(PRE-FINAL)
JOINT BASE ANACOSTIA-BOLLING (JBAB) INSTALLATION FACILITIES STANDARDS (IFS)


Installation Elements


Site Development


Facilities Exteriors


Facilities Interiors

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AIR FORCE INSTALLATION FACILITIES STANDARDS

2023

JBAB 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. All Air Force designs including Non-Appropriated Funds (NAF) facilities are required to conform to AFCFS per Air Force Instruction (AFI) 32-1023; AFCFS will be used to formulate Installation Facilities Standards (IFS) per the AFI. The Base Civil Engineer (BCE) maintains and implements 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 will 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 will 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

◉ 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

Georgian Influenced Building Expresses Compatibility with the Historical Classical Architecture

Arnold Gate with Compatible Materials

Traditional Vernacular Design for Housing

Historical Georgian-Revival HQ Building

A01. FACILITY HIERARCHY

Comply with AF Corporate Standards for Facility Hierarchy (and subsections):
http://afcfs.wbdg.org/facility-hierarchy/index.html

A02. FACILITY QUALITY

Comply with AF Corporate Standards for Facility Quality (and subsections):
http://afcfs.wbdg.org/facility-quality/index.html

A03. FACILITY DISTRICTS

Comply with AF Corporate Standards for Facility Districts (and subsections):
http://afcfs.wbdg.org/facility-districts/index.html

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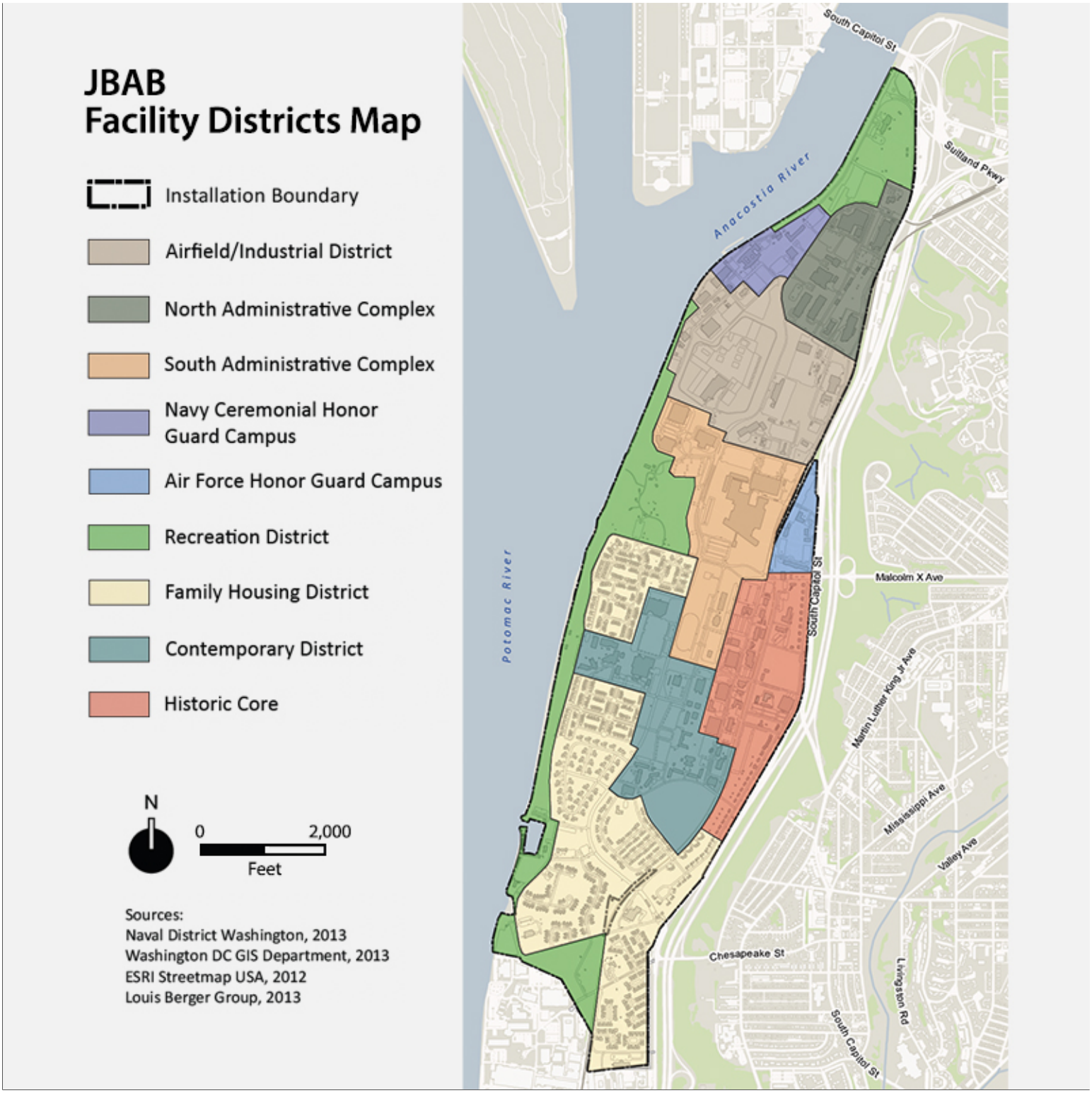


Note: *Apply the base-wide standards in this IFS for Installation Elements, Site Development, Facilities Exteriors and Facilities Interiors (products, materials, color, etc.). Following application of the base-wide standards, refer to the Appendix and apply any additional requirements specifically related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

B. INSTALLATION ELEMENTS

Comply with Air Force Corporate Standards for Installation Elements:
http://afcfs.wbdg.org/installation-elements/index.html

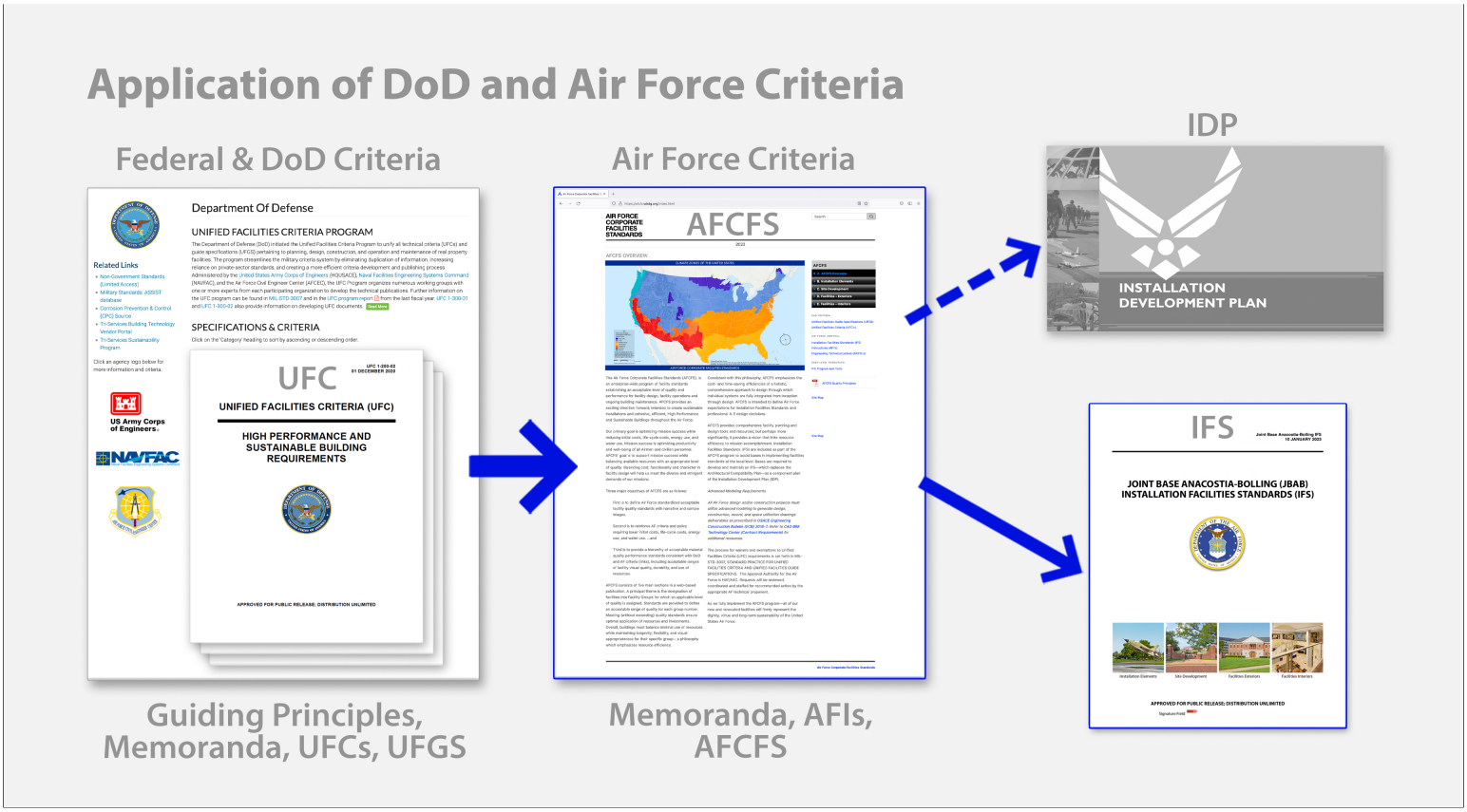
B01. COMPREHENSIVE PLANNING

Comply with Air Force Corporate Standards for Comprehensive Planning:
http://afcfs.wbdg.org/installation-elements/comprehensive-planning/index.html

B01.1. Installation Development Plan (IDP)

◉ 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



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 Planning documents and to ensure that the Installation Development Plan (IDP) is prepared, maintained, and implemented following AFI 32-1015.

2. Refer to the IDP for information on climate and weather and for demographics and related data.

3. Comply with installation planning criteria, architectural compatibility and facilities standards.

4. All Air Force designs will conform to the standards specified in the Air Force Corporate Facilities Standards (AFCFS). AFCFS will also be used to formulate individual Installation Facilities Standards (IFS).

5. Maintain this Installation Facilities Standards (IFS) as required under AFI 32-1023. IFS is maintained and implemented by the Base Civil Engineer (BCE).

6. Address all infrastructure, site and, facilities reuse opportunities in the IDP. Reuse designs will follow IFS.

7. Address all infill projects for infrastructure, site and, facilities in the IDP. Infill designs will follow IFS.

B01.1.1. IFS Requirements and Documents

◉ 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

Future Land Uses and Special Districts[1]										
PV Type	Historic District	Central Dev. Focus Area	Airfield Ops	Family & Bachelor Housing	Industrial	Mission/ Admin.	Open Space/ Outdoor Recreation	Port Ops	Temporary Lodging	Mixed Use
Rooftop	P	P	N	P	P	P	P	P	P	P
Carport	C	C[2]	N	P	P	P	P	P	P	P
Ground-Mount	N	N	N	P	P	P	C	N	P	P
Accessory	C[3]	P	C	P	P	P	P	P	P	P
P = Permitted (subject to site approval process), N = Not Permitted, C = Conditional (subject to site approval process)										
[1] See 2014 JBAB Installation Master Plan for map										
[2] Commissary/Exchange parking lot only										
[3] Bus shelters only										

Solar Photovoltaic (PV) Panel Installations at JBAB Should Be Sited in Accordance with the Table above; Refer Also to Section D09.1.

Solar Photovoltaic (PV) Panels

1. All PV panel installations at JBAB should be sited in accordance with table above.

2. Recommended PV installation techniques for sloped or barrel roofs are
   a. Integrated PV panels on metal roof
   b. Solar shingles
   c. Crystalline PV array system
   d. Thin-film PV

3. PV panel surface should be setback 1 foot from the exterior perimeter of the roof.

4. The addition of a PV panel must not adversely impact its existing stormwater runoff patterns.

5. Carport PV panels should not exceed 20 feet in height unless site specific requirements dictate otherwise.

6. Ground-mounted PV panels should be as close to the ground as possible and should not exceed eight feet in height measured from the ground.

7. Carport PV systems in close proximity to Defense/Chappie James Boulevard SW require designs that are of high architectural quality due to their high visibility.

8. The mounting frameworks for carport PV systems must be in neutral in color and should not include unfinished lumber.

9. Refer also to section D09.1 Passive and Active Systems.

B01.1.2. Brief History of Base

◉ 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

Bolling Field with Army Biplane Fighters and Bombers in the Foreground and the U.S. Capitol Building in the Background c. 1920

NAS Anacostia and Bolling Field c. 1944

De Havilland DH-4B Biplane NAS Anacostia

Martin Biplane Bombers over Bolling Field

Although the history of JBAB as a joint base is relatively short, JBAB's property has been a DoD asset since 1917. NSF Anacostia's and Bolling AFB's histories include the growth and evolution of the U.S. Navy Ceremonial Guard, the U.S. Air Force Band, and the U.S. Air Force Honor Guard.

Major construction on the south side began in the 1930s. Installation planners and architects were instructed to follow guidelines for post planning influenced by the City Beautiful movement, including the use of pattern and symmetry. The Georgian Revival-style buildings remaining on both the north and south sides of the installation reflect this line of thought.

As World War II approached, installation planning became much more functional, responding to the need for runways to accommodate additional aircraft. Hangars, barracks, and, administrative buildings were built around runways with little thought given to visual layout. After World War II, installation development reflected the prevailing urban design theory at the time, which was to concentrate uses in separate geographic areas surrounded by open space and connect facilities via roadways. Architecturally, the Air Force favored modernistic designs that reflected its status as the newest service branch.

B01.1.3. Future Development

◉ 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 Small graphics do not apply

Aerial Imagery of JBAB Area

Aerial Image of Central JBAB with Areas of Historical Bolling District at right and Housing and Community Support District at Left

1. Follow AFI 32-1015 for Air Force Comprehensive Planning, the Comprehensive Planning Process, Comprehensive Planning Requirements, and Geospatial Mapping.

2. Address all future development under the Installation Development Plan (IDP).

3. Comply with the regulatory framework governing the physical appearance of projects at JBAB. In addition to federal, DoD-, and installation-specific requirements for project design, comply with all applicable requirements set forth by the National Capital Planning Commission (NCPC), the Commission of Fine Arts (CFA) and the National Historic Preservation Act (NHPA).

4. National Capital Planning Act: Per the National Capital Planning Act, the National Capital Planning Commission (NCPC) is the central planning agency for the federal government in the National Capital Region (NCR). NCPC is empowered to ensure orderly and coordinated development of the federal government in the region and consistency with the Comprehensive Plan for the National Capital "Comprehensive Plan". Federal agencies must advise and consult with NCPC on individual site and building plan projects prior to preparing construction plans.

5. Commission of Fine Arts (CFA): CFA, established in 1910 by Act of Congress, is charged with giving expert advice to the President, Congress and the Heads of Departments and agencies of the federal and D.C. governments on matters of design and aesthetics, as they affect the federal interest and preserve the dignity of the nation's capital. Federal agencies must present new footprint construction (or major renovation project that alters the exterior appearance of a building) to CFA prior to the finalization of design plans.

6. National Historic Preservation Act (NHPA): Any actions involving alterations or disturbances to JBAB's historic sites, districts, buildings, or landscapes (see JBAB ICRMP for details) require coordination with historic preservation departments (DC State Historic Preservation Office) and/or agencies in compliance with historic preservation laws. In terms of project design and appearance, The Secretary of the Interior's Standards for the Treatment of Historic Properties should be closely followed. In general, this document instructs project designers to preserve the integrity and visual character of historic resources. For example, if a building's windows are to be replaced, they should be replaced with historically-accurate ones. For additional information and guidance, refer to the JBAB ICRMP.

B02. STREET ENVELOPE STANDARDS

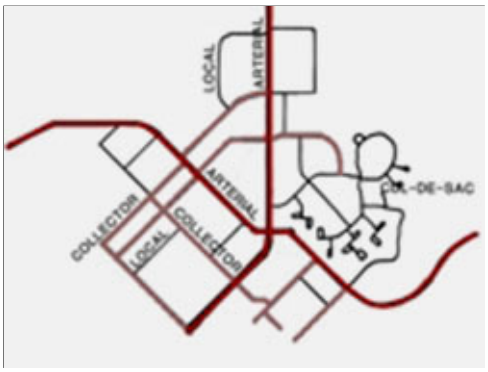
Comply with Air Force Corporate Standards for Installation Elements:
http://afcfs.wbdg.org/installation-elements/index.html

Comply with AF Corporate Standards for Street Envelope Standards:
http://afcfs.wbdg.org/installation-elements/street-envelope-standards/index.html

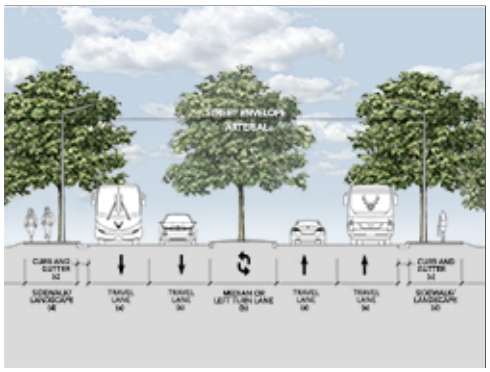
B02.1. Hierarchy of Streets

○ 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



Hierarchy of Streets


Street Envelope Section


Coordinated Landscape Features

1. Develop and evolve a hierarchical transportation network of arterial (primary), collector (secondary) 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. 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.

5. Minimize stops and turns along arterials. Eliminate on-street parking along arterials and provide on collector streets only on lower speed roadways such as residential streets.

6. Connect arterials to local streets with appropriately scaled collector streets.

7. Provide appropriate landscape setbacks and pedestrian buffers along all streets.

8. Minimize and consolidate curb cuts along streets.

9. Ensure access for emergency and service vehicles.

10. Define bicycle traffic routes in the Installation Development Plan or its applicable component plans.

11. Define appropriate force protection features, site furnishings, signs, lighting, utilities, and paving in the IFS.

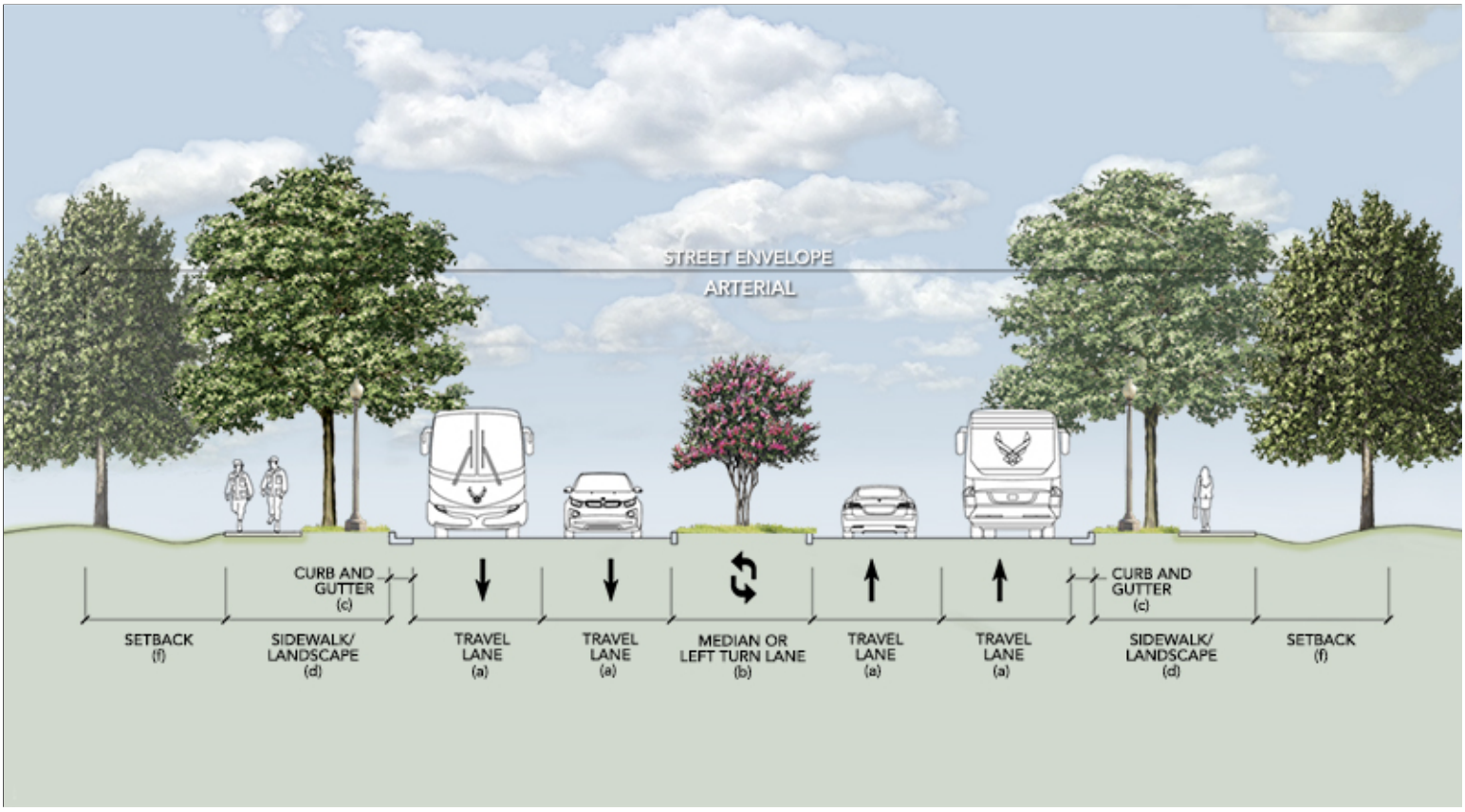
12. Encourage stormwater infiltration features between the roadway and sidewalk. Options for these areas include (but are not limited to) the following:

a. Stormwater planters
b. Street trees

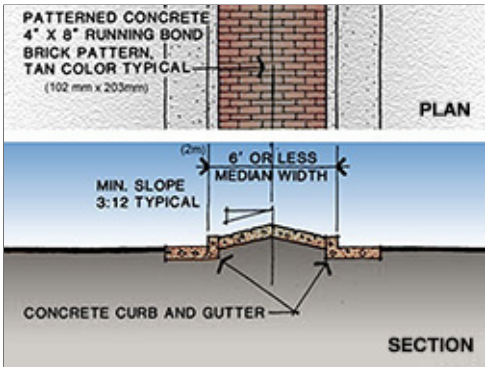
B02.1.1. Arterial Streets

◉ 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): 12′ Curb and Gutter (c): 2′ Sidewalk / Landscape (d): 12′) Setback (f): Min. 35' or per AT



Paved Median

Coordinated Placement of Elements

Predominant Use of Street Trees

Arterial (Primary) Streets

1. Stops and turns should be minimized and future 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' buffer between the road and sidewalk where space allows to allow space for street trees.

3. Limit curb cuts on arterial streets to entries into major facilities, building groups and major parking areas.

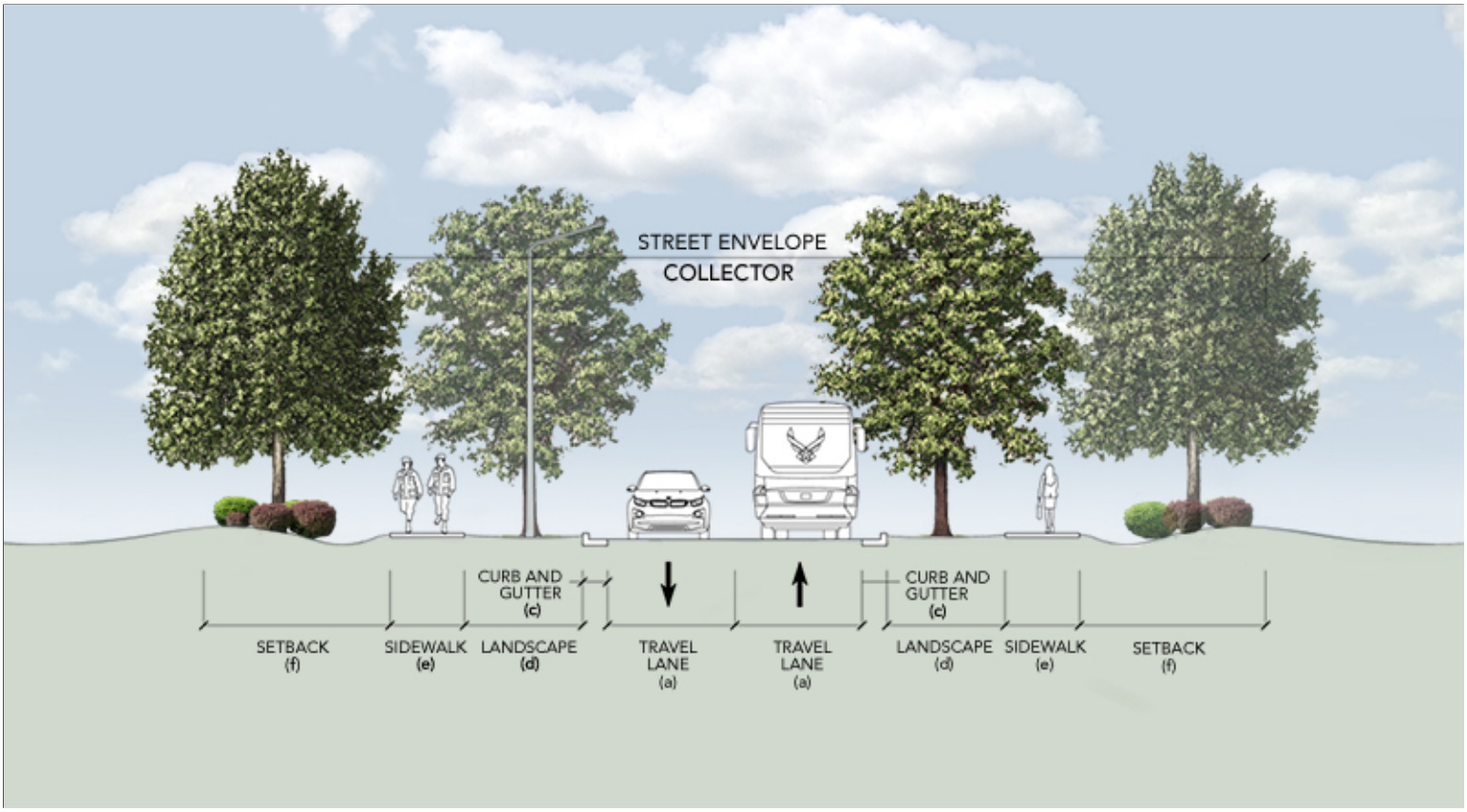
4. Reinforce the importance of arterial streets with appropriate signs, plantings and street lighting.

5. Implement a stormwater infiltration area between the street and sidewalk. The goal of this feature is to capture stormwater runoff from the roadway. In the boulevard configuration, the landscaped median may also be designed as an infiltration feature. Stormwater infiltration areas should include plantings.

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


Detached Sidewalk with Grass Planting


Trees and Grasses in Landscape Setback


Street Trees between Curb and Sidewalk

Collector (Secondary) Streets

1. Frequent traffic stops and low speeds are permitted on collector streets.

2. 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 to allow space for street trees.

3. On-street parking may be allowed on one side where secondary roads are not less than 34 feet wide (not withstanding existing DIA parking along Brookley Avenue). Parking will not interfere with intersections or traffic flow.

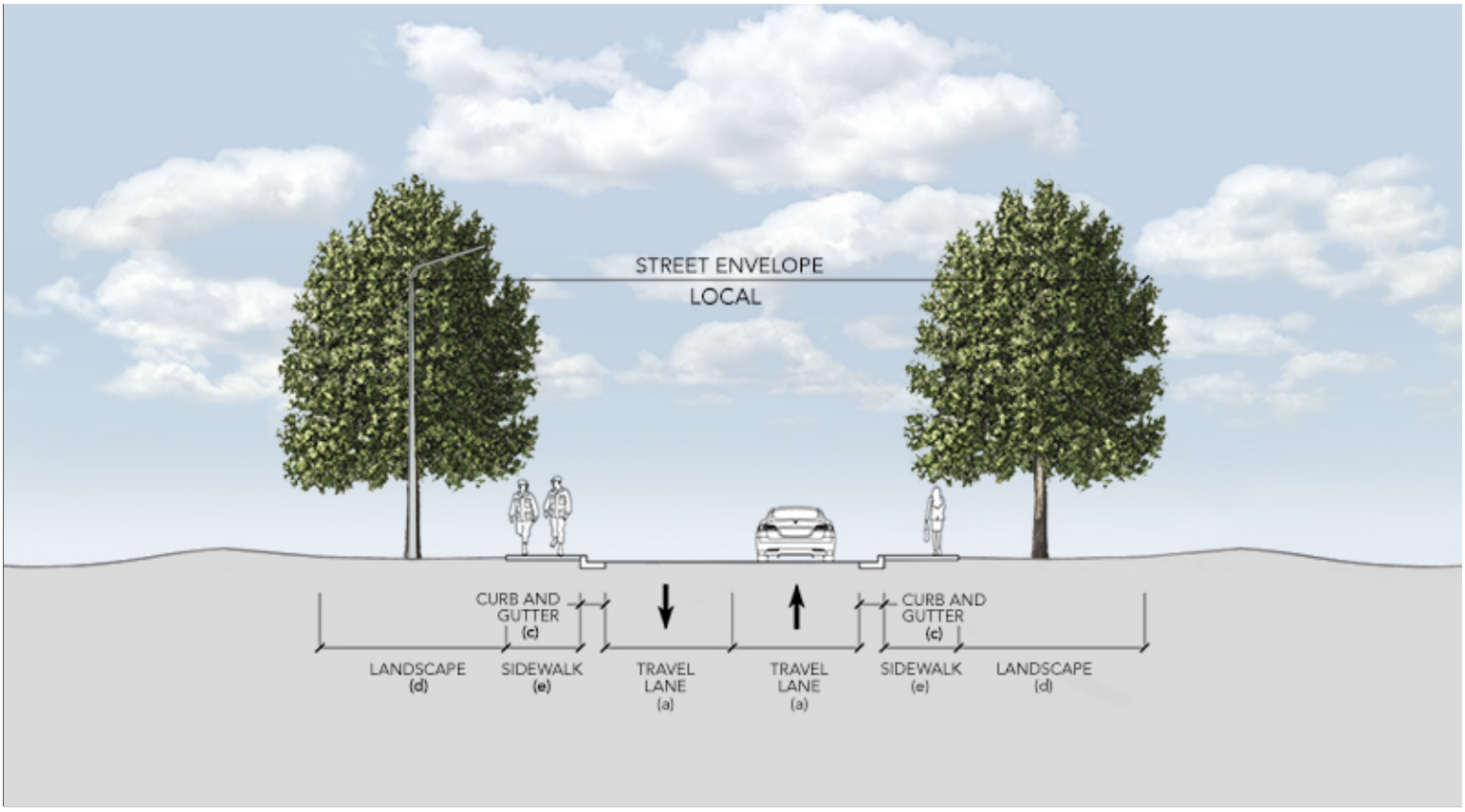
4. Signs, plantings and street lighting should reinforce the designation of "collector" street.

5. Implement a stormwater infiltration area between the street and sidewalk. The goal of this feature is to capture stormwater runoff from the roadway. In the boulevard configuration, the landscaped median may also be designed as an infiltration feature. Stormwater infiltration areas should include plantings.

B02.1.3. Local Streets

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

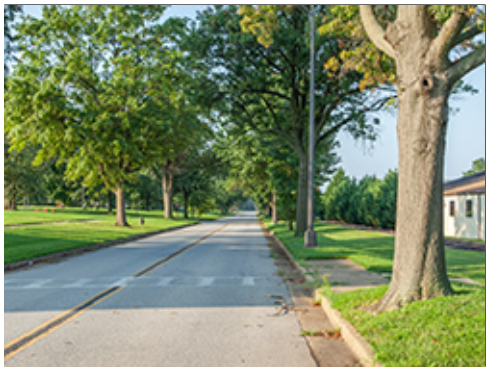
◉ Applicable ○ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3 Image Tool 250 x 188



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

Local Street Elements in Group 4

Use of Trees, Shrubs and Grasses in Setback



Trees Providing Shade

Trees Between Sidewalk and Curb

1. Frequent traffic stops and low speeds are permitted on local streets.

2. Provide sidewalks on at least one side of local streets and both sides of local streets where functionally required. Buffers are preferred but not required on local streets to allow space for street trees.

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.

6. Where space permits, include a stormwater infiltration area between the street and sidewalk. The goal of this feature is to capture stormwater runoff from the roadway. In the boulevard configuration, the landscaped median may also be designed as an infiltration feature.

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

Flag Array and Static Display of Aircraft in Green Space along MacDill Boulevard SE

1. No standards are provided for this section.

B02.2. Hierarchy of Intersections

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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. Pursue passive systems to lower maintenance requirements and reduce energy use, where such systems do not degrade the traffic operations or safety of pedestrians and bicyclists.

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

Signalized Intersection at Chappie James Boulevard and MacDill Boulevard SE

Coordinated Street Elements

Preserved Sight Lines at Gate

Integrated Security Elements

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

B02.2.2. Arterial/Collector

○ 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


Traffic Signal at Group 3 and 4


Coordinated Crosswalks


Organized Placement of Elements

1. At arterial/collector intersections adjacent to Group 1, landscaping of native grasses and shrubs may be planted; trees may be included when maintenance and non-potable irrigation 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


Preserved Sight Lines


Standard Street Elements


Detached Sidewalk with Grass Planting

1. At collector intersections adjacent to Group 1, landscaping of native grasses and shrubs may be planted; trees may be included when maintenance and non-potable irrigation 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

Landscape Buffer at Parking Lot

Street Trees and Grasses

Detached Sidewalk on On Side

1. At a minimum, allow frontage space for a 6-foot planting strip along the building, a 5-foot sidewalk, and another 6-foot plant strip to the back of curb.; total of 17 feet from back of curb.

2. For buildings set back further than 17 feet from a curb; an enhanced landscaping plan or stormwater management feature should be added.

3. Refer to sections D04.1.7, D04.1.10, D04.1.12, D04.2.9 and D04.2.10 for requirements regarding primary and secondary entrances.

4. 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, local municipality guidelines, and SDDCTEA published standards.

B02.3. Street Elements

◉ 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

Coordinated Types and Placement of Street Elements

Street Elements in Group 4

Standard Markings and Elements

Standard Placement of Traffic Device

1. Emulate the streetscape area's pre-development hydrology using passive and active design features to help sustain native landscaping. Coordinate with the installation Stormwater Management Plan.

2. Employ systems, materials and techniques to maximize streetscape sustainability. Consider pervious paving and high reflectivity of surfaces.

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 and the latest SDDCTEA published guidelines.

6. Crosswalk markings will follow the MUTCD for Streets and Highways, current edition and the latest SDDCTEA published sign guidelines. 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.

9. Refer to sections C06.1.7, D04.1, and D04.2 for additional recommendations.

B02.3.1. Paving

◉ 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

Standard Bituminous Paving

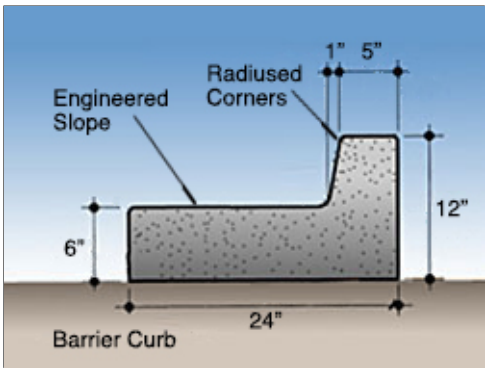
1. Pavement design will comply with UFC 3-250-01. Ensure appropriate analysis and design of subgrade conditions to promote low maintenance, high performance pavements. Apply all applicable best practices from Appendix B of the UFC.

2. Materials 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.

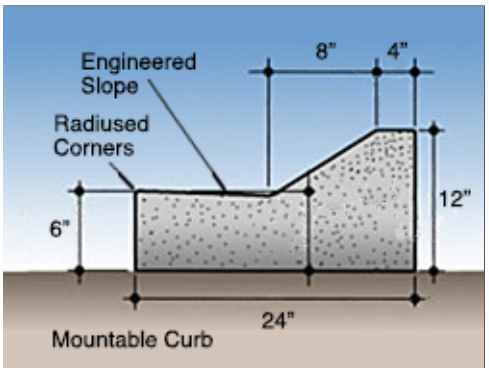
B02.3.2. Curb and Gutter

○ 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



Installation Standard Curb



Group 4 Curbing


Standard Integral Curb and Gutter

1. Curb all streets except remote/isolated roads and rock-paved service roads.

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

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

4. Refer to section C03.1.2 for additional curb recommendations

B02.3.3. Utility Service 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


Standard Hydrant


Utility Cabinet with Standard Color


Fencing Used for Visual Screening

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.

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

Standards Placement

Mounting on Light Pole

Standard Traffic Device and Location

1. Refer to Sections C08 and C08.1 for sign requirements and recommendations.

B02.3.5. Street Lighting

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

1. Refer to Sections C05.1.2 and C09 for standards and recommendations.

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://afcfs.wbdg.org/installation-elements/index.html

Comply with AF Corporate Standards for Open Space / Public Space:
http://afcfs.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 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

Red Brick Paving at Plaza Adjacent to Group 2

Red Brick Plaza Adjacent to Group 1

Commemorative Marker at Group 1

Static Display of Aircraft

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 installation to ensure judicious use of resources, reduce ongoing maintenance requirements, and sight line safety.

2. Design highly durable plazas and monuments with a level of quality comparable to Facility Group 1.

3. Link plazas and monuments 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.

5. See section C08 for plaza, monument and static display signs

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 Image Tool 250 x 188

Brick Paving with Concrete Edging at Group 1

Concrete Plaza at Group 1

Stamped Colored Concrete at Group 2

Concrete Entrance Plaza at Group 1

1. Mitigate heat island effect 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 will match the color of pavers used on adjacent sidewalks using installation standard range of similar colors to the Honor Guard Campus, red blend. Bricks used on plazas will typically be 4" x 8" size.

3. Paved plazas are encouraged to should have benches near trees to provide some shaded sitting areas.

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

Bronze Plaque Mounted on Precast Plinth Base

Bronze Plaque Mounted to Brick Pier

Engraved Corner Stone


Commemorative Plaque in Recreation Area

1. Relate new sculpture, markers and statuary to the installation'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 installation's visual quality, and encourage pride for the community and the US Air Force.

7. Public art that is displayed on base should be obtained from local artists.

8. Public art, if displayed, should be in the vicinity of plazas, parks, pedestrian corridors, public space, employee break areas, and main base entrances/exits.

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 Small graphics do not apply

Dynamic Mounting of Aircraft with Steel Post and Concrete Base

1. Follow IFS installation-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 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

Maintained Recreational Space with Coordinated Site Furnishings

Recreational Green Space in Group 4

Maintained Green Space Adjacent to Group 1

Grass Buffer at Perimeter Fence

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

2. Maintain preservation areas (if any) 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 installation's gates and perimeter fence.

4. Identify and describe installation-wide utility corridors in the IDP.

5. Installation-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.

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 if situated along a primary travel corridor for bicycles, pedestrians, and vehicles, 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 that match those respective design elements present at adjacent buildings.

10. Paint aboveground equipment and associated components such as electrical piping or exposed plumbing lines dark bronze.

11. Maintain existing buried utility service lines as a visual asset.

12. Consolidate and enclose service utility lines in underground utility corridors when feasible. Create routes along the inside edge of parking lot islands.

13. All development of open space requires prior coordination and approval from the Base Civil Engineer.

End of section B03.2. Grounds and Perimeters

B03.2.1. Parade Grounds

◉ 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

Parade Ground at Air Force Honor Guard Campus

Maintained Green Space

Brick Paving with Concrete Edging

Functionally Required Platform and Bleachers

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 ongoing maintenance are preferred. The Base Civil Engineer will determine quantities, sizes, and products on a case-by-case basis.

B03.2.2. Parks

◉ 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

Recreational Open Space, Playgrounds and Trail along River

Park with Pavilion at Group 4

Playground at Group 4

Basketball Court Adjacent to Playground

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 helicopter landing sites, aprons, 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 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

Brick Piers and Metal Fence at Group 1

Chain Link Fencing near Group 3

Fencing with Integrated Security Measures

1. Design, install and maintain the installation's perimeter fence following UFC 4-022-03.

2. Stringently comply with AT requirements following UFC 04-010-01 for all spaces adjacent to the installation's perimeter fence and all gates.

3. Fencing, gates and other elements that are associated with the main gates will be a level of quality equivalent to Facility Group 1.

4. Maintain a positive visual quality along the traffic corridor on both sides of the main gates. Specifically address pedestrian access, circulation and common areas.

End of section B. Installation Elements

C. SITE DEVELOPMENT

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

C01. SITE DESIGN

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

C01.1. Site Design Considerations

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

1. Collect documentation to validate approvals and completion of the NEPA process.

2. Consider and analyze soil type to ensure facility is built on a stable soil and the foundation will not settle over time.

3. Ensure site design compliance with the Installation Development Plan (IDP) and its component plans and Installation Facilities Standards (IFS).

4. Promote integrated design with on-site solutions such as engineered small-scale hydrologic controls versus installation-wide infrastructure; consider open space, natural features, bioswales, building roofs, streets, and paved surfaces.

5. Limit the impact of development on land and water resources. All site elements and infrastructure will reinforce an image of sustainability, with reduced energy demand, renewable-energy usage, and water conservation.

6. 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, and energy management (metering, EMCS).

7. 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.

8. New building projects should preserve open space and protect natural habitat.

9. 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.

10. 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.

11. 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.

12. Minimize existing and planned obstructions from landscaping, structures, topography, and adjacent developments to preserve solar access and natural ventilation.

13. Purposefully integrate service access, receiving and storage areas to eliminate the need for visual screening.

14. 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.

15. Applicably coordinate heat island mitigation in paving and roof designs when implementing an integrated approach to stormwater management.

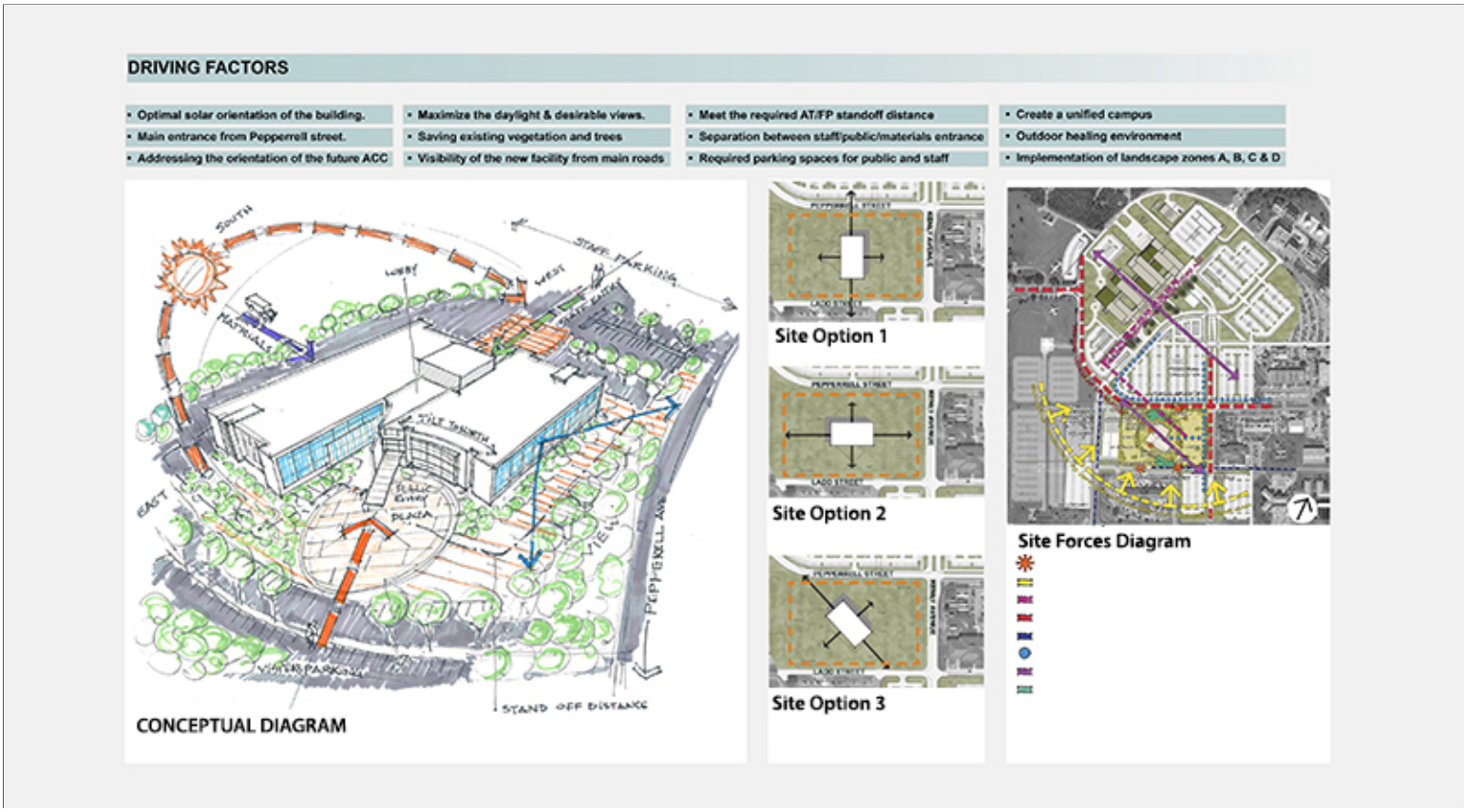
16. Consider the location of “Designated Tobacco Areas.”

17. Avoid building in the 500-year floodplain until the new levee is in place. If a mission critical facility is deemed required by the military and there are no other feasible locations on the installation, flooding mitigation measures should be considered.

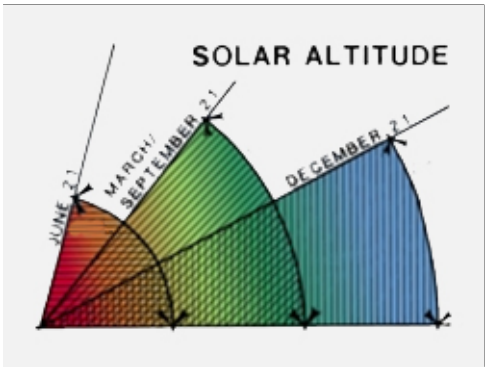
C01.2. Building Orientation

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

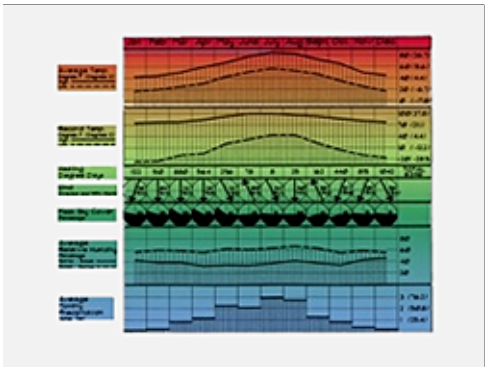
◉ Applicable ○ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 6 Image Tool 250 x 188



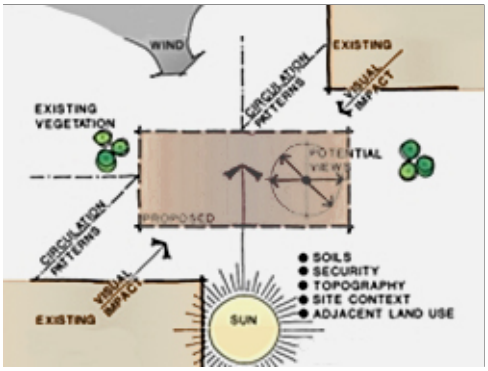
Conceptual Site Analysis and Site Design Diagram



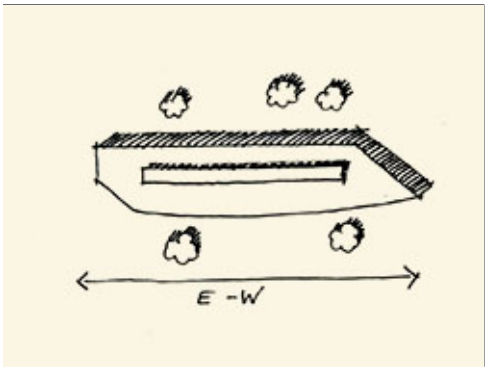
Local Solar Data



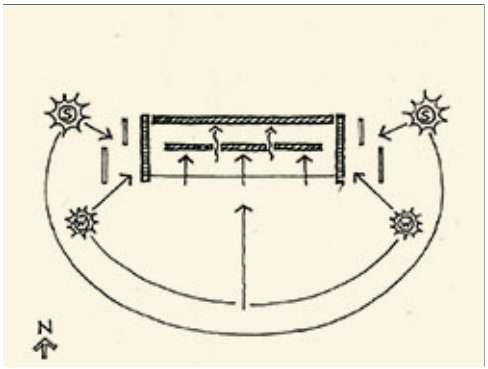
Local Climate Data



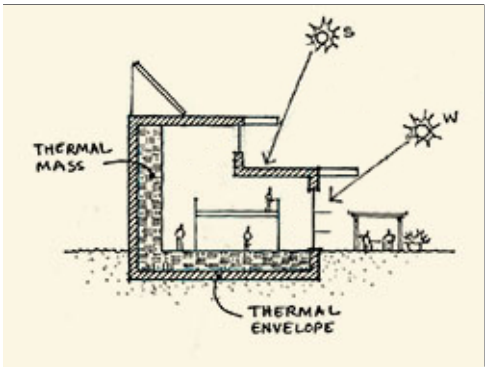
Site Data



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 building's view from the street and the location of the main entrance.

C02. UTILITIES

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

Comply with AF Corporate Standards for Utilities:
http://afcfs.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

Inconspicuous Location and Color

Utilities Located in Landscape Setback

Fire Hydrant with Coordinated Access

1. Refer to UFC 1-200-20 that provides references in Section B-1.1 to mitigate heat island effects or UFC 3-201-01 in Chapter 4 to use pavement design criteria and procedures recognized by the Department of Transportation (DDOT in this case) in the state of the installation.

2. Evaluate adjacent sites and cost-effectively consolidate parking areas to maximize efficient use; ensure that all areas meet accessibility guidelines.

   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; Comply with IFS standards while meeting AT requirements. Encourage no more than 50% of the parking in the front of the building. Landscape elements should be provided between the parking lot edge and front of building.

3. 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.

4. For parking lots that cannot accommodate solar shade panels, provide landscaped islands as appropriate. See C.03 1.03 3 for parking island landscape requirements.

5. Define pedestrian access with approved hardscape and provide shading along the primary path from the parking area to the building's main entrance of the building; and develop a direct connection between the main building's entrance/exit to the Primary Street via a pedestrian path with approved hardscape and shading to provide access to a potential shuttle bus stop and surrounding facilities.

6. Coordinate suitable native landscaping or barriers integrated with walls and fences to ensure adequate force protection, while also meeting AT requirements

7. Accessible parking spaces will be marked 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, vanpools, and carpools near the main entrance of buildings.

10. Design parking area to accommodate one (1) space for every three (3) proposed daytime shift employees, excluding visitor spaces and government vehicle spaces; the total space count for employees include officer reserved spaces, carpool spaces, and ADA spaces meant for employees.

11. Consider cost-effectively integrating solar photovoltaic arrays into covered parking structures and parking lots.
    a. For exiting large parking areas, large photovoltaic arrays should be incorporated. (see picture below)
    b. For smaller existing parking areas, single photovoltaic systems should be incorporated.
    c. All proposed photovoltaic arrays should not disrupt underground utilities.

12. Reserved parking is discouraged except for Facility Group 1.

13. On-street parking is discouraged except in multi-use areas. When used, provide approved on-street parking configurations following UFC 3-201-01.

14. Access and service drives should accommodate the largest vehicle serving the facility.

15. Eco-friendly measures are encouraged to be incorporated into existing and proposed parking lots. This includes, electric car charging stations, electric bike charging stations, solar shade panels and solar panel light poles.

16. Perimeter landscaping is strongly encouraged for parking lots adjacent to a primary roadway.

17. Consider adding curb cuts to the parking lot at locations that allow for natural drainage into stormwater management facilities.

18. Rock and crushed stones should be utilized at curb cut locations to slow down the water from entering the stormwater management system.

C03. PARKING AREAS

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

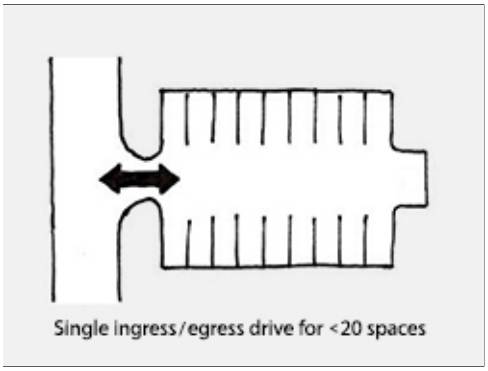
Comply with AF Corporate Standards for Parking Areas:
http://afcfs.wbdg.org/site-development/parking-areas/index.html

C03.1. Configurations and Design

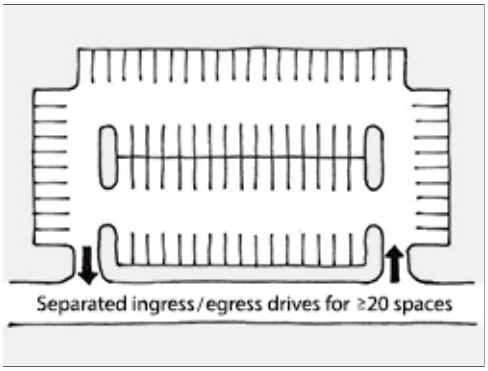
(●) Applicable ( ) N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1 Image Tool 800 x 440

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

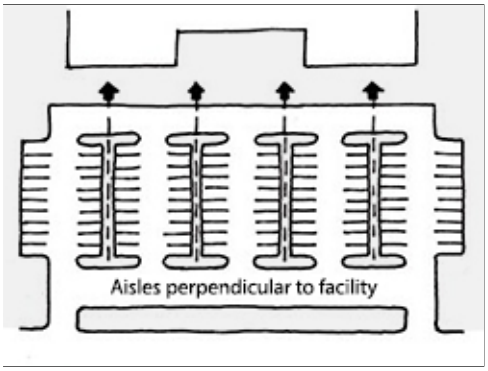
Standard 90-Dregree Parking Configuration



Small Lot Configuration



Large Lot Configuration



Facility Group 1 Configuration

1. Refer to UFC 1-200-20 that provides references in Section B-1.1 to mitigate heat island effects or UFC 3-201-01 in Chapter 4 to use pavement design criteria and procedures recognized by the Department of Transportation (DDOT in this case) in the state of the installation.

2. Evaluate adjacent sites and cost-effectively consolidate parking areas to maximize efficient use; ensure that all areas meet accessibility guidelines.

   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; Comply with IFS standards while meeting AT requirements. Encourage no more than 50% of the parking in the front of the building. Landscape elements should be provided between the parking lot edge and front of building.

3. 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.

4. For parking lots that cannot accommodate solar shade panels, provide landscaped islands as appropriate. See C.03 1.03 3 for parking island landscape requirements.

5. Define pedestrian access with approved hardscape and provide shading along the primary path from the parking area to the building's main entrance of the building; and develop a direct connection between the main building's entrance/exit to the Primary Street via a pedestrian path with approved hardscape and shading to provide access to a potential shuttle bus stop and surrounding facilities.

6. Coordinate suitable native landscaping or barriers integrated with walls and fences to ensure adequate force protection, while also meeting AT requirements

7. Accessible parking spaces will be marked 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, vanpools, and carpools near the main entrance of buildings.

10. Design parking area to accommodate one (1) space for every three (3) proposed daytime shift employees, excluding visitor spaces and government vehicle spaces; the total space count for employees include officer reserved spaces, carpool spaces, and ADA spaces meant for employees.

11. Consider cost-effectively integrating solar photovoltaic arrays into covered parking structures and parking lots.
    a. For exiting large parking areas, large photovoltaic arrays should be incorporated. (Refer to section D03.3.6.)
    b. For smaller existing parking areas, single photovoltaic systems should be incorporated.
    c. All proposed photovoltaic arrays should not disrupt underground utilities.

12. Reserved parking is discouraged except for Facility Group 1.

13. On-street parking is discouraged except in multi-use areas. When used, provide approved on-street parking configurations following UFC 3-201-01.

14. Access and service drives should accommodate the largest vehicle serving the facility.

15. Eco-friendly measures are encouraged to be incorporated into existing and proposed parking lots. This includes, electric car charging stations, electric bike charging stations, solar shade panels and solar panel light poles.

16. Perimeter landscaping is strongly encouraged for parking lots adjacent to a primary roadway.

17. Consider adding curb cuts to the parking lot at locations that allow for natural drainage into stormwater management facilities.

18. Rock and crushed stones should be utilized at curb cut locations to slow down the water from entering the stormwater management system.

C03.1.1. Paving and Striping

◉ 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

Bituminous Paving with Standard White Striping

Facility Group 1 paving materials will be as follows.

Primary:	Asphaltic Concrete
Secondary:	Concrete
Accent:	Permeable Pavers

Facility Group 2 paving materials will be as follows.

Primary:	Asphaltic Concrete
Secondary:	N/A
Accent:	N/A

Facility Group 3 paving materials will be as follows.

Primary:	Concrete where Operationally Required
Secondary:	Asphaltic Concrete
Accent:	N/A

Facility Group 4 paving materials will be as follows.

Primary:	Asphaltic Concrete
Secondary:	N/A
Accent:	N/A

1. All new parking lots in Groups 1 and 2 will be constructed of bituminous pavement, or concrete pavement where functionally required, following UFC 3-250-01.

2. Porous paving may be considered on a case basis.

3. Cost-effectively provide light-colored concrete to reduce heat island effect; otherwise install bituminous pavement. Dirt, gravel, and grass lots are not allowed.

4. Use consistent striping, angles and stall sizes in all parking areas.

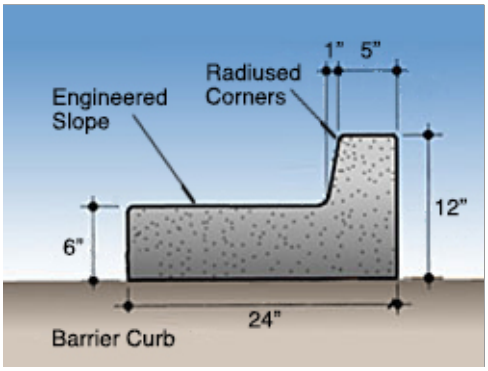
5. All parking will be marked with white stripes of paint or applied vinyl coatings. Red or yellow markings will only be used for safety purposes and must be kept to a minimum. All lines will be four inches (4") wide.

6. Permeable paving is encouraged to be used in areas that are not subjected to severe freeze-thaw cycles.

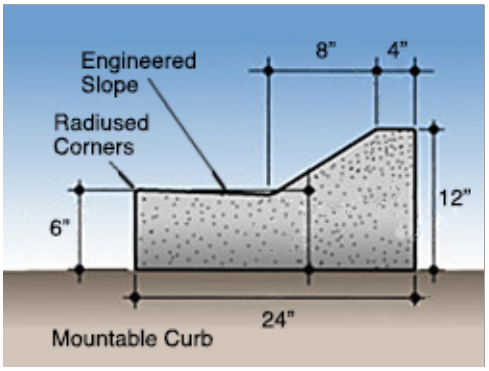
C03.1.2. Curbing

○ Applicable ◉ N/A Large graphics do not apply

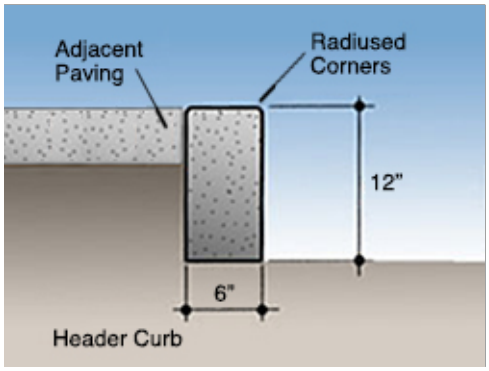
◉ Applicable ○ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3 Image Tool 250 x 188



"Barrier" Curb



"Mountable" Curb



Header Curb

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

Primary: Concrete

Secondary: N/A

Accent: N/A

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

Primary: Concrete

Secondary: N/A

Accent: N/A

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

Primary: Concrete

Secondary: N/A

Accent: N/A

Facility Group 4 curbing / edging materials will 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.

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 car bumpers could contact adjacent items such as poles, signs or pedestrians.

4. Consider adding curb cuts in parking lots and along streets in downhill locations adjacent to a stormwater management facility.

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 Image Tool 250 x 188

Use of Trees and Grasses

Ornamental Species

Pedestrian Scaled Tree with Natural Habit

1. Install landscape islands and medians as visual breaks, to reduce heat island effects and to accommodate bioswales and rain gardens with consideration for winter conditions. 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 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

Building with Contiguous Parking Area and Connection to Secondary Entrance

Link to Base-wide Sidewalk System

Connection to Accessible Parking

Direct Access to Main Entrance

1. Refer to the Installation Development Plan (IDP) for locations of transit stops and pedestrian and cycling networks; provide appropriately sized sidewalks and bicycle paths to efficiently 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://afcfs.wbdg.org/site-development/index.html

Comply with AF Corporate Standards for Stormwater Management:
http://afcfs.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 Image Tool 800 x 440

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

Stormwater Detention Area with Riparian Landscape

Storm Drainage Elements

Inlet to Storm Sewer

Inlet to Vegetated Drainage Swale

Grass Swale to Inlet

Inlet Located in Swale

Rip Rap at Curb

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

2. Ensure stormwater mitigations measures comply with federal EPA 2021 Multi Sector General Permilt (MSGP) and local standards below.

3. If the project disturbs more than 50 square feet or more of soil (including grading, trenching and excavating), and the project IGE (Initial Government Estimate) is above $9,200, a DC Department of Energy and the Environment (DOEE) approved Erosion and Sediment Control (ESC) Plan and DOEE inspections of the project are required.

4. If the project disturbs a land area greater than 5,000 square feet, DOEE-approved Stormwater Management Plan and the subsequent design and installation of a Stormwater Best Management Practice (BMP) that meets the Energy Independence and Security Act (EISA) requirements is required.

5. If the project has a combined footprint of interior and exterior work of 5,000 square feet or more with a project value above 50% of the building's assessed value, a DOEE-approved Stormwater Management Plan and subsequent design and construction of a stormwater BMP is included as a requirement in the scope.

6. Incorporate bioswales into the design of all proposed roadways, parking and facility roof systems to enhance water quality, support the overall stormwater systems, and reduce runoff

7. Permeable paving is encouraged to be used in areas that are not subjected to severe freeze-thaw cycles.

8. If permeable paving is being used, apply for the DOEE permeable surface rebate and the DC water impervious incentive.

9. New buildings are encouraged to provide rainwater harvesting and storage that is attached to the building's roof drain systems to support grey water irrigation; consider freeze protection for winter months. Existing buildings should be analyzed for their ability to add harvesting and storage systems.

10. Harvested stormwater must be reused for the watering and the maintenance of new plantings.

11. When underground drainage systems are required, establish a maintenance plan to include removal of sediments and debris; inspect joints seasonally for alignment to prevent leakage and the development of voids and surface failures. Establish maintenance schedule and responsible entity for underground drainage system during planning stage of project.

12. Cost-effectively integrate stormwater systems with AT measures.

13. Proposed parking lots must be graded to the best of their ability to match the natural contour of the land. The water runoff shall be treated within the limits of the parking lot. This will be achieved by adding stormwater best management practices (BMP such as landscapes islands within the parking lot perimeter and curb cuts that lead into bioswales.

14. Meadows shall replace grassy open space in areas that have erosion issues and or natural drainage swales.

15. Storm drainage systems will be inspected every 3 years to ensure they are working and properly cleaned.

16. Plants within bioretentions and stormwater management areas should be inspected every 3 years for health and or replacement.

17. Plants should be replaced (with the same species) if they are dead or dying.

18. Plants shall be chosen from Maryland Extension list of native plants list and verified by a landscape architect or environmentalist

C05. SIDEWALKS, BIKEWAYS AND TRAILS

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

Comply with AF Corporate Standards for Sidewalks, Bikeways and Trails:
http://afcfs.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 2 Image Tool 800 x 440

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

Concrete Sidewalks at Group 1 with Coordinated Lighting and Site Furnishings

Recreational Trail with Bituminous Paving, Lighted Bollards and Integrated Site Furnishings

Detached Sidewalk at Group 4

Trees for Shading

Connection to Crosswalk

Brick Paving at Group 2

Coordinated Alignment

Connection to Main Entrance

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

Primary:	Pervious Pavers
Secondary:	Concrete Edging
Accent:	N/A

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

Primary:	Pervious Pavers
Secondary:	Concrete Edging
Accent:	N/A

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

Primary:	Permeable Concrete
Secondary:	N/A
Accent:	N/A

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

Primary:	Permeable Concrete
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 installation 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, trees, or accommodate site constraints.

3. Walks in parking areas will provide a direct path using "safe islands" and "peninsulas" to encourage safety. Walks parallel to streets will follow streetscape guidelines. Clearly mark pedestrian crossings at vehicular routes.

4. Mitigate heat island effect by providing high-albedo, shaded sidewalks. Pervious pavers will be used on all sidewalks, 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.

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 will 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 vehicles park adjacent and head-in to the sidewalk and wheel stops are not used, such perimeter walks will be increased to a minimum width of 8' to accommodate overhangs of the parked vehicles.

10. All sidewalks will have positive drainage to prevent ponding of water or ice accumulation with slopes ranging from 2.1% to 4.2%. Walks with a slope greater than 4.2% will be designed as ramps following accessibility guidelines. All walks will have a minimum cross slope of 2.1%.

11. Pavers will conform to the following range of color: Red blend. Pavers used on walks will typically be 4″x8″ nominal 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. Encourage development of sidewalks and multi-use trails for pedestrian recreational use and connectivity throughout the installation.

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


Concrete Site Stair


Brick Site Stair near Group 1


Site Stair with Railings

1. Use ramps instead of stairs for sidewalks, bicycle routes 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 Lighting


Lighted Bollards Defining Space


Lighted Bollards along Trail

1. Provide lighting for all stairs and landings where traffic warrants. See Section C09.2.4 for standards and recommendations.

2. Refer to Section C09 for lighting standards and recommendations.

C06. LANDSCAPE

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

Comply with AF Corporate Standards for Landscape:
http://afcfs.wbdg.org/site-development/landscape/index.html

C06.1. Climate-based Materials

(●) 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

Native Trees and Grasses

Deciduous Trees for Shading

Flowering Trees Providing Visual Appeal

Trees and Shrubs Defining Space

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 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

Predominant Use of Grasses with Trees Shading Facades and Grounds

Trees Defining Space

Trees Providing Shade

Ornamental Accent Planting

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 installation's stormwater management plan. Refer to the Streetscape Envelope Standards in this IFS.

4. All Facility Group 1 and 4 sites will 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 will 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 meadow 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. Adherence to the installation tree placement policy of 1:1 replacement ratio is required for all tree removal. Adherence to NCPC's Tree Preservation and Replacement Policy of the Federal Environment Element is required for development projects subject to NCPC review.

15. Consider size of plants at maturity, especially concerning potential tree and utility conflicts (See tree planting priority, Section G05).

16. Optimize placement of deciduous trees to provide shade in summer and sun in winter (See tree planting priority, Section G05).

17. Optimize placement of evergreen trees to provide wind, noise, and visual barriers (See tree planting priority, Section G05).

End of section C06.1.1. Landscape Design Concept

C06.1.2. Xeriscape Design Principles

◉ 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

Landscape Plantings Sustained with Annual Rainfall

Native Drought Tolerant Species

Xeric Species

Xeric Planting with Organic Mulch

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 Small graphics do not apply

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 Image Tool 800 x 440

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

Predominant Use of Native Grasses and Trees

Use of Flowering Shrubs

Species with Contrasting Color

Exfoliating Bark

Predominant Use of Grasses and Trees

Seasonal Berries

Use of Flowering Trees

1. Use only native, naturally occurring plant materials including trees, shrubs, 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 plant list available in Appendix G.

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. Evergreen trees should be utilized for screening where appropriate (See tree planting priority, Section G05).

5. Deciduous trees should be used along streets as street trees where appropriate (See tree planting priority, Section G05).

6. Ground covers are only recommended when minimal maintenance is required.

7. Meadow areas should be self-sufficient and require little to no maintenance.

8. 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.

9. Analyze soils and provide organic amendments as needed to improve plant growth and conserve water.

10. All plant material will have a one-year warranty and is subject to approval by the Installation Landscape Architect.

11. Layer plantings with low growing varieties in front and large/taller varieties behind.

12. Include seasonal mixtures for color, texture, and form.

13. Avoid monocultures.

14. Use the University of Maryland Extension website regarding plant selection native to the Chesapeake Bay watershed. https://extension.umd.edu/resources#!/category/2/subcategory/62

C06.1.5. Water Budgeting (Hydrozones)

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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 will 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 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


Wall with Complementary Planting


Shrubs Defining Space


Predominant Use of Grasses

1. At the main gate, reinforce a sense of arrival through a well-designed concentration of height appropriate 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 installation signs and street and pedestrian lighting whenever feasible.

C06.1.7. Streetscape Landscaping

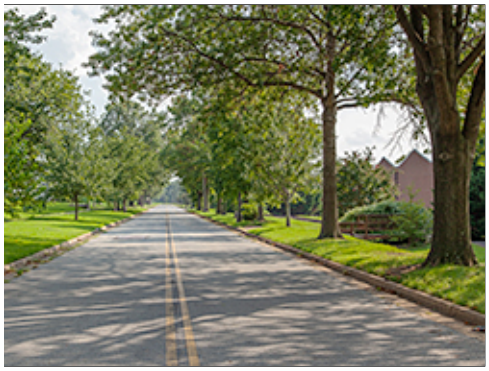
◉ Applicable ○ N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1 Image Tool 800 x 440

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

Native Grasses with Deciduous Trees

Tree Planting between Curb and Sidewalk

Uniform Planting of Street Trees



Landscape Setback along Group 2

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. For streets that can accommodate trees, trees should be added within the planting strip between the sidewalk and back of curb; at a minimum of 30-feet and maximum of 60-feet apart on center. Shrubs should be mature height on center. Continue to meet AT requirements and B02.2.6 for sight lines.
    a. For streets that do not have sidewalks or no planting strip, asses if a sidewalk or planting strip can be added.

4. A combination of native trees and shrubs should be used for streetscape planting.

C06.1.8. Pedestrian Circulation Landscaping

◉ 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

Maintained Grass Planting with Trees and Shrubs Defining Space

Trees for Shading

Flowering Trees for Visual Appeal

Tree Planting as a Focal Point

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


Use of Ornamental Species


Landscaped Island Defining Space


Median with Grasses and Tree Planting

1. Integrate appropriate landscaping elements into parking areas to visually soften the appearance at a minimum rate of 10% percent of the total area.

2. Avoid trees that drop sap, fruit, or seeds, and use long-lived species; keep trees trimmed, removing dead and dying trees or branches.

3. Landscape using native tree and plant species.

4. Provide planting in islands within parking lots for shade and appeal following IFS and the installation stormwater management plan.

5. Rain garden islands will 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.

C06.1.10. Screen/Accent 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


Flowering Species Used for Visual Screening


Evergreen Varieties Used for Screening


Flowering Trees in an Accent Planting

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.

C06.1.11. Other

◯ Applicable ◉ N/A Large graphics do not apply

◯ Applicable ◉ N/A Small graphics do not apply

C07. SITE FURNISHINGS

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

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

C07.1. Furnishings and Elements

◉ 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

Coordinated Placement of Site Furnishings

Picnic Area with Standard Furnishings

Standard Bike Rack

Approved Bench in Plaza near Group 1

1. Provide a coordinated consistent inventory of site furnishings to positively contribute to the visual environment, image, and identity of the installation; ensure durability, low maintenance, reduced visual clutter, and compatibility with the adjacent architecture.

2. Remove poorly located or redundant litter / ash receptacles, bicycle racks, vending machines, walls and fences to reduce visual clutter and to lessen the requirements for maintenance.

3. Group 1, 2, 3, 4 and parks site furnishings will be powder coated metal. Recycled plastic may be used for seating and tabletops. Match the site furniture of adjacent facilities and the facility district. Architectural precast may be used in Group 1.

4. Install needed outdoor seating (benches and low walls) in public gathering spaces near main and secondary building entrances. Low walls will match facility architecture.

5. Benches in 1, 2, 3, 4 and parks will be powder coated metal. Recycled plastic may be used for seating. In parks, recycled plastic may be used for backs also.

6. Integrate functional bicycle racks meeting the potential daily demand with the design of the building's main entrance grounds in Facility Groups 1 and 2 while meeting AT requirements.
    a. Approved bicycle racks (images and specifications) are referenced in section C07.2.3.

7. Limit the use of bollards, but when necessary for force protection use anodized aluminum in Groups 1, 2, 4 and parks and trails; concrete-filled steel bollards in Group 3. Illuminated bollards may be used as approved on a case-by-case basis.

8. Locate architecturally coordinated containers for recycling, litter, ash, vending, etc., to minimize visual clutter and not be visible from the building's main entrance. Minimize the use of freestanding planters.

9. The Installation Flagpole location will 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.

10. Flagpoles using approved materials may be installed at locations designated by IFS, and in accordance with AFI 34-1201.

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 will be provided only where there is a documented need and when approved on a case basis. Emulate the designs of adjacent shelters using red brick base, aluminum storefront framing and glazing and hipped standing seam metal roofs. Consider adding photovoltaic systems on top of bus shelters. Remove bus shelters that do not serve buses (school or shuttle).

13. Monuments and static displays will be limited. New elements are generally discouraged unless these are fully vetted through the installation'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 brick and precast to match the adjacent facility.

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, 2 and 3 with masonry walls to match adjacent facilities; all gates will be metal factory finished dark bronze of black.

19. Specify screen wall materials and finishes that do not require painting or maintenance beyond periodic cleaning.

20. Group 1, 2 and 3 picnic tables and seating will be recycled plastic. Group 4 and recreational areas will have picnic tables and seating with metal frames and recycled plastic table tops and seating. 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.

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: Natural stainless steel

Finish: Mill

Model #: SS BBQ Grill

Other: Concrete foundation, 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 2 Image Tool 250 x 188

Type: **Architectural Cast Frame with Wood or Recycled Content Slats**

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

Mfr: The Bench Factory

Color: Silver frame, desert tan slats

Finish: Standard Finish (Smooth)

Model #: Madison Benches

Other: N/A

UFGS: N/A

Type: **Hardwood or Recycled Content, Slatted**

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, seat and back

Other: N/A

UFGS: N/A

C07.2.3. Bike Racks

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188

Type: **Single Loop**

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

Mfr: MetroBike

Color: Black

Finish: Factory powder coat, gloss

Model #: Chiefs Own, Goose, or JBAB design

Other: N/A

UFGS: N/A

C07.2.4. Bike Lockers

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188

Type: **Steel Bike Locker**

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

Mfr: Madrax

Color: Bronze

Finish: Powder coat

Model #: Madlocker steel bike locker with perforated bike door

Other: Stainless steel handle, lock

UFGS:

C07.2.5. Bollards

◉ Applicable ○ N/A Number of base standards 3 Image Tool 250 x 188

Type: **Lighted Square Sloped Top**

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

Mfr: Kim Lighting

Color: Platinum Silver

Finish: Anodized aluminum

Model #: VSB1 Square

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

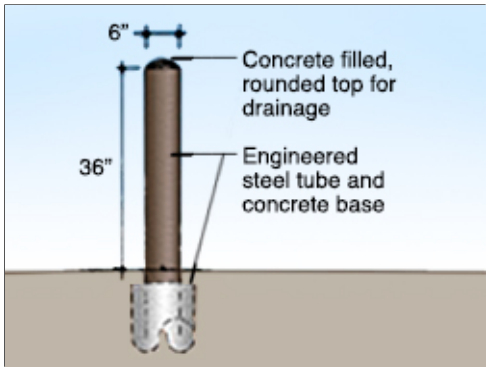
Color: Dark Bronze

Finish: Anodized aluminum

Model #: KBA

Other: Flared cone, 3000K LED Lamp

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 1 Image Tool 250 x 188

Type: **Metal with Brick Base**

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

Mfr: Custom

Color: Dark bronze framing and roof, red brick

Finish: Powder coated

Model #: Hipped roof

Other: Provide concrete slab and 2 pre-manufactured aluminum benches

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

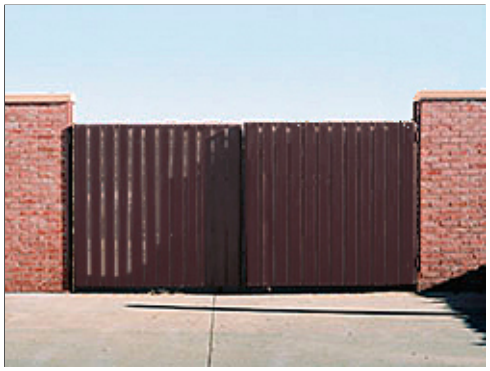
Model #: MDF 440 SMSS

Other: Accessible

UFGS: N/A

C07.2.8. Dumpster Enclosures / Gates

◉ Applicable ○ N/A Number of base standards 1 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

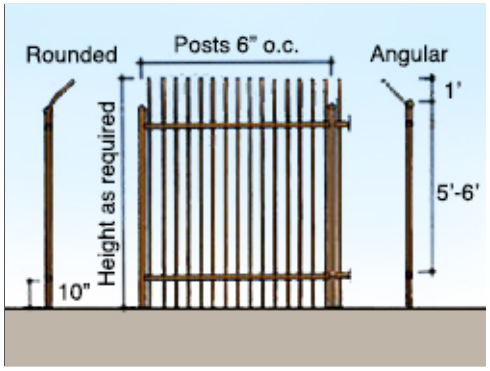
Model #: Match adjacent building

Other: Steel gates and hardware, dark brown, dumpsters will be painted dark brown

UFGS: Section 04 20 00 Unit Masonry

C07.2.9. Fencing

◉ Applicable ○ N/A Number of base standards 7 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

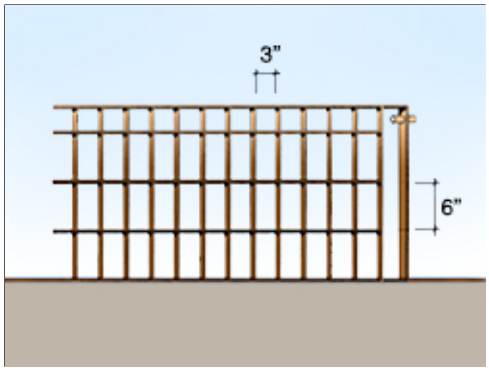
Color: Black or dark bronze

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 piers to match adjacent buildings may be provided

UFGS: Section 32 31 13 Chain Link Fences and Gates



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

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

Mfr: Custom

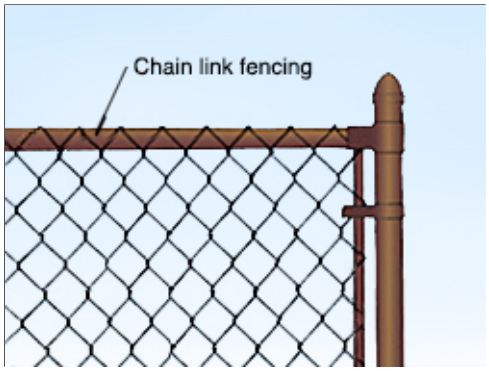
Color: Dark brown

Finish: Powder coat

Model #: Steel grid: flat bar stock verticals, round rod horizontals

Other: Steel posts, horizontal bars, braces, and accessories, in heights, lengths, and gauges as required; Close all ends of tubing

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



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

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

Mfr: General Wire Company

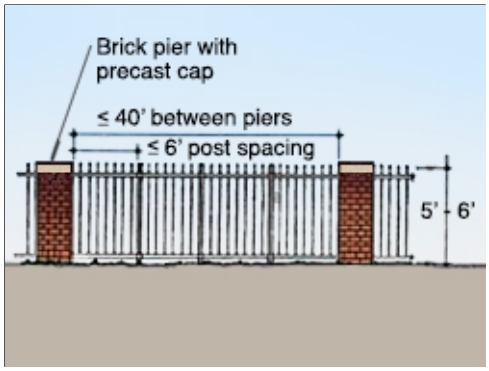
Color: Dark bronze or black, or galvanized

Finish: Powder coat or galvanized

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

Other: Chain link, steel posts and rails, gates and accessories

UFGS: Section 32 31 13 Chain Link Fences and Gates



Type: **Style D Barrier: Low security, High visibility**

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

Mfr: Custom

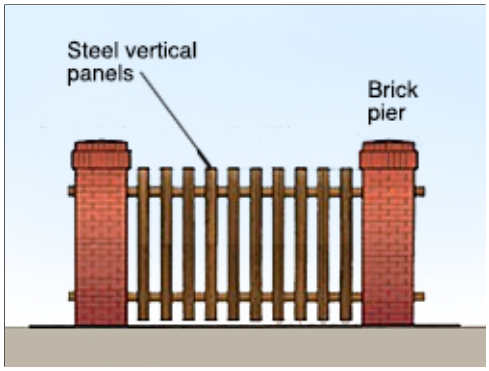
Color: Red brick blend, dark brown fencing

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

UFGS: 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, dark brown fencing

Finish: Powder coated metal

Model #: Brick Piers with steel posts, rails and alternating panels

Other: Brick: 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

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

Type: **Style F Barrier: Very low security, high visibility**

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

Mfr: Custom

Color: Integral mixed Davis Colors: dark warm gray

Finish: Factory

Model #: Post and rail

Other: Concrete 3-rail, wood-grain textured (4,000 psi at 28 days); Posts: 39" height, 8' spacing, set 30" deep below grade with footing, typical

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

Type: **Style G Barrier (Alternate): Very low security, high visibility**

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

Mfr: James Hardie Building Products, Inc.

Color: Off white and Earth tones

Finish: Factory

Model #: Post and rail with vertical boards

Other: Posts: Height as required, 8' max. spacing; apply boards to outside face.

UFGS: Not Available (SECTION 074646 Fiber Cement Siding)

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)

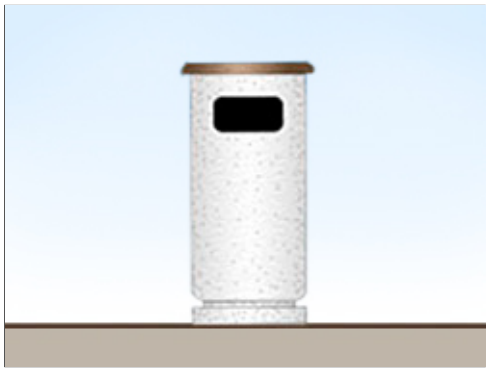
UFGS: N/A

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**

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

Mfr: Materials, Inc.

Color: Weatherstone Gray

Finish: Smooth

Model #: TR-3225 Sante Fe (round or square)

Other: Rigid plastic internal liner,
http://materialsinc.com/wp-content/uploads/2014/10/
TR-3225_SANTA_FE.pdf

UFGS: N/A

Type: **Style 2: Metal**

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

Mfr: Wabash Valley

Color: Black or as approved

Finish: Perforated Pattern

Model #: Urbanscape “E” with liner, 32 Gallon

Other: With dome top, without side door

UFGS: N/A

C07.2.13. Picnic Tables

◉ Applicable ○ N/A Number of base standards 2 Image Tool 250 x 188

Type: **Metal Rectangular Table with Benches**

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

Mfr: Belson Outdoors

Color: Wood tone top and bench, black frame

Finish: Recycled top and benches

Model #: Recycled content slatted table with 2 benches

Other: N/A

UFGS: N/A

Type: **Metal, vinyl coated**

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

Mfr: Wabash Valley

Color: Brown or as approved

Finish: Factory vinyl coated

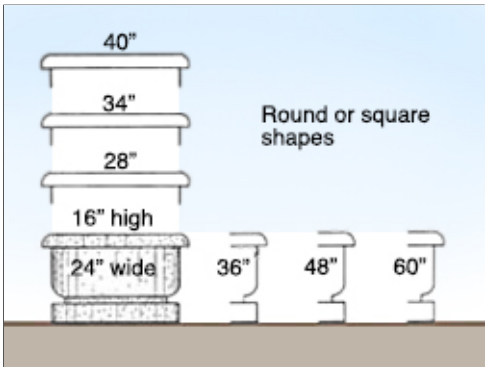
Model #: Signature Series, 46" Square Pedestal Tables with 4 Seats

Other: Perforated Pattern, 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

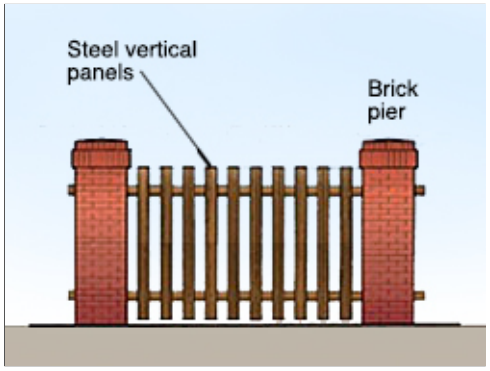
Model #: N-R-G Freestyle

Other: Coordinate with Base Architect

UFGS: N/A

C07.2.16. Screen Walls

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188



Type: **Brick / Steel**

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

Mfr: Custom

Color: Red brick blend, dark brown fencing

Finish: Powder coated metal

Model #: Brick Piers with steel posts, rails and alternating panels

Other: Brick: 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

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

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://afcfs.wbdg.org/site-development/index.html

Comply with AF Corporate Standards for Exterior Signs:
http://afcfs.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

Approved Standout Letters at Group 1

Directional Sign

Building Number Sign

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. Multiple signs of the same type should be consolidated on a single post when possible.

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. Any animated, blinking, chasing, flashing, moving effects, rotating, windblown or inflated, neon, and portable signs are prohibited per UFC 3-120-01

7. Raised "standout" letters and numbers may be used for Group 1 with approval on a case basis.

8. Group 2 and 3 facilities will have wall mounted facility signs with sizes and layouts following UFC 3-120-01. Signs are not permitted for Group 4 facilities.

9. 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.

10. Traffic Control Devices, which regulate vehicular traffic on the installation, will 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.

11. Provide Directional and Wayfinding Signs and address both pedestrian and vehicular traffic following UFC 3-120-01 for size, layout and content.

12. Reserved parking signs should be kept to a minimum. When approved, provide post-mounted sign faces in installation standard materials and colors. Consider "bracketing" a designated area with a single sign at each end.

13. Parking lot identification signs may be used to identify areas or rows within large lots.

14. Follow the guidelines and requirements in ABAAS and the MUTCD for accessible parking signs.

15. Follow UFC 3-120-01 for Informational and Motivational Signs for size, layout and content.

16. Symbols or pictographs (graphic expressions of actual objects) may be used to indicate service, mandatory / prohibitory, sports, and recreation when rapid communication is necessary.

17. Force Protection signage may be applied to glass doors using white vinyl lettering.

18. Refer to UFC 3-120-01 for prohibited signs, which include those with animated, blinking, chasing, flashing, or moving effects.

19. 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. Fabricate sign panels from aluminum sheet. Sign posts will be anodized extruded aluminum with capped ends in a concrete base.

2. Fence mounted sign panels may be attached with exposed fasteners.

3. All signage will follow Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) and SDDCTEA military signing guidance 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 Face**

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

Mfr: Custom

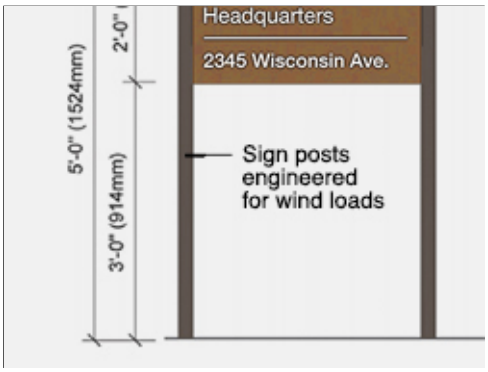
Color: Medium brown, Fed Std 595B 10080, RGB: 97.74.54

Finish: Matte vinyl

Model #: Aluminum flat sheet

Other: White lettering; 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

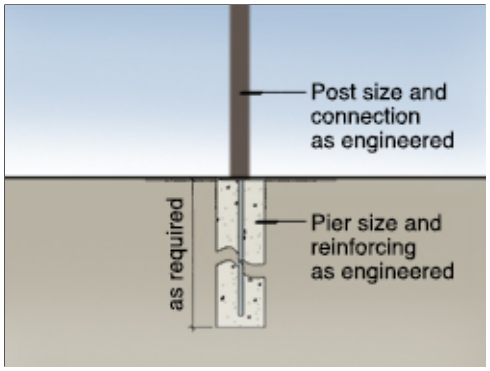
Color: Dark bronze, Fed Std. 595B 30040, RGB: 95.85.77

Finish: Matte

Model #: Extruded aluminum with capped top ends

Other: White lettering; 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

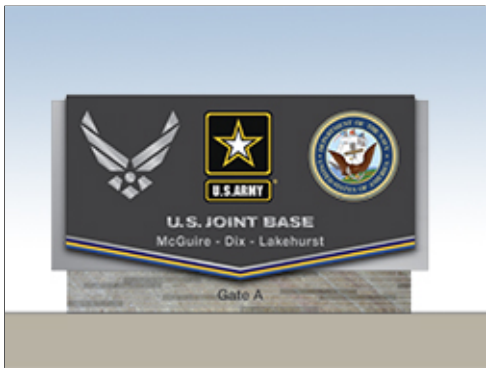
Model #: 24" height x 12" diameter, as engineered

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

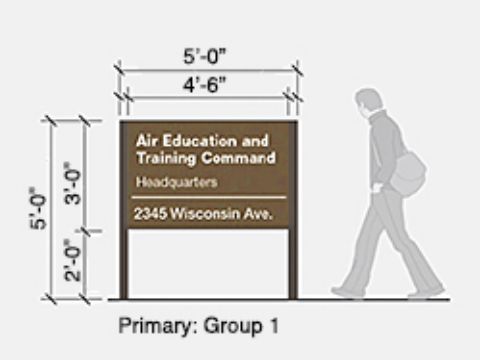
Model #: Metal frame and panels, buff stone base

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

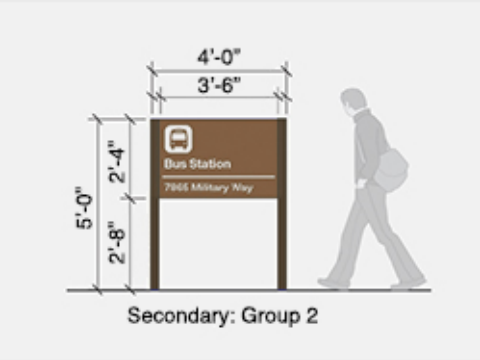
Color: Medium brown face, dark bronze posts, white vinyl lettering

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

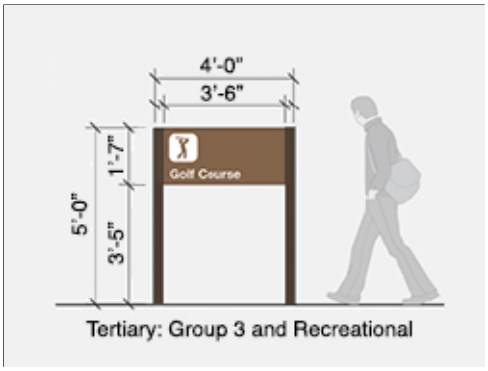
Color: Medium brown face, dark bronze posts, white vinyl lettering

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

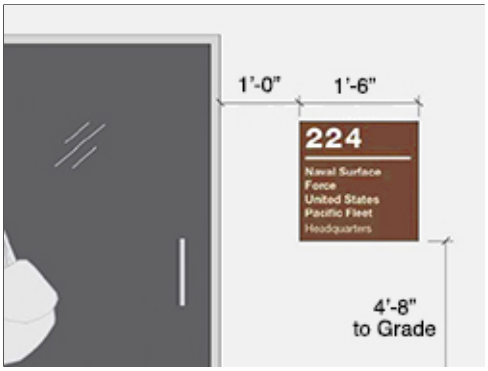
Color: Medium brown face, dark bronze posts, white vinyl lettering

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

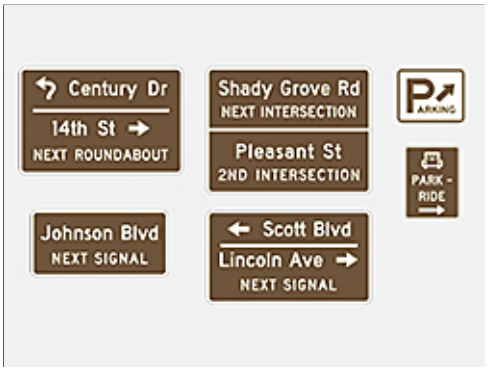
Model #: Aluminum sign face, control arm or pole mounted

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

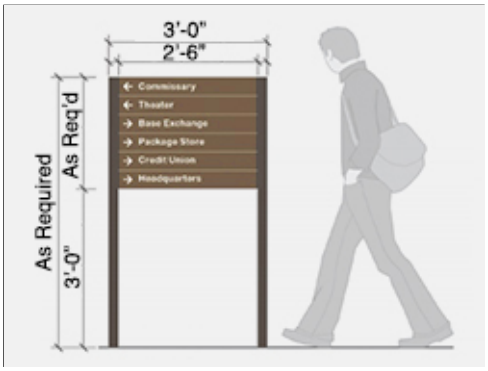
Color: Medium brown face, dark bronze posts, white reflective lettering

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 will have standard dark bronze.

3. Hours of operation signs will have a level of quality equivalent to the Facility Group number.

4. Temporary / Project Signage will 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 will 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 a natural warm gray color.

C08.1.8. Parking Lot Signs

◯ Applicable ◉ N/A

1. Follow UFC 3-120-01 and AFCFS.

C08.1.9. Regulatory Signs

◯ Applicable ◉ N/A

1. Regulatory signage, which restricts, warns and advises, will 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 installation warning signs for safety and security at the installation perimeter and at specific secure areas. Use these to notify visitors of restrictions governing conduct on the installation, as well as other security procedures.

C08.1.10. Other

◯ Applicable ◉ N/A

C09. LIGHTING

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

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

C09.1. Fixtures and Lamping

(●) 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

Replicas of Historical Fixtures with Uniform Spacing at Group 1 Air Force Honor Guard Campus

Pedestrian Scaled Lighting

Street Lighting

Parking Lot Lighting

1. Provide, coordinate and efficiently install street, parking lot, sidewalk and facility lighting with appropriate 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.

2. Integrate controls to automatically reduce lighting power during periods of non-activity; automatically turn off power when sufficient daylight is available.

3. 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.

4. Economically provide renewable-energy power sources such as solar photovoltaic when feasible.

5. Use appropriately designed or shielded luminaires to direct light downward to minimize light pollution and intrusion onto adjacent sites and to facilitate night training.

6. Calculate illuminant levels for all lighting applications following UFC 3-530-01 and ensure compliance with pre-curfew maximum brightness level requirements.

7. Sufficiently address environmental factors to prevent corrosion and weathering of fixtures, plinths and other components.

8. Wall mounted fixtures should respond to the architectural character of the facility.

9. Efficient accent lighting of architectural and landscape features may be provided for Group 1, lodging and historical applications. 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.

10. Comply with UFC 3-530-01 for light source technology and lamp types. High efficiency lamping such as LED is preferred for most applications.

11. Provide round tapered, square non-tapered, or round non-tapered aluminum poles and aluminum fixtures with square, rectangular or circular housings in colors and shapes to match adjacent facilities and the facility district.

12. Install lighted bollards only at Group 1 and high-traffic Group 2 facilities. Match materials, colors and shapes of adjacent facilities and the facility district.

13. Install natural warm 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.

14. When parking lot lighting is necessary (See UFC 3-530-01), provide an illuminated path to the building's main entrance. Pole bases should be contained within an internal landscape median or island.

15. Consistently install lighting for sidewalks, bicycle routes and trails to match adjacent facilities.

16. 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.

17. 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 2 Image Tool 250 x 188

Type: **LED Street**

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: Factory

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

Other: For use only outside historical district; lamp: LED; follow manufacturer's recommendations for fixture base

UFGS: N/A

Type: **Replica of Historical Fixture**

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

Mfr: Manufacturer TBD

Color: Medium bronze post and arm

Finish: Factory

Model #: Single arm or dual arm mount

Other: For use only in the hiistorical district; lamp: LED; follow manufacturer's recommendations for fixture base

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

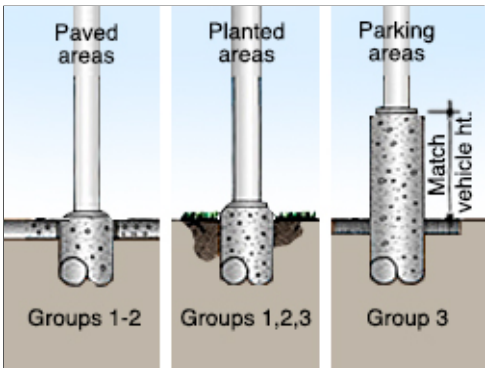
Color: Dark bronze or clear anodized as approved by BCE

Finish: Factory

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

Other: Lamp: LED. Parking Lot – Poles will be 25' square straight extruded aluminum, 5" cross section, with 6" matching mounting arm, dark bronze anodized finish. Pole will 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 2 Image Tool 250 x 188

Type: **Lighted Round Dome Top**

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

Mfr: Lithonia Lighting Products

Color: Dark Bronze

Finish: Anodized aluminum

Model #: KBA

Other: Flared cone, 3000K LED Lamp. Follow manufacturer's recommendations for fixture base.

UFGS: N/A

Type: **Replica of Historical Fixture**

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

Mfr: Manufacturer TBD

Color: Medium bronze

Finish: Cast aluminum or cast iron

Model #: Fluted with flared based

Other: 3000K LED Lamp, 360° downlighting

UFGS: N/A

C09.2.4. Sidewalk Lighting

◉ Applicable ○ N/A Number of base standards 1 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 white 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

C09.2.5. Walls / Stairs Lighting

◉ Applicable ○ N/A Number of base standards 4 Image Tool 250 x 188

Type: **Honor Guard Campus Wall-Mounted Fixture**

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

Mfr: TBD

Color: Clear glass globe, medium bronze base

Finish: Factory

Model #: Globe, historical replica

Other: Match existing fixtures; lamp: LED

UFGS: N/A

Type: **Wall Mounted Fixture**

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

Mfr: Hubbell-Kim Lighting

Color: Dark bronze

Finish: Matte textured, powder coat

Model #: Cypher Pedestrian Scale or Accent Scale

Other: Select appropriate size and lumen output based on mounting height; LED lamp

UFGS: N/A

Type: **Recessed Step and Landscape Wall Light Fixture**

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

Mfr: Hubbell-Kim Lighting

Color: Dark bronze or black

Finish: Matte textured, powder coat

Model #: Aluminum Rectangle Landscape Step Light

Other: Select appropriate lumen output based on mounting height; LED lamp

UFGS: N/A

Type: **Low-profile Wall Mounted Fixture**

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

Mfr: Hubbell

Color: Dark bronze or black

Finish: Powder coat

Model #: Aluminum LED Outdoor Wallpack - PCOWF

Other: Select appropriate lumen output based on mounting height: LED lamp

UFGS: N/A

C09.2.6. Other

◉ Applicable ○ N/A Number of base standards 2 Image Tool 250 x 188

Type: **Ground-mounted Landscape Lighting**

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

Mfr: Hubbell-Kim Lighting

Color: Black or dark bronze

Finish: Powder coat

Model #: Scarab Landscape Light

Other: Lamp: LED

UFGS: N/A

Type: **Recreational Field Lighting**

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

Mfr: Olympia

Color: Black

Finish: Powder coat

Model #: LED Stadium Light Fixture

Other: Select directive beam angle, lumens and fixture height based on documented needs

UFGS: N/A

D. FACILITIES EXTERIORS

Comply with Air Force Corporate Standards for Facilities Exteriors:
http://afcfs.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 Materials and Detailing

Group 3 Facility

Group 2 Dining Facility

Group 4 Family Housing

D01. SUPPORTING THE MISSION

Comply with AF Corporate Standards for Supporting the Mission:
http://afcfs.wbdg.org/facilities-exteriors/supporting-the-mission/index.html

D02. SUSTAINABILITY

Comply with Air Force Corporate Standards for Sustainability:
http://afcfs.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.

◉ 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

Orientation to Air Force Honor Guard Campus Central Green Space

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. Combine functions where practical to avoid a proliferation of small, independent structures.

5. Use and coordinate shading devices with orientation and for function.

6. Current master planning guidance (UFC 2-100-01) calls for multi-story buildings whenever possible. In most instances, the minimum number of floors for new occupied facilities at JBAB should be two stories, given the urban location and space constraints.

7. This document does not set a maximum number of floors for new buildings at JBAB, but recommends maximum overall building heights (Refer to the "Maximum Building Heights" map in supplementary document G01 JBAB IFS Building Envelope Standards; the document may be downloaded from Appendix G). These restrictions are based on master plan and historic preservation goals, operational requirements, relation to Washington Reagan National Airport, view sheds, and existing building heights. It is not intended that every building within a height “zone” reaches the maximum height.

8. Rooftop structures such as parapets or mechanical penthouses do not count towards the building height, though these structures should not extend an unreasonable amount over the roofline.

9. If project- or site-specific requirements dictate higher building heights than shown on the "Maximum Building Heights" map, these situations will be assessed via the site approval process.

10. Finished ground floor should be 18 inches above finished grade at a minimum to reduce flooding potential.

11. For planning purposes, first floor building heights should be proposed between 16 and 20 feet depending on proposed use and adjacent conditions (excludes warehouses, dorms. and buildings housing JBAB AF missions (AFHG and AF Band).

12. Upper floor building floor heights should range between a minimum of 10 feet for residential and a maximum of 14 feet finished floor to floor height for commercial, training or office uses.

13. Building massing and orientation (the compass direction the building faces) should be decided together early in the design process to maximize daylight and passive heating/cooling opportunities.

14. Building orientation is encouraged to respect existing (including historic) buildings and avoid obscure or unusable spaces that are inconsistent with the surrounding context

15. Buildings should utilize central courtyards or building cutouts where appropriate to allow daylight into more spaces. Courtyards and other gathering areas should be oriented to take maximum advantage of solar potential.

16. A building's massing should contribute positively to the public realm to promote a pedestrian friendly environment. Buildings should address the pedestrian scale, particularly at the ground level by providing visual interest and rhythmic patterns (using windows, doors, or articulated façade) along expansive uninterrupted walls.

17. The building's mass should consider importance within the surrounding context. Prominent buildings are typically larger and taller than adjacent construction and should be respected and emphasized by their surroundings through the use of scale, height, and spacing of new facilities.

18. Avoid abrupt changes in scale to avoid negative impacts such as blocked views and solar exposure.

19. Organize wall components including doors, windows, accents, shading devices, control joints, etc., to provide an ordered, professional appearance.

20. An average range for window and door fenestration for most occupied facilities (administrative, community functions, housing) is between 40 and 90 percent (window to wall ratio), excluding missions that require minimal to no windows.

21. Fenestration ratios should create a uniform appearance that is consistent with the established dimensions and spacing of similar building uses at JBAB, including historic buildings, and not vary abruptly. In general, windows should be aligned between floors.

22. Ground levels of buildings should include windows whenever possible, especially on street-facing façades. Blank walls are discouraged unless required for functional purposes.

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 traditional vernacular or contemporary vernacular theme with architectural features expressive of sustainability and resilience that represents the current mission.

5. All new facilities will express sustainability through their orientation, massing, shape, form, materials, and detailing. Provide roof overhangs, 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.

7. For facilities within the two designated historic districts (See IDP) or rehabilitation to historic structures design structure should use historically accurate materials where possible as long as the project does not impact the mission or create a cost prohibitive project.

8. Following Section B01.1.3 from the IFS, additions and demolitions to facilities located within the historic designated areas will be required to follow Section 106 of the NHPA by coordinating with DC SHPO to ensure the continued historic heritage of JBAB.

9. JBAB will submit plans to construct new facilities within the designated historic districts for DC SHPO review.

◉ 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

Palette of Classical Features, Materials and Detail

Contemporary Vernacular Architectural Features and Details

Natural Stone Feature at Group 1

Clerestory Lighting at Group 3

Dormers at Group 4

D03.3. Details and Color

1. Refer to D05. Wall Systems for detailed material listings.

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. Noncorrosive metals with factory applied color finishes are required.

6. Combine details and color with orientation, massing, scale and architectural character to maintain installation compatibility.

7. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

8. Materials chosen for building exteriors will be high quality and durable.

9. Unfinished lumber will not be used on building exteriors, including doors and windows.

10. Cementitious siding is preferred for Group 4. Vinyl siding will not be used as an exterior wall cladding.

◉ 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

Predominant Use of Red Brick Blend with Brown Brick Accents and Neutral Metal Panels

Group 1 Detailing at Entrance

Coursed Ashlar Column Base

Precast and Natural Stone Detailing

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 flooding and corrosion.

Other:

Facility: Narrow buildings along E-W axis are preferred

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

Doors: Recessed are preferred

Windows: Limit non-shaded windows / maximize windows on south facades with shading

Roof: High to medium albedo, minimal to moderate slope

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

MEP: Ground-source and solar photovoltaic following LCCA

Other: Provide functional shading devices appropriate for the direction of the surface being shading

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: Dark bronze (or clear anodized as approved by BCE

Finish: Anodized

Model #: 2x4, slider or awning type

Other: Provide thermally broken frames.

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

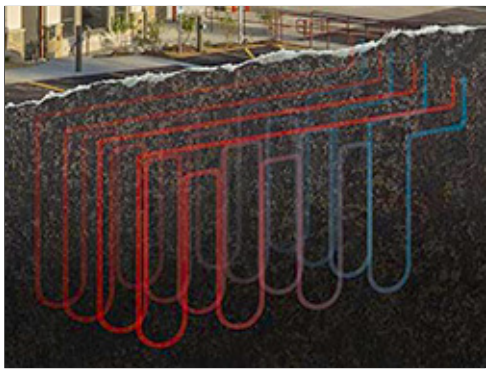
Model #: Louver

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 Number of base standards 1 Image Tool 250 x 188

Type: **Ground Mounted Parking Canopy**

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

Mfr: Custom

Color: Galvanized frame, factory panels

Finish: Matte

Model #: Custom sloped canopy, fixed flat plate collector

Other: Ground mount or roof mount; refer to section D09.1. Passive and Active Systems for additional standards and requirements

UFGS: Section 48 14 00 Solar Photovoltaic Systems

D03.3.7. Solar Thermal System

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188

Type: **Flat Panel or Evacuated Tube**

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

Mfr: Varies, TBD

Color: Factory

Finish: Factory

Model #: Flat panel or evacuated tube

Other: Ground mount, wall mount or roof mount

UFGS: Section 48 14 13.00 20 Solar Liquid Flat Plate and Evacuated Tube. . .

D04. BUILDING ENTRANCES

Comply with AF Corporate Standards for Facilities Exteriors:
http://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Building Entrances:
http://afcfs.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 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 spaces sized for the building function and occupancy.

5. Install appropriate lighting and site furniture following AT and IFS.

6. Primary building entries should be clearly visible, identifiable, and proportional to the size and scale of the facility.

7. Primary building entries should face the street whenever possible. Where functionally prohibitive, the building entry may face a central courtyard or open space and should consider relationships to other adjacent buildings or entries.

8. Entries should be an integral design element that reflects the building's architectural theme and avoid the appearance of an add-on.

9. Buildings should have a both a primary façade and a primary entry that is easily identifiable and in proportion to the size and prominence of the facility.

10. Buffer major building entries from potential environmental impacts such as prevailing winds or rain. Protect entrances wind, rain, and from falling ice and snow. This can be accomplished with some height appropriate native landscaping.

11. Provide porte cocheres or covered drop-offs when justified for lodging, clubs, and medical facilities; do not use for prestige or architectural accents.

12. A combination of architectural and landscaping elements should be used to identify or enhance a building's primary entrance.

13. If an awning is used at a building entry, it should be dark blue. All awnings within close proximity should match exactly in color.

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.

9. Service/loading areas will not be located along a building's primary facade unless required for functional purposes. If a service or loading dock must be located along a building's primary facade, try to avoid having the primary entrance along the street frontage or plant evergreen trees to screen the loading area from the road.

10. A combination of architectural and landscape features should be used to minimize the appearance of service/loading areas from adjacent roadways and pedestrian paths.

End of section D04.2. Secondary Entrances

D05. WALL SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:
http://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Wall Systems:
http://afcfs.wbdg.org/facilities-exteriors/wall-systems/index.html

Comply with AFCFS Recommended Materials:
http://afcfs.wbdg.org/facilities-exteriors/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. Group 1 facilities may have more refined detailing than Group 2, and Group 2 may have more definition than Group 3.

2. Ensure architectural compatibility with a materials palette that is generally consistent with adjacent buildings.

3. Buildings should have a positive relationship with pedestrians on adjacent streets; imposing features and large expanses of blank walls should be avoided.

4. Group 1 and 2 facilities will be a combination of red or brown brick with architectural precast and / or natural stone accents; metal panels and curtain wall may be used also.

5. Architectural precast belt courses, friezes, copings, water tables, and window sills will use only 6,000 psi high-density architectural precast to resist weathering. Due to added costs for higher density, limit precast use only to Group 1 and 2 facilities. When budgets do not allow precast, metal copings and sills may be used.

6. New facilities in the designated Historic District will use some combination of Group 1 and 2 materials listed above as determined by a qualified architect and coordinated with the DC Historic Preservation Office (SHPO). Section 106 of the NHPA will be followed through this process as well. While new buildings in the Historic District need not emulate existing architectural styles, they should incorporate the strong sense of symmetry seen on most buildings in the historic core.

7. Many Group 1 and 2 facilities can be considered as belonging to the "Georgian Colonial" inspired architectural style, as seen near the Navy Ceremonial Guard Campus and Air Force Honor Guard Campus. New facilities adjacent to this building style should incorporate similar features to ensure consistency.

8. Group 3 primary materials include light gray metal panels, light gray masonry, red brick or gray metal vertical panel; light tan prefabricated panels or dark gray CMU are acceptable accent materials. Provide only ground face or burnished face CMU adjacent to grade. Refer to the Appendix for special requirements of Facility Districts, such as the historic district.

9. Group 3 facilities are envisioned to be utilitarian in character. Buildings should present strong, clean lines and should not use unnecessary ornamentation. New buildings should use horizontal banding and accents, as seen on many existing buildings in this area, such as Buildings 398, 400, and 370.

10. Group 4 housing will be predominately cementitious siding with brick base or accents. Brick will be red, brown, or gray blends. Architectural precast or natural stone may be used. Cementitious siding may be clapboard and / or shingles. New buildings will combine these materials as determined by a qualified architect. It is not intended for a building to incorporate all of the materials/colors shown.

11. Buildings and homes in the family housing district will incorporate high-quality, durable materials. Vinyl siding and aluminum siding is discouraged.

12. Stucco is only permitted for repairs and additions when matching existing.

13. Existing buildings in this central area of the installation (also called the South Administrative Complex, see Appendix for a list of all Facility Districts) exhibit continuous horizontal lines of windows. New facilities should incorporate these to ensure consistency.

14. Accent colors are most appropriate for doors, windows and / or other features should be limited to either white, off-white, beige, dark bronze, or cocoa brown. Exceptions are made in limited areas where accent colors can be used in combination with metal panels or curtain wall. Refer to the appendix for special requirements of Facility District - South Administrative Complex and Airfield / Industrial Visual Districts for alternate accent colors.

15. All buildings should incorporate high-quality materials.

16. Use high-performance building envelopes following UFC 1-200-02.

17. Use detailing not subject to excessive weathering. Provide wall accents consistently throughout the installation.

18. Use integrally colored materials and factory-finished metals. Do not paint concrete block.

19. Translucent wall panels may be used in Facility Group 1 and recreational uses in Group 2 when protected from direct solar gain. Provide insulating panels and shading appropriate for the orientation and exposure.

20. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D05.2. Layout, Organization and Durability

1. Integrate shading devices into the overall composition of the wall.

2. Integrate fixed shading devices 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.

3. Shading systems may be included as part of a manufacturer's window system or may be custom systems integrated into the wall.

4. Provide appropriate transitions between dissimilar materials to mitigate effects of thermal expansion and galvanic action per UFGS 07 60 00 Flashing and Sheet Metal.

5. All joint sealants will be slightly darker than adjacent surfaces.

6. Promote durability and avoid detailing that discharges water from roofs across brick and precast wall surfaces. Do not allow water to drain from roofs, balconies or mechanical equipment onto wall surfaces. Ensure transitions in materials are properly flashed and direct drainage to the stormwater system.

7. Materials requiring regular maintenance are not permitted; do not use exposed structural steel or other materials that require painting.

8. Refer to C07.2.16. Screen Walls for materials and colors of freestanding walls.

9. 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 will be as follows.

Primary:	Modular Red or Brown Brick
Secondary:	Precast, Metal Panel, Curtain Wall
Accent:	Natural Stone

Facility Group 2 wall materials will be as follows.

Primary:	Modular Red or Brown Brick
Secondary:	Precast, Metal Panel, Curtain Wall
Accent:	Natural Stone

Facility Group 3 wall materials will be as follows.

Primary:	Metal Panel or Ribbed Metal Sheeting
Secondary:	CMU or Brick
Accent:	Alternate Colors of Masonry or Metal

Facility Group 4 wall materials will be as follows.

Primary:	Factory Finished Cementitious Siding
Secondary:	Modular Red or Brown Brick, Trim Boards
Accent:	Optional: Precast or Natural Stone

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 3 Image Tool 250 x 188

Type: **Aluminum Composite Material Panel System**

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

Mfr: 3A Composites

Model #: Alucobond Plus Anodized Collection

Color: Neutral colors, silver and warm gray

Finish: Clear anodized

Other: "V" route and return, vertical or horizontal expansion joints

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

Type: **Insulated Metal Panel System**

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

Mfr: Metl-Span

Model #: CF Architectural Vertical Wall Panel

Color: Off-white, silver, medium gray, or beige

Finish: Heavy stucco-embossed

Other: Horizontal wall panels may be used; brick wainscot when required

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

Type: **Metal Panel System**

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

Mfr: Centria

Model #: Rainscreen Systems, IW Series, Concealed Fastener

Color: Neutral colors as approved by CES

Finish: Fluropon over galvanized, or zinc

Other: N/A

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 4 Image Tool 250 x 188

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

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

Mfr: Local, TBD

Model #: Modular Face Brick, 2.3x4x8 nominal

Color: Red blend

Finish: Straight edges, smooth texture

Other: Flash brick intermixed to match adjacent

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

Type: **Modular Face Brick - Brown Blend, Light**

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

Mfr: Local, TBD

Model #: Modular Face Brick, 2.3x4x8 nominal

Color: Light brown blend

Finish: Straight edges, smooth texture

Other:

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

Type: **Modular Face Brick - Brown Blend, Medium**

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

Mfr: Local, TBD

Model #: Modular Face Brick, 2.3x4x8 nominal

Color: Medium brown blend

Finish: Straight edges, smooth texture

Other: N/A

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

Type: **Modular Face Brick - Gray Blend**

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

Mfr: Local, TBD

Model #: Modular Face Brick, 2.3x4x8 nominal

Color: Gray blend

Finish: Straight edges, smooth texture

Other: N/A

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 3 Image Tool 250 x 188

Type: **Coursed Precast**

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

Mfr: Local Precast Company, TBD

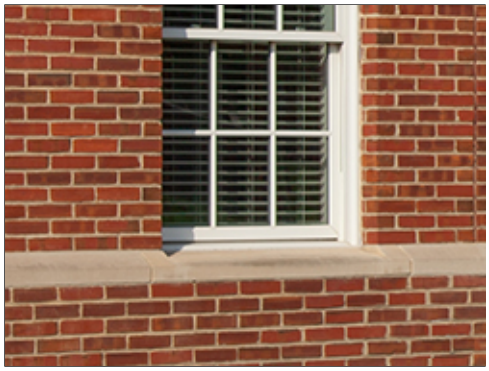
Model #: Smooth casting

Color: Light off-white or beige

Finish: Very light texture

Other: Provide 6,000 psi density to prevent excessive weathering

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



Type: **Coursed Precast Water Table and Sill**

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

Mfr: Local Precast Company, TBD

Model #: Smooth casting, provide drip edge to prevent staining below surfaces

Color: Light off-white or beige

Finish: Very light texture

Other: Provide 6,000 psi density to prevent excessive weathering

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

Type: **Monolithic Precast Sill**

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

Mfr: Local Precast Company, TBD

Model #: Smooth casting, provide drip edge to prevent staining below surfaces

Color: Light off-white or beige

Finish: Very light texture

Other: Provide 6,000 psi density to prevent excessive weathering

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 Number of base standards 2 Image Tool 250 x 188

Type: **3-Coat Cementitious Stucco**

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

Mfr: La Habra

Model #: Traditional 3-coat system

Color: Off-white, neutral colors, light beige

Finish: Sand

Other: Accent color may be used; stucco integrally colored

UFGS: Section 09 24 23 Cement Stucco:
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 24 23.pdf

Type: **Provide Proper Grilles and Flashing to Reduce Weathering**

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

Mfr: All

Model #: Non-ferrous metal grilles only; do not allow water to drain onto walls

Color: Factory

Finish: Factory

Other: Provide proper detailing, location and drip edge, etc., per SMACNA

UFGS: Section 09 24 23 Cement Stucco:
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 24 23.pdf

D05.4.5. Curtain Wall

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188

Type: **Pressure Equalized Rain Screen Design**

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

Mfr: Kawneer

Model #: 7500 Wall, double glazing

Color: Silver, dark bronze or black

Finish: Kynar or anodized

Other: High thermal performance only; Group 2 with CES approval

UFGS: Section 08 44 00 Curtain Wall and Glazed Assemblies:
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 44 00.pdf

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: Off-white, almond or tan as approved by 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 2 Image Tool 250 x 188

Type: **Concrete Masonry Unit (CMU) Ground Face**

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

Mfr: TBD

Model #: 8x8x16 nominal, face and corner units

Color: Light or medium gray or beige

Finish: Ground with exposed aggregate

Other: N/A

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

Type: **Concrete Masonry Unit (CMU) Split Face**

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

Mfr: TBD

Model #: 8x8x16 nominal, face and corner units

Color: Light or medium gray or beige

Finish: Heavy texture

Other: Avoid use on north exposures to prevent weathering

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 #: Hardie Plank, Hardie Shingle

Color: Earth tones

Finish: Factory

Other: Horizontal lap siding, shingle siding

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

D05.4.13. Other

◉ Applicable ○ N/A Number of base standards 5 Image Tool 250 x 188

Type: **Natural Stone - Cut, Shaped and Polished**

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

Mfr: Local TBD

Model #: Custom fabricated stone veneer sandstone and granite

Color: Off-white, light beige, light gray

Finish: Smooth sandstone, polished granite

Other: N/A

UFGS: UFGS: SECTION 04 20 00 Unit Masonry
http://wbdg.org/ccb/DOD/UFGS/UFGS%2004%2020%2000.pdf

Type: **Natural Stone - Tooled and Dressed, Coursed Ashlar**

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

Mfr: Local TBD

Model #: Custom fabricated stone veneer

Color: Earth tones

Finish: Medium texture

Other: N/A

UFGS: UFGS: SECTION 04 20 00 Unit Masonry
http://wbdg.org/ccb/DOD/UFGS/UFGS%2004%2020%2000.pdf

Type: **Provide Proper Thru-wall Flashing with Drip Edge at Coping**

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

Mfr: All

Model #: Thru-wall flashing to prevent efflorescence

Color: All

Finish: All

Other: Provide proper detailing, location and drip edge, etc., per SMACNA

UFGS: Section 07 60 00 Flashing and Sheet Metal; also refer to UFC 3-101-01, Chapter 21, Section 2115

Type: **Provide Proper Flashing or Piping to Prevent Weathering**

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

Mfr: All

Model #: All

Color: All

Finish: All

Other: Do not allow water to drain from roofs onto masonry surfaces

UFGS: Section 07 60 00 Flashing and Sheet Metal; also refer to UFC 3-101-01, Chapter 21, Section 2115

Type: **Thinset Brick Cladding Is Not Permitted**

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

Mfr: All

Model #: All

Color: All

Finish: All

Other: All

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

D06. DOORS AND WINDOWS

Comply with AF Corporate Standards for Facilities Exteriors:
http://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Doors and Windows:
http://afcfs.wbdg.org/facilities-exteriors/doors-and-windows/index.html

Comply with AFCFS Recommended Materials:
http://afcfs.wbdg.org/facilities-exteriors/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 existing.

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. Utility and emergency egress doors will match or be harmonious with the wall color.

7. Passive thermal comfort methods of ventilation are encouraged where life cycle cost justified.

8. Windows must meet force protection requirements.

9. Adjacent joint sealants should be slightly darker than the frame color.

10. Make efforts to contain noise at its source with properly gasketed doors per UFC 3-450-01 Noise and Vibration Control.

11. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

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 will augment interior lighting and space conditioning needs.

4. Protect against vandalism and intrusion and coordinate sound ratings.

5. An average range for window and door fenestration for most occupied facilities (administrative, community functions, housing) is between 40 and 90 percent (window to wall ratio), excluding missions that require minimal to no windows.

6. Fenestration ratios should create a uniform appearance that is consistent with the established dimensions and spacing of similar building uses at JBAB, including historic buildings, and not vary abruptly. In general, windows should be aligned between floors.

7. Ground levels of buildings should include windows whenever possible, especially on street-facing façades. Blank walls are discouraged unless required for functional purposes.

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 will be neutral and generally match adjacent facilities.

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.

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

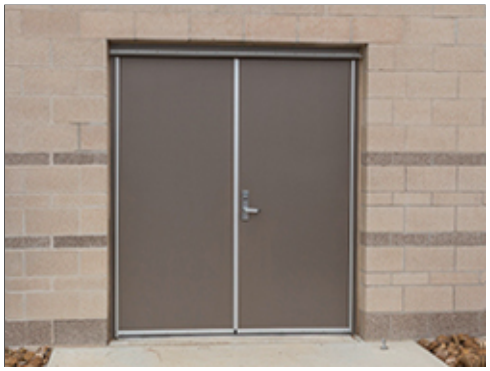
Model #: 2x4

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 1 Image Tool 250 x 188



Type:

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

UFGS: Section 08 11 13 Steel Doors and Frames:
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 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

UFGS: Section 08 14 00 Wood Doors
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 08 14 00.pdf

D06.5.4. Other

○ Applicable ◉ N/A

D07. ROOF SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:
http://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Roof Systems:
http://afcfs.wbdg.org/facilities-exteriors/roof-systems/index.html

Comply with AFCFS Recommended Materials:
http://afcfs.wbdg.org/facilities-exteriors/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, 2, and 3 buildings will use flat roofs or standing seam metal roofs. Flat roofs will incorporate renewable energy and / or LID features when feasible. Asphalt shingle roofs are permissible in some areas (Navy Ceremonial Guard Campus, Air Force Honor Guard Campus, and the Historic Core, see Appendix for Facility Districts) to coordinate with existing material palette.

4. Provide screens for roof-mounted appendages and equipment of the same materials, which are used predominantly in the building's roof systems.

5. Group 3 facilities may use barrel roofs for hangars. Larger facilities may use sloped-roof features in conjunction with predominantly minimal-sloped “flat” membrane roofs.

6. Group 4 facilities will have gabled or hipped asphalt shingle roofs.

7. Roof form should complement adjacent buildings. Consider using similar shapes, angles, and pitches.

8. With the exception of photovoltaic (PV) panels and other renewable energy features, all roof-mounted mechanical and electrical equipment, communication antennae, and/or satellite dishes should be enclosed within a penthouse, or otherwise screened from view from adjacent streets.

9. Where feasible, green (vegetated) roofs are highly encouraged. If a green roof is not possible, a white (“cool”) roof should be used instead.

10. Roof eaves will 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.

11. South-facing eaves will coordinate with adjacent wall-mounted shading devices.

12. The color, shape and slope of the eave and soffit will be compatible with adjacent facilities.

13. Keep roofs uncluttered and minimize penetrations.

14. Diminish massive roofs into coordinated smaller components consistent with adjacent facilities; avoid random, arbitrary changes.

15. Increase the insulation value of existing roofing systems during renovations if supported by life cycle cost and structural analysis.

16. Roofs will be maintained for the life of the system and replaced in accordance with UFC 3-110-04. A warranty is required on all new roofs.

17. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

D07.2. Roof Slope

1. 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.

2. Sloped roofs in Group 1, 2, 3 and 4 facilities will use 4:12 to 6:12 roof slopes.

3. Ensure adequate drainage and connect to the subsurface rain collection system where available.

4. Provide roof slopes to accommodate solar photovoltaic, solar thermal, passive systems and daylighting when applicable following UFC 1-200-02.

5. 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 roofline 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. Flat and sloped roofs in Groups 1, 2, and 3 will be light colored to match adjacent facilities and follow requirements of IFS.

2. All minimal-slope membrane roofs will 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 will be earth tones.

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

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

D07.5. Gutters, Downspouts, Scuppers, Drains

1. All sloped roofs will use gutters and downspouts. Locate gutters outside the fascia.

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

3. All gutters and fascias will 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 will 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 and inconspicuous appearance; integrate components 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 will not interfere with LPS or other rooftop systems that may be required.

12. Include permanent fall protection with any addition 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. Existing buildings should be assessed to determine if the structure can support a minimal green roof.

2. Proposed buildings must consider a green roof for stormwater management, increasing the tree canopy, and solar panels (with consideration from the FAA).

3. Green roofs do not have to accommodate open space for employees.

4. The green roof system will consist of a minimum of 7 layers.
    a. Vegetation
    b. Growing medium
    c. Irrigation
    d. Drainage layer and filter fabric

e. Root Barrier
f. Waterproofing membrane
g. Structural Deck

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 2 Image Tool 250 x 188

Type: **Style 1 - Dark Color**

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

Type: **Style 1 - Light Color**

Applies to: [•] Group 1 [•] Group 2 [•] Group 3 [ ] Group 4 [ ] Other

Mfr: Berridge

Color: Silver, light beige, or light gray

Finish: Matte

Model #:

Other:

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 Number of base standards 1 Image Tool 250 x 188

Type:

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

Mfr: LiveRoof or local TBD

Color: Factory

Finish: Factory

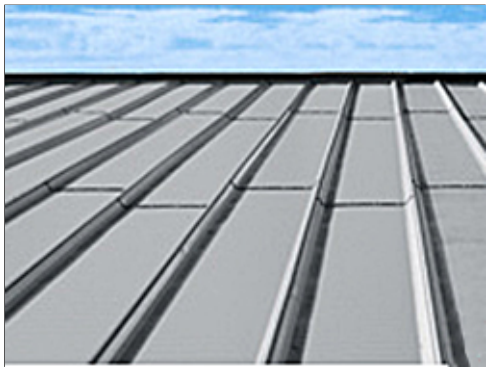
Model #: Standard or deep components

Other: Coordinate traffic areas, not-potable irrigation requirements and selection of plant materials; plants as approved by the BCE

UFGS: Section 32 97 00 Vegetated Roof Assemblies
(Not Available on UFGS)

D07.9.8. Ribbed Metal Sheeting

◉ 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: **Style 1**

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

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://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Structural Systems:
http://afcfs.wbdg.org/facilities-exteriors/structural-systems/index.html

Comply with AFCFS Recommended Materials:
http://afcfs.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://afcfs.wbdg.org/facilities-exteriors/index.html

Comply with AF Corporate Standards for Mechanical, Electrical and Plumbing:
http://afcfs.wbdg.org/facilities-exteriors/mechanical-electrical-and-plumbing/index.html

Insert 3 photos for each facility group.

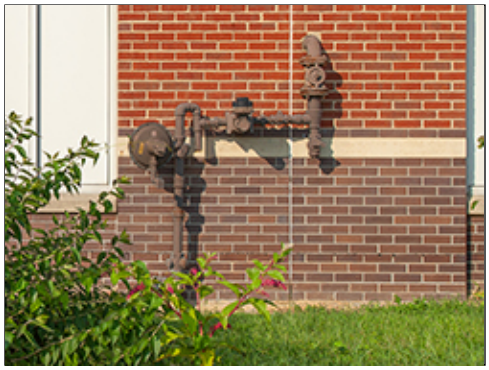
Image Tool 250 x 188

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. Photovoltaic Systems:

    a. Types of Photovoltaic (PV) Systems on the installation can consist of rooftop carport, ground-mount and accessory.

    b. All PV Systems need to go through Air Force site approval process for height, appearance, setbacks, color/materials, and stormwater management.

    c. All PV Systems need to go through outside agency review such as NCPC.

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.

End of section D. Facilities Exteriors

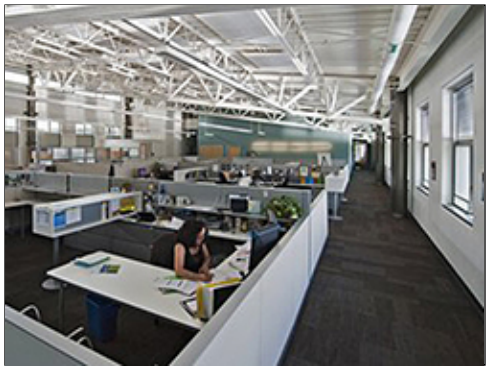
E. FACILITIES INTERIORS

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

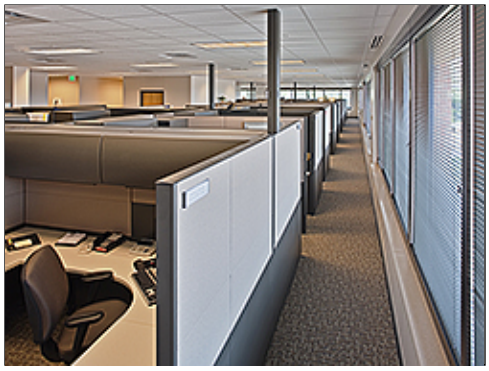
Insert 3 photos for each facility group.

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 will 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 will 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://afcfs.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://afcfs.wbdg.org/facilities-interiors/floors/index.html

E02.1. Floor Materials

Facility Group 1 floor materials will be as follows.

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

Facility Group 2 floor materials will be as follows.

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

Facility Group 3 floor materials will be as follows.

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

Facility Group 4 floor materials will 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 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: Daltile

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: Daltile

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

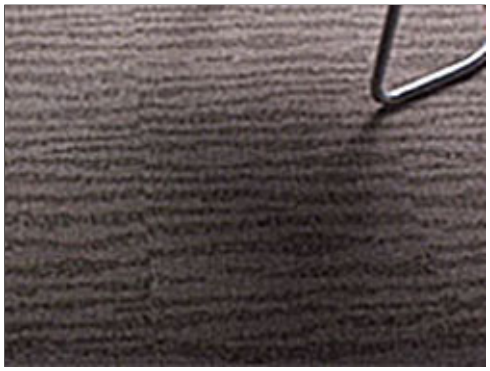
Model #: Raised design rubber tread

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

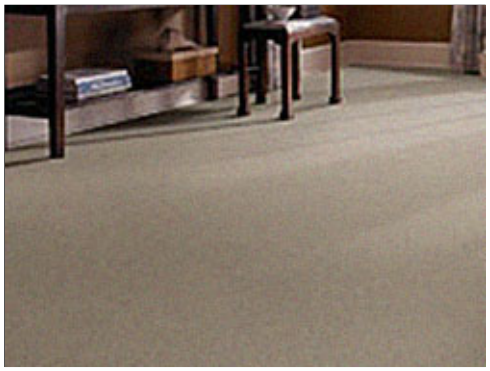
Color: Neutral multi-colored tones/patterned/solid

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://afcfs.wbdg.org/facilities-interiors/walls/index.html

E03.1. Wall Materials

Facility Group 1 wall materials will be as follows.

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

Facility Group 2 wall materials will be as follows.

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

Facility Group 3 wall materials will be as follows.

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

Facility Group 4 wall materials will 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

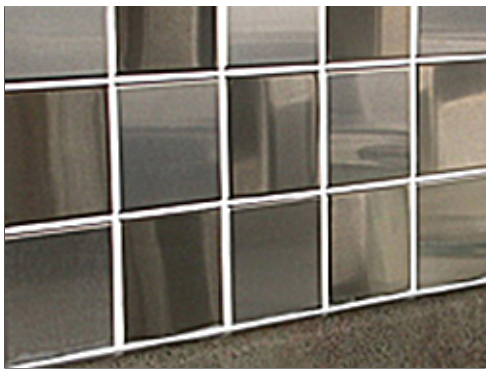
Model #: Coursed unit masonry

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

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

UFGS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 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://afcfs.wbdg.org/facilities-interiors/ceilings/index.html

E04.1. Ceiling Materials

Facility Group 1 ceiling materials will be as follows.

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

Facility Group 2 ceiling materials will be as follows.

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

Facility Group 3 ceiling materials will 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 will 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

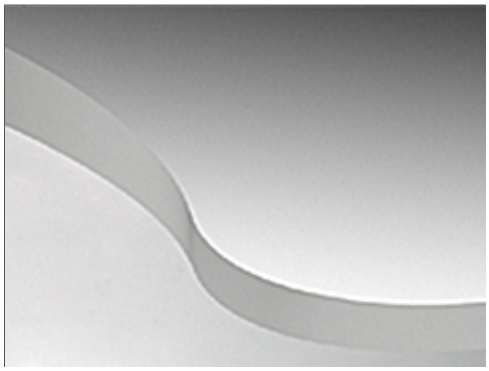
Model #: 2'x2' Tegular with reveal edge and fine texture, grid 15/16"

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://afcfs.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 will be as follows.

Primary:	Aluminum, clear anodized
Secondary:	Hollow metal (painted)
Tertiary:	N/A

Facility Group 1
door (leaf) materials will be as follows.

Primary:	Hardwood veneer
Secondary:	Hollow metal (painted)
Tertiary:	N/A

Facility Group 2
door (frame) and window frame materials will be as follows.

Primary:	Aluminum, clear anodized
Secondary:	Hollow metal (painted)
Tertiary:	N/A

Facility Group 2
door (leaf) materials will be as follows.

Primary:	Hardwood veneer
Secondary:	Hollow metal (painted)
Tertiary:	N/A

Facility Group 3
door (frame) and window frame materials will be as follows.

Primary:	Hollow metal (galvanized, painted)
Secondary:	Hollow metal (galvanized, painted)
Tertiary:	N/A

Facility Group 3
door (leaf) materials will 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 will be as follows.

Primary:	Wood
Secondary:	N/A
Tertiary:	N/A

Facility Group 4
door (leaf) materials will 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

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

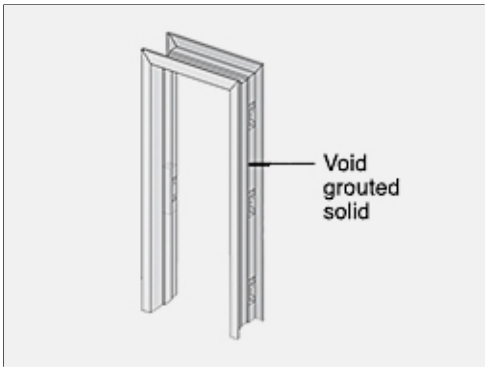
Color: Neutral colors

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 will have a factory applied primer finish. Provide 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



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 ¾", 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

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

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 will 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

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

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

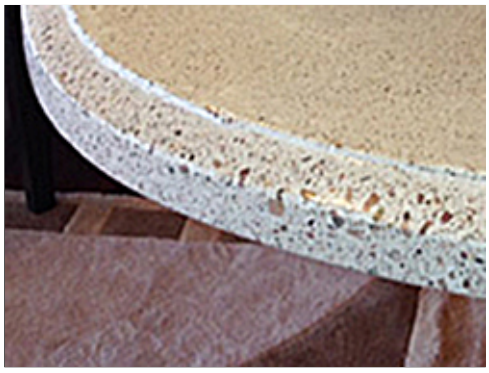
Model #: Custom cut slabs

Other: N/A

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

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

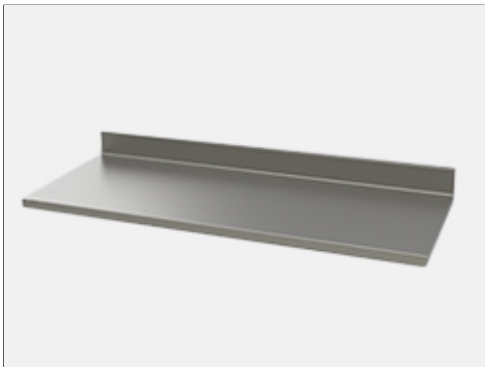
Model #: Custom cast or cut slabs

Other: N/A

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

E06.2.5. Metal

◉ Applicable ○ N/A Number of base standards 1 Image Tool 250 x 188



Type:

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

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

E06.2.6. Other

○ Applicable ◉ N/A

E07. Furnishings

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

E07.1. Durability and Serviceability

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

E07.2. Accessories

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

1. Comply with AFCFS.

E08. Interior Signs

Comply with Air Force Corporate Standards for Interior Signs:
http://afcfs.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. Natural stone, masonry and cast stone signs may only be used in Group 1 with approval on a case basis.

2. Comply with 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. Comply with AFCFS.

End of section E. Facilities Interiors

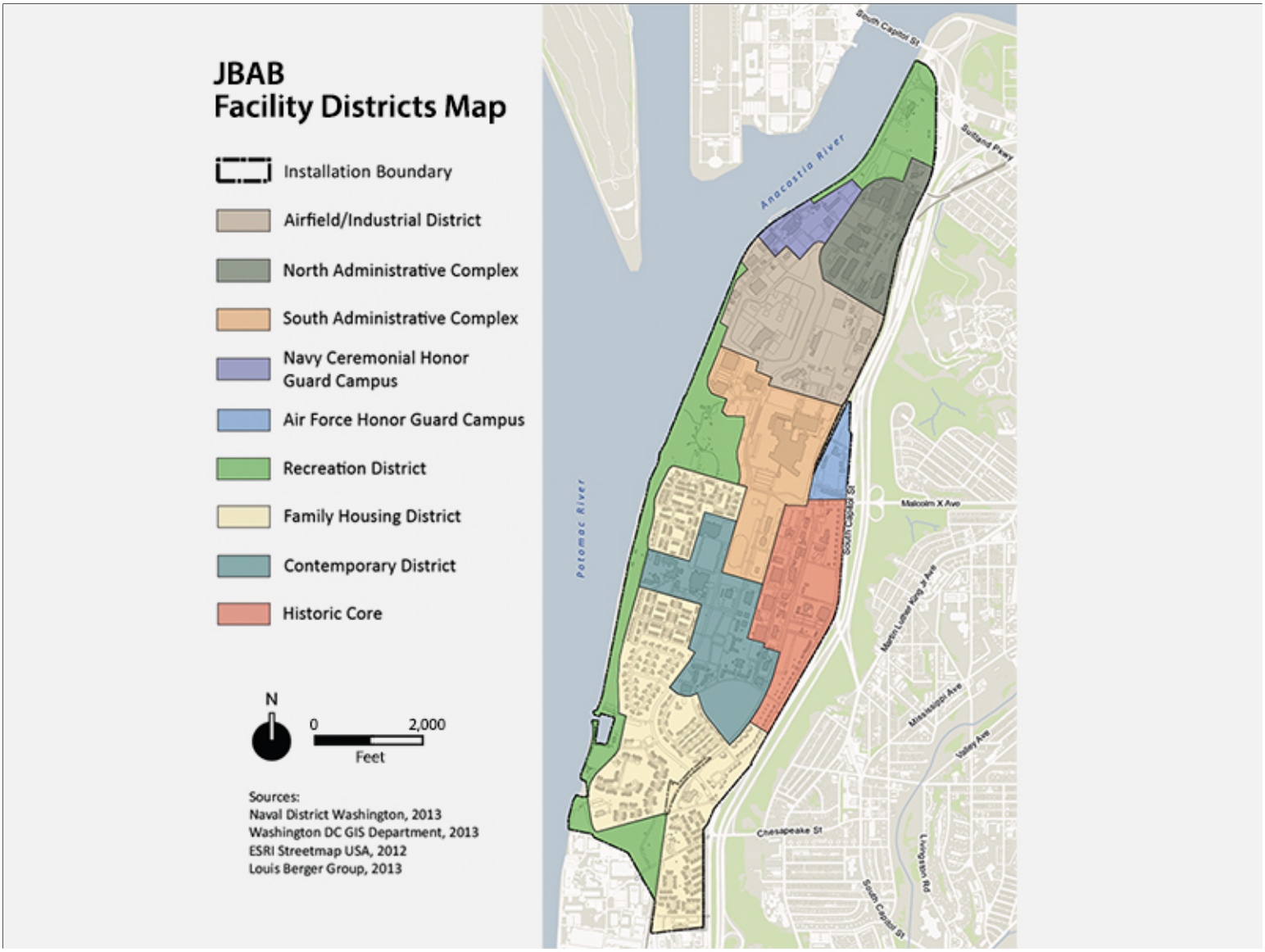
F. APPENDIX - Facility Districts

- (•) Applicable
- ( ) N/A

Comply with Air Force Corporate Standards for Facility Districts:
http://afcfs.wbdg.org/facility-districts/index.html

Facilities Districts Overview Map:

Image Tool 800 x 600



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.*

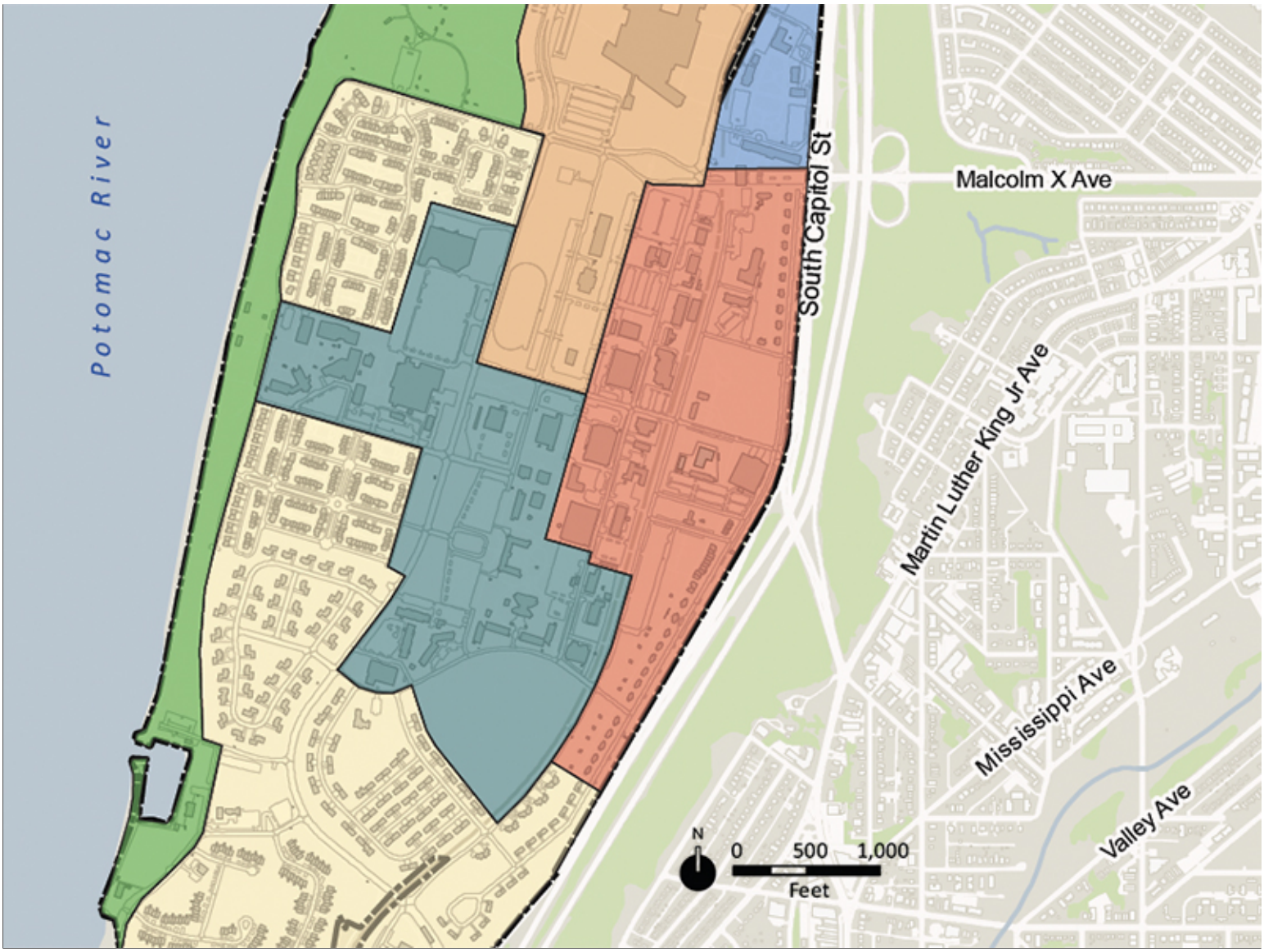
Enter No. of Facility Districts 1

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.

Name of District: Installation-wide 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

Joint Base Anacostia-Bolling is divided into four districts, some with unique architectural styles that align with land use zones as defined in the Installation Development Plan. Each district has designated uses that support the installation'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. The four districts are called Sentinels of the Capital, Anacostia, Bolling, and Family Housing. A brief description of each unique area and the IDP-defined district follows.

1. Airfield/Industrial

The Airfield/Industrial area situated in the Sentinels of the Capital District includes facilities that are industrial in nature and support HMX-1 airfield and industrial operations. Facilities are provided for various activities including aircraft storage and maintenance, and general storage, utility functions, industrial services, transportation storage, communications, civil engineering, supply and equipment, fuel storage, vehicle maintenance/motor pool complex, open storage, and other industrial uses. New facilities and major renovations in this area will generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 2 and 3 as defined in this IFS.

2. North Administrative Complex

Facilities in the North Administrative Complex area situated in Anacostia District should continue to be monumental in scale. Application of the installation prevailing architectural theme, contemporary vernacular, should be implemented during major renovations or new construction as appropriate and will follow standards for Facility Group 2 as defined in this IFS.

3. South Administrative Complex

Facilities in the South Administrative Complex area situated in Bolling District should continue to be monumental in scale. Application of the installation prevailing architectural theme, contemporary vernacular, should be implemented during major renovations or new construction as appropriate and will follow standards for Facility Group 2 as defined in this IFS.

4. Navy Ceremonial Honor Guard Campus

The Navy Ceremonial Honor Guard Campus situated in the Anacostia District should be pedestrian in scale. Application of the current architectural theme, traditional vernacular, should be implemented during major renovations or new construction as appropriate. New construction and major renovations will follow standards for Facility Group 2 as defined in this IFS.

5. Air Force Honor Guard Campus

The Air Force Honor Guard Campus area situated in the Bolling District should be pedestrian in scale. Application of the current architectural theme, traditional vernacular, should be implemented during major renovations or new construction as appropriate. New construction and major renovations will follow standards for Facility Group 1 and 2 as defined in this IFS.

6. Recreation

The Recreation area situated in the Family Housing and Sentinels of the Capital Districts include the riverfront trail, as well as the larger recreational areas at JBAB including the ballfields at the north end and the marina at the south end. Maintain these areas to enhance the quality of life at JBAB, with a pedestrian scale, and to enhance the aesthetic qualities of this district. Preserve spectacular views of the Potomac and Anacostia Rivers, Washington Monument, U.S. Capitol Dome, and Ronald Reagan Washington National Airport. Application of the installation prevailing architectural theme, traditional vernacular, should be implemented during major renovations or new construction as appropriate.

7. Family Housing

The Family Housing District consists of detached single family residential units and multi-family 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.

8. Contemporary

The Contemporary area situated in the Sentinels of the Capital District may have monumental structures but will maintain a pedestrian scale along streets to promote walkability. Either of the installation's prevailing architectural themes, traditional vernacular or contemporary traditional vernacular, may be implemented during major renovations or new construction as appropriate. New construction and major renovations will follow standards for Facility Group 1 and 2 as defined in this IFS.

9. Historic Core

Facilities in the installation's NRHP-eligible Historic Core areas situated in the Anacostia and Bolling Districts should be preserved, maintained and rehabilitated as required following the guidelines in supplementary document G04 JBAB Standards and Guidelines for Historical Facilities. Refer to Appendix G for a link to this document. Maintain the walkable streetscape and pedestrian scaled landscape, lighting and site furnishings.

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 installation and creates a natural setting for the cantonment area. 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 this area situated in all four districts require prior coordination and approval from the Base Civil Engineer.

G. APPENDIX - References

Comply with Air Force Corporate Standards:
http://afcfs.wbdg.org/index.html

Note: The below listed Supplementary Documents are provided as part of this IFS and will 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.

11th Civil Engineer Squadron

G01 JBAB IFS Building Envelope Standards
https://www.wbdg.org/FFC/AF/AFIFS/G01_JBAB_IFS_Building_Envelope_Standards.pdf

G02 JBAB IFS Plant List
https://www.wbdg.org/FFC/AF/AFIFS/G02_JBAB_IFS_Plant_List.pdf

G03 JBAB IFS Painting Standards
https://www.wbdg.org/FFC/AF/AFIFS/G03_JBAB_IFS_Painting_Standards.pdf

G04 JBAB IFS Standards and Guidelines for Historical Facilities
https://www.wbdg.org/FFC/AF/AFIFS/G04_JBAB_IFS_StandardsGuidelines_Historical_Facilities.pdf

G05 JBAB IFS Priority Tree Planting Areas
https://www.wbdg.org/FFC/AF/AFIFS/G05_JBAB_IFS_Priority_Tree_Planting_Areas.pdf

G06 JBAB IFS Reserved Parking Standards
https://www.wbdg.org/FFC/AF/AFIFS/G06_JBAB_IFS_Reserved_Parking_Standards.pdf