interior-signs/types-and-color/index.html>

E08.2. Interior Signs Materials

1. Refer to AFCFS.

E09. Lighting, Power and Communication

<http://afcfs.wbdg.org/facilities-interiors/lighting-power-and-communication/index.html>

E09.1. Functionality and Efficiency

Comply with Air Force Corporate Standards for Functionality and Efficiency:
<http://afcfs.wbdg.org/facilities-interiors/lighting-power-and-communication/functionality-and-efficiency/index.html>

E09.2. Types and Color

1. Refer to AFCFS.

F. APPENDIX - Facility Districts

- Applicable
- N/A

Comply with Air Force Corporate Standards for Facility Districts:

<http://afcs.wbdg.org/facility-districts/index.html>

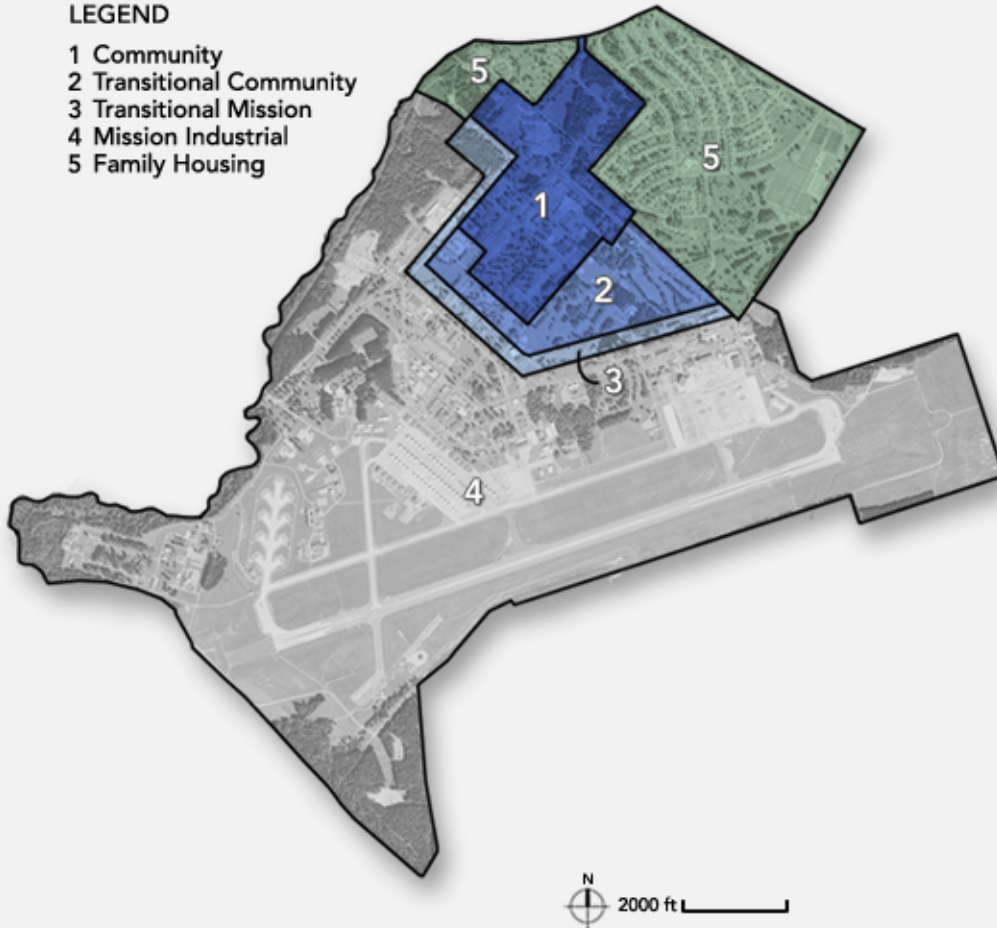
Facilities Districts Overview Map:

Image Tool 800 x 600

SEYMOUR JOHNSON AFB FACILITY DISTRICTS MAP

LEGEND

- 1 Community
- 2 Transitional Community
- 3 Transitional Mission
- 4 Mission Industrial
- 5 Family Housing



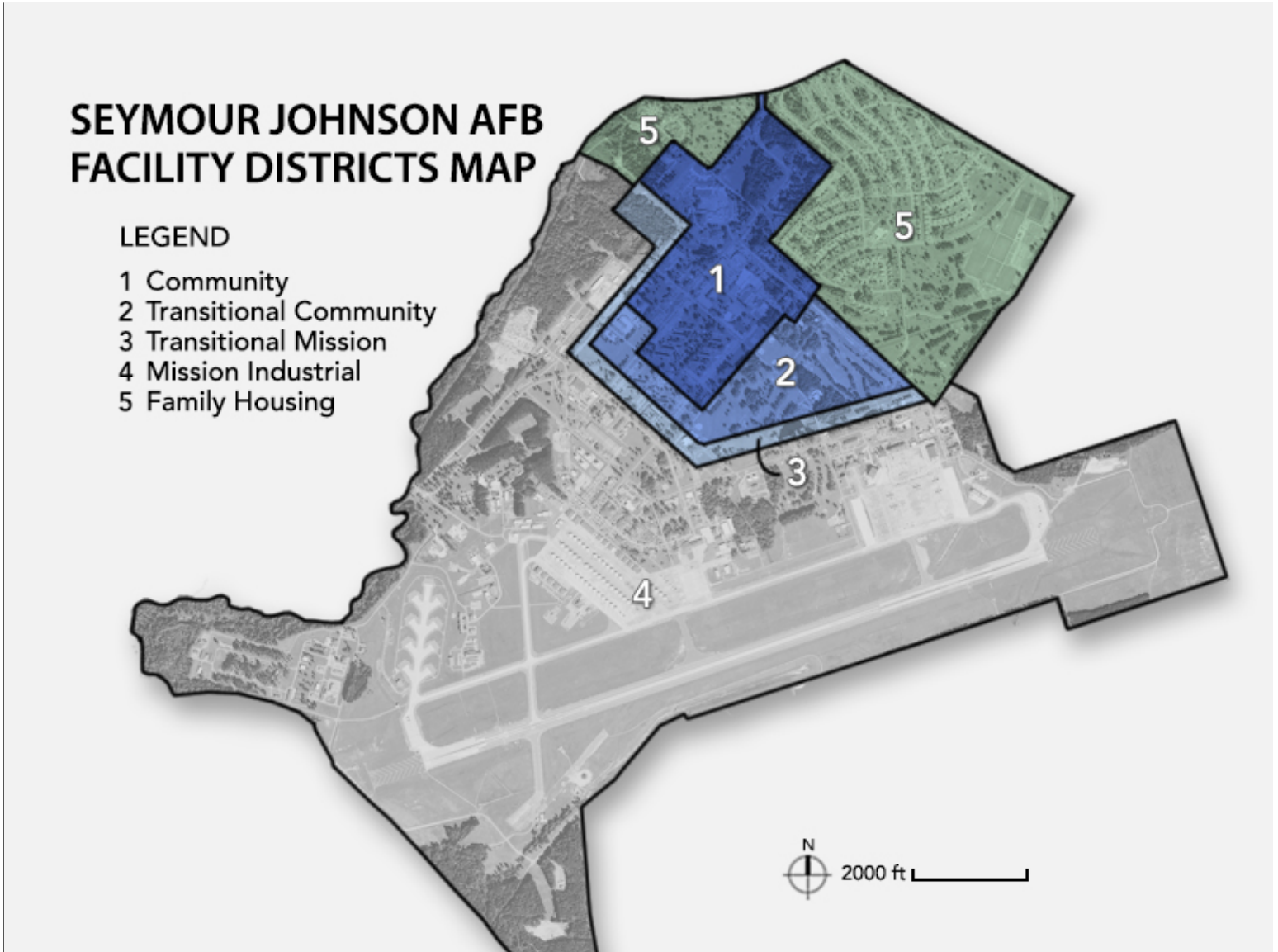
Note: Apply the base-wide standards in this IFS for Installation Elements, Site Development, Facilities Exteriors and Facilities Interiors (products, materials, color, etc.). Following application of the base-wide standards, refer to the Appendix and apply any additional requirements specifically related to the Facility District.

Enter No. of Facility Districts 1

The following Facility Districts list exceptions to the base standards that are unique to each district. Please refer to the Site Development, Facilities Exteriors, and Facilities Interiors sections of this IFS for base standards.

Image Tool 800 x 600

Map of District



Photos for each facility group within the Facility District as applicable.

Image Tool 250 x 188

Group 1 Applicable N/A

Group 2 Applicable N/A

Group 3 Applicable N/A

Group 4 Applicable N/A

Other Applicable N/A

FACILITY DISTRICTS

Seymour Johnson Air Force Base is divided into districts that align with land use zones as defined in the Installation Development Plan. Each district has designated uses that support the base's operations. Generally match adjacent facilities in new construction to promote architectural compatibility throughout the installation. Please refer to Section D03.2. and contact the Base Civil Engineer for additional information. A brief description of each district follows.

1. Community

The Community district should be pedestrian in scale. Application of the installation prevailing architectural theme, regional vernacular, will be implemented during major renovations or new construction as appropriate. Facilities in this district include administrative, lodging, dormitories, commercial and community. These will generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Groups 1 and 2 as defined in this IFS.

2. Transitional Community

The Transitional Community district should be pedestrian in scale. Application of the installation prevailing architectural theme, regional vernacular, will be implemented during major renovations or new construction as appropriate. Facilities in this district include administrative, commercial, community, light industrial and recreational. These will generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 2 and 3 as defined in this IFS.

3. Transitional Mission

The Transitional Mission district should be pedestrian in scale. Application of the installation prevailing architectural theme, regional vernacular, will be implemented during major renovations or new construction as appropriate. Facilities in this district include administrative and light industrial. recreational. These will generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 2 and 3 as defined in this IFS.

4. Mission Industrial

The Mission Industrial district includes facilities that are generally industrial in nature and may support flightline operations. Administrative facilities with headquarters functions are also located in this district. Alternative uses include warehouses for various base activities including maintenance, storage, utility functions, industrial services, transportation storage, communications, civil engineering, supply and equipment, fuel storage, vehicle maintenance/motor pool complex, open storage, emergency/disaster response facilities, ordnance and weapons storage areas, and other industrial uses. Facilities in this district will generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 1, 2 and 3 as defined in this IFS.

5. Family Housing

The Family Housing districts consist of detached single family residential units occupied by enlisted and officer families. This area is currently under a housing privatization contract but will follow standards for Facility Group 4 as defined in this IFS.

Open Space and Preserves

Open space includes undeveloped land both inside and outside of the immediate cantonment area. It both separates and defines the various sections of the base and creates a natural setting. Areas classified as open space may be undeveloped to act as a buffer space between incompatible uses or for safety or security clearances or there may be other constraints that are not readily visible. All development in open space requires prior coordination and approval from the Base Civil Engineer.

G. APPENDIX - References

Comply with Air Force Corporate Standards:

<http://afcs.wbdg.org/index.html>

Note: The below listed Supplementary Documents are provided as part of this IFS and shall become fully part of the IFS. If there are any discrepancies between the requirements of this IFS and the Supplementary Documents, the IFS will govern.

1. There are no supplementary documents at this time.