Eielson AFB IFS
24 January 2023

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


Installation Elements


Site Development


Facilities Exteriors


Facilities Interiors

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AIR FORCE INSTALLATION FACILITIES STANDARDS

2023

Eielson Air Force Base IFS

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A. OVERVIEW

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

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

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

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

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

1. Conformance to Air Force Corporate Facilities Standards (AFCFS) and Installation Facilities Standards (IFS) are required by Air Force Instruction (AFI) 32-1023 and Air Force Memorandum. Please refer to the AFCFS website for links to documentation on current policy.

2. Requests to deviate from any installation facilities standards, that are Unified Facilities Criteria (UFC) requirements, will follow the process outlined in the AFCFS for UFC waivers and exemptions.

3. 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

Group 3 Hangar in the Tanana-Kuskokwim Lowlands Setting

Group 1 Visitor Center and Main Gate

Group 2 Dormitory

Historical Hangar

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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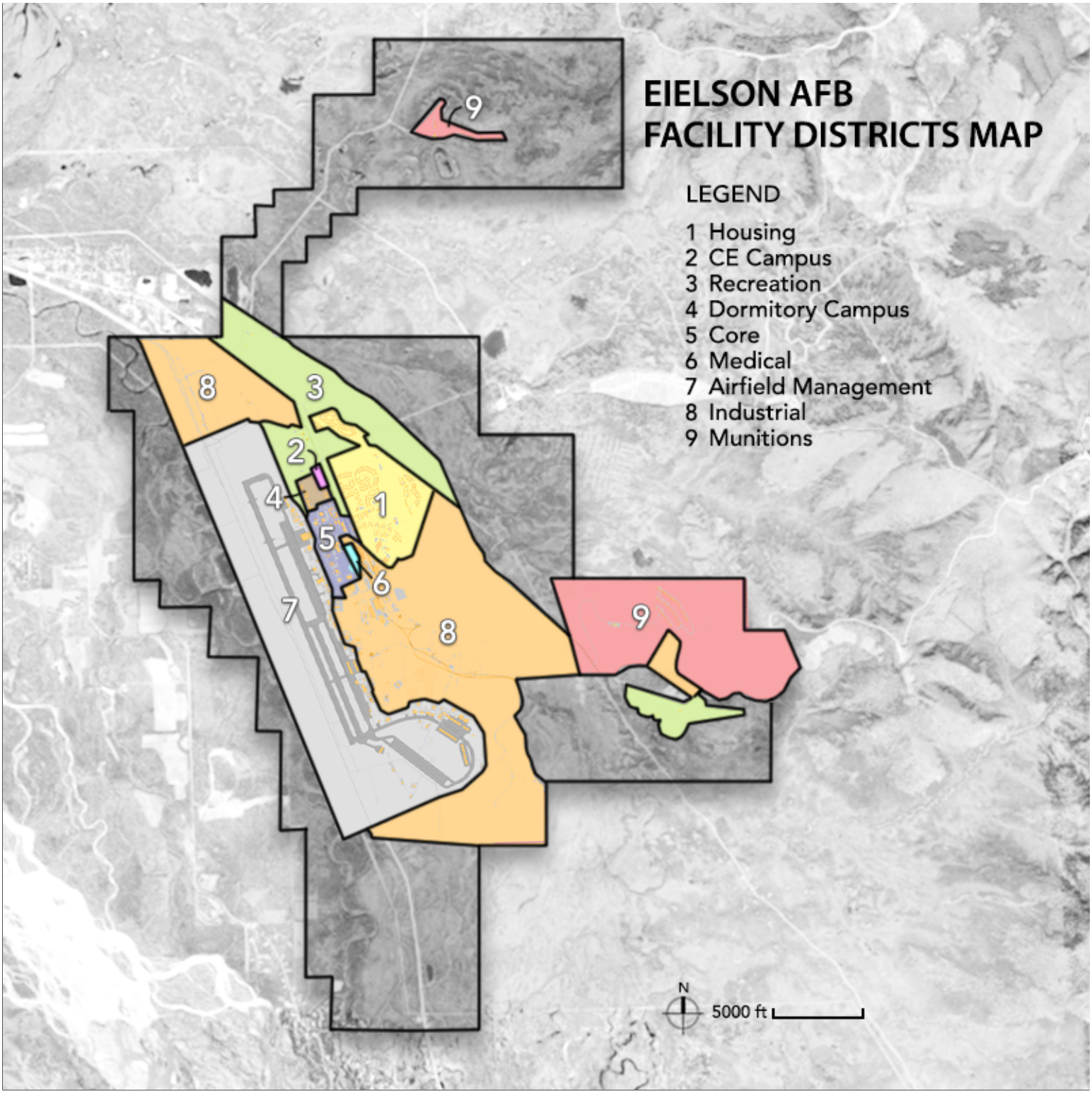


Note: *Apply the base-wide standards in this IFS for Installation Elements, Site Development, Facilities Exteriors and Facilities Interiors (products, materials, color, etc.). Following application of the base-wide standards, refer to the Appendix and apply any additional requirements specifically related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

B. INSTALLATION ELEMENTS

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

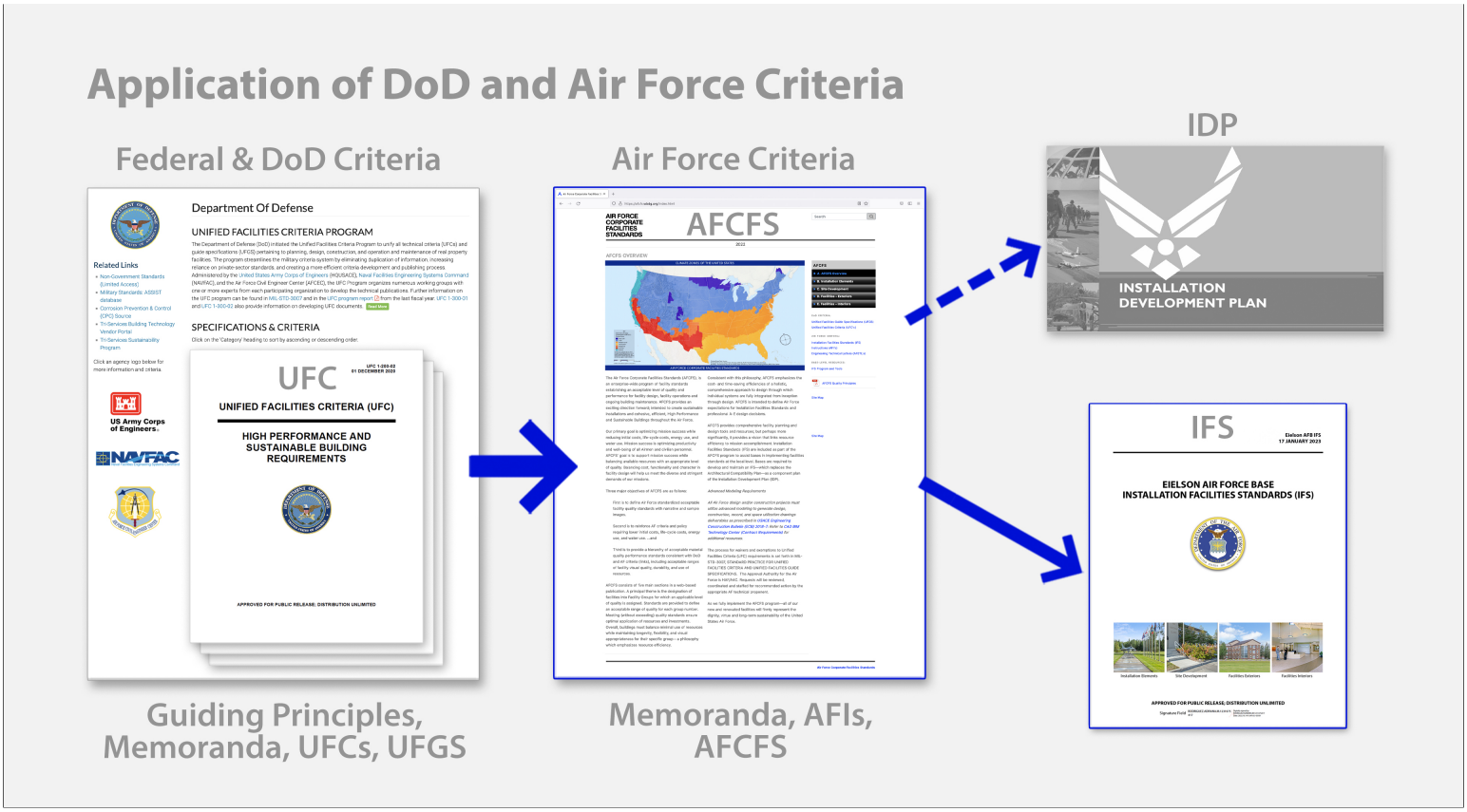
B01. COMPREHENSIVE PLANNING

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.

B01.1.1. IFS Requirements and Documents

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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

2. 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).

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

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

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

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

Ptarmigan Hall, c. 1962, Airmen Dormitory Converted to Wing Headquarters in 1972

F-16s at Eielson AFB

A-10 Warthogs with Arctic Camouflage

F-35As Taxiing

Eielson AFB began as a satellite field for Ladd Army Airfield, the airfield of Fort Wainwright Army Base. This small airfield was called Mile 26, as it was near the 26 mile marker of nearby Richardson Highway. Mile 26 airfield was constructed in 1943, to support Fort Wainwright. The field was not often used, and not used for combat operations, but was occasionally used for Lend-Lease aircraft and carriers on the way to support the then-US ally, the Soviet Union. The airfield closed at the end of the war.

The Cold War created a rapid demand for forward air bases close to the Soviet Union. In 1946 Mile 26 Airfield reopened, and was soon assigned a fighter group, and shortly after a very heavy bomber wing. The important strategic location of Mile 26 field led to explosive growth, and runways and hangars were added, along with housing, fueling, administration, and other facilities, and the once tiny field was designated Eielson Air Force Base, after Carl Ben Eielson, an Alaskan aviation pioneer. The ongoing Cold War continued to fuel expansion; many of the site buildings still in use date to the 1950s, including Amber Hall (originally Ptarmigan Hall), the Thunderdome, gymnasium, the Ernie Walker Theater, school, and much of the housing. Many units rotated through Eielson, hosted by Eielson's own, the 5010th Wing, including a large number of bomber, fighter-interceptor, fighter-bomber, reconnaissance, air fueling, and weather units.

The large area of Eielson's base territory has made it an excellent location for cold weather exercises, maneuvers, and field problems, and the base has hosted units from the US Army and Marines, and Canadian Army.

The end of the Cold War reduced, but did not eliminate, the need for Eielson ABF's service, and the base weathered the general military drawdown in the 1990s. In the 2000s a new reassessment of Eielson's role led to the base reducing its population but remaining open to the present.

B01.1.3. Future Development

◉ 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

Aerial Image of Eielson AFB

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).

B02. STREET ENVELOPE STANDARDS

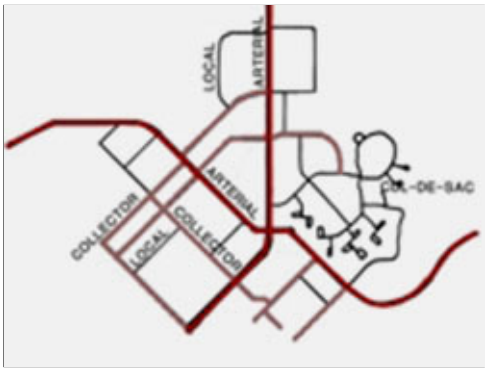
Comply with Air Force Corporate Standards for Installation Elements:
http://afcfs.wbdg.org/installation-elements/index.html

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

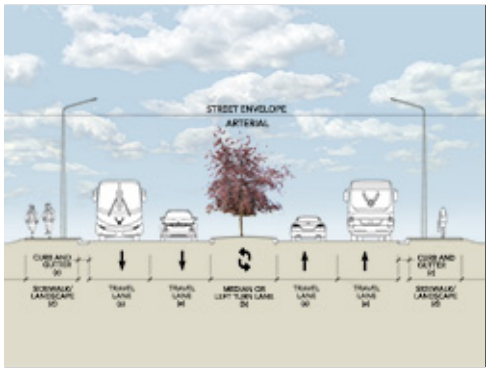
B02.1. Hierarchy of Streets

○ 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


Arterial in Forest Setting

1. Develop and evolve a hierarchical transportation network of arterial, collector and local streets following UFC 3-201-01 and its industry references.

2. Provide consistent functionality throughout the installation and a level of visual quality relating to the adjacent Facility Group number.

3. Routes along facilities in Group 1 may have materials, finishes and features with a higher visual quality than Groups 2, 3 and 4. Reduce maintenance requirements by installing highly durable materials and finishes in routes along Group 3 industrial facilities. Consider snow removal operations and snow storage areas in all designs.

4. Special routes may have a visual quality comparable to those along facilities in Group 1.

5. Create and maintain arterials with two lanes of traffic in each direction with landscaped or paved medians as applicable to the local climate and adjacent facility group designation / land use.

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

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

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

9. Minimize and consolidate curb cuts along streets.

10. Ensure access for emergency and service vehicles.

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

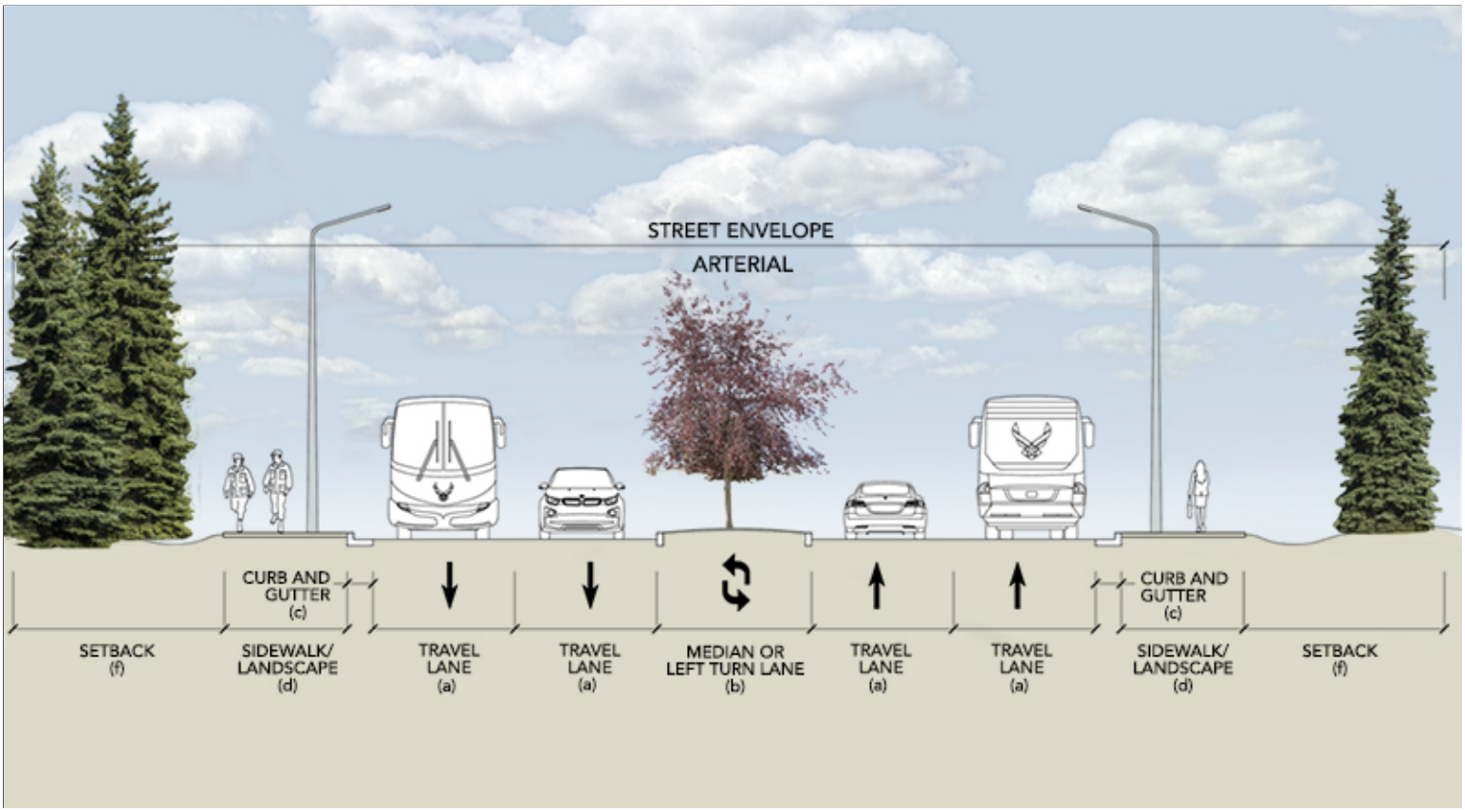
12. Remote service roads may be paved with a rock/clay mix that is suitable for the service vehicles. Appropriately size roads to accommodate service vehicle traffic.

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

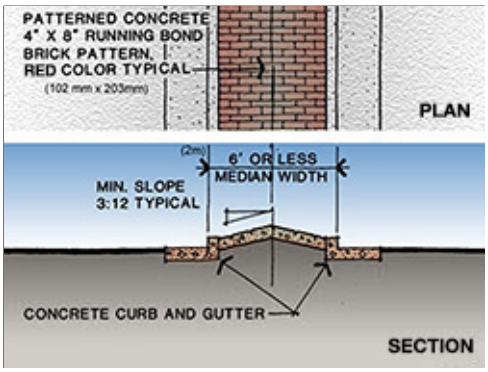
B02.1.1. Arterial Streets

◉ 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

Attached Sidewalk on One Side

Divided Arterial with Striped Median

1. Stops and turns should be minimized and on-street parking will not be allowed at any point along arterial streets.

2. Provide sidewalks on at least one side of arterial streets and both sides of arterial streets in developed areas. Provide a 6' buffer between the road and sidewalk where space allows.

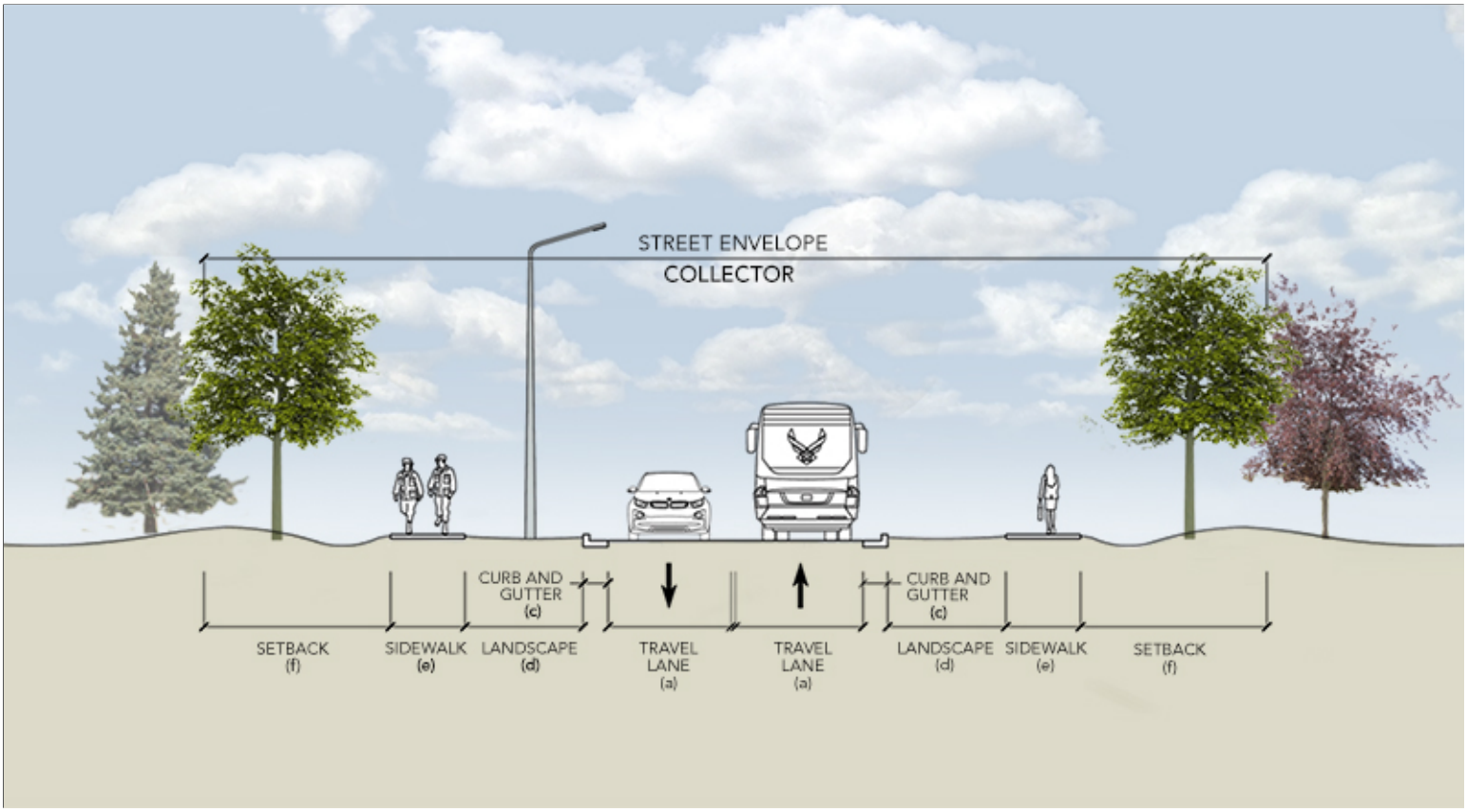
3. Limit curb cuts on arterial streets to entries into major facilities, building groups and major parking areas.

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

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

Maintained Landscape Buffer

Attached Sidewalk

Coordinated Placement of Elements

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.

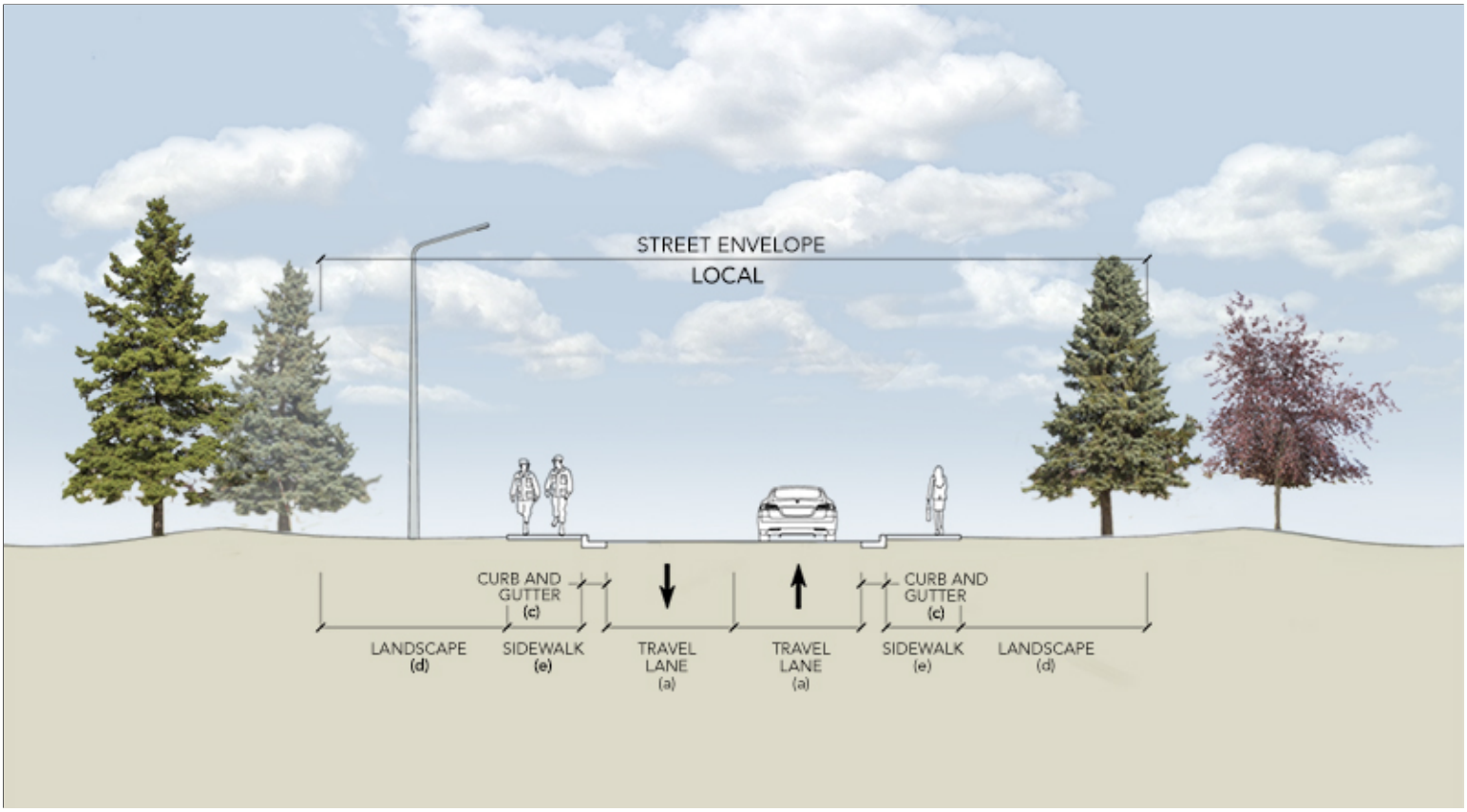
3. On-street parking may be allowed on one side where secondary roads are not less than 34 feet wide. Parking will not interfere with intersections or traffic flow.

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

B02.1.3. Local Streets

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

Rock Paving

Asphalt Paving at Group 2

Attached Sidewalk

1. Minimum local street dimensions will be as follows:
   a. Travel Lane. 11'
   b. Curb and Gutter. 1.5'

c. Sidewalk. 6'
d. Landscape. 15' setback or per AT
e. Buildings. 35' setback or per AT
f. Obstructions. 3' setback or per AT

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

3. 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.

4. On-street parking may be allowed following UFC industry references.

5. Signs, plantings and street lighting should reinforce the designation of "local" street.

6. Cul-de-sacs are only permitted in family housing areas.

B02.1.4. Special Routes

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

○ Applicable ◉ N/A Small graphics do not apply

Array of Flags and Airpark along Central Avenue

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

2. Special routes will include the following streets:

a. Old Richardson Highway from South Highway 2 Ramp to Flight Line Avenue.
b. Central Avenue along Air Park.

3. Maintain the trees, grasses, trails and setback areas along these special routes as applicable.

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. Aggressively pursue passive systems to lower maintenance requirements and reduce energy use.

3. Use a level of visual quality for an intersection equal to the quality found in the related streetscape, which corresponds to the adjacent Facility Group number.

B02.2.1. Arterials

○ Applicable ◉ N/A 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 Markings

Striped Median

Coordinated Placement of 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 Small graphics do not apply

1. At arterial/collector 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.

B02.2.3. Collectors

◉ 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 Standard Street Elements

T Intersection at Group 4

Standard Placement of Street Sign

Standard Crosswalk Marking

1. At collector 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. Intersections adjacent to Group 2 may be developed similarly, but with less detailing.

B02.2.4. Special Intersections

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

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

Roundabout with Visitor Center Facility Sited at the Center

Landscape Defining Space

Array of Flags and Signs

Static Display of Aircraft

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

B02.2.5. Street Frontage 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 Small graphics do not apply

Predominant Use of Grasses with Trees and Boulders Defining Space

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

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

B02.2.6. Sight Lines

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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

B02.3. Street Elements

◉ Applicable ○ N/A 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

Coordinated Placement of Light Poles, Signs and Landscape Features

1. Emulate the streetscape area's pre-development hydrology using passive and active design features to help sustain the adjacent regionally appropriate landscape. Coordinate with the base Stormwater Management Plan.

2. Employ systems, materials and techniques to maximize streetscape sustainability. Consider pervious paving and high reflectivity of surfaces, which are appropriate for the local climate.

3. Install at-grade curbing and/or raised-profile curb and gutter as applicable to direct stormwater to bioswales and rain gardens as source water for vegetation. Do not paint concrete curbing.

4. Provide all on-site utility service lines and equipment below grade when adjacent to Facility Group 1. In routes along Group 2, 3 and 4, when mounting elements such as utility cabinets, communications equipment and water valves above grade is unavoidable, paint these consistently and provide visual screening following Installation Facilities Standards (IFS).

5. Provide traffic control devices including access control point/entry control facility signs, speed limit signs and street name signs following the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) per UFC 3-120-01.

6. Crosswalk markings will follow the MUTCD for Streets and Highways, current edition. Provide white markings that define the edges of the crosswalk or a tone of lines defining the area of the crosswalk consistent with common practices found in the adjacent municipality.

7. Follow UFC 3-120-01 for directional and wayfinding signs and address both vehicular and pedestrian traffic.

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

B02.3.1. Paving

◯ Applicable ◉ N/A Large graphics do not apply

◯ Applicable ◉ N/A Small graphics do not apply

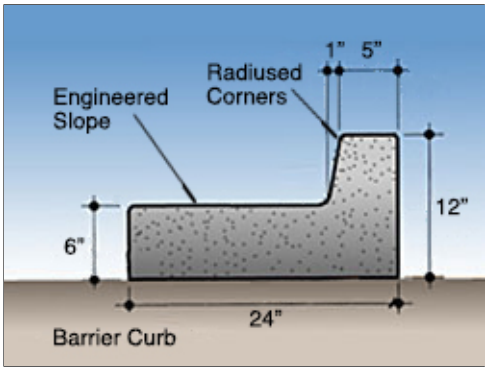
1. Pavement design will comply with UFC 3-250-01. Ensure appropriate analysis and design of subgrade conditions to promote low maintenance, high performance pavements. Apply all applicable best practices from Appendix B of the UFC.

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.

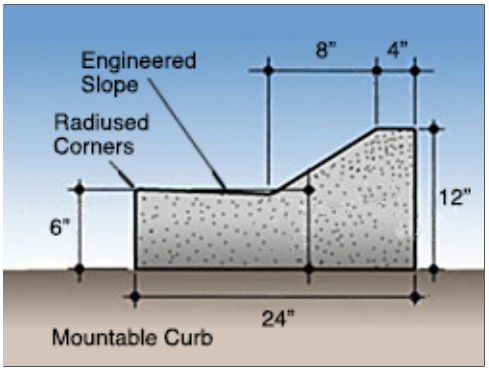
B02.3.2. Curb and Gutter

◯ 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



Barrier Curb



Mountable Curb


Curb Ramp

1. Curb all streets except remote/isolated roads and rock-paved service roads. Header curbs may be used to facilitate snow plowing operations when coordinated with the base stormwater plan.

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

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

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


Coordinated Placement and Standard Colors


Hydrant with Protective Plinth


Above Grade Utility Service

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

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

B02.3.4. Traffic Signs

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

1. Refer to Exterior Signs, Colors and Types for Traffic Control Devices, which includes signs.

B02.3.5. Street Lighting

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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

B02.3.6. Other

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

B03. OPEN SPACE / PUBLIC SPACE

Comply with Air Force Corporate Standards for Installation Elements:
http://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

Memorial Plaza with Coordinated Elements and Compatible Materials

Monument as a Focal Point

Array of Flags

Static Aircraft Mounting

1. Natural features and culturally or historically significant features or events may be recognized and acknowledged with physical elements such as plazas, monuments and static displays. However, limit these elements on the base to ensure judicious use of resources and to reduce ongoing maintenance requirements.

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

3. Link plazas, monuments and static displays to the pedestrian circulation system. Install landscaping, site furnishings and lighting appropriate for the application and local climate following Installation Facilities Standards (IFS).

4. Select systems, products and materials for paving, walls, and structures following IFS.

B03.1.1. Paved Plazas

○ Applicable ◉ N/A Large graphics do not apply

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


Concrete Paving at Plaza, Stairs and Ramps


Concrete Sidewalk


Concrete Paving at Pavilion


Plaza with Memorial Marker at Focal Point


Pavilion with Plaza


Decorative Paving at Group 1 Entrance Plaza

1. Mitigate heat island effect by providing high-albedo, shaded plazas. Permeable pavers will be used on all plazas and courtyards in Facility Groups 1 and 2; use 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 base standard range of red blend. Bricks used on plazas will typically be 4" x 8" size. Avoid the use of pavers that effloresce or corrode when exposed to snow-melt chemicals.

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

Coordinated Sculpture, Marker and Statuary

Memorial Plaza with Seating

Engraved Stone Marker

Commemorative Bronze Plaque

1. Relate new sculpture, markers and statuary to the base's architectural design theme. Generally, limit these elements to frequently used locations adjacent to Facility Group 1 and highly traveled community pedestrian spaces.

2. Consider entry gates as possible sites for new displays.

3. All proposed memorials will follow AFI 36-3108 and be limited to highly deserving individuals or groups as deemed appropriate by the installation leadership. Living memorials (tree plantings / etc.) are discouraged due to added maintenance requirements.

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

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

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

B03.1.3. Static Display of Aircraft

○ Applicable ◉ N/A Large graphics do not apply

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


Aircraft Park with Pavilion and Plaza


Plaza with Coordinated Markers


Display with Integrated Lighting


At Grade Mount


Elevated Grade at Mounting


Coordinated Access and Interpretive Signs

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

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

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

B03.2. Grounds and Perimeters

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

Water Feature as an Amenity

Open Space with Recreational Field

Trees Defining Space

Trees for Visual Screening

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

2. Maintain preservation areas following the IDP and IFS.

3. Comply with UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings and UFC 4-022-03 Security Fences and Gates for all elements associated with the base's gates and perimeter fence.

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

5. Base-wide utility infrastructure will be inconspicuous. Bury utility service lines below grade when adjacent to Facility Group 1 and when economically feasible for Facility Groups 2, 3 and 4. When service lines are located above grade, create an ordered, coordinated appearance.

6. Follow the requirements of this IFS regarding all utility structures and service lines located above grade that visually impact the installation.

7. Where screening of utility equipment and structures is provided, allow adequate and proper clearance for safety and maintenance.

8. Reduce visual clutter and visual impact of the following items through a combination of careful placement, screen walls, landscaping and painting:
- Electrical switch-stations
- Sewage lift stations
- Water well pumps, storage tanks and/or related structures
- Gas piping, meters and similar incidental items
- Above ground fuel storage tanks
- Any ground-mounted freestanding utility item exposed to view

9. Larger structures such as electrical switch-stations, sewage lift stations, fuel storage tanks and mechanical/electrical equipment will be screened from view, using materials, forms, and colors in the screen walls 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. Bury the following exposed above-grade items in future projects when economically feasible:
- Electrical power grid and service lines
- Telephone lines
- Cable TV lines
- Communications lines
- Exterior lighting service lines
- Any similar system of above-ground lines serving the base

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

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

B03.2.1. Parade Grounds

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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

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

3. Bleachers may be installed only when there is a documented requirement at parade grounds. Nonferrous metals that do not require painting or 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 Large graphics do not apply

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


Coordinated Site Furnishings


Playground


Play Equipment

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


Preserved Riparian Area


Naturally Forming Landscape


Native Fire Weed

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

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

B03.2.4. Perimeter Fence

○ Applicable ◉ N/A 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


Perimeter Fencing Adjacent to Main Gate


Operable Gate at Perimeter


Typical Chain Link Fencing

1. Design, install and maintain the base'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 base'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 Select number of graphics / images (small: 250 px x 188 px) to insert 3 Image Tool 250 x 188


Axial Approach to Main Entrance


Integrated Drainage Features


Designated Accessible Parking

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

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

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

4. Integrate snow storage areas with adjacent streets and parking areas; coordinate snow storage with the base stormwater plan.

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.

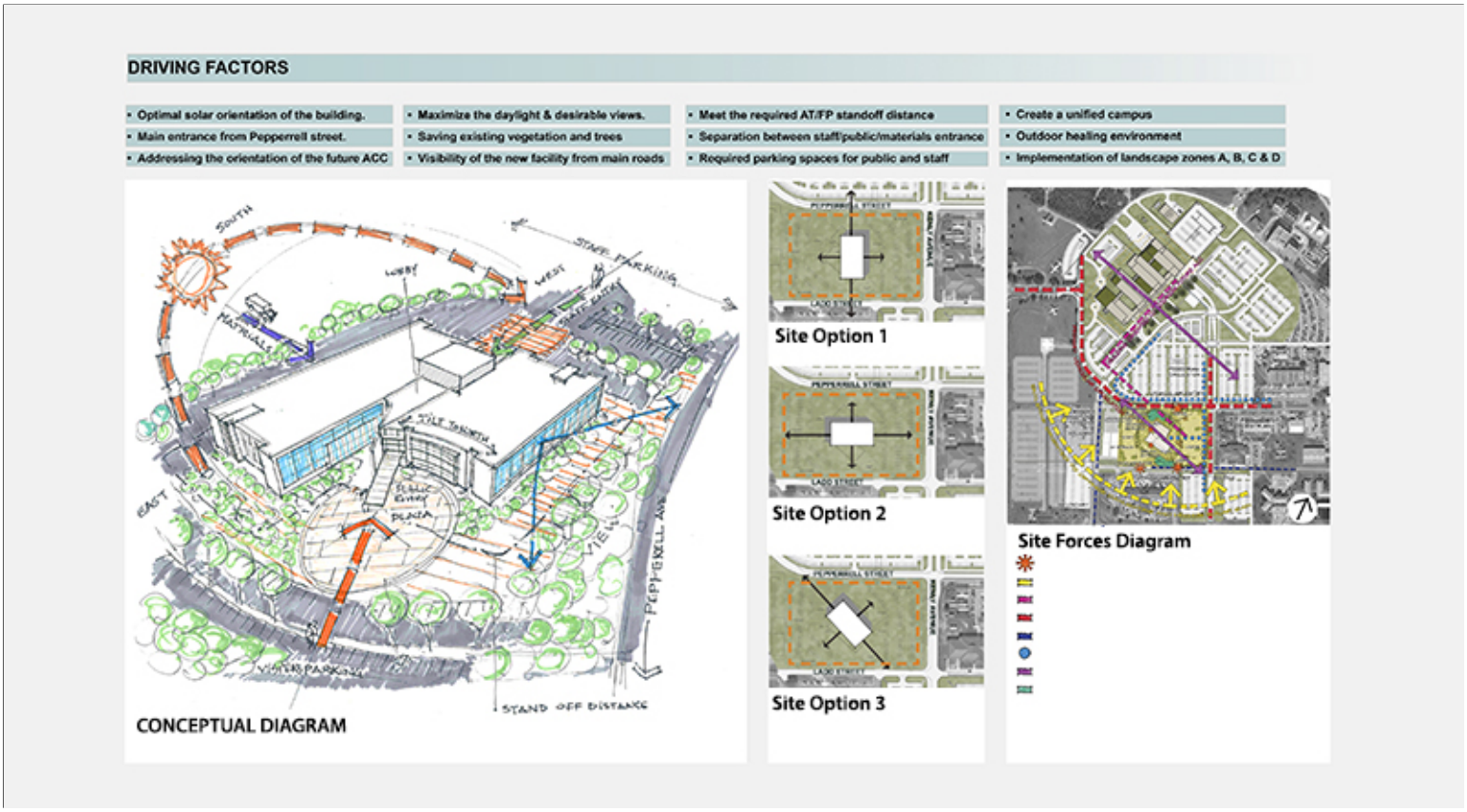
15. Applicably coordinate heat island mitigation in paving and roof designs when implementing an integrated approach to stormwater management.

16. Consider the location of "Designated Tobacco Areas."

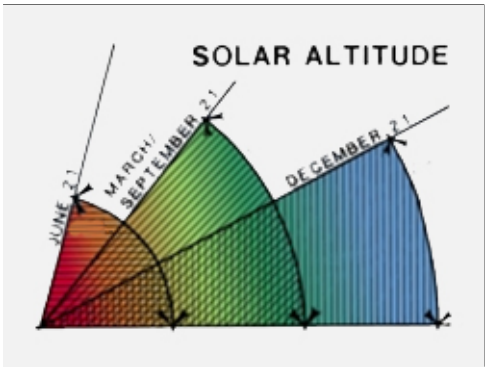
C01.2. Building Orientation

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

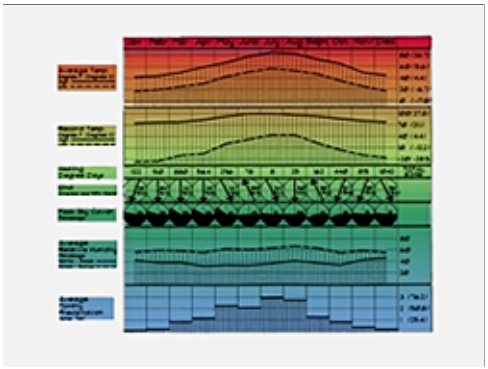
◉ Applicable ○ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 6 Image Tool 250 x 188



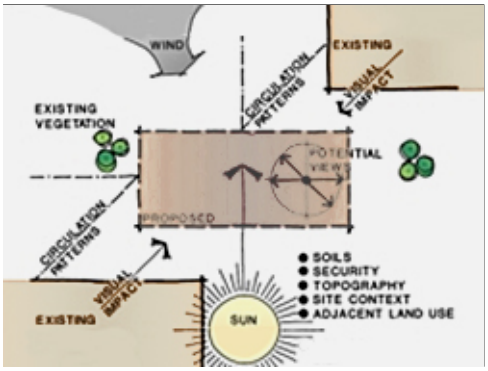
Conceptual Site Analysis and Site Design Diagram



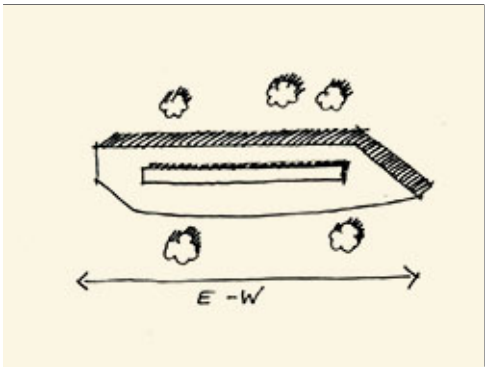
Local Solar Data



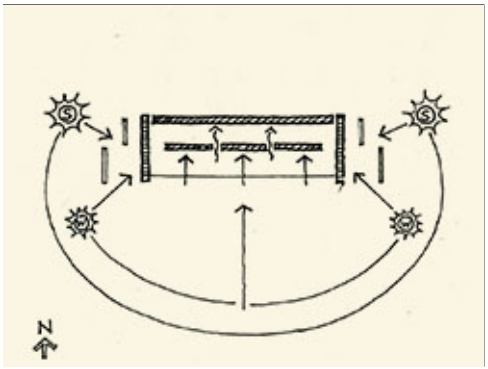
Local Climate Data



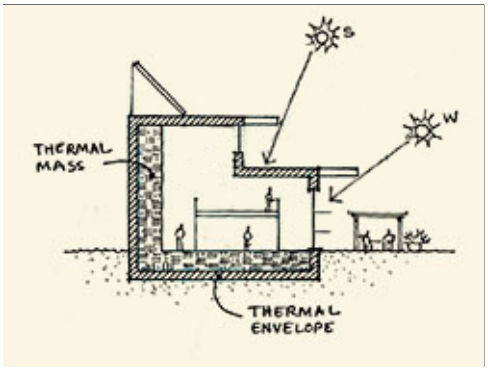
Site Data



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 “public side” of the building, its views and the location of the main entrance.

C02. UTILITIES

Comply with AF Corporate Standards for Site Development:
http://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


Utility Cabinet with Standard Color


Automobile Outlets with Concrete Base


Utility Placement in Group 4

1. Provide all on-site utility service lines below grade for Facility Group 1; when mounting elements (such as utility cabinets, communications equipment and water valves) above grade is unavoidable, paint these consistently and provide visual screening following Installation Facilities Standards (IFS).

2. Provide installation of utility infrastructure to support near term and future electric vehicle charging stations.

3. Define all service entry points into the building and route distribution below grade into an interior space within the facility; exposed conduits, cables and wires on exterior walls are not permitted for Facility Group 1.

4. Include consideration of appropriate placement of meters in support of Automated Revenue Management Services (ARMS).

5. Limit exterior mechanical distribution systems such as exterior steam, chilled water, and hot water distribution to Group 3 facilities; when required for Group 1 and 2 facilities integrate with the architecture and provide visual screens following IFS.

6. Direct roof drainage to bioswales or underground collection when feasible or provide splash blocks / paved channels to intercept roof drainage at grade.

C03. PARKING AREAS

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

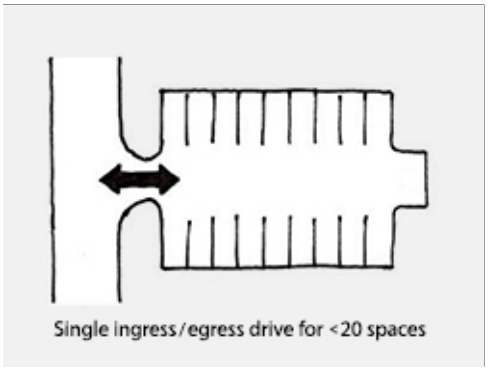
Comply with AF Corporate Standards for Parking Areas:
http://afcfs.wbdg.org/site-development/parking-areas/index.html

C03.1. Configurations and Design

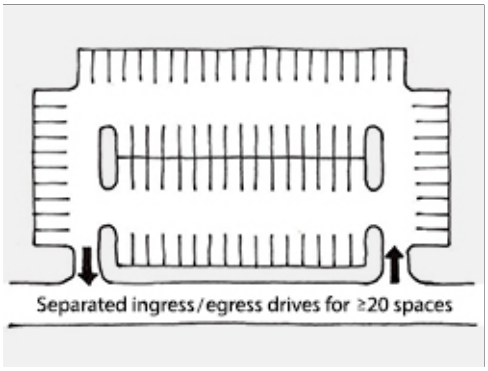
◉ Applicable ○ N/A Select number of graphics / images (large: 800 px x 440 px) to insert 1 Image Tool 800 x 440

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

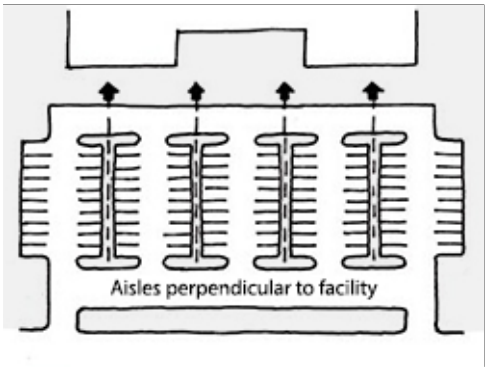
Typical 90-Degree Configuration



Small Lot Configuration



Large Lot Configuration



Facility Group 1 Configuration

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

2. Generally, envision on-site parking as a series of small connected singular areas selectively placed around the facility served, rather than a single large area; buffer parking areas from the facility main entrance with a transition space and provide drop-offs to decrease close-in parking. Comply with IFS standards while meeting requirements.

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. Configure curbing to facilitate snow removal. Ensure snow storage areas are coordinated with the stormwater plan.

4. 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.

5. Coordinate suitable landscape or barriers integrated with walls and fences to ensure adequate force protection.

6. Accessible parking spaces will be marked according to UFC 3-120-01 and its references in ABAAS and the MUTCD.

7. Consider locations and requirements of near term and future electric vehicle charging stations.

8. Provide 120V AC ground fault interrupter (GFI) receptacles for engine heater plug-ins in parking lots where there is a documented need. Consider providing a 20 amp service to accommodate Level 1 electric vehicle (EV) charging for near term and future charging and EV heating. Provide Level 2 charging stations where needed that allow users to pay for power.

9. Designate preferred parking spaces for electric vehicles and carpools near the main entrance.

10. Consider cost-effectively integrating solar photovoltaic arrays into covered parking structures.

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

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

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

C03.1.1. Paving and Striping

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

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.

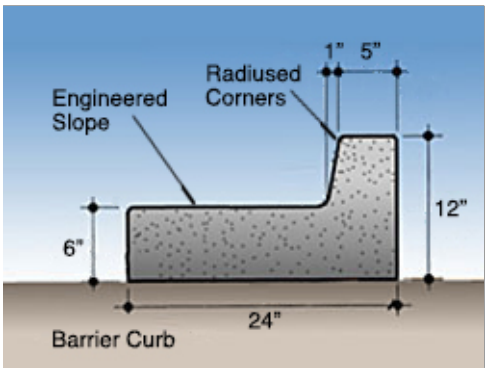
4. Use consistent striping, angles and stall sizes in all parking areas.

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.

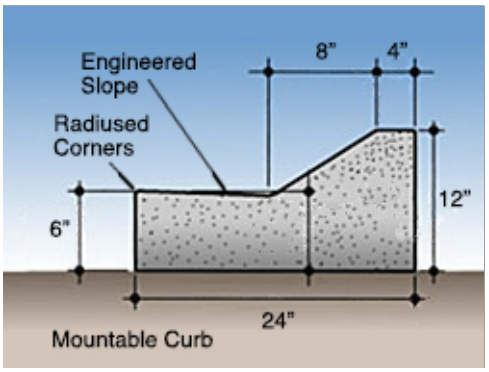
C03.1.2. Curbing

○ Applicable ◉ N/A Large graphics do not apply

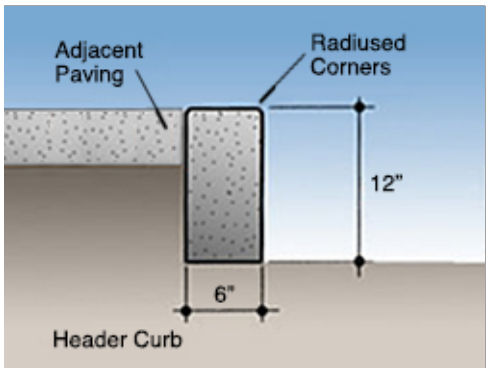
◉ Applicable ○ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3 Image Tool 250 x 188



"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. All raised curbs will be the rolled (mountable) type.

2. Integrate curbing to direct stormwater to bioswales and rain gardens as source water for regionally appropriate native vegetation.

3. Wheel stops are not permitted except at locations where car bumpers could contact adjacent items such as poles, signs or pedestrians.

C03.1.3. Internal Islands and Medians

◉ 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

Accessible Spaces with Landscaped Islands

Median with Grass Planting

Coordinated Placement of Light Fixture

Xeric Planting with Rock Mulch

1. Install landscape islands and medians as visual breaks, to reduce heat island effects and to accommodate bioswales and rain gardens with consideration for snow storage and removal. Coordinate suitable landscape or barriers integrated with walls and fences to ensure adequate force protection.

2. When lighting is necessary, contain fixture bases within medians or internal landscape islands.

C03.2. Parking Structures

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

1. Parking structures are encouraged in land-constrained locations when economically feasible.

2. Consider near- term and future electric vehicle charging stations and renewable energy generation development during the analysis and design.

3. Consider opportunities for integrating parking structures into multi-use developments with pedestrian-oriented uses located on the ground floor and parking on upper levels; ensure AT guidelines are fully addressed.

4. Structures may be constructed below grade with roofs serving as vegetated areas or plazas.

C03.3. Connectivity

○ Applicable ◉ N/A Large graphics do not apply

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

Connection to Sidewalk System

Planters Defining Space

Link from Parking 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 bike paths to connect facilities and users to these networks.

2. Provide amenities such as rain and shade shelters, trees, and benches to encourage and facilitate use of public transportation.

3. Evaluate the IDP for the current and planned network of roads and optimally develop vehicular access to and from the site.

C04. STORMWATER MANAGEMENT

Comply with AF Corporate Standards for Site Development:
http://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 Large graphics do not apply

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


Detention Basin as an Amenity


Vegetated Swale along Street


Drainage Channel


Aligned Culverts


Swale with Rip Rap


Site Graded to Swale

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

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

3. Permeable paving may be used in areas that are not subjected to severe freeze-thaw cycles.

4. 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.

5. When underground drainage systems are required establish a maintenance program to include removal of sediments and debris; inspect joints seasonally for alignment to prevent leakage and the development of voids and surface failures.

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

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 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]

Concrete Sidewalk at Group 2

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

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

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

Primary:	Permeable Pavers
Secondary:	Concrete Paving and Edging
Accent:	N/A

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

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

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

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

1. Maintain efficient geometry and accessibility to connect building entrances to adjacent parking areas and activity areas and to the base transportation system following AT. Efficiently use materials to optimize life-cycle costs and to minimize maintenance.

2. Generally, conform horizontal layouts of sidewalks to the geometric configuration of adjacent buildings, streets, parking lots, and other adjacent related site amenities. Occasional meanders and/or jogs may be included to capture views, to coordinate with landscaping or accommodate site constraints.

3. Walks in parking areas 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 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" 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.

C05.1.1. Ramps and Stairs

◉ 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

Stair to Main Entrance with Accent Landscaping

Site Ramp at Entrance

Zero Curb with Grade to Accommodate Slope

Stair with Integrated Ramp

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

C05.1.2. Lighting

○ Applicable ◉ N/A Large graphics do not apply

○ Applicable ◉ N/A Small graphics do not apply

1. Provide lighting for all stairs and landings where traffic warrants.

2. Refer to the Lighting section for path lighting along sidewalks, bikeways and trails.

C06. LANDSCAPE

Comply with AF Corporate Standards for Site Development:
http://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 Deciduous and Evergreen Tree Species and Adaptive Species of Grasses

Native Species at Group 1

Indigenous Species at Group 3

Ornamental Planting at Group 2 Lodging

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 6 Image Tool 250 x 188

Three-Tier Planting with Trees, Shrubs and Groundcovers

Deciduous Trees for Shading

Trees Defining Entrance

Landscape with Mound and Boulders

Trees for Shading

Trees as an Amenity

Trees as a Wind Break

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

2. Landscaping is required for all newly developed sites and facilities; preserve existing native landscape where possible and avoid overplanting.

3. Concentrate landscaping in Facility Group 1 and along major thoroughfares and integrate these landscaped areas into the base's stormwater management plan. Refer to the Streetscape Envelope Standards in this IFS.

4. All Facility Group 1 and 4 sites 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 prairie areas where appropriate with native plants to eliminate mowing and maintenance requirements.

9. In tree clusters replace grass with naturalized shrub beds and leaf litter mulch to eliminate mowing requirements.

10. Use plantings in open spaces to reinforce the space as a visual asset.

11. Consider landscape windbreaks when suitable for the local climate.

12. Integrate security requirements into the landscape design. Coordinate the heights of trees and shrubs and note restrictions for plantings following UFC 4-010-01.

13. Berms may be used as an integral part of the overall landscape strategy for screening, security and/or visual interest.

C06.1.2. Xeriscape Design Principles

○ Applicable ◉ N/A Large graphics do not apply

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


Xeric Planting with Drought Tolerant Species


Use of Mulch and Boulders


Mulched Planting Bed

1. Apply xeriscape principles following UFC 3-201-02, Appendix B, and Air Force Corporate Facilities Standards.

2. Facility plantings are encouraged to use native plant species and to consider specific microclimates created by the adjacent building: shadow areas, protected areas, zones adjacent to thermal mass, and availability of rainwater and/or grey water.

C06.1.3. Minimizing Water Requirements

○ Applicable ◉ N/A Large graphics do not apply

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


Vegetation Sustained by Annual Rainfall


Basin to Retain Water


Organic Mulch Adjacent to Paving

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 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

Native Coniferous Species

Trees for Shading Facade

Trees Defining Space

1. Use only native, naturally occurring plant materials including grasses or turf suited for the local climatic conditions in the landscape design; potable-water irrigation systems are discouraged beyond the establishment period.

2. New facilities are encouraged to use native plant species as indicated on the following plant lists available from the Base Civil Engineer.

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

5. 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.

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

7. All plant material will have one-year warranty and is subject to approval by the Base Landscape Architect.

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 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

Preserved Adjacent Naturally Occurring Forest

Maintained Grass Buffer

Limited Planting at Gate

Shrubs and Ornamental Trees at Visitor Center

1. At the main gate, reinforce a sense of arrival through a well-designed concentration of landscape elements consistent in visual quality with Facility Group 1.

2. Ensure landscaping has seasonal features with spring and fall color and a combination of evergreen and deciduous trees and shrubs for winter interest.

3. Integrate base signs and street and pedestrian lighting whenever feasible.

C06.1.7. Streetscape Landscaping

○ Applicable ◉ N/A Large graphics do not apply

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


Landscape Providing Visual Appeal


Use of Evergreen Species


Trees Defining Space

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.

C06.1.8. Pedestrian Circulation 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


Trees for Definition and Shading


Pedestrian Scale Planting


Accent Planting at Entrance

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


Planting at Perimeter of Parking Lot


Planting with Evergreen Trees


Landscaped Island

1. Integrate appropriate landscaping elements into parking areas to visually soften the appearance at a minimum rate of 10 percent 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. Provide planting in islands within parking lots for shade and appeal following IFS and the base stormwater management plan.

4. Rain garden islands will be landscaped to receive snowmelt and 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


Visual Screening at Mechanical Equipment


Accent Planting at Building Sign


Accent Plantings at Group 2 Entrance

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 Large graphics do not apply

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


Coordinated Site Furnishings


Compatible Screen Wall


Standard Picnic Table

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 or black

Finish: Mill or powder coat

Model #: SS BBQ Grill or BK BBQ Grill

Other: Concrete foundation or pad mount, 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 or black

Finish: Mill or powder coat

Model #: SS BBQ Grill or BK BBQ Grill

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: **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

Type: **Recycled Content, Slatted**

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

Mfr: Belson Outdoors

Color: Black 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 2 Image Tool 250 x 188

Type: **Ribbon Bike Rack**

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

Mfr: Brandir International Inc.

Color: Black or dark bronze

Finish: Factory

Model #: The Ribbon Bike Rack, RB-07

Other: N/A

UFGS: N/A

Type: **Post Bike Rack**

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

Mfr: Belson Outdoors

Color: Black, dark bronze or medium bronze

Finish: Powder coat

Model #: Classic Bollard Bike Rack BOL-2-SF-P or BOL-2-IG-P

Other: Surface on in-ground mount

UFGS: N/A

C07.2.4. Bike Lockers

○ Applicable ◉ N/A

C07.2.5. 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

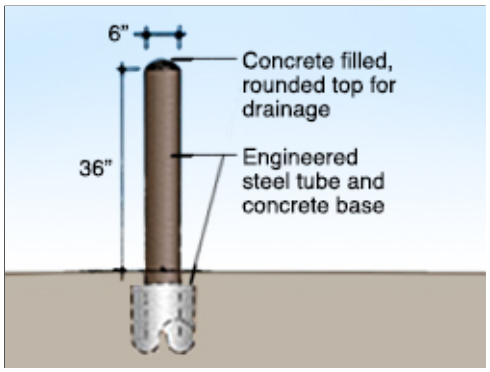
Color: Dark bronze

Finish: Anodized aluminum

Model #: KBA

Other: Flared cone, 3000K LED Lamp

UFGS: N/A



Type: **Building Protection**

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: **Enclosed Shelter**

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

Mfr: Custom

Color: Dark bronze, medium bronze, amber timber, aluminum, concrete

Finish: Powder coated, anodized frames

Model #: Gabled roof

Other: Provide shelters only where there is a documented need; 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: **CMU and Galvanized Steel**

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

Mfr: Custom

Color: CMU to match adjacent building; natural zinc, bronze slats

Finish: Ground face CMU is preferred; factory frame and slats

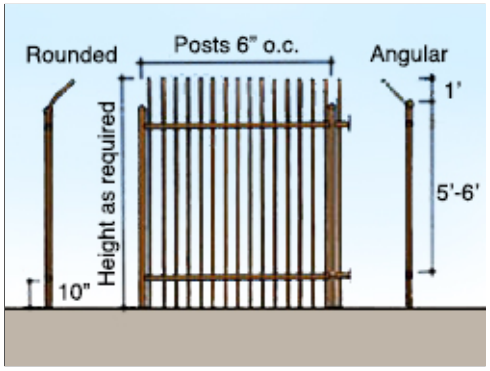
Model #: Match adjacent building

Other: Galvanized steel posts, gate frames, chain links panels, and hardware; dark brown dumpsters, dark bronze slats in chain link

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

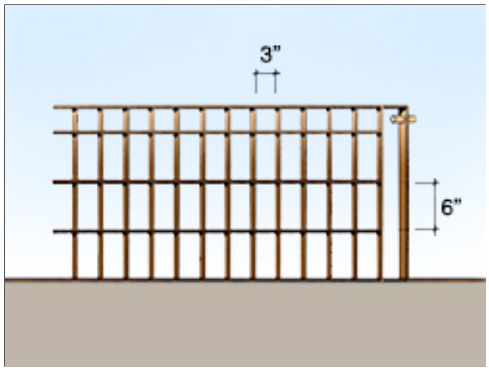
Color: Black or dark bronze

Finish: Powder coated

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

Other: Split Face, beige CMU piers may be used

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Style B Barrier: High security, medium visibility**

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

Mfr: Custom

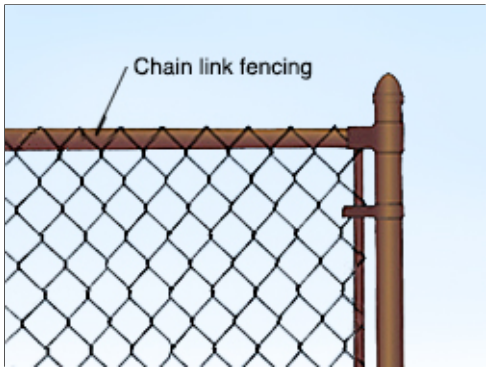
Color: Dark brown

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 WireCompany

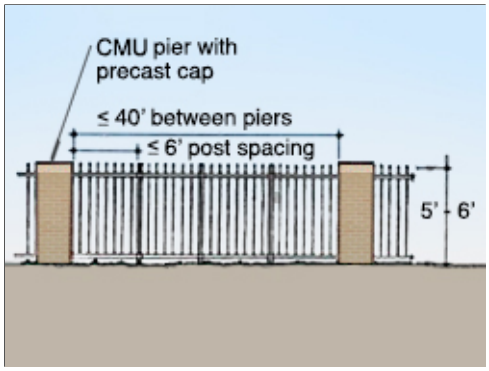
Color: Black or dark bronze

Finish: Powder coated galvanized steel

Model #: Chain link, steel posts and rails, gates and accessories

Other: Posts and rails in heights, lengths and gauges as required, (see Appendix for Facility Districts requirements)

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

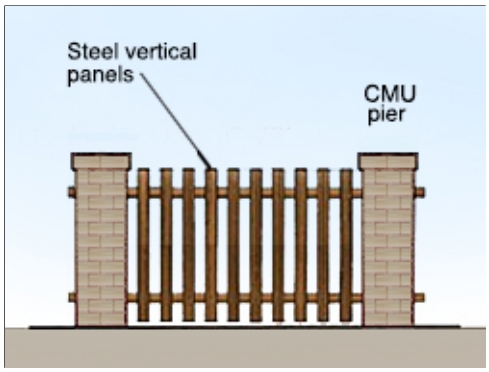
Color: Tan CMU blend, dark brown fencing

Finish: Face brick, powder coated metal

Model #: CMU piers with steel posts, rails and pickets

Other: CMU: 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: Tan CMU blend, dark brown fencing

Finish: Powder coated metal

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

Other: CMU: 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: **Precast Concrete**

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

Mfr: Uline - Rubbermaid

Color: Black or brown frame

Finish: Factory

Model #: H-3570BR or H-3570BL

Other: Landmark Series, 35 gallon waste container, dome top; provide liner; may be used in parks and commercial areas

UFGS: N/A

Type: **Recycled Content Slatted**

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

Mfr: Belson

Color: Black base and top; cedar slats or as approved

Finish: Factory

Model #: Round Trash Receptacle

Other: Round top, without side door; provide liner; may be used in parks and commercial areas

UFGS: N/A

C07.2.13. Picnic Tables

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

Type: **Metal Base Recycled Content Top and Seats**

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

Mfr: Belson Outdoors

Color: Cedar or brown top, factory galvanized or black base

Finish: Factory

Model #: Park Chief Recycled Plastic Picnic Table

Other: 8' Length, 30-1/2"H x 62"W

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

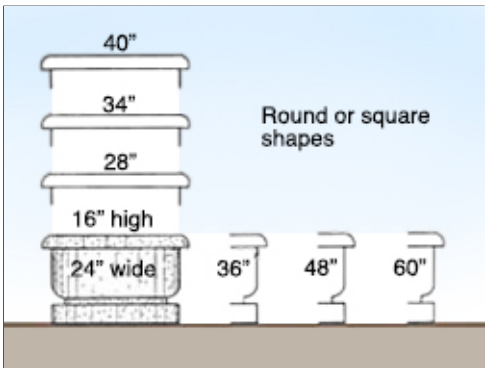
Model #: Signature Series, 46" Square Pedestal Tables with 4 Seats

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: Local Precast Company TBD

Color: Gray

Finish: Smooth casting

Model #: Round

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

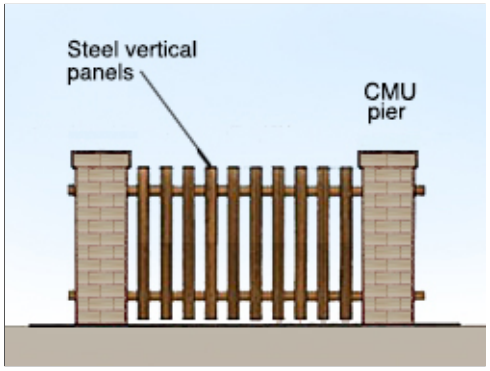
Model #: N-R-G Freestyle

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: **CMU / Steel**

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

Mfr: Custom

Color: Tan CMU blend, dark brown fencing

Finish: Powder coated metal

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

Other: CMU: 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 Number of base standards 1 Image Tool 250 x 188

Type: **Vehicle Electric Service Station**

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

Mfr: TBD

Color: Natural concrete base, stainless steel or galvanized steel devices

Finish: Mill or galvanized

Model #: Single-space, 2-space or 4-space service station

Other: Coordinate with Electric Vehicle (EV) chargers

UFGS: 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 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

Ground-Mounted Building Identification Sign

Aluminum Stand-out Letters at Group 1

Approved Monument Sign at Group 2 Lodging

Wall-Mounted Building Identification 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.

4. Use clear concise terms for content consistent with UFC 3-120-01.

5. Display of emblems on building exterior walls or other permanent structures is prohibited by UFC.

6. Raised “standout” letters and numbers may be used for Group 1 with approval on a case basis.

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

8. Only one identification sign is permitted at each building entrance. Include a building address consistent with US Postal Service protocols following UFC 3-120-01.

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

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

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

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

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

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

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

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

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

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

C08.1.1. Materials and Color Specifications

◯ Applicable ◉ N/A Large graphics do not apply

◯ Applicable ◉ N/A Small graphics do not apply

1. Fabricate sign panels from aluminum plate. Sign posts will be extruded aluminum with capped ends fastened to a concrete base. Do not field paint surfaces. Provide factory coatings and materials only.

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) using standard colors. Refer to MUTCD color specifications, which provide cross-referenced Pantone Matching System (PMS) numbers.
   a. Standard Blue
   b. Standard Dark Bronze
   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

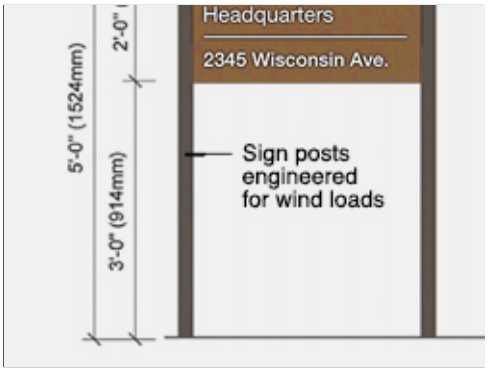
Color: Medium brown

Finish: Matte vinyl

Model #: Aluminum flat sheet

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

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Typical Sign Post**

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

Mfr: Custom

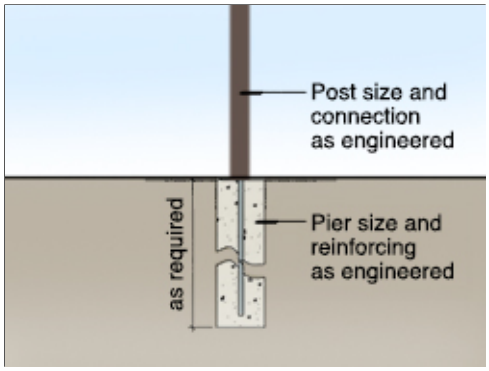
Color: Dark bronze, powder coat finish

Finish: Matte

Model #: Extruded aluminum with capped top ends

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

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Typical Sign Base**

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

Mfr: Custom

Color: Natural Gray

Finish: Sonotube-formed

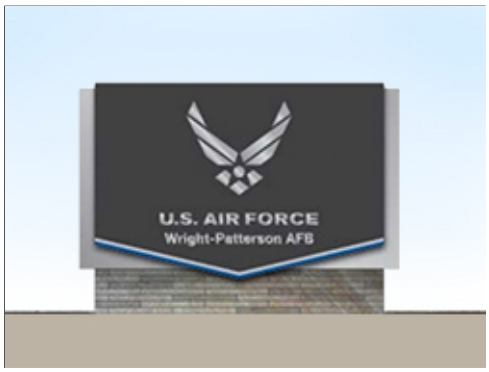
Model #: 24" height x 12" diameter, as engineered.

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

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

C08.1.2. Installation and Gate Identification Signs

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



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

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

Mfr: Custom

Color: Dark bronze, brushed aluminum, accents per UFC

Finish: Powder coat or vinyl sign face

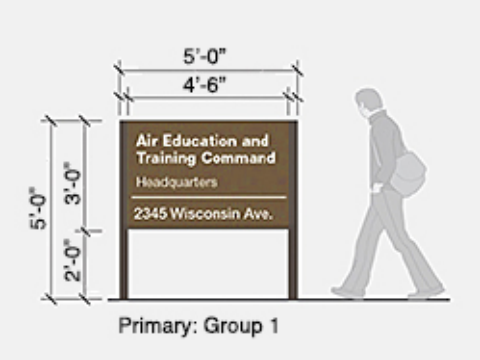
Model #: Metal frame and panels, buff stone base

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

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

C08.1.3. Building Identification Signs

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



Primary: Group 1

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

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

Mfr: Custom

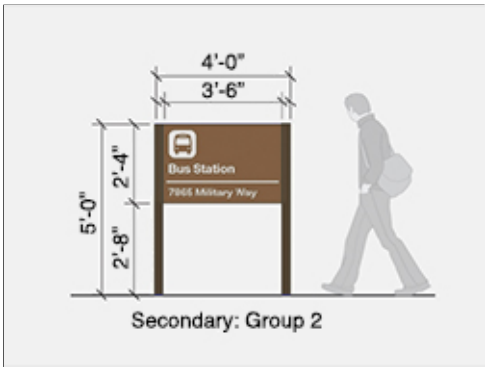
Color: Medium brown face, dark bronze posts, white vinyl lettering

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



Secondary: Group 2

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

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

Mfr: Custom

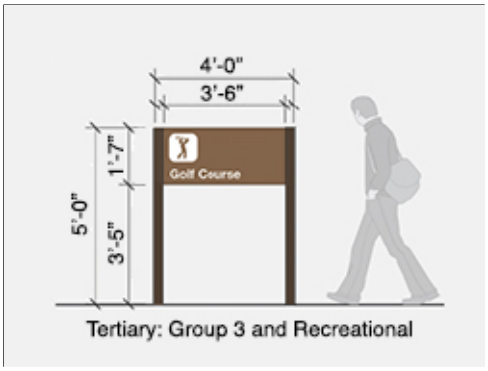
Color: Medium brown face, dark bronze posts, white vinyl lettering

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

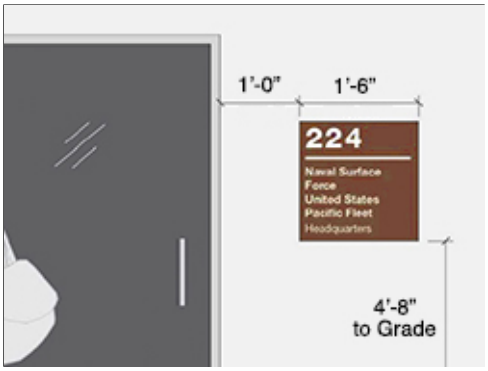
Color: Medium brown face, dark bronze posts, white vinyl lettering

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

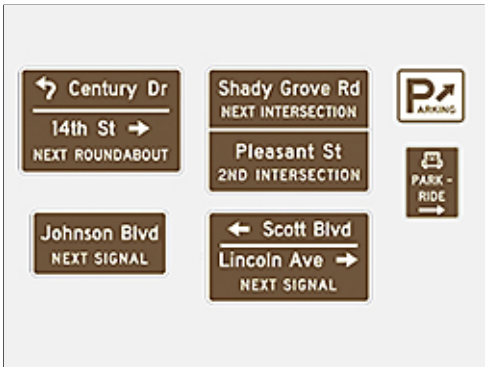
Model #: Aluminum sign face, control arm or pole mounted

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

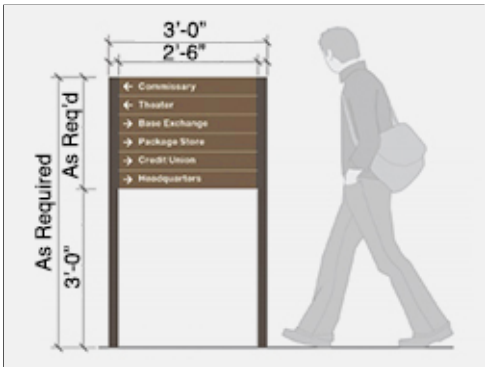
Color: Medium brown face, dark bronze posts, white reflective lettering

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 bronze color.

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

C08.1.10. Other

○ Applicable ◉ N/A

C09. LIGHTING

Comply with AF Corporate Standards for Site Development:
http://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

Dual Purpose Parking Lot and Pedestrian Scaled Sidewalk Fixtures

Dual Arm Street Light Fixture

Lighted Bollards

Wall Mounted Light Fixture

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. Generally, 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, 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, bikeways 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 1 Image Tool 250 x 188

Type: **LED Street**

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

Mfr: Hubbell, Beacon Viper luminaire

Color: Dark bronze, gray or clear anodized aluminum as approved by BCE

Finish: Factory

Model #: VPL/ 80NB-180/4K/T3/UNV/GYS, single arm or dual arm

Other: Lamp LED, Roadway – Poles will be 25' round or square seamless aluminum; up to 8' up swept mounting arm; pole will be rated for 100 MPH wind with a 1.3 factor

UFGS: N/A

C09.2.2. Parking Lot Lighting

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

Type: **LED Parking Lot**

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

Mfr: Hubbell, Beacon Viper luminaire

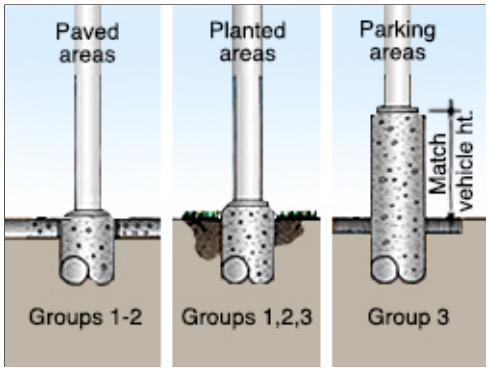
Color: Dark bronze or clear anodized as approved by BCE

Finish: Factory

Model #: VPL/ 80NB-180/4K/T3/UNV/GYS, single arm or dual arm

Other: Lamp LED, Parking – Poles will be 16' round or square seamless aluminum; up to 1.5' up swept mounting arm; pole will be rated for 100 MPH wind with a 1.3 factor

UFGS: N/A



Type: **Parking Lot Fixture Base**

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

Mfr: Custom

Color: Natural gray

Finish: Trowel

Model #: Form-cast, round

Other: N/A

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

C09.2.3. Lighted Bollards

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

Type: **Lighted Round Dome Top**

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

C09.2.4. Sidewalk Lighting

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

Type: **Rectilinear Cutoff**

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

Mfr: Hubbell, Kim Lighting

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

Finish: Anodized aluminum

Model #: Rectilinear Cutoff, Single Arm

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 1 Image Tool 250 x 188

Type: **Style 1**

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

Mfr: Vista Lighting

Color: Dark bronze anodized

Finish: Smooth

Model #: Aluminum Step and Brick Lights, 5230 round louvered

Other: Lamp: LED

UFGS: N/A

C09.2.6. Other

○ Applicable ◉ N/A

D. FACILITIES EXTERIORS

Comply with Air Force Corporate Standards for Facilities Exteriors:
http://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 3 Hangar with Insulated Metal Panels and Concrete Masonry Unit Wainscot

Historical Facility Adapted for Group 1

Group 2 Materials Palette

Group 4 Multi-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. Refer to federal and Air Force guidance on high performance and sustainable buildings and integrate site considerations in the design of buildings. Energy efficiency design decisions must be based on a life-cycle cost analysis (LCCA).

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.

◉ 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

Optimum Orientation for Efficiency and Expression of Human Scale through Massing

Massing Based on Functional Requirements

Horizontally Developed Massing

Materials Used as a Visual Base

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. Building heights will not be limited; however, building heights over 2 stories will be considered on a case-by-case basis.

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

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

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 contemporary vernacular theme with architectural features expressive of innovation and technology that represents the current mission.

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

(•) 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

Contemporary Vernacular Theme with Group 2 Materials Palette

Predominant Use of Concrete Masonry Units (CMU) at Group 2 Facility

Entrance Expressed in Roof Features

Gabled Roof with Metal Clad Endwall

Standard Materials and Colors

D03.3. Details and Color

1. Provide a palette of earth-tone colors related to the native landscape in brick, block, stucco and powder-coated metals. 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 or factory finished 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 base compatibility.

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

◉ 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

Off-White Metal Panels with Accent Color at Group 1

Compatible Colors

Log Accent Feature

Timber and Roof Color as a Focal Point

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: Consider the effects of climate on permafrost

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: Provide insulating glazing on north-facing windows / maximize shading for windows on south façades

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

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

MEP: Ground-source following LCCA

Other: Internal thermal mass walls may be used for heating following LCCA

Other: Passive systems may be developed for cooling 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: **Operable Aluminum Windows**

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

Mfr: Kawneer (or equivalent)

Color: Clear anodized as approved by BCE

Finish: Anodized

Model #: 2x4, slider, casement 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: **CMU Interior Wall Material**

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

Mfr: Custom, TBD

Color: CMU beige blend to match exteriors

Finish: Light texture

Model #: Coursed unit masonry

Other: Ground face CMU is preferred. Split face may be used as an accent only 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

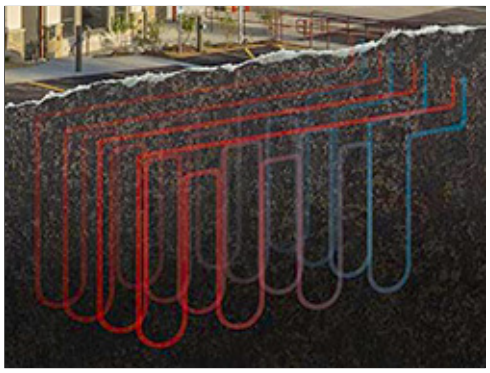
Model #: Louver

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 2 Image Tool 250 x 188

Type: **Ground-Mounted PV Panels**

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

Mfr: TBD

Color: Factory

Finish: Matte

Model #: Flat plate collector; fixed or tracking

Other: Coordinate with local utility provider

UFGS: Section 48 14 00 Solar Photovoltaic Systems

Type: **Roof-Mounted PV Array**

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

Mfr: TBD

Color: Factory

Finish: Matte

Model #: Flat plate collector

Other: Coordinate with local utility provider

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: **Wall-Mounted or Roof-Mounted Panels**

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

Mfr: TBD

Color: Factory

Finish: Matte

Model #: Flat plate collector

Other: N/A

UFGS: Section 48 14 13 Solar Liquid Flat Plate and Evacuated Tube Collectors

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 a gabled roof over all entrances to shed snow and ice away from pedestrians.

3. Provide vestibules, or transitional spaces, which are locally described as "Arctic Entry," at entries in Groups 1, 2 and 3 unless used infrequently or serving unconditioned space following ASHRAE 90.1. Design vestibules (air locks or Arctic Entry) to minimize heat loss during the action of opening and closing doors. Develop these transitional spaces, integrally with the passive and active mechanical systems.

4. Fully integrate all elements including the design of handicap ramps in the overall design of the primary entrance in an organized, uncluttered appearance.

5. Install paved transitional spaces sized for the building function and occupancy.

6. Generally, snow-melt systems should not be provided on roofing or in paving unless required to ensure efficient mission-critical operations.

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

8. Protect entrances from heavy rains and falling ice and snow.

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

D04.2. Secondary Entrances

1. Provide vestibules at entries in Groups 1, 2 and 3 unless used infrequently or serving unconditioned space following ASHRAE 90.1; use of stair towers as vestibules for multi-story buildings is encouraged when building and / or energy codes are satisfied.

2. Reflect the character of the primary entrance to a lesser extent with a smaller scale. Include "Arctic Entry" transitional spaces at secondary entrances integrally with the passive and active mechanical systems.

3. Include a recess or projection for weather protection and shading.

4. Integrate service and egress doors and loading areas with the building design by matching the materials and detailing and reflect the overall quality of the facility.

5. Incorporate egress structures such as stair towers into the facility design.

6. Canopies may be used for service and loading areas; weather protection beyond weatherstripping is not required at doors used only for life safety egress.

7. Develop building massing and orientation to minimize the appearance of service and loading areas; physically and visually separate these from primary entrances.

8. Loading areas must be organized, orderly and have an uncluttered appearance.

D05. WALL SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:
http://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. Provide only standard colors for materials, equipment and elements to ensure harmony and consistency throughout the installation. Refer to the wall systems materials section D05.4. for standard materials and associated standard colors.

4. Group 1 facilities will be predominantly rainscreen or insulated metal panel systems or concrete masonry units (CMU); for primary metal facades, CMU may be used as a secondary material and color. When CMU is used as the principal material, architectural precast may be used as an accent for water table, belt course, header, and sill components. Refer to section D05.4. for materials and colors, and also to Appendix F for special requirements, if any, of Facility Districts.

5. Group 2 facilities will be CMU with accents of CMU or coursed architectural precast for water table, belt course, header, and sill components. Precast panels may be used with BCE approval. Refer to section D05.4. for materials and colors, and also to Appendix F for special requirements, if any, of Facility Districts.

6. Group 1 and 2 facilities may receive an accent of structural debarked natural logs or heavy timber as a focal point; rough-sawn lumber cladding may be used as a finished wall material. These applications require BCE approval and coordination and should be generally limited to the main entrance.

7. Group 1 facilities, when complementing adjacent buildings, may use curtain wall systems adjacent to the main entrance or in stair towers with a glazing color of neutral, bronze or green. Use for Group2 requires BCE approval.

8. Group 3 primary materials will be insulated metal panels or ribbed metal sheeting. Where functionally required for durability, provide wainscots of split-face CMU; ground face CMU is required adjacent to grade and for north-facing exposures. Refer to D05.4. for materials and colors. Precast panels or cast-in-place concrete may be used with BCE approval following a life-cycle cost analysis.

9. Group 3 primary materials will be insulated metal panels or ribbed metal sheeting. Where functionally required for durability, provide wainscots of split-face CMU; ground face CMU is required adjacent to grade and north-facing exposures. Refer to D05.4. for materials and colors. Precast panels or cast-in-place concrete may be used with BCE approval following a life-cycle cost analysis.

10. Group 4 will be a combination of cementitious siding and shingles in Earth tone colors. Senior officer housing have more refined detailing.

11. Multi-story Group 1 facilities may include a transition in material, color or detailing to create a visual base; limit CMU to a single color on Group 1 facilities.

12. Metal Panel and Metal Sheeting Standards:
    a. Insulated metal panels are required for all actively crewed industrial buildings, such as hangars and repair facilities.
    b. Metal sheeting with batt insulation backup and interior liner sheeting is acceptable on group 3 buildings that are small in scale and with limited occupancy.
    c. Uninsulated metal panel and sheeting systems are only acceptable where interior heating or cooling are absent, such as in unoccupied storage buildings.
    d. Proportions, scale, and orientation of metal panels must be approved by the BCE.
    e. Exposed fasteners (screws) are not acceptable for either roof or wall panels except with BCE approval only.
    f. All exposed metals will be factory finished with a fluoropolymer coating such as Kynar 500 or equal. Silicone applications are not acceptable.
    g. Provide a secondary color of metal or a secondary complementary material for all wall systems on all facilities.

13. CMU Standards:
    a. Use National Concrete Masonry Association (NCMA) standard nomenclature for CMU shapes and sizes. Use NCMA specified unit dimensions (7-5/8" x 7-5/8" x 15-5/8) or nominal dimensions (8" x 8" x 16") ground face or split face CMU in a running bond pattern with tooled concave joints.
    b. Header and soldier coursing or other accents is encouraged for Group 2.
    c. Detailing should emulate bearing wall construction.

d. Joint sealants will match mortar color; when adjacent surfaces are the same color use a darker joint sealant in the same hue.
e. Provide features such as slight reveals in CMU wall plane surfaces, or by the use of a band of accent color or texture, for human scale and to emphasize horizontal or vertical proportion.
f. Conceal expansion joints with downspouts or locate these at transitions in the wall such as at pilasters or reveals.
g. Use natural gray Portland cement mortar.
h. Efflorescence in masonry work is unacceptable. Provide measures to prevent it including:
i. Reduce all soluble alkali sulfates.
ii. Use proven details to prevent water from entering the masonry.
iii. Use proven construction practices to eliminate migratory paths for moisture.

14. Architectural Precast Concrete Standards:
a. Architectural precast, in coursed units, is appropriate for lintels, sills, belt courses and friezes. Precast panel systems may be used to match adjacent facilities following a life-cycle cost analysis.
b. Use coursed precast elements sparingly to ensure that it is secondary in appearance to the predominant material such as metal panels or CMU.
c. Off-white or light or medium beige are the standard colors for precast concrete.
d. Detailed designs and patterns may be cast into panels for Group 1 facilities to create an individual character for a single facility or complex.
e. Site-cast systems and components require BCE approval.
f. Glass Fiber Reinforced Concrete requires BCE approval for its use, location, color selection, finish, and detailing.

15. Stucco may be used for Group 2 with a traditional three-coat cementitious application. The finish coat must have integral color and, when approved by the BCE, may be an elastomeric application.

16. EIFS is discouraged by AFCFS in favor of materials with greater durability such as metal, masonry or concrete. EIFS may be used only when matching adjacent facilities and with BCE approval for the class of the system.

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

18. Use detailing not subject to excessive weathering. Provide wall accents consistently throughout the base.

19. Use integrally colored materials and factory-finished metals. Do not paint CMU, stucco or factory finished metals. Only materials, which have been previously painted, may be repainted. Refer to Appendix G for painting guidelines.

20. 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.

21. Manufacturers listed in section D05.4. are only provided to establish a baseline of equivalency among all applicable manufacturers.

D05.2. Layout, Organization and Durability

1. Organize wall components including doors, windows, accents, shading devices, control joints, etc., to provide an ordered, professional appearance. Refer to section D04.1 Primary Entrances and D04.2 Secondary Entrances for "Arctic Entry" requirements.

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

3. 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.

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

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

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

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:	Rainscreen or Insulated Metal Panels or CMU
Secondary:	CMU or, when Approved, Natural Stone
Accent:	Architectural Precast, Alternate Color of Metal

Facility Group 2 wall materials will be as follows.

Primary:	CMU, Stucco or Insulated Metal Panels
Secondary:	CMU, Stucco or Insulated Metal Panels
Accent:	Arch. Precast, Alt. Color of Primary Material

Facility Group 3 wall materials will be as follows.

Primary:	Insulated Metal Panels or Ribbed Metal Sheeting
Secondary:	Optional: CMU where Approved
Accent:	Optional: Alt. Color of Primary Material

Facility Group 4 wall materials will be as follows.

Primary:	Fiber Cement Siding
Secondary:	Fiber Cement Siding, Trim Boards
Accent:	Concrete Foundation

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 2 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 Terra Series

Color: Off-white, light or medium beige, or neutral

Finish: Fluropolymer

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 - Kynar Finish**

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

Mfr: Metl-Span

Model #: CF Santa Fe Insulated Metal Wall System

Color: Off-white, light or medium beige, or neutral

Finish: Striated-embossed, fluoropolymer

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

D05.4.3. Architectural Precast

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

Type: **Coursed Precast Water Table, Belt Course, Header, and Sill**

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

Mfr: Local Precast Company, TBD

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

Color: Light beige, medium beige, natural gray, or off-white

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 cast sill, provide drip edge to prevent staining below surfaces

Color: 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: **Precast Panels**

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

Mfr: Local Precast Company, TBD

Model #: Smooth casting

Color: Light or medium beige, or natural concrete

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 1 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: Beige

Finish: Sand

Other: Accent color may be used

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 #: 1600 SS Curtain Wall System

Color: Clear anodized frames, Solex green or neutral glazing

Finish: Anodized aluminum

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 Number of base standards 1 Image Tool 250 x 188

Type: **Board-Formed or Sheet-Formed Bearing Columns and Walls**

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

Mfr: Custom

Model #: Rough-sawn dimensional lumber or liner forming

Color: Natural gray concrete

Finish: Board-formed or liner-formed texture exposed

Other: No exposed form ties; clear sealer may be applied

UFGS: Section 03 33 00 Cast-In-Place Architectural Concrete:
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 33 00.pdf

D05.4.7. Tilt-Up Concrete

○ Applicable ◉ N/A

D05.4.8. Ribbed Metal Sheeting

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

Type: **Lap Seam Vertical Rib – Concealed Fasteners**

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

Mfr: MCBI

Model #: Designer Series - Fluted

Color: Light to medium beige

Finish: Fluoropolymer factory coating, smooth

Other: 24 ga. steel, embossed texture

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

Type: **Lap Seam Purlin Bearing Rib (PBR) Panel System**

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

Mfr: Allied or equivalent

Model #: Standard PBR panel system 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) Split Face**

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

Mfr: Local TBD

Model #: 8x8x16 Nominal, face and corner units

Color: Light, medium or dark beige; or light or medium gray

Finish: Light to medium 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

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

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

Mfr: Local TBD

Model #: 8x8x16 nominal, face and corner units

Color: Light, medium or dark beige; or light or medium gray

Finish: Ground with exposed aggregate

Other: Required at locations subject to excessive 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: **Cementitious Siding**

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: Wood texture

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 3 Image Tool 250 x 188

Type: **Natural Stone**

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

Mfr: Local, TBD

Model #: Sawcut, uniform-dimensional stone strip veneer

Color: Natural Earth tones

Finish: Medium to heavy texture

Other: May be used only with BCE approval

UFGS: Section 04 20 00 Unit Masonry

Type: **Log, Timber and Lumber - Structural or Cladding**

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

Mfr: Local, TBD

Model #: Debarked Log, Rough-Sawn Timber and Lumber

Color: Natural with amber stain / sealer

Finish: Satin

Other: BCE must approve materials and finishes prior to specification and use

UFGS: Section 06 10 00 Rough Carpentry

Type: **Timber Cladding on Steel Structure**

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

Mfr: Local, TBD

Model #: Steel Post and Beam with Rough-Sawn Timber Cladding

Color: Natural with amber stain / sealer

Finish: Satin

Other: BCE must approve materials and finishes prior to specification and use

UFGS: Section 06 10 00 Rough Carpentry
Section 05 12 00 Structural Steel

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 insulation and thermal breaks are required for all heated buildings in Facility Groups 1-4. Clear finish is preferred in heavy used administrative areas 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, but these may be used in any application in Group 3 facilities.

6. Utility and emergency egress doors will match the wall color and for an inconspicuous appearance.

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.

D06.3. Glazing and Shading

1. Tinted, energy-efficient, low-e, double-pane glazing is encouraged; triple-pane glazing may be provided following and life-cycle cost analysis.

2. Generally, glazing colors will be compatible with adjacent facilities and may be solar gray, solar bronze or Solex Green; the base-wide standard color for glazing is Solex Green.

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: Clear anodized (dark bronze may be used only when approved by BCE)

Finish: Matte

Model #: 2x4, thermally broken framing

Other: Group 1 may use larger openings with larger framing sections

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: **Hollow Metal Doors, Windows and Frames**

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

Mfr: Steelcraft (or equivalent)

Color: Medium Bronze

Finish: Powder Coated, Satin

Model #: 2x4, thermally broken framing

Other: Group 1 use only for secondary entrances or emergency egress

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 light Earth tones

Finish: Powder coated, satin

Model #: Aluminum-clad wood doors and windows

Other: Double hung windows

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 immediately adjacent existing facilities in new construction.

3. Group 1, 2 and 3 facilities under a 5,000 sf footprint and/or narrow in plan geometry, may use shed, gabled or hipped standing seam metal roofs. Larger facilities may use sloped-roof features in conjunction with predominantly minimal-sloped “flat” membrane roofs.

4. Generally, follow local practices for “Cold Roof” design, which optimizes venting and air movement with appropriate coordination of the thermal envelope. Provide roof configurations that minimize or eliminate snow management requirements.

5. Provide screens for roof-mounted appendages and equipment, which are clad to match standing seam roofs or parapet walls.

6. Roof translucent panels and skylights are not permitted in roofs.

7. Group 4 facilities will have gabled or hipped composite shingle roofs.

8. Roof eaves will extend beyond the exterior wall to avoid drainage onto wall surfaces.

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

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

11. Keep roofs uncluttered and minimize penetrations.

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

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

14. Roofs will be maintained for the life of the system and replaced in accordance with UFC 3-110-04 and AFI 32-1051. A warranty is required on all new roofs.

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

D07.2. Roof Slope

1. Group 1 and 2 buildings with sloped roofs will use sloped roofs, min. 3:12.

2. Minimal-sloped roofs may be permitted on a case-by-case basis by CES for larger structures or to match existing conditions on renovation projects. Minimal-sloped roofs may be considered for Group 3 facilities in high-visibility areas..

3. Group 4 facilities will use 4:12 to 6:12 roof slopes.

4. Ensure adequate drainage, and connect internal drains to the subsurface rain collection system where available.

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

6. 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. Sloped roofs in Groups 1, 2 and 3 may be dark bronze or galvalume; generally match the color of any immediately adjacent facilities.

2. All minimal-slope membrane roofs may use low-albedo because heat island effect is not applicable.

3. Sloped roofs in Group 4 will be natural medium to dark wood 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 generally not use gutters and downspouts due to ice formation. When gutters and downspouts are approved by CES, 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 approved 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 approved 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, inconspicuous appearance and integrated into the organization of the roof and wall systems.

10. Ensure that LPS roof mounting systems are approved by the roofing manufacturer.

11. Additions to a roof will not interfere with LPS or other rooftop systems that may be required.

12. Permanent fall protection will be included with any addition to a roof with a slope above 3:12 per UFC 3-110-03 to a roof with a slope above 3:12 per UFC 3-110-03.

D07.7. Clerestories and Skylights

1. Clerestories are permitted in Group 1, 2 and 3 facilities only when serving passive systems and are justifiable by life-cycle analysis.

2. Design clerestories using the same principles for seasonal shading that are required for walls and roof overhangs.

3. Translucent panel systems are preferred in clerestory applications due to lack of window cleaning.

4. Clerestories must comply with UFC 4-10-01.

5. Skylights are not permitted.

D07.8. Vegetated Roof

1. Not applicable.

D07.9. Roof Systems Materials

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

D07.9.1. Standing Seam Metal

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

Type: **Factory Finished Steel**

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

Mfr: Berridge

Color: Dark bronze

Finish: Fluoroploymer coating, matte

Model #: Tee-Panel

Other: Shed, gabled or hipped standing seam metal

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

D07.9.2. Membrane Single-ply

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

Type: **EPDM Membrane**

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

Mfr: Carlisle Systems

Color: Off-white or black

Finish: Smooth

Model #: EPDM single-ply, “flat” minimal slope

Other: N/A

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

D07.9.3. Built-up Multi-ply

○ Applicable ◉ N/A

D07.9.4. Concrete Tile

○ Applicable ◉ N/A

D07.9.5. Clay Tile

○ Applicable ◉ N/A

D07.9.6. Slate Shingles

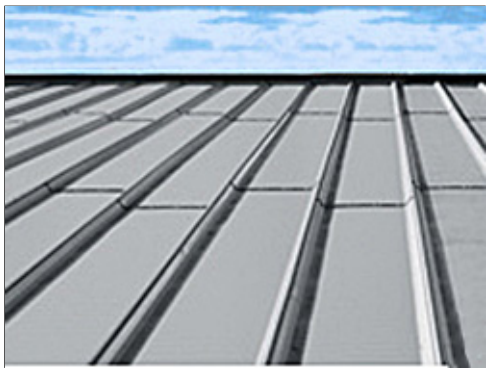
○ Applicable ◉ N/A

D07.9.7. Vegetated System

○ Applicable ◉ N/A

D07.9.8. Ribbed Metal Sheeting

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



Type: **Mechanically Seamed Metal**

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

Mfr: Berridge

Color: Dark bronze or galvalume

Finish: Factory, matte

Model #: High Seam Tee-Panel

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

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

D07.9.9. Composite Shingles

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

Type: **Architectural Laminated Shingle**

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 Number of base standards 2 Image Tool 250 x 188

Type: **Metal Fascia and Soffit**

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

Mfr: Berridge or equivalent

Color: Dark bronze

Finish: Fluoroploymer coating, matte

Model #: Flush Seam Panel

Other: Align vertical fascia joints with soffit panel joints

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

Type: **Snow Guards**

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

Mfr: Sno-Gem or equivalent

Color: Dark bronze to match roofing

Finish: Fluoroploymer coating, matte

Model #: Single Bar with Standing Seam Mounts

Other: N/A

UFGS: Section 07 61 14 Steel Standing Seam Roofing
Section 07 41 13 Metal Roof Panels

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. Rigid frame steel systems and concrete systems may be used following a LCCA.

3. Select economical structural systems that integrate roof and wall systems.

4. 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.

5. Fully coordinate structural grids with exterior window systems to align columns with window frames or wall systems.

6. When structure is exposed on building exteriors, it must be made of concrete or non-ferrous metals such as aluminum or stainless steel. Exposed non-ferrous metals are only permitted with weatherproof non-ferrous metal cladding or precast concrete cladding. Metal cladding must be factory finished and must not be field painted. Heavy timber or log construction is only permitted in additions when matching existing conditions, or in Eielson AFB Bear Lake FamCamp.

7. When structure is exposed on building interiors, provide an organized appearance and coordinate with mechanical, electrical, plumbing, fire protection, information technology, and communications systems.

8. Limit the use of specialty systems (such as space frames, vaults or domes) and of structure as a visual feature.

9. Cost-effectively design interior bearing walls as thermal mass.

10. 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: Coordinate with mechanical for chilled beam technologies

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 finish 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 Number of base standards 1 Image Tool 250 x 188

Type: **Load-Bearing Masonry**

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

Mfr: Custom, TBD

Color: Natural concrete, beige masonry or brown masonry

Finish: Ground face or split face

Model #: Board-formed or sheet formed concrete, coursed unit masonry

Other: Precast or cast-in-place concrete is preferred for Group 1. Concrete block may only be used in Group 1 when approved by the BCE.

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

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 Number of base standards 1 Image Tool 250 x 188

Type: **Lumber Framing**

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

Mfr: Boise Cascade Wood Products

Color: N/A

Finish: S4S

Model #: Structural dimensional lumber

Other: N/A

UFGS: Section 06 10 00 Rough Carpentry
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 06 10 00.pdf
Section 06 11 00 Wood Framing and Sheathing
(Not Available on UFGS)

D08.2.9. Other

○ Applicable ◉ N/A

D09. MECHANICAL, ELECTRICAL AND PLUMBING

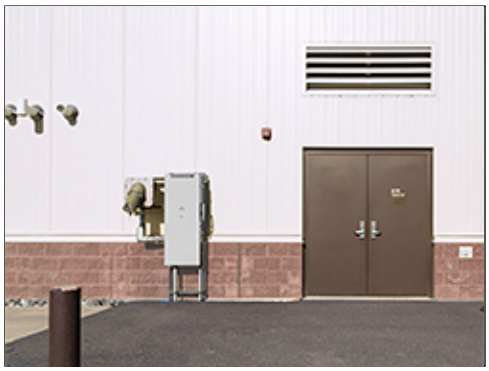
Comply with AF Corporate Standards for Facilities Exteriors:
http://afcfs.wbdg.org/facilities-exteriors/index.html

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 the summer months, when mechanical cooling is needed; ensure shading devices are properly configured given the direction they face.

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. Direct exterior access is preferred for CES personnel to main mechanical and electrical rooms. Provide access whenever it is feasible.

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.

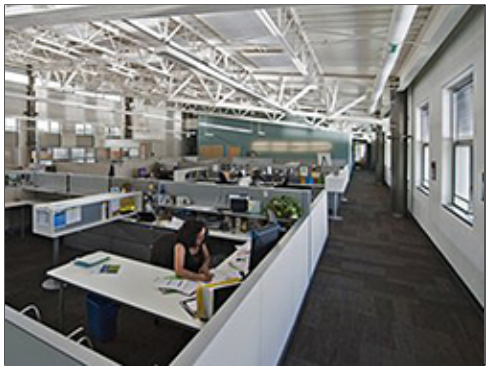
E. FACILITIES INTERIORS

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

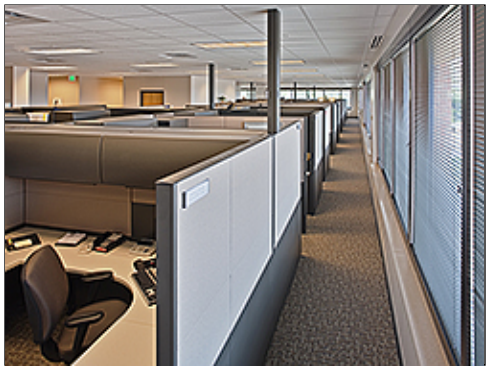
Insert 3 photos for each facility group.

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-by-case basis.

2. Resilient and rapidly renewable flooring may be used in low traffic areas in Group 1, 2 and 4.

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

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

E02.1.1. Prepared Slabs

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

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

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

Mfr: Local (TBD)

Color: Natural gray cement, light to dark beige aggregates

Finish: Fine polished texture

Model #: Medium to small aggregate

Other: N/A

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

Type:

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

Mfr: Local (TBD)

Color: Natural gray cement, light to dark beige aggregates

Finish: Medium polished texture, slip resistant

Model #: Medium to small aggregate

Other: N/A

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

E02.1.2. Natural Stone and Terrazzo

○ Applicable ◉ N/A

E02.1.3. Quarry Tile

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

Type: **Style 1**

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

Mfr: 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

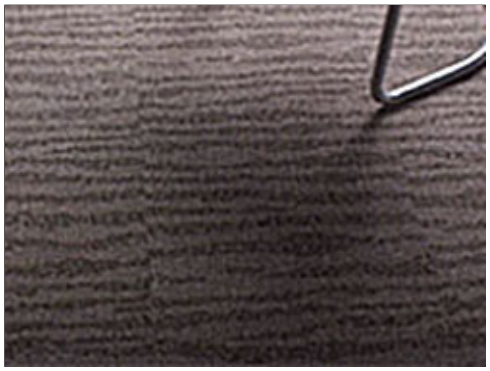
Model #: Raised design rubber tread

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

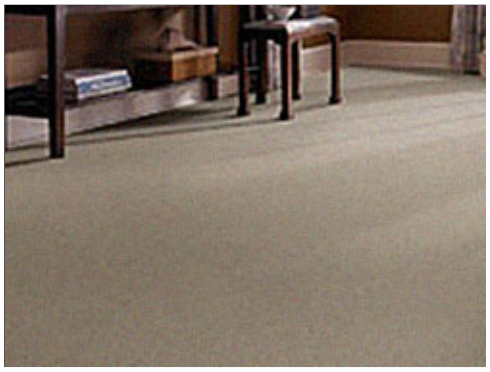
Color: Neutral multi-colored tones/patterned/solid

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-by-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-by-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 Number of base standards 1 Image Tool 250 x 188

Type: **Formed Concrete**

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

Mfr: Custom, TBD

Color: Natural concrete

Finish: Medium texture

Model #: Board-formed or sheet-formed concrete

Other: Vertical or horizontal forming is permitted

UFGS: Section 03 33 00 Cast-In-Place Architectural Concrete
http://www.wbdg.org/FFC/DOD/UFGS/UFGS 03 33 00.pdf

E03.1.2. Masonry

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

Type: **CMU**

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

Mfr: Local (TBD)

Color: CMU beige blend to match exteriors

Finish: Light texture

Model #: Coursed unit masonry

Other: Ground face CMU is preferred. Split face may be used as an accent only 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-by-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 2 Image Tool 250 x 188

Type: **Style 1 All Purpose**

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

Type: **Style 2 Kitchen**

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

Mfr: Armstrong

Color: White

Finish: Factory

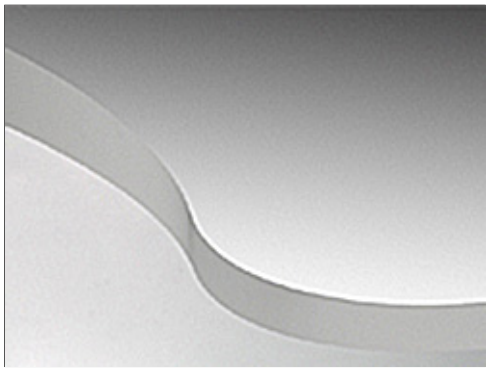
Model #: Kitchen – 2′ x 2′ Ceramaguard

Other: Grid 15/16″ Prelude (Ceiling and grid: Fire rated when applicable)

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-by-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

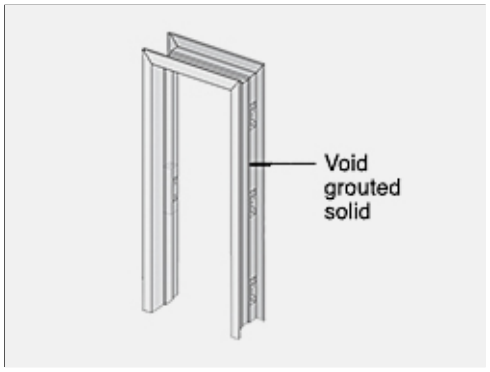
Color: Neutral colors

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 shall 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-by-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

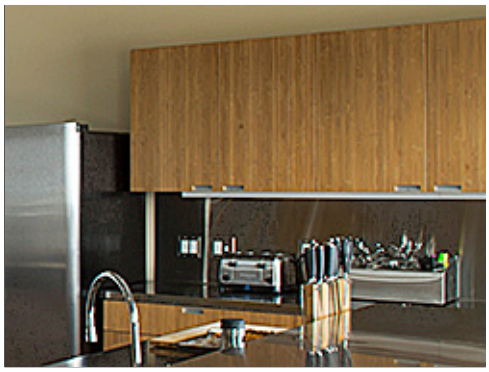
Model #: Solid Surface

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

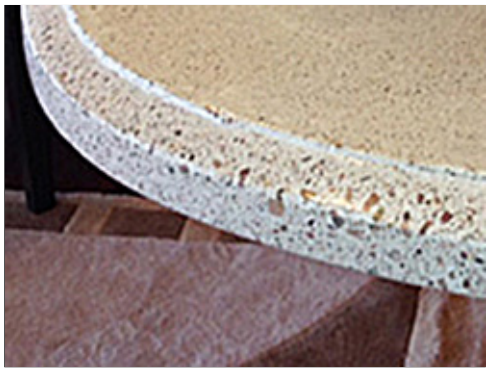
Model #: Custom cut slabs

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

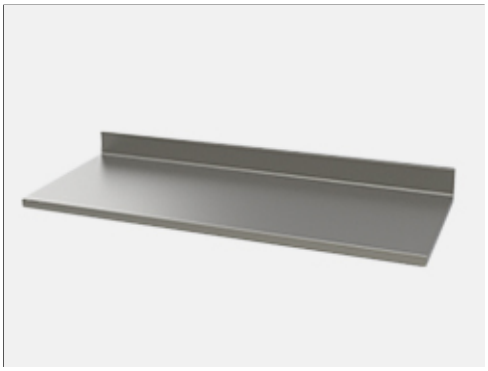
Model #: Custom cast or cut slabs

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-by-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.

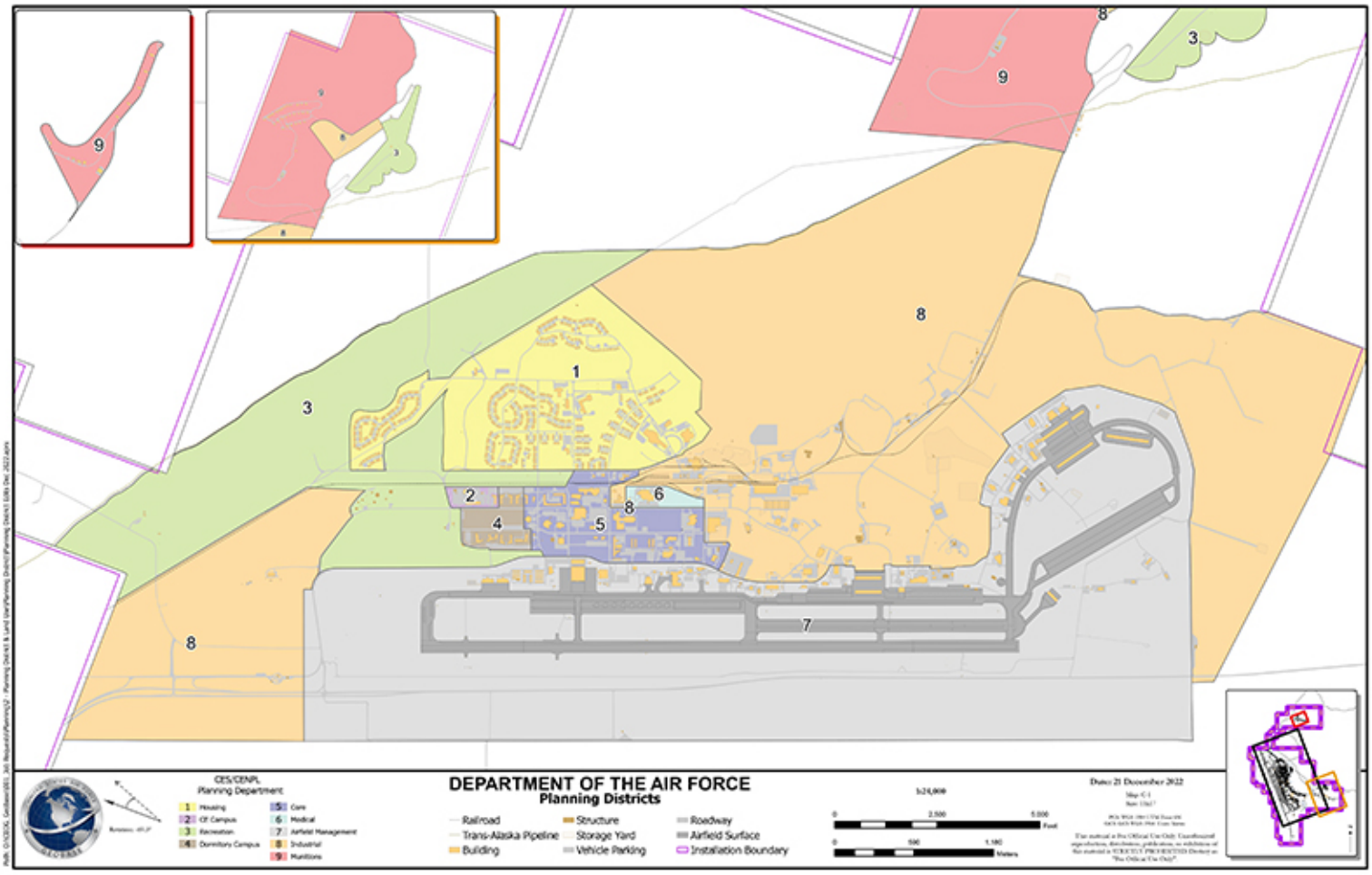
F. APPENDIX - Facility Districts

- (•) 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.*

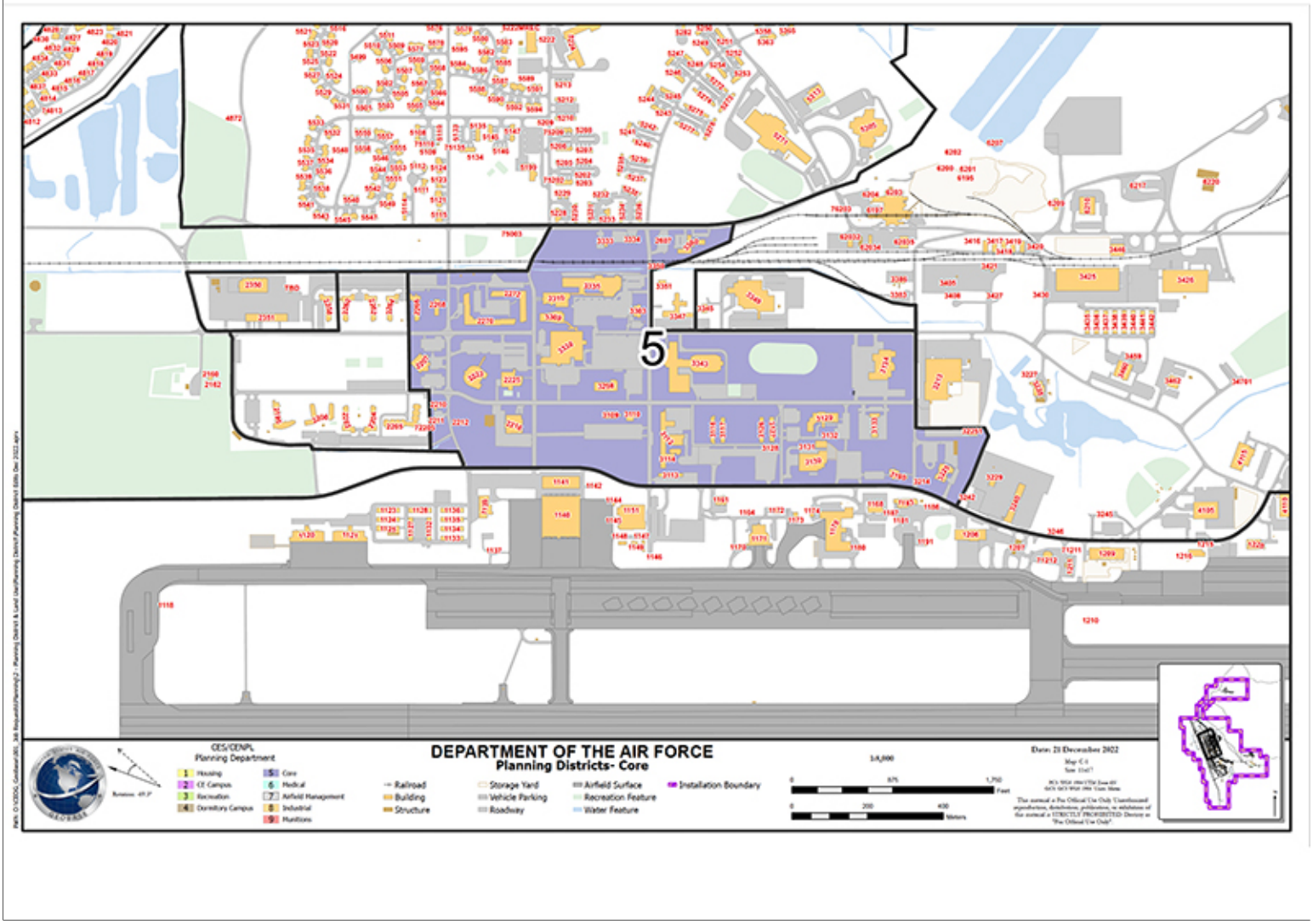
Enter No. of Facility Districts 2

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: All Districts: Standards Are Applied Base-wide (Map: Detail of Core)

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

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

1. Housing

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

2. CE Campus

The CE Campus district includes facilities that are industrial in nature. These should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 3 as defined in this IFS.

3. Recreation

The Recreation district includes outdoor areas that are very important to the quality of life at Eielson AFB. Uses included are (parks, picnic areas, jogging paths, and athletic fields. Facilities in this district are pedestrian in scale and, in many areas, are directly adjacent to open spaces further enhancing the aesthetic qualities of this district. Application of the installation prevailing architectural theme, contemporary vernacular theme, should be implemented during major renovations or new construction as appropriate.

4. Dormitory Campus

The Dormitory Campus district should be pedestrian in scale. Application of the contemporary vernacular theme should be implemented during major renovations or new construction as appropriate. Facilities in this district should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 2 as defined in this IFS.

5. Core

Facilities in the Core district should continue to be pedestrian in scale. Implement the contemporary vernacular theme during major renovations or new construction as appropriate. Facilities in this district should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 1 or 2 as defined in this IFS.

6. Medical

Facilities in the Medical district should continue to be pedestrian in scale. Integrate the contemporary vernacular theme during major renovations or new construction as appropriate. Facilities in this district should be compatible with adjacent buildings and follow standards for Facility Group 1 as defined in this IFS.

7. Airfield Management

The Airfield Management district includes facilities that are industrial in nature and may support flightline operations. Alternative uses may include maintenance, storage and utility functions including communications, civil engineering, supply and equipment, fuel storage, vehicle maintenance/motor pool complex, open storage, emergency/disaster response facilities, and other industrial uses. Facilities in this district are industrial in nature, should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 3 as defined in this IFS.

8. Industrial

The Industrial district includes facilities that are industrial in nature. These should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 3 as defined in this IFS.

9. Munitions
The Munitions district includes facilities that are industrial in nature and may include ordnance and weapons storage areas. Facilities in this district should generally match adjacent buildings to ensure architectural compatibility and will follow standards for Facility Group 3 as defined in this IFS.

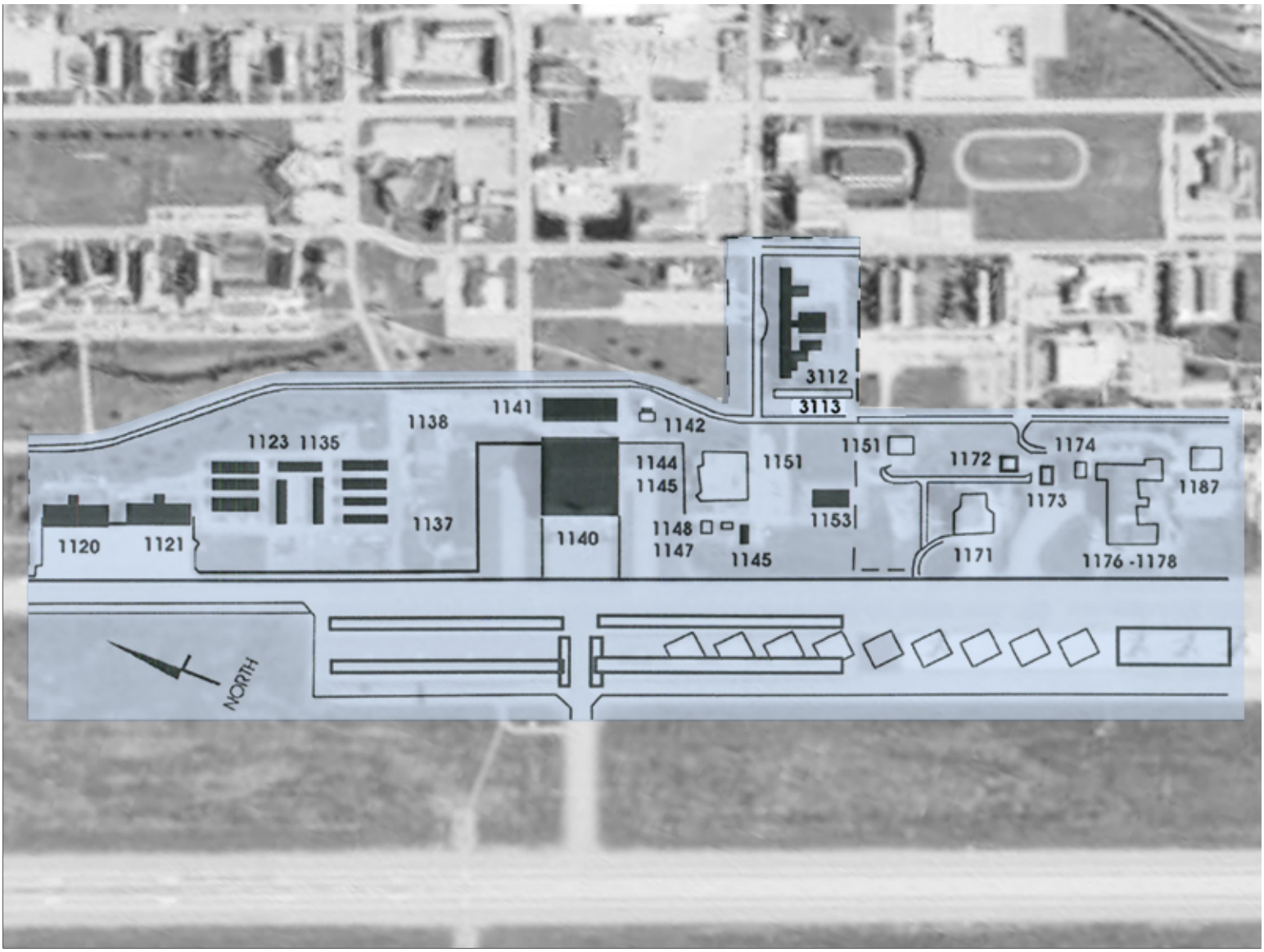
Open Space and Preserves
Open space includes undeveloped land both inside and outside of the immediate cantonment area. It both separates and defines the various sections of the base and creates a natural setting for the cantonment area. Areas classified as open space may be undeveloped to act as a buffer 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 district requires prior coordination and approval from the Base Civil Engineer.

End of Section

Name of District: Eielson AFB Flight Line Historic District (Overlay)

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

Eielson AFB Flight Line Historic District

In 2002, "A Cold War along the Flight Line," a contextual documentation and inventory of Flight Line properties at Eielson Air Force Base, was accomplished. The inventory Identified a historic district of twenty contributing buildings and one contributing structure (runway) called the Eielson AFB Flight Line Historic District. The facilities in the historic district are:

1120 Nosedock
1121 Nosedock
1123 Warehouse
1124 Warehouse
1125 Warehouse
1127 Warehouse
1128 Warehouse
1131 Runway
1132 Butler Building
1133 Butler Building
1134 Butler Building
1135 Butler Building
1136 Butler Building
1138 SAC Building
1140 SAC Hangar
1141 Aircraft Shop
1146 Generator Building
1153 Storage
1183 Squad Ops
1190 Nose Dock
3112 Amber Hall

Exceptions or amendments to the IFS base-wide standards are listed below by section number.

B01. Comprehensive Planning

1. The treatment and management of historic properties in the Eielson AFB Flight Line Historic District will be in accordance with the Programmatic Agreement regarding the operation. maintenance, and development of historic properties at Eielson AFB and the Eielson AFB Integrated Cultural Resources Management Plan.

2. Conserve original historic materials where possible and strive to ensure that rehabilitation and new construction in the district are consistent with the original function and historic character of the properties, as outlined in the Secretary of Interior, Standards for Rehabilitation of Historic Properties.

3. Consult with the State Historic Preservation Office and Advisory Council on Historic properties when designing projects in the Historic District and follow procedures outlined in the National Historic Preservation Act.

4. New facilities and building additions in this setting are discouraged.

5. If a new facility is required to meet mission requirements, the building shall be sited with front and side-yard setbacks equal to those adjacent properties. If setbacks of adjacent properties differ, use the greater setback.

C06. Landscape

1. Maintain the minimal landscaping and vegetation precedents found throughout the historic district.

2. Blend new landscaping with established landscaping precedents throughout the historic district using identical species, types, and scales or appropriate substitutes.

3. Use mature specimens where possible to avoid disruption to the historic landscape presentation.

D03. Architectural Features

1. When designing and constructing additions, carefully integrate into the character of the historic building while preserving the main facility's original character and defining features.

2. New structures must match the style, form, and level of detailing of adjacent historic examples.

3. New facilities must not exceed adjacent building height.

D05. Wall Systems

1. Materials and colors will be consistent with IFS.

D06. Doors and Windows

1. Use similar types of windows and frames on new facilities to match existing.

D07. Roof Systems

1. Materials and colors will be consistent with IFS.

2. Use similar types of roofing materials in making repairs or replacing roofs.

3. For additions and alterations, match roof pitch to the contributing building.

End of Section

G. APPENDIX - References

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

Eielson Air Force Base (EAFB) IFS Supplementary Documents

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

354th CIVIL ENGINEER SQUADRON

G01 EAFB IFS Civil Design Guide
https://www.wbdg.org/FFC/AF/AFIFS/G01_EAFB_Civil_Design_Guide.pdf

G02 EAFB IFS GIS Drafting and Surveying Standards
https://www.wbdg.org/FFC/AF/AFIFS/G02_EAFB_IFS_GIS_Drafting_Surveying_Standards.pdf

G03 Not Used

G04 EAFB IFS Plant List and Planting Standards
https://www.wbdg.org/FFC/AF/AFIFS/G04_EAFB_IFS_Plant_List_Planting_Standards.pdf

G05 EAFB IFS Painting Standards
https://www.wbdg.org/FFC/AF/AFIFS/G05_EAFB_IFS_Painting_Standards.pdf

G06 EAFB IFS Door Hardware Specifications Guide
https://www.wbdg.org/FFC/AF/AFIFS/G06_EAFB_IFS_Door_Hardware_Specification_Guide.pdf

G07 EAFB IFS Roofing Standards
https://www.wbdg.org/FFC/AF/AFIFS/G07_EAFB_IFS_Roofing_Standards.pdf

G08 EAFB IFS Overhead Door Standards
https://www.wbdg.org/FFC/AF/AFIFS/G08_EAFB_IFS_Overhead_Door_Standards.pdf

G09 EAFB IFS Foundation Design Guide
https://www.wbdg.org/FFC/AF/AFIFS/G09_EAFB_IFS_Foundation_Design_Guide.pdf

G10 EAFB IFS Utilidor Design Guide
https://www.wbdg.org/FFC/AF/AFIFS/G10_EAFB_IFS_Utilidor_Design_Guide.pdf

G11 EAFB IFS HVAC Standards
https://www.wbdg.org/FFC/AF/AFIFS/G11_EAFB_IFS_HVAC_Standards.pdf

G12 Not Used

G13 EAFB IFS Insulation Guide
https://www.wbdg.org/FFC/AF/AFIFS/G13_EAFB_IFS_Insulation_Guide.pdf

G14 EAFB IFS Electrical Design Standard
https://www.wbdg.org/FFC/AF/AFIFS/G14_EAFB_IFS_Electrical_Design_Standard.pdf

G15 EAFB IFS Head Bolt Outlet Specification
https://www.wbdg.org/FFC/AF/AFIFS/G15_EAFB_IFS_Head_Bolt_Outlet_Specification.pdf

G16 EAFB IFS Comm and Info Sys Standards Guide
https://www.wbdg.org/FFC/AF/AFIFS/G16_EAFB_IFS_Comm_Info_Sys_Standards_Guide.pdf

G17 EAFB IFS Fire Alarm Systems Standards
https://www.wbdg.org/FFC/AF/AFIFS/G17_EAFB_IFS_Fire_Alarm_Systems_Standards.pdf

G18 EAFB IFS Utility Metering Requirements
https://www.wbdg.org/FFC/AF/AFIFS/G18_EAFB_IFS_Utility_Metering_Requirements.pdf

G19 EAFB IFS Restoration Site Map
https://www.wbdg.org/FFC/AF/AFIFS/G19_EAFB_IFS_Restoration_Site_Map.pdf

G20 EAFB IFS Asbestos MOP
https://www.wbdg.org/FFC/AF/AFIFS/G20_EAFB_IFS_Asbestos_MOP.pdf

G21 EAFB IFS Fugitive Dust Emissions Plan
https://www.wbdg.org/FFC/AF/AFIFS/G21_EAFB_IFS_Fugitive_Dust_Emissions_Plan.pdf

G22 EAFB IFS Instructions for DoD Form 1354
https://www.wbdg.org/FFC/AF/AFIFS/G22_EAFB_IFS_Instructions_DoD_Form_1354.pdf

G22.1 EAFB IFS DoD Fillable Form 1354
https://www.wbdg.org/FFC/AF/AFIFS/G22.1_EAFB_IFS_DoD_Fillable_Form_1354.pdf

G22.2 EAFB IFS Fillable Checklist for DoD Form 1354
https://www.wbdg.org/FFC/AF/AFIFS/G22.2_EAFB_IFS_Fillable_Checklist_DoD_Form_1354.pdf

G23 EAFB IFS Excavation Dewatering Requirements

https://www.wbdg.org/FFC/AF/AFIFS/G23_EAFB_IFS_Excavation_Dewatering.pdf

G24 EAFB IFS Utility Pole Locations for ADOT
https://www.wbdg.org/FFC/AF/AFIFS/G24_EAFB_IFS_Utility_Pole_Locations_ADOT.pdf

G25 EAFB IFS Intrusion Detection and Access Control Systems for Secured Spaces
https://www.wbdg.org/FFC/AF/AFIFS/
G25_EAFB_IFS_Intrusion_Detection_Access_Control_Systems_Secured_Spaces.pdf

G26-G70 Not Used

G71 EAFB IFS Fire Protection Guide
https://www.wbdg.org/FFC/AF/AFIFS/G71_EAFB_IFS_Fire_Protection_Design_Guide.pdf

End of Section