

PEASE AIR NATIONAL GUARD BASE INSTALLATION FACILITIES STANDARDS (IFS)



Installation Elements



Site Development



Facilities Exteriors



Facilities Interiors

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Signature Field

Pease Air National Guard Base IFS

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E03.1.8. Other			

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. Host Nation Facilities: Use the International Building Code(r) (IBC) for planning, design and construction of all facilities built for Host Nation personnel use outside of the United States and its territories and possessions. Use the IBC in conjunction with Status of Forces agreements (SOFA), bilateral agreements or other Host Nation (HN) agreements.
UFC 1-200-01 DoD Building Code: https://www.wbdg.org/FFC/DOD/UFC/ufc_1_200_01_2022_c2.pdf

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

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Main Gate



Group 1 Materials Palette



Group 2 Materials Palette



Group 3 Hangars

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:

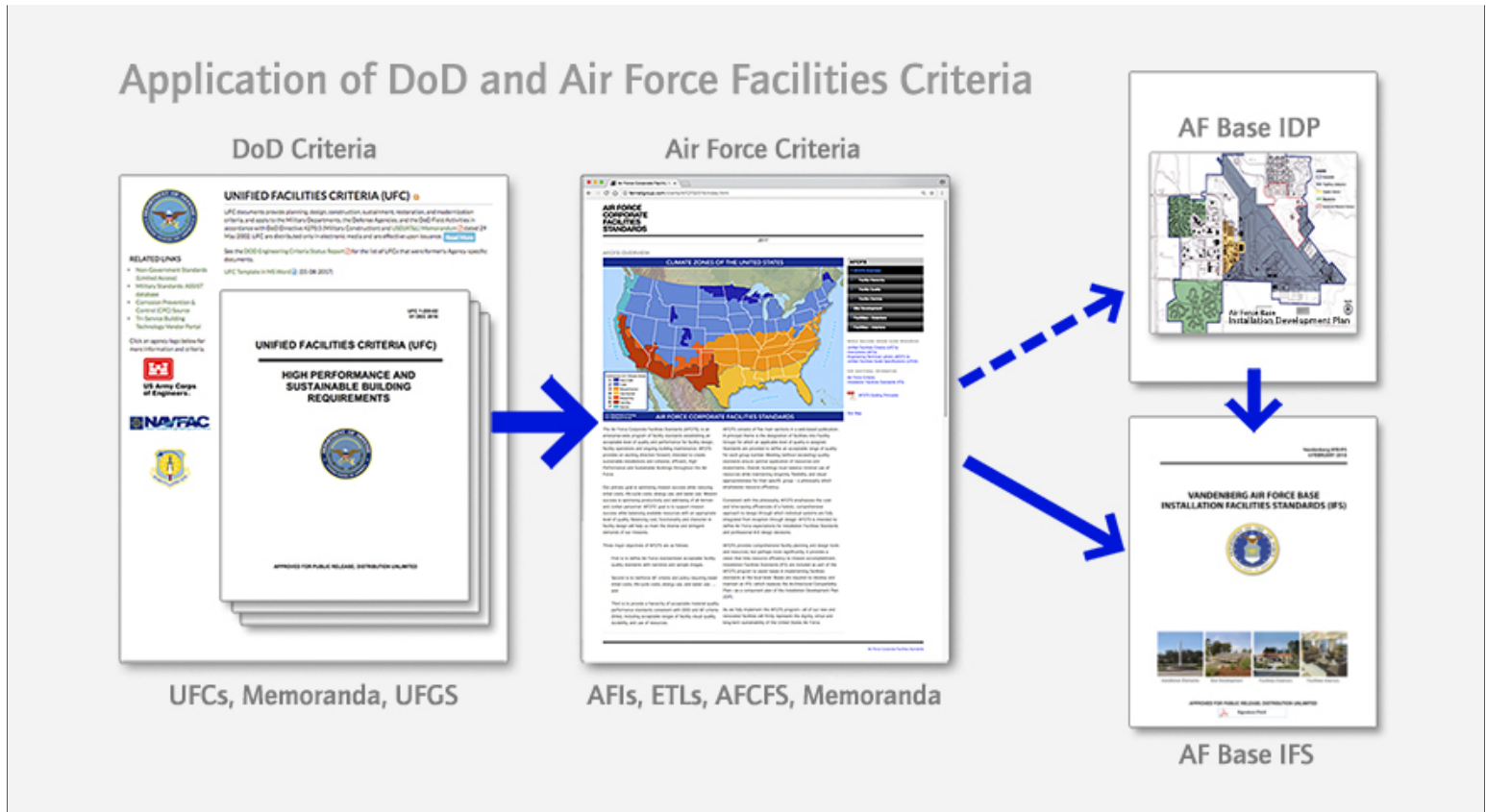
<http://afcfs.wbdg.org/installation-elements/comprehensive-planning/index.html>

B01.1. Installation Development Plan (IDP)

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

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☐ 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's Comprehensive 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

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

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Main Gate of Former Pease Air Force Base



133rd P-47D Thunderbolt (1947)



Refueling an A-10 (1984)



Former Pease Air Force Base

Pease Air National Guard Base (Pease ANGB) is located in a portion of Pease International Tradeport, former Pease Air Force Base, in Portsmouth and Newington, New Hampshire. The base is named for Captain Harl Pease, Jr., a heroic B-17 pilot during World War II. Captain Pease posthumously earned the Congressional Medal of Honor on December 2, 1942, when it was presented by President Franklin D. Roosevelt to his parents.

Pease Air Force Base began as the Portsmouth Municipal Airport in the 1930s and during World War II improvements to the airport were made for military purposes. The airport was closed to civilian use in 1942, and Civil Air Patrol began using the facility in 1944. The airport was eventually leased to the U.S. Navy, who already had a nearby presence at the Portsmouth Naval Shipyard.

The U.S. Air Force assumed control of the airport in 1951, when the installation was selected for development as a Strategic Air Command (SAC) base. Additional land was purchased for expansion of the base between 1952 and 1956. Numerous military aircraft have been stationed at the facility throughout its history including several types of strategic bombers, cargo aircraft, and aerial refueling aircraft.

In 1966 Pease became home to the New Hampshire Air National Guard 157th Military Airlift Group. That Unit's designation was changed in 1975 to a refueling mission and currently the 157th Air Refueling Wing flies twelve KC-46A refueling aircraft. In addition, the Wing acts as host to a variety of transient military aircraft. Since the closure of the Air Force Base in 1991 the Air National Guard has reconfigured many of the buildings it inherited from the Air Force to suit its unique mode of operation and evolving mission. Pease ANGB currently includes 215 acres of land.

B01.1.3. Future Development

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

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☐ Applicable ☒ N/A Small graphics do not apply



Aerial Image of Pease Air National Guard Base

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

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

3. Large open areas of land are not readily available for future development at Pease ANGB. Detailed analysis will be required if future extensive building projects are required. Analysis may include of demolition of antiquated facilities, incorporation of multi-story facilities, and/or availability of reasonable parking as part of any planning or design solution.

4. An important future development influence is the issue of security. As with all military installations, Pease ANGB must address security needs as they relate to the built environment.

5. All MILCON projects are required to complete an Air Force Sustainability Requirements scoresheet and to follow Federal, DoD and AF criteria for sustainability following UFC 1-200-02 and AFCFS.

6. Follow federal requirements to reduce demand and optimize performance of the building energy and water systems as a key strategy to minimizing the total ownership cost of AF facilities. Design buildings to reduce energy consumption following UFC 1-200-02 and base design decisions on life-cycle cost (LCC) effectiveness using calculation methodologies detailed in the UFC's Appendix A and NIST Handbook 135. Cost-effectively attain energy efficiency and water conservation.

Designers are required to follow UFC 1-200-02 and fully integrate natural and passive design strategies prior to the design of active and mechanical system.

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

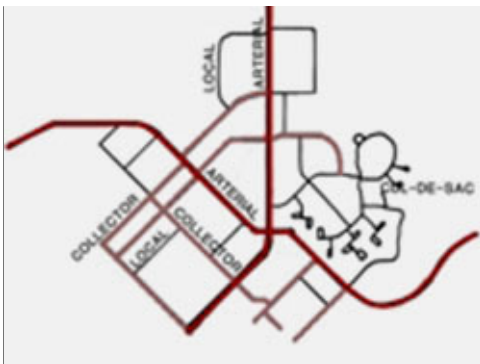
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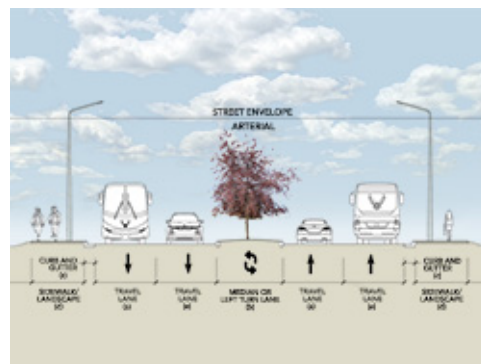
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Coordinated Street Elements



Hierarchy of Streets



Street Envelope Section



Collector Street



Local Street



Local Street

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 and 3. Reduce maintenance requirements by installing highly durable materials and finishes in routes along Group 3 industrial facilities.
4. Special routes may have a visual quality comparable to those along facilities in Group 1.
5. Provide on-street parking on collector streets only on lower speed roadways.
6. Provide appropriate landscape setbacks and pedestrian buffers along all streets.
7. Minimize and consolidate curb cuts along streets.
8. Ensure access for emergency and service vehicles.
9. Define bicycle traffic routes in the Installation Development Plan or its applicable component plans.
10. Define appropriate force protection features, site furnishings, signs, lighting, utilities, and paving in the IFS.

B02.1.1. Arterial Streets

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Arterial streets are not present within the Pease ANGB.

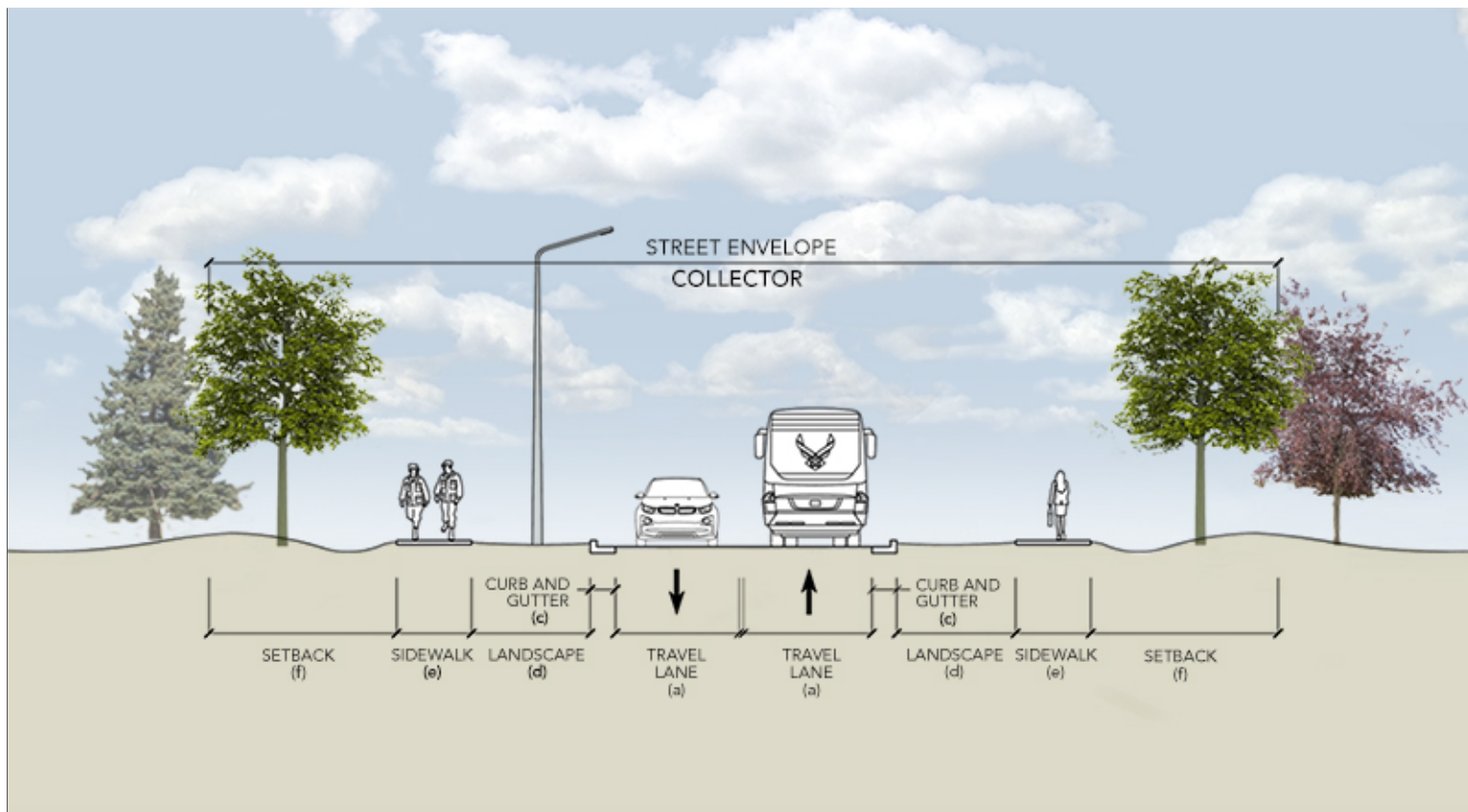
B02.1.2. Collector Streets

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

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

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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 ATFP



Collector Road at Group 1



Collector Road at Group 2



Collector Road at Group 3

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.

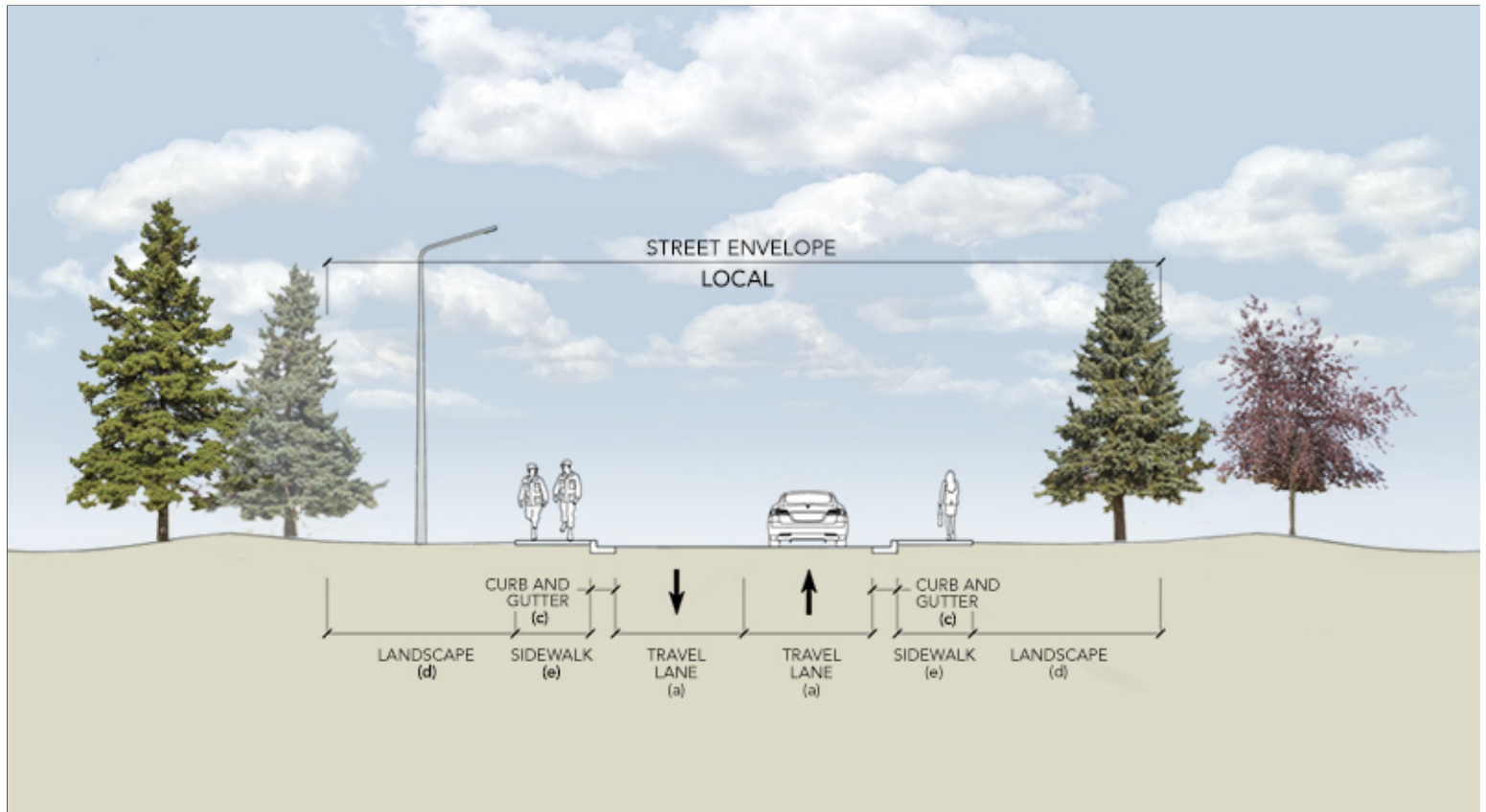
B02.1.3. Local Streets

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

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

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



Local Street at Group 1



Local Street at Group 2



Local Street at Group 3

1. Frequent traffic stops and low speeds are permitted on local streets.
2. Provide sidewalks on at least one side of local streets and both sides of local streets where functionally required. Buffers are preferred but not required on local streets.
3. On-street parking may be allowed following UFC industry references.

4. Signs, plantings and street lighting should reinforce the designation of “local” street.

B02.1.4. Special Routes

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

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

B02.2. Hierarchy of Intersections

☐ Applicable ☒ N/A Large graphics do not apply

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

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Four-Way Intersection



T-Intersection



Crosswalk at T-Intersection

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 Small graphics do not apply

1. Arterial streets are not present within the Pease ANGB.

B02.2.2. Arterial/Collector

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Arterial streets are not present within the Pease ANGB.

B02.2.3. Collectors

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Four-Way Intersection



T-Intersection



Collector Adjacent to Main Entrance

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 Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

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

B02.2.5. Street Frontage Requirements

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Street Frontage at Group 1



Street Frontage at Group 2



Street Frontage at Group 3

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

Image Tool 250 x 188



View at T-Intersection



View at T-Intersection



View Adjacent to Contractor Gate

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

B02.3. Street Elements

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Crosswalk



Pop-Up Barrier



Stormwater Grate

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, where possible and practical.
3. Install curbing as applicable to direct stormwater to stormwater management systems and protect pedestrian walkways.
4. Provide on-site utility service lines and equipment below grade where possible and practical. When mounting elements such as utility cabinets and communications equipment 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 within the Pease ANGB.
7. Follow UFC 3-120-01 for directional and wayfinding signs and address both vehicular and pedestrian traffic.
8. Reduce energy consumption and reduce maintenance requirements by providing street lighting only when functionally required to ensure safety and to address antiterrorism following UFC 4-010-01. Ensure the quality and quantities of lighting and fixtures are appropriate for the adjacent Facility Group number.
9. Refer to section C04 for applicable Stormwater Management requirements.

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. To the extent practical, use local materials that meet the requirements of NHDOT.

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

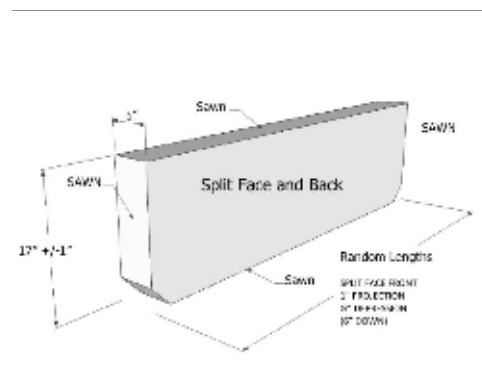
Image Tool 250 x 188



Vertical Granite Curb



Curb tip-down



Granite Curb Dimensions

1. Curb streets except remote/isolated roads and non-paved service roads.
2. Painted curbs are prohibited because they are very difficult to maintain.
3. Use asphalt for sidewalks. Use granite for curb. Do not use asphalt or concrete curbs.
4. To the extent practical, use curbs that meet the requirements of NHDOT.
5. Refer to section C05.1 for applicable Circulation and Paving requirements.

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



Electrical Transformer and Generator



Gas Pipe Risers



Water Tower

1. Provide all utility service lines below grade where possible and practical. When mounting elements (such as utility cabinets and communications equipment) above grade is unavoidable, paint these consistently and provide visual screening following Site Development, Landscaping. Transformers (T-#), Switches (SW-#) and Comm (C-#) cabinets will be numbered.

2. Overhead service lines are discouraged.
3. Locate fire hydrants at least 5 feet away from other structures. Maintain a 30-inch clear area. Fire Hydrants must be painted based on flow rates.
4. Locate Post Indicator Valves (PIV) at least 5 feet away from other structures. PIVs must be locked.
5. Locate pad mounted equipment in less visible areas where possible.

B02.3.4. Traffic Signs

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Stop Sign



Instructional Sign



Base Speed Limit Sign

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://afcfb.wbdg.org/installation-elements/index.html>

B03.1. Plazas, Monuments and Static Displays

☐ 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



Flag Court at Building 100



Minute Man at Main Entrance



POW/MIA Monument at Main Entrance

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 Small graphics do not apply

1. Mitigate heat island effect by providing high-albedo, shaded plazas. Pervious pavers must be used on all plazas and courtyards in Facility Groups 1 and 2; use pervious concrete in Groups 3 and 4. The designer must incorporate appropriate expansion and construction joints.
2. Pavers must match the color and pattern of pavers used on adjacent sidewalks using base standard range of neutral colors. Bricks used on plazas must typically be 4" x 8" size.

B03.1.2. Sculptures, Markers and Statuary

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

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 must follow AFI 36-3108 and be limited to highly deserving individuals or groups as deemed appropriate by the installation leadership. Living memorials (tree plantings / etc.) are discouraged due to added maintenance requirements.
4. When sculpture requires a base, match the materials and / or color palette of adjacent buildings.
5. Use direct or indirect lighting to accentuate features or enhance an intended effect.
6. Ensure that all sculpture, markers, and statuary are honorable and inspiring, provide a sense of place, positively contribute to the base's visual quality, and encourage pride for the community and the US Air Force.

B03.1.3. Static Display of Aircraft

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

Image Tool 800 x 440

☐ Applicable ☒ N/A Small graphics do not apply



Static Display of Aircraft

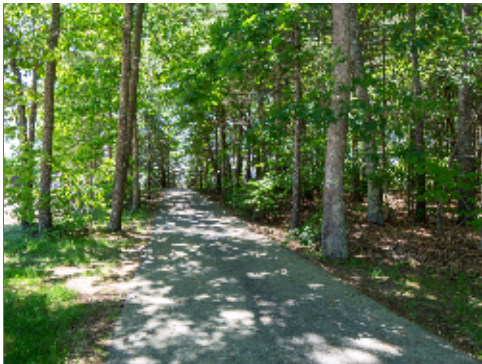
1. Follow IFS base-wide standards for all elements of the display area with specific attention to traffic sight lines, pedestrian circulation, site furnishings, signs, and lighting. Address requirements for the Facility District as well.
2. Generally, locate concrete base/foundation structures for static 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 Large graphics do not apply

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

Image Tool 250 x 188



Pedestrian Pathway



Outdoor Seating Area



Picnic Area at Group 1

1. Maintain preservation areas following the IDP and IFS.
2. 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.
3. Identify and describe base-wide utility corridors in the IDP.
4. Base-wide utility infrastructure will be inconspicuous. Bury utility service lines below grade where possible and practical. When service lines are located above grade, create an ordered, coordinated appearance.
5. Follow the requirements of this IFS regarding all utility equipment, structures and service lines located above grade that visually impact the installation.
6. Where screening of utility equipment and structures is provided, allow adequate and proper clearance for safety and maintenance.
7. 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
8. 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.
9. Paint aboveground equipment and associated components such as electrical piping or exposed plumbing lines dark bronze, or to match the color of the underlying painted surface on a building.
10. Maintain existing buried utility service lines as a visual asset.
11. 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

12. Consolidate and enclose service utility lines in underground utility corridors when feasible. Create routes outside of paved areas, where possible.

13. 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. Parade Grounds are not present at Pease ANGB.

B03.2.2. Parks

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Parks are not present at Pease ANGB.

B03.2.3. Preserves

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Preserve areas adjacent to runways, taxiways, aprons, 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.

- End of Section -

B03.2.4. Perimeter Fence

☒ 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



Decorative Fence



Reinforced Chain-Link Fence



Chain-Link Fence



Main Gate

1. Design, install and maintain the Base's perimeter fence following UFC 4-022-03. The minimum crash rating required will be identified by the Base Civil Engineer.
2. Stringently comply with AT requirements following UFC 04-010-01 for a K-8 rating 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 -

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

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Pedestrian Route Adjacent to Local Street



Pedestrian Route with Landscape Elements



Pedestrian Access to Group 2 Facility

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. Account for appropriate snow control of all paved areas (vehicular and pedestrian) to include snow plowing, stockpiling, and hauling operations when the facility is both unoccupied and occupied.
4. Promote integrated design with Low Impact Development solutions such as engineered small-scale hydrologic controls versus base-wide infrastructure; consider open space, natural features, stormwater treatment system, building roofs, streets, and paved surfaces, and snow storage areas.
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 impacts to natural areas and 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 infrastructure and systems and cost effectively connect building systems to harvest 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. Cost effectively mitigate heat island effects from paving and roof designs when implementing an integrated approach to stormwater management.
16. Consider the location of "Designated Tobacco Areas."
17. Include temporary measures and facilities to maintain existing pedestrian and vehicular traffic during construction.
18. Allow for future expansion of buildings, parking and other site facilities.
19. The Pease ANGB provides utility mark out information for its own utilities. A Work Clearance Request (AF Form 103) must be submitted through CE Operations at least two (2) weeks but not more than twelve (12) weeks in advance of the intended excavation activities. The exception to this is existing natural gas lines. Contractors are required to contact Dig Safe to coordinate location, verification and marking of natural gas lines by Unutil.
20. Excess stripped soil will normally be specified to become property of the Contractor and is to be removed from the base. Coordinate with the Government if testing for regulated contaminants should be performed.
21. Throughout earth disturbing activities, erosion control measures must be provided in accordance with the New Hampshire Stormwater Manual.

- End of Section -

C01.2. Building Orientation

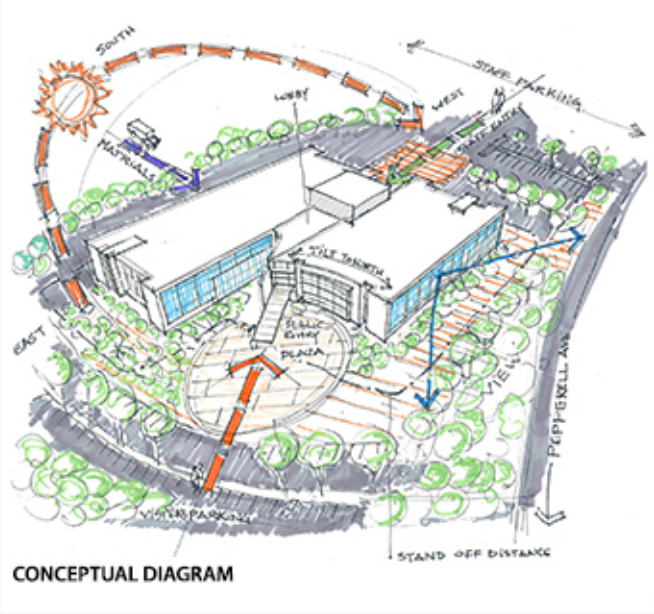
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- Select number of graphics / images (large: 800 px x 440 px) to insert
- 1
- ☒ Applicable ☐ N/A
- Select number of graphics / images (small: 250 px x 188 px) to insert
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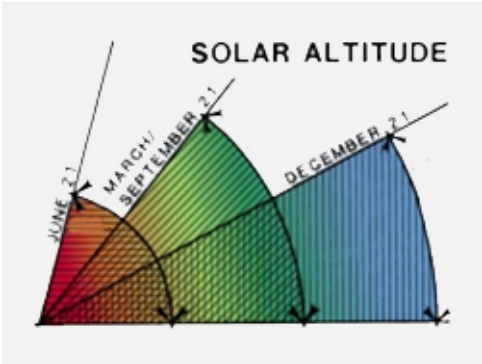
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DRIVING FACTORS

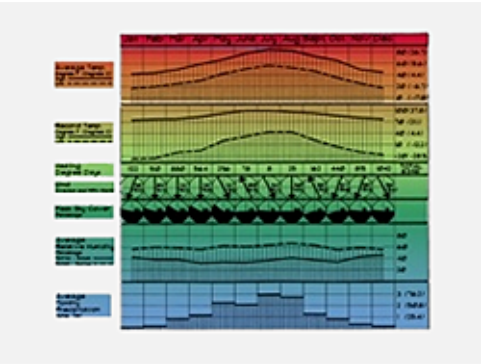
- | | | | |
|--|--|--|---|
| • Optimal solar orientation of the building. | • Maximize the daylight & desirable views. | • Meet the required AT/FP standoff distance | • Create a unified campus |
| • Main entrance from Pepperrell street. | • Saving existing vegetation and trees | • Separation between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



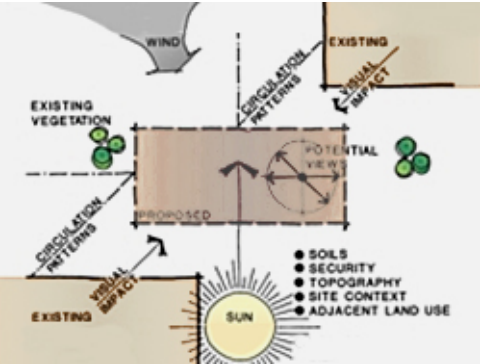
Conceptual Site Analysis and Site Design Diagram



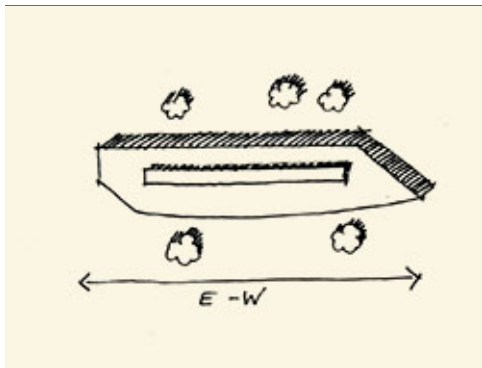
Local Solar Data



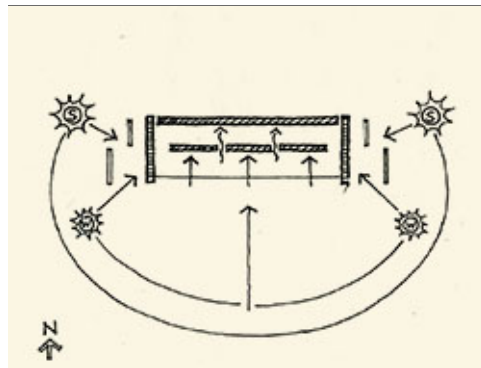
Local Climate Data



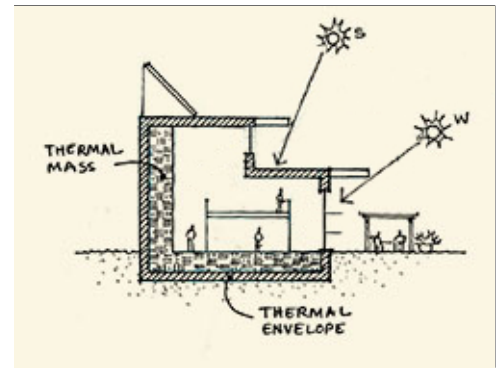
Site Data



East-West Axis



Optimum Solar Control



Maximized Shading

1. Ensure the site will accommodate optimum requirements for building orientation, which is with the long axis parallel to the east/west direction for rectilinear CONUS buildings.
2. Meet Installation Facilities Standards (IFS) requirements for the locations of the building's passive and renewable-energy systems—including geothermal and solar systems—and exterior shading systems.
3. Locate the building(s) and permitted ancillary structures to promote solar gain, solar shading, natural ventilation, 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 beneficial byproducts.
5. Consider the “public side” of the building, its views and the location of the main entrance.
6. Accommodate for areas of the site shaded by the building that will significantly delay the natural melting of snow and ice. Ensure that pedestrian access is not hindered with prolonged unsafe conditions from ice and snow buildup in shaded areas.

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



Air Cooled Condensing Units



Fluid Coolers



Electrical Generator

1. Provide all on-site utility service lines below grade for Facility Groups 1, 2 and 3; 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 utility services below grade into an interior space within the facility; exposed conduits, cables and wires on exterior walls are not permitted for Facility Groups 1, 2 and 3.
4. Limit exterior mechanical distribution systems such as chilled water distribution to Group 3 facilities; when required for Group 1 and 2 facilities integrate with the architecture and provide visual screens following IFS.
5. Natural gas lines within the installation perimeter are currently owned and maintained by Unitil. Comply with Unitil standards and requirements for natural gas mains, services and meters. Natural gas mains and services must be a minimum of 36 inches below grade. Costs for installation or relocation of natural gas mains, services and meters must be paid directly to Unitil by the Contractor.
6. Procure water meters from the City of Portsmouth Water Department and associated fees must be paid directly to the City by the Contractor. The City does not need to be notified of any other activities within the installation perimeter (i.e., connection to water or sewer mains), as these systems are owned and operated by the Government.
7. Fire hydrants must be painted in accordance with UFC3-600-01.
8. Collocate coaxial and telephone components and entry points. Align all communication components with one another on the horizontal and vertical plane.

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:

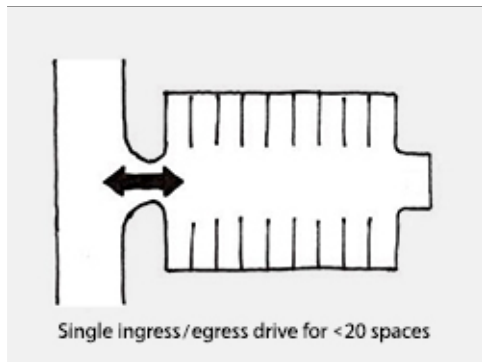
<http://afcfs.wbdg.org/site-development/parking-areas/index.html>

C03.1. Configurations and Design

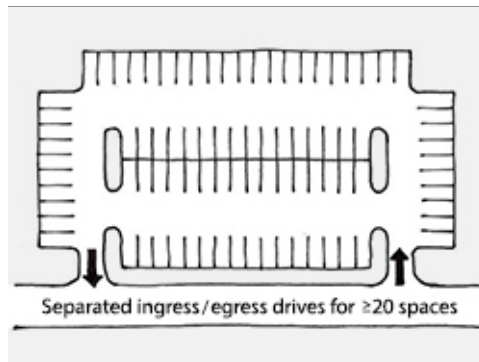
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☒ Applicable ☐ N/A Select number of graphics / images (small: 250 px x 188 px) to insert 3

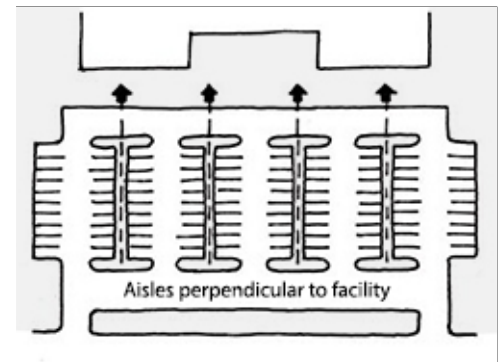
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Small Lot Configuration



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 and promote snow removal operations and temporary snow storage.
2. Generally, envision on-site parking as a series of small connected singular areas selectively placed around the facility served, rather than a single large area; buffer parking areas from the facility main entrance with a transition space and provide drop-offs to decrease close-in parking. Comply with IFS standards while meeting AT requirements.
3. Integrate curbing, permeable paved areas, and parking islands with the stormwater management system and direct stormwater to stormwater treatment systems, where required. Design stormwater management systems that comply with New Hampshire Department of Environmental Services (NHDES) Land Development statutes and rules. Configure curbing to facilitate snow removal. Ensure snow storage areas are coordinated with the stormwater plan.
4. Define pedestrian access with approved hardscape.
5. Coordinate suitable landscape or barriers integrated with walls and fences to ensure adequate force protection.
6. Accessible parking spaces, and routes, 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. Designate preferred parking spaces for electric vehicles and carpools near the main entrance.
9. Consider cost-effectively integrating solar photovoltaic arrays into covered parking structures.
10. Reserved parking is discouraged except for Facility Group 1.
11. On-street parking is prohibited on Base for new developments.
12. Access and service drives must accommodate the largest vehicle serving the facility.
13. Arrange parking lots for safe, efficient pedestrian travel from vehicles to building entrances.
14. Parking circulation aisles must accommodate the largest vehicle identified by the Base Civil Engineer.
15. Parking design and pavement projects should consider repairs or replacement of existing antiquated or aged underground utility systems to outside of the pavement limits and the placement of spare conduits for future utility service improvements.
16. Avoid dead-end passenger vehicle parking lots exceeding 20 spaces.

17. Passenger parking lots must include a dedicated area for motorcycle parking with concrete paving.
18. Locate and configure parking lots to maximize sharing with other adjacent facilities.
19. Provide granite curbing to protect walkways, light poles, signs and other structures, as well as, to control and direct stormwater runoff to stormwater management/treatment systems.
20. Provide emergency access and routes to buildings according to UFC 3-600-01, Fire Protection Engineering.

C03.1.1. Paving and Striping

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

Image Tool 800 x 440

☐ Applicable ☒ N/A Small graphics do not apply



Typical White Striping on Asphalt Paving

Facility Group 1 paving materials will be as follows.

Primary: Bituminous Paving

Secondary: Concrete

Accent: Optional: Colored concrete or pavers at walkways

Facility Group 2 paving materials will be as follows.

Primary: Bituminous Paving

Secondary: Concrete

Accent: N/A

Facility Group 3 paving materials will be as follows.

Primary: Bituminous Paving / Concrete

Secondary: Concrete

Accent: N/A

Facility Group 4 paving materials will be as follows.

Primary: N/A

Secondary: N/A

Accent: N/A

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

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

3. Dirt, gravel, and grass lots are not allowed.

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

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

6. Accessible parking space pavement markings must be according to ABAAS and MUTCD.

- End of Section -

C03.1.2. Curbing

☒ 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



Vertical Granite Curb

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

Primary: Vertical Granite

Secondary: Sloped Granite

Accent: N/A

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

Primary: Vertical Granite

Secondary: N/A

Accent: N/A

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

Primary: Granite

Secondary: N/A

Accent: N/A

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

Primary: N/A

Secondary: N/A

Accent: N/A

- 1. Define parking lots with curbing, as appropriate, to promote drainage and protect walkways and other structures.
- 2. Provide curbing to direct stormwater runoff to stormwater management systems.

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

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 Small graphics do not apply



Planted Parking Lot Median

1. Install landscape islands and medians as visual breaks, to reduce heat island effects and to accommodate stormwater management/treatment systems, and snow storage and removal. Coordinate require ATRP measures with the landscape, walls and fences following IFS.

2. At-grade islands are preferred. Raised internal islands are highly discouraged due to their negative effect on snow and ice control operations.

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

4. Provide designated areas for pedestrian cross traffic.

C03.2. Parking Structures

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Parking Structures are not present at Pease ANGB.

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 From Parking to Bldg, Group 1



Connection From Parking to Bldg, Group 2



Crosswalk

1. Note: Pease Air National Guard Base does not currently have access to public transportation within the installation perimeter.
2. 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.
3. Evaluate the IDP for the current and planned network of roads and optimally develop vehicular access to and from the site.

C04. STORMWATER MANAGEMENT

Comply with AF Corporate Standards for Site Development:

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

Comply with AF Corporate Standards for Stormwater Management:

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

C04.1. Stormwater Requirements

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

Image Tool 800 x 440

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

Image Tool 250 x 188



Bioretention Area



Stormwater Detention



Stone Check Dam



Stormwater Grate in Asphalt Pavement

1. Design stormwater management systems including conveyance systems, treatment systems and pretreatment systems, 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 Low Impact Development measures into the design of all roadways, parking, and facility roof systems to enhance water quality and support the overall stormwater system.
3. Permeable paving may be used where approved by the Base Civil Engineer.

4. When stormwater management/treatment systems are required establish a maintenance program to include inspection requirements and frequency and maintenance requirements and frequency.
5. Cost-effectively integrate stormwater systems with ATFP measures.
6. Design stormwater management systems that comply with New Hampshire Department of Environmental Services (NHDES) Land Development statutes and rules.
7. Comply with UFC 3-210-10 Low Impact Development, UFC 3-201-02 Landscape Architecture, and EISA section 438.
8. Comply with the Pease ANGB Stormwater Pollution Prevention Plan.
9. Direct roof drainage to stormwater treatment systems that reduce temperature to appropriate levels before discharge to existing drainage systems and courses. Where roof drainage is discharged to grade, provide splash blocks or other appropriate outlet protection.
10. To the extent practical use NHDOT standard structures (i.e., catch basins and manholes) for closed storm drain systems.

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



Unit Paver Sidewalk at Group 2 Facility



Concrete Sidewalk at Group 1 Facility



Unit Paver Sidewalk at Group 2 Facility



Asphalt Pedestrian Trail

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

Primary: Concrete Paving

Secondary: N/A

Accent: Pervious Pavers (Optional)

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

Primary: Concrete Paving

Secondary: N/A

Accent: Pervious Pavers (Optional)

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

Primary: Bituminous Paving

Secondary: N/A

Accent: N/A

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

Primary: N/A

Secondary: N/A

Accent: N/A

1. Maintain efficient geometry and accessibility to connect building entrances to adjacent parking areas and activity areas. 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. Walkways in parking areas will provide a direct path using "safe islands" and "peninsulas" to encourage safety. Walkways parallel to streets will follow streetscape guidelines. Clearly mark pedestrian crossings at vehicular routes.
4. Pervious pavers may be used on sidewalks, plazas and courtyards where approved by the Base Civil Engineer.
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 5.0' in width to allow for comfortable side-by-side walking, .
8. Sidewalks along roads, leading to a building's main entrance, and at the interior of parking lots will be a minimum width of 6.0'. Walkways greater than 10.0' wide may be used at high-density pedestrian areas where volumes of traffic justify added material. Wide sidewalks may be used for fire truck access if the width is approved by the Authority Having Jurisdiction and walkways are designed to accept the vehicle load of a fire truck.
9. Where vehicles park adjacent and head-in to the sidewalk and curbing is not used, such perimeter walks will be either increased to a minimum width of 8.0' to accommodate overhangs of the parked vehicles or separated from vehicle parking by a planting strip/buffer.
10. Sidewalks must have positive drainage to prevent ponding of water or ice accumulation with slopes ranging from 1.0% to 4.9%. Walks with a slope greater than 4.9% will be designed as ramps following accessibility guidelines. All walks will have a cross slope between 1.0% and 2.0%.
11. Pavers will conform to the following range of color: Natural gray and tan colors. Pavers used on walks will typically be 4"x8" nominal in size.
12. Connect to the bicycle circulation system and provide bicycle parking with a suitable means for securing bicycles following IFS. Consider changing/shower facilities for use by cyclists.
13. Refer to the Installation Development Plan for future trails, bicycle paths, and sidewalks.

14. For passenger vehicle and pedestrian pavements, utilize NHDOT standards for roadways, parking areas and sidewalks.

C05.1.1. Ramps and Stairs

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Sloped Walkway



Concrete Stair



Accessible Curb Ramp at Group 1 Facility

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. Incorporate ramps into all walkways where required to provide barrier-free access for the disabled to all streets, walkways, intersections, and crosswalks throughout the installation.

2. Coordinate the following requirements with UFC and referenced code requirements:

a. The slope of any ramp will not exceed 8.33% (1-inch vertical to 12-inch horizontal).

b. Ramps will be a minimum of 5' wide.

c. Ramps will have landings at the top and bottom and will have at least one (1) intermediate landing for every 5' of rise.

d. Top landings and intermediate landings will have a dimension measured in the direction of ramp run of not less than 5'.

e. Landings at the bottom of ramps will have a minimum dimension in the direction of ramp run of 6'.

f. All ramps will be provided with handrails on each side of the ramp, running the full length of the ramp, if steeper than 1:15 slope.

C05.1.2. Lighting

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Pedestrian Scale Fixtures at Group 2 Facility



Building Mounted Lights at Group 1 Facility



Light Fixture Base

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

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

C06. LANDSCAPE

Comply with AF Corporate Standards for Site Development:

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

Comply with AF Corporate Standards for Landscape:

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

C06.1. Climate-based Materials

☒ 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



Low Maintenance Bioretention Area with Native Plants

1. Consult Contracting Officer and BCE for the physical and budgetary extent of landscape work to be included in the project.
2. Comply with DoD ATP regulations (UFC-4-010-01).
3. 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.
4. Follow details and specifications of the American Standard for Nursery Stock, current edition.

C06.1.1. Landscape Design Concept

☐ 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 at Group 1 Facility



Landscape at Group 2 Facility



Landscape at Group 2 Facility

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 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 guidance provided by the University of New Hampshire Cooperative Extension service as referenced in Part C06.1.4.
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 parking areas.
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. To avoid Foreign Object Damage (FOD) hazard to aircraft, do not provide mulch within 500 feet of the flightline. Within 500 feet of the flightline, do not provide any plantings that produce berries that birds eat.
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 Small graphics do not apply

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

C06.1.3. Minimizing Water Requirements

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Reasonably reduce demand on potable water while seeking opportunities to increase alternative water sources for irrigation. 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 Small graphics do not apply

1. Reference the University of New Hampshire Cooperative Extension Service for plant selection. <https://extension.unh.edu/agriculture-gardens/landscaping/plant-selection-design>
2. 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 prohibited beyond the establishment period.
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. For turf for in sun and partial shade, use seed mix proportioned by weight as follows:
 - a. 50 percent Kentucky Bluegrass (*Poa pratensis*).
 - b. 30 percent Chewings Red Fescue (*Festuca rubra* variety).
 - c. 10 percent Perennial Ryegrass (*Lolium perenne*).
 - d. 10 percent Redtop (*Argostis alba*).
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 Civil Engineer.

C06.1.5. Water Budgeting (Hydrozones)

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

1. Provide permanent irrigation only if directed by BCE.

2. Comply with DoD and Air Force policy that prohibits the use of potable-water for permanent irrigation systems.
3. Provide temporary 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.
4. If directed by BCE to include permanent irrigation, 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 Small graphics do not apply



Main Entrance

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



Wooded Edge at Collector Street



Streetscape Adjacent to Group 3 Facility



Streetscape at Local Street

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 Small graphics do not apply

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.

- End of Section -

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



Shade Trees at Parking Lot



Shrubs at Parking Lot Median



Shade Trees at Parking Lot

1. Provide appropriate landscaping around the perimeter of the parking lot. Do not provide Internal planting islands due to the negative effect on snow and ice control operations.
2. Integrate appropriate landscaping elements into parking areas to visually soften the appearance in accordance with International Green Construction Code (IgCC) Chapter 5 "Site Sustainability" <https://codes.iccsafe.org/content/IGCC2018P3/chapter-5-site-sustainability>.
3. Avoid trees that drop sap, fruit, or seeds, and use long-lived species; keep trees trimmed, removing dead and dying trees or branches.
4. Rain garden islands will be landscaped to receive rainwater runoff and snow melt 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 Small graphics do not apply

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

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

C07.1. Furnishings and Elements

☐ Applicable ☒ N/A

Large graphics do not apply

☒ Applicable ☐ N/A

Select number of graphics / images (small: 250 px x 188 px) to insert 8

Image Tool 250 x 188



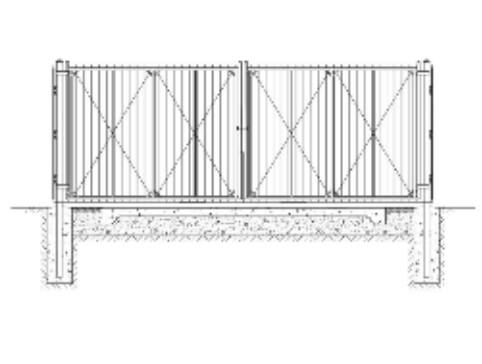
Bike Racks



Safety Bollard - Yellow



Safety Bollard - Red



Dumpster Enclosure



Decorative Fence



Chain-Link Fence



Concrete Planter



Screen Wall

1. Provide a coordinated consistent inventory of site furnishings to positively contribute to the visual environment, image, and identity of the base; ensure durability, low maintenance, reduced visual clutter, and compatibility with the adjacent architecture.
2. Remove poorly located or redundant litter / ash receptacles, newspaper and bicycle racks, telephone booths, vending machines, walls and fences to reduce visual clutter and to lessen the requirements for maintenance.
3. Group 1, 2, and 3 site furnishings will be factory finished dark bronze powder coated metal. Generally match the site furniture of adjacent facilities and the facility district.
4. Install needed outdoor seating (benches and low walls) in public gathering spaces near main and secondary building entrances. Low walls will match facility architecture.
5. Benches in Groups 1, 2, 3 will be factory finished dark bronze powder coated metal.
6. Integrate functional bicycle racks with the design of the building's main entrance grounds in Facility Groups 1 and 2 while meeting ATRP requirements.
7. Limit the use of bollards, but when necessary for force protection or building protection from vehicle circulation, use galvanized steel with red or yellow Polyethylene cover. Illuminated bollards may be used as approved on a case-by-case basis.
8. Locate architecturally coordinated containers for recycling, litter, ash, vending, etc., to minimize visual clutter and not be visible from the building's main entrance. Minimize the use of freestanding planters.
9. Refer to the Overview Section "Facility Hierarchy" topic of this AFCFS for guidelines regarding ancillary structures such as pavilions and shade shelters.
10. Monuments and static displays will be limited. New elements are generally discouraged unless these are fully vetted through the base's approval process and designed following IFS.
11. When visual screening is necessary, consider landscaping as the first option; screen walls are permitted only in Group 1 finished with granite piers and black, decorative fencing.
12. For fencing, apply the standards for "Products, Materials and Color" in the following section. Limit those with the highest visual quality to Facility Group 1 where there is sustained maintenance. Define all levels of security and visual quality.
13. Do not use chain-link fencing at Group 1 or 2 facilities; Limit the use of barbed-wire outriggers on chain-link fencing at industrial sites, unless required for additional security or protection of assets.
14. Provide trash dumpster enclosures for Group 1, 2, and 3 with galvanized steel posts and 1"x6" rough-sawn cedar boards
15. Specify screen wall materials and finishes that do not require painting or maintenance beyond periodic cleaning.
16. Limit the use of freestanding planters to areas with ongoing maintenance.
17. Provide kiosks only where there is a documented need for visual communication of posted messages. When used, match adjacent facilities in materials and detailing and consolidate kiosks with other site furnishings within 30 feet of major pedestrian paths. Limit kiosks to facility Groups 1 and 2.
18. Manufacturers listed in sections C07.2.1. - C07.2.18. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

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

C07.2.2. Benches

☐ Applicable ☒ N/A

C07.2.3. Bike Racks

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Round Loop**

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

Mfr: **Madrax**

Color: **Silver**

Finish: **Stainless Steel**

Model #: **Orion**

Other: **Round tube steel, 2-bikes per rack. Provide as listed or approved equal.**

UFGS: **Section 12 93 00 Site Furnishings**

C07.2.4. Bike Lockers

☐ Applicable ☒ N/A

C07.2.5. Bollards

☒ Applicable ☐ N/A

Number of base standards 2



Type: **Style 1, Building Protection, Galvanized Steel**

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

Mfr: Custom

Color: Safety Yellow

Finish: Polyethylene Cover

Model #: N/A

Other: N/A

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Style 2, Fire Hydrant Protection, Galvanized Steel**

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

Mfr: Custom

Color: Red

Finish: Polyethylene Cover

Model #: N/A

Other: N/A

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

C07.2.6. Bus Shelters

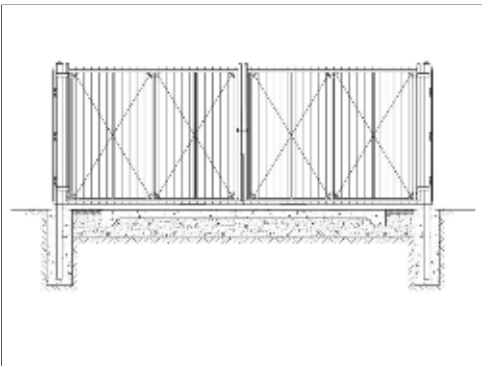
☐ Applicable ☒ N/A

C07.2.7. Drinking Fountains

☐ Applicable ☒ N/A

C07.2.8. Dumpster Enclosures / Gates

☒ Applicable ☐ N/A Number of base standards 1



Type: **Wood**

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

Mfr: Custom

Color: Natural wood

Finish: Galvanized steel posts, rough-sawn cedar boards

Model #: N/A

Other: Posts set in concrete below frost depth. Reinforced, lockable gates for dumpster removal and pedestrian gate.

UFGS: Section 06 10 00 Rough Carpentry

C07.2.9. Fencing

☒ Applicable ☐ N/A Number of base standards 2



Type: **Style 1, Barrier: Decorative, high security fence**

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

Mfr: AMERISTAR PERIMETER SECURITY USA INC.

Color: Black

Finish: Powder coated

Model #: Stalwart IS K8 Guantlet

Other: Provide as listed or approved equal.

UFGS: Section 34 71 13.16 Vehicle Crash Barriers



Type: **Style 2, Barrier: High security chain link fence**

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

Mfr: Local Custom

Color: Silver/gray

Finish: Galvanized

Model #: N/A

Other: Steel posts, horizontal bars, braces and accessories; in heights, lengths and gauges as required; close all ends of tubing. Crash Rating: ASTM F2656 M40 (K8) rating.

UGFS: Section 32 31 13.53 High-Security Fences And Gates

C07.2.10. Flagpoles

☐ Applicable ☒ N/A

C07.2.11. Lighting – Landscape / Accent

Please refer to the Lighting section.

C07.2.12. Litter and Ash Receptacles

☐ Applicable ☒ N/A

C07.2.13. Picnic Tables

☐ Applicable ☒ N/A

C07.2.14. Planters

☒ Applicable ☐ N/A

Number of base standards 1



Type: **Precast concrete**

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

Mfr: Dawn Enterprises

Color: Natural

Finish: Sealed

Model #: Classic Series – Round Planter

Other: Wall thickness of 2 1/2-inches; 3/8-inch steel rebar reinforced.

UGS: Section 12 93 00 Site Furnishings

C07.2.15. Play Equipment

☐ Applicable ☒ N/A

C07.2.16. Screen Walls

☒ Applicable ☐ N/A

Number of base standards 1



Type: **Barrier: Low Security**

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

Mfr: Basteel Perimeter Systems

Color: TBD per project

Finish: PVDF resin-based metal coating (KYNAR 500)

Model #: Bennington

Other: N/A

UGS: Section 05 50 13 Miscellaneous Metal Fabrications

C07.2.17. Tree Grates

☐ Applicable ☒ N/A

C07.2.18. Other

☐ Applicable ☒ N/A

C08. EXTERIOR SIGNS

Comply with AF Corporate Standards for Site Development:

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

Comply with AF Corporate Standards for Exterior Signs:

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

C08.1. Colors and Types

☐ Applicable ☒ N/A Large graphics do not apply

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

Image Tool 250 x 188



Building Identification Sign



Building Identification Sign



Base Speed Limit Sign

1. Comply with UFC 3-120-01, Air Force Sign Standard.
2. 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.
3. 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.
4. 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.
5. Use clear concise terms for content consistent with UFC 3-120-01.
6. Display of emblems on building exterior walls or other permanent structures is prohibited by UFC.
7. Raised "standout" letters and numbers may be used for Group 1 with approval on a case basis.

8. Group 2 and 3 facilities will have wall mounted facility signs with sizes and layouts following UFC 3-120-01.
9. Only one identification sign is permitted at each building entrance. Include a building address consistent with US Postal Service protocols following UFC 3-120-01.
10. Traffic Control Devices, which regulate vehicular traffic on the installation, will conform to the standards in the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration. Coordinate street signs with this IFS.
11. Provide Directional and Wayfinding Signs and address both pedestrian and vehicular traffic following UFC 3-120-01 for size, layout and content.
12. Reserved parking signs should be kept to a minimum. When approved, provide post-mounted sign faces in base standard materials and colors. Consider "bracketing" a designated area with a single sign at each end.
13. Parking lot identification signs may be used to identify areas or rows within large lots.
14. Follow the guidelines and requirements in ABAAS and the MUTCD for accessible parking signs.
15. Follow UFC 3-120-01 for Informational and Motivational Signs for size, layout and content.
16. Symbols or pictographs (graphic expressions of actual objects) may be used to indicate service, mandatory / prohibitory, sports, and recreation when rapid communication is necessary.
17. Force Protection signage may be applied to glass doors using white vinyl lettering.
18. Refer to UFC 3-120-01 for prohibited signs, which include those with animated, blinking, chasing, flashing, or moving effects.
19. Manufacturers listed in sections C08.1.1. - C08.1.10. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

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 flat sheet. Sign posts will be extruded aluminum with capped top ends set in a concrete base.
2. Fence mounted sign panels may be attached with exposed fasteners.
3. All signage will follow Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) using standard colors. Refer to MUTCD color specifications, which provide cross-referenced Pantone Matching System (PMS) numbers.
 - a. Standard Blue
 - b. Standard Dark Bronze (also Federal Standard Color 30040)
 - c. Standard Red
 - d. Standard Black (non-reflective)
 - e. Standard White
 - f. Standard Brown

Materials and Color Specifications

● Applicable ○ N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Typical Sign Face**

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

Mfr: Custom

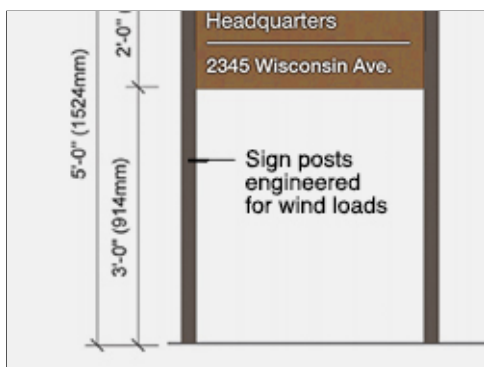
Color: Medium brown

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

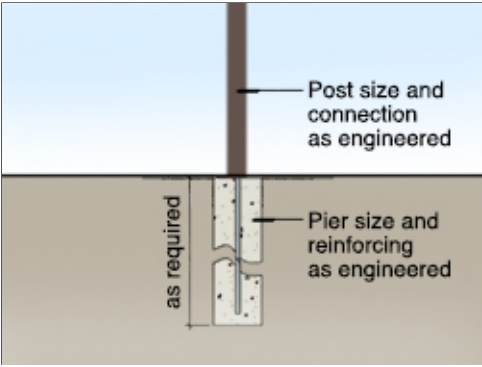
Color: Dark bronze

Finish: Powder coated

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 #: 30" height x 12" diameter, as engineered.

Other: At grade with 3/4" chamfer.

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

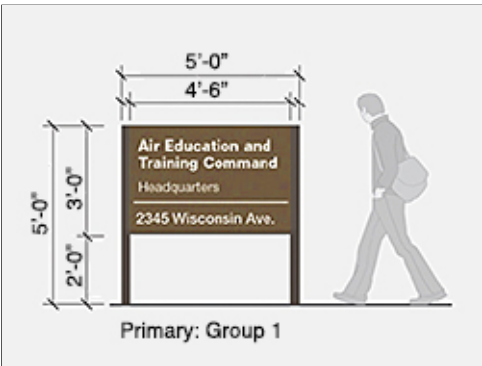
Model #: Metal frame and panels, granite stone base

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



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

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

Mfr: Custom

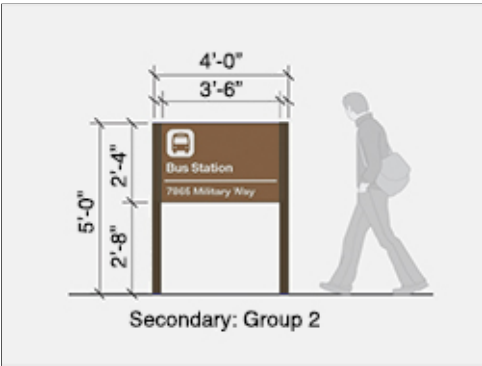
Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



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

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

Mfr: Custom

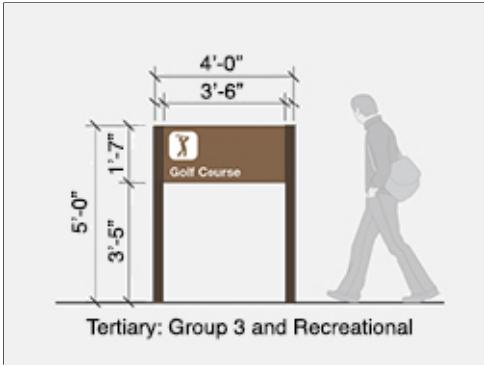
Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



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

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

Mfr: Custom

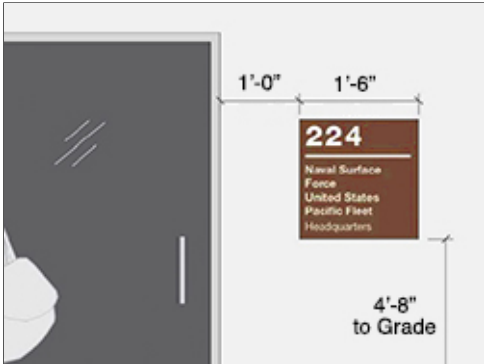
Color: Medium brown face, dark bronze posts, white vinyl lettering

Finish: Powder coat or vinyl sign face

Model #: Aluminum sheet face, extruded aluminum posts

Other: Provide layout and sizes per UFC.

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications



Type: **Wall Mounted**

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

Mfr: Custom

Color: Medium brown, white lettering

Finish: Satin vinyl applied to aluminum sheet

Model #: Aluminum sheet with vinyl face and vinyl lettering

Other: Provide layout and sizes following UFC.

UFGS: N/A



Type: **Glass Mounted**

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

Mfr: Custom

Color: White vinyl lettering

Finish: Matte vinyl

Model #: Machine-cut sheet vinyl

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

UFGS: N/A

C08.1.4. Traffic Control Devices (Street Signs)

☒ Applicable ☐ N/A Number of base standards 1 **Image Tool 250 x 188**



Type: **Street Signs**

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

Mfr: Custom

Color: White reflective lettering on a Standard Brown background

Finish: Powder coat or vinyl sign face

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

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

UFGS: Section 05 50 13 Miscellaneous Metal Fabrications

- Signs to comply with MUTCD Standards and NHDOT Standards.
- 1. Maintain streets signs as the most important directional signage on the base with consistent color and layout conforming to UFC-3-120-01.
 - 2. Provide White reflective lettering on a Standard Brown background for street signs. Note that pictographs and logos are prohibited on street name signs per UFC.
 - 3. Determine the length of the sign by the number of letters in the street name. Use only a single line of text with capital and lower case lettering

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

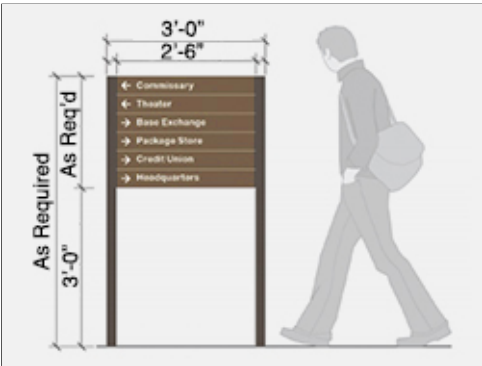
Color: Medium brown face, dark bronze posts, white reflective lettering

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. Hours of operation signs will have a level of quality equivalent to the Facility Group number.
- 3. 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 wood panel signs (rodeo, charity events, etc.) will be eliminated. 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. Minimize the use of signs whenever possible. Where functionally required, limit the number of parking signs by "bracketing" multiple reserved parking spaces. Use the "bracketing" approach for three (3) or more contiguous spaces. For one (1) or two (2) spaces, use individual signs at each space.

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

3. Parking lot identification signs may be used to identify areas or rows within large parking lots over 100 spaces with two or more rows of parking.

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. Traffic control signs will be used only where required to regulate vehicular traffic as described in the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration. The IFS does not control this type of signage.

4. 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.

5. Hazardous waste signs will be reflective Standard Brown backgrounds with 1" upper case Helvetica white lettering. Emblems are not authorized. These signs may be fence mounted.

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 Small graphics do not apply



Pedestrian Scale Light Poles

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 (PV) when feasible. When PV is provided, the lighting fixture must also be direct wired.
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 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 aluminum poles and aluminum fixtures with square, rectangular or circular housings in dark bronze and shapes to match adjacent facilities and the facility district.
12. Install lighted bollards for pedestrian paths only at Group 1 and high-traffic Group 2 facilities. Generally, match materials, colors (dark bronze) and shapes of adjacent facilities and the facility district.
13. Install natural warm gray color, smooth finished concrete bases for all poles in heights (reveal above finish grade) appropriate for the facility group, location with respect to vehicle traffic and application. Generally, bases within a landscape island, protected by curb or not within 5 feet of a paved vehicle travelway must have a 12-inch reveal. Bases that are subject to potential impacts from vehicles must have a 36-inch reveal.
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 in sections C09.2.1. - C09.2.6. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

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: **Style 1**

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

Mfr: Hubbell, Kim Lighting

Color: Dark Bronze Anodized (or Clear Anodized as approved by BCE)

Finish: Factory

Model #: Round cutoff, single arm or dual arm mount

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

UGFS: Section 26 56 00 Exterior Lighting

C09.2.2. Parking Lot Lighting

☒ 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: Hubbell, Kim Lighting

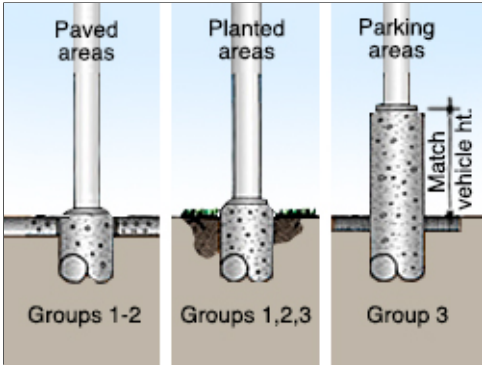
Color: Dark Bronze Anodized (or Clear Anodized as approved by BCE)

Finish: Factory

Model #: Round cutoff, single arm or dual arm mount

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

UGFS: Section 26 56 00 Exterior Lighting



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

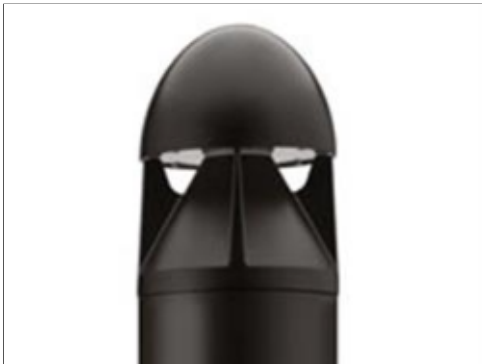
Other: N/A

UGFS: 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

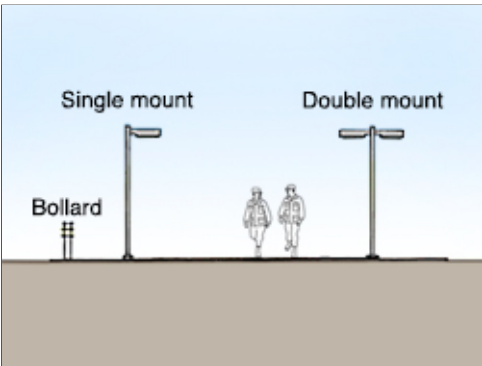
Model #: KBA

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

UGFS: Section 26 56 00 Exterior Lighting

C09.2.4. Sidewalk Lighting

☒ Applicable ☐ N/A Number of base standards 1



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 or dual arm mount

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

UGFS: Section 26 56 00 Exterior Lighting

C09.2.5. Walls / Stairs Lighting

☒ Applicable ☐ N/A Number of base standards 1



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

UGFS: Section 26 56 00 Exterior Lighting

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 1 Materials and Detailing



Group 1 Facility



Group 2 Facility



Group 3 Facility

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-exterior/index.html>

Comply with AF Corporate Standards for Architectural Features:
<http://afcfs.wbdg.org/facilities-exterior/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. Comply with ANGETL 24-01-02, SCIF & AT Guidance.
2. 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.
3. Generally, orient the main entrance, the majority of windows and parking areas to the south, maximizing solar heat gain.
4. 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.
5. 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.
6. Building heights will not be limited; however, building heights over 2 stories will be considered on a case basis.
7. Combine functions where practical to avoid a proliferation of small, independent structures.
8. Use and coordinate shading devices with orientation and for function.

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

D03.2. Architectural Character

1. Comply with ANGETL 15-01-01, Sustainable Design, Development, and Resource Conservation.
2. Develop architectural features, materials and detailing appropriate for the Facility Group designation. Refer to Building Entrances, Wall Systems and Roof Systems.
3. Respond to the local climate and regional influences with environmentally functional architectural features. Understated references to the historical architecture may be made but avoid directly reproducing features and ornamental detailing.
4. 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.
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. Minimize exterior surface area to maximize energy conservation. Earth sheltering concepts may be used when approved by the BCE.
7. Strive for economical construction without compromising a high-quality, professional appearance.

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

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 nonferrous 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 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. Match the existing materials for addition/alteration projects unless a significant change to the exterior envelope is included. Whenever possible bring existing facilities into compliance.
6. Noncorrosive metals with factory applied color finishes are required.
7. Combine details and color with orientation, massing, scale and architectural character to maintain base compatibility.
8. Manufacturers listed in sections D03.3.2. - D03.3.7. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

☐ Applicable ☒ N/A Large graphics do not apply

☐ Applicable ☒ N/A Small graphics do not apply

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

- ☒ Climate dominated by mechanical cooling
- ☐ Climate dominated by mechanical heating
- ☐ Climate with similar mechanical cooling / heating needs
- ☐ Climate with minimal mechanical cooling / heating needs
- ☐ Climate with high humidity
- ☐ Climate with moderate humidity
- ☒ Climate with low humidity
- ☒ High Solar Insolation
- ☐ Moderate Solar Insolation
- ☐ Low Solar Insolation
- ☐ Soils with High Thermal Conductivity

☒ Soils with Average Thermal Conductivity

☐ Soils with Low Thermal Conductivity

Other: Consider the potential for flooding and corrosion.

Other:

Facility: Narrow buildings along E-W axis are preferred

Wall: Integral shading features and devices / interior masonry thermal mass walls

Doors: Recessed or with projecting gabled roofs over entrances

Windows: Stringently limit north-facing windows and appropriately locate windows on south façades to optimize solar heat gain when needed

Roof: Low to medium albedo, minimal to moderate slope

Structure: Do not expose ferrous metals; provide factory finished Non-ferrous metals or concrete

MEP: Ground-source, radiant heating and heat recovery following LCCA

Other: Optimize shading devices to allow appropriate levels of solar heat gain year round

Other: Internal thermal mass walls to supplement radiant heat systems may be used following LCCA

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

D03.3.2. Natural Ventilation System

☒ Applicable ☐ N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Style 1, Aluminum Windows**

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

Mfr: Kawneer (or equivalent)

Color: Medium or dark bronze or clear anodized to blend with adjacent wall

Finish: Anodized

Model #: 2x4, Awning type

Other: Provide thermally broken frames.

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

Type: **Style 2, Steel Windows**

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

Mfr: Steelcraft (or equivalent)

Color: Medium or dark bronze or clear anodized to blend with adjacent wall

Finish: Powder coated

Model #: 2x4 frame, Awning type

Other: Provide thermally broken frames

UGFS: Section 08 11 13 Steel Doors and Frames



D03.3.3. Thermal Mass

☒ Applicable ☐ N/A Number of base standards 1



Type: **Style 1, Interior Wall Material**

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

Mfr: Custom, TBD

Color: Match exterior brick

Finish: Light texture

Model #: Modular Face Brick

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

UGFS: Section 04 20 00 Unit Masonry

D03.3.4. Thermal Shading

☒ Applicable ☐ N/A Number of base standards 2



Type: **Style 1, Wall Devices**

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

Mfr: Kawneer (or equivalent) or custom

Color: Match color of wall or frame to which the unit is attached

Finish: Factory, to match frames

Model #: Louver

Other: Shading devices may be attached to frames or structure

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



Type: **Style 2, Wall Devices**

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

Mfr: Custom

Color: Match color of wall or frame to which the unit is attached

Finish: Factory, to match frames

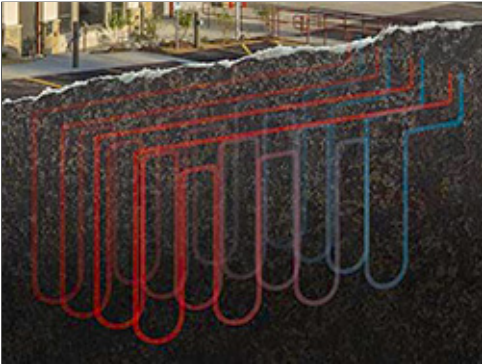
Model #: Louver, powder coated

Other: Shading devices may be attached to frames or structure

UGFS: Section 08 11 13 Steel Doors and Frames

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 (or equivalent)

Color: N/A

Finish: N/A

Model #: N/A

Other: Vertical ground loop well field

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

D03.3.6. Solar Photovoltaic System

☒ Applicable ☐ N/A

Number of base standards 1



Type: **Photovoltaic Panels**

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

Mfr: Varies

Color: Factory

Finish: Factory

Model #: Flat plate collector, fixed or tracking

Other: Coordinate with local utility provider

UGFS: Section 48 14 00 Solar Photovoltaic Systems

D03.3.7. Solar Thermal System

☒ Applicable ☐ N/A

Number of base standards 1



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

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

Mfr: Varies

Color: Factory

Finish: Factory

Model #: Flat plate collector

Other: Wall mount or roof mount

UGFS: 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-exterior/index.html>

Comply with AF Corporate Standards for Building Entrances:
<http://afcfs.wbdg.org/facilities-exterior/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 sloped or recessed covering for weather protection following Installation Facilities Standards (IFS) appropriate for Facility Group designations. Generally provide sloped metal roofs supported by exposed non-ferrous metal and/or concrete structure that will endure without degradation due to weathering and with zero to very low maintenance requirements.
2. Provide snow/ice protection at all entrances, refer to section D07.1. Covered arcade elements may be used for Facility Group 1.
3. Provide vestibules at entries in Groups 1, 2 and 3 unless used infrequently or serving unconditioned space following ASHRAE 90.1. Design vestibules (air locks) to minimize heat loss during the action of opening and closing doors.
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. Snow-melt systems may be provided on roofing or in paving when functionally required to ensure efficient mission-critical operations.
7. Install appropriate lighting and site furniture following AT and IFS.
8. Protect entrances from falling ice and snow. Develop roof form and slopes to avoid the need for gutters and to prevent water from discharging onto sidewalks.
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 but to a lesser extent with a smaller scale and to blend with the adjacent wall using a matching color.
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 where there is a documented need; provide weather-stripping and appropriate insulation for 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. Group 1 facilities will be predominantly a red brick, with accents of light beige coursed architectural precast or ground face concrete masonry units (CMU). Silver aluminum composite panels and/or gray brick may be used as a secondary wall material. Weathering steel or cast-in-place concrete may be used as a secondary material with CES approval.
3. Group 2 facilities will be predominantly a red brick, with accents of light beige coursed architectural precast or ground face concrete masonry units (CMU). Silver aluminum composite panels and/or gray brick may be used as a secondary wall material. Weathering steel or cast-in-place concrete may be used as a secondary material with CES approval.
4. Group 3 occupied facilities will be predominantly light beige insulated metal panel systems. Unoccupied facilities may be light beige ribbed metal sheeting. Use red brick when applicable for wainscots.
5. Only ground face "honed" or "burnished" CMU is recommended in the local climate because of its resistance to weathering. Split face CMU is not recommended due to potential severe weathering.
6. Multi-story Group 1 facilities may include a transition in material, color or detailing to create a visual base. Generally, limit Group 1 and 2 facilities to three field colors and Group 3 facilities to two field colors.
7. When weathering steel is used, ensure vertical surfaces are uninterrupted and shed rain directly to adjacent weathering steel surfaces or to the ground; avoid allowing weathering steel surfaces to drain against or onto natural concrete or other light surfaces that may stain.
8. Use high-performance building envelopes following UFC 1-200-02.
9. Use detailing not subject to excessive weathering. Generally provide wall accents consistently throughout the base for each facility group.
10. Use integrally colored concrete and masonry with clear sealers when recommended by the manufacturer. Do not paint concrete or concrete masonry units (CMU).
11. 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.
12. Manufacturers listed in sections D05.4.1. - D05.4.13. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

D05.2. Layout, Organization and Durability

1. Organize wall components including doors, windows, accents, shading devices, control joints, etc., to provide an ordered, professional appearance.
2. Integrate shading devices into the overall composition of the wall. When weathering steel is used for shading devices, provide weathering steel wall cladding to direct drainage along the wall to the ground to avoid staining adjacent light-colored materials.
3. Integrate fixed shading devices to reduce glare and promote daylighting in interiors. Generally, promote solar gain into interiors as a passive design measure to reduce energy use.
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, exposed glued laminated construction or other materials that require field 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: Insulated Metal Panels or Brick
Secondary: (with brick) Architectural Precast
Accent: Optional: (with brick) Metal Panels

Facility Group 2 wall materials will be as follows.

Primary: Brick
Secondary: Architectural precast
Accent: Optional: Cast-in-Place Concrete

Facility Group 3 wall materials will be as follows.

Primary: Insulated Metal Panels
Secondary: Metal Panels in Alternate Color or CMU
Accent: Optional: Brick

Facility Group 4 wall materials will be as follows.

Primary: N/A
Secondary: N/A
Accent: N/A

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

D05.4.1. Flat Metal Panels

☒ Applicable ☐ N/A

Number of base standards 3

Image Tool 250 x 188



Type: **Aluminum Composite Material Panel System**

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

Mfr: 3A Composites

Model #: Alucobond Plus Anodized Collection

Color: Neutral - Valspar Sandstone (upper), Valspar Surrey Beige (lower)

Finish: Clear anodized

Other: Factory finished colors.

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

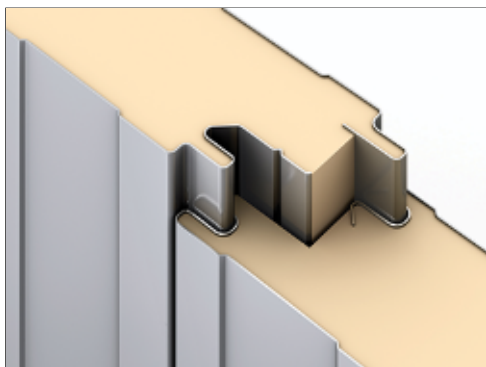
Model #: Insulated Metal Wall System

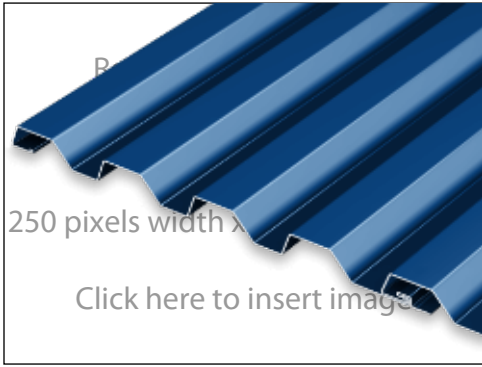
Color: Neutral - Valspar Sandstone (upper), Valspar Surrey Beige (lower)

Finish: Factory finished colors. Embossed.

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>





Type: **Insulated Metal Panel System**

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

Mfr: Centria

Model #: Rainscreen Systems, IW Series, Concealed Fastener

Color: Neutral - Valspar Sandstone (upper), Valspar Surrey Beige (lower)

Finish: Fluoropolymer over galvanized, or zinc

Other: N/A

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

D05.4.2. Brick Veneer

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



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

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

Mfr: Morin Brick: Morin Old Port Red Range; Glen Gery: 56-DD (Red), Granite Red Velour, Red Matt; KF Bricks: Connecticut Sanded, Heritage Red;

Model #: Modular Face Brick, 2.3x4x8 nominal

Color: Red blend

Finish: Straight edges, smooth texture

Other: Flash brick intermixed to match adjacent

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

D05.4.3. Architectural Precast

☒ Applicable ☐ N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Coursed Precast**

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

Mfr: Local Precast Company, TBD

Model #: Smooth casting; monolithic panels; relief must be approved by BCE

Color: Light off-white or beige

Finish: Very light texture

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

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

Type: **Precast Water Table and Sill**

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

Mfr: Local Precast Company, TBD

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

Color: Light off-white or beige

Finish: Very light texture

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

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

D05.4.4. Stucco Over Sheathing

☐ Applicable ☒ N/A

D05.4.5. Curtain Wall

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Curtain Wall**

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

Mfr: Kawneer

Model #: 7500 Wall, double glazing

Color: Silver, dark bronze or black frames, neutral glazing

Finish: Kynar or anodized

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

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

D05.4.6. Cast-In-Place Concrete

☒ Applicable ☐ N/A

Number of base standards 2

Image Tool 250 x 188



Type: **Board-Formed Bearing Walls**

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

Mfr: Custom

Model #: Rough-sawn dimensional lumber forming

Color: Natural gray concrete

Finish: Board-formed texture exposed, no exposed form ties

Other: 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>



Type: **Liner- or Sheet-Formed Bearing Walls**

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

Mfr: Custom

Model #: Patterned or monolithic surfaces

Color: Natural gray concrete, colored concrete must have BCE approval

Finish: Light to medium texture with no exposed form ties

Other: 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>

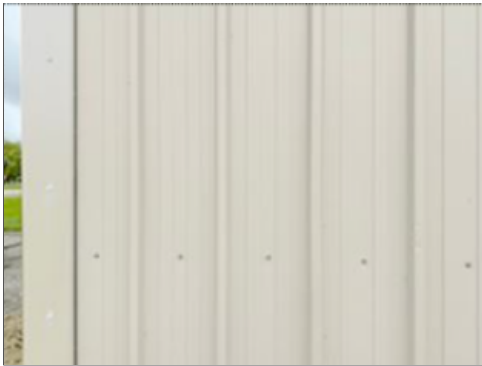
D05.4.7. Tilt-Up Concrete

☐ Applicable ☒ N/A

D05.4.8. Ribbed Metal Sheetting

☒ Applicable ☐ N/A Number of base standards 1

Image Tool 250 x 188



Type: **Lap Seam Metal Panel System**

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

Mfr: Allied or equivalent

Model #: Standard Purlin Bearing Rib (PBR) panel with all closures

Color: Neutral colors, e.g., Totally Tan (SW 6115), Jute Brown (SW6096)

Finish: Factory standard, smooth

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

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

D05.4.9. EIFS

☐ Applicable ☒ N/A

D05.4.10. GFRC

☐ Applicable ☒ N/A

D05.4.11. Concrete Block

☒ Applicable ☐ N/A

Number of base standards 2

Image Tool 250 x 188



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

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

Mfr: Local TBD

Model #: 8x8x16 Nominal, face and corner units

Color: Light or medium gray or beige

Finish: Ground with exposed aggregate

Other: N/A

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

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

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

Mfr: Local TBD

Model #: 8x8x16 nominal, face and corner units

Color: Light or medium gray or beige

Finish: Heavy texture

Other: Avoid use on north exposures to prevent weathering

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

D05.4.12. Fiber Cement Siding

☐ Applicable ☒ N/A

D05.4.13. Other

☐ Applicable ☒ N/A



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. Dark Bronze or Clear anodized aluminum doors, windows and frames with thermal breaks are preferred for Facility Groups 1-3 because they show less wear and weathering than dark anodized finishes; match the color of the door and frame. For renovation projects the color of new windows, doors and frames may match existing. New facilities may match adjacent buildings.
2. Cylinder cores must be Stanley Security Solutions / BEST Access - Best Peaks, 150 Series 7 pin with KABA patented key cut to be compatible with the base's existing master keying system.
3. Standard-sized hinged doors are preferred. Use sliding, folding, overhead, sectional and other door configurations only to support mission operations.
4. Automatic doors are allowed only where functionally necessary.
5. Limit hollow metal doors and frames to security doors, utility rooms and mechanical rooms in Groups 1 and 2 and to any application in Group 3 facilities.
6. Utility and emergency egress doors will match or be harmonious with the wall color.
7. Passive thermal comfort methods of ventilation are encouraged where life cycle cost justified.
8. Windows must meet AFTP protection requirements per UFC 4-010-01 Minimum Antiterrorism Standards for Buildings.
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 in sections D06.5.1. - D06.5.4. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).
12. Windows must meet Energy Star equivalent performance levels.

D06.2. Layout and Geometry

1. Visually and functionally compose openings in walls for the climate-specific exposure; generally, minimize windows on north-facing facades.
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, intrusion, and coordinate sound ratings.

D06.3. Glazing and Shading

1. Tinted, energy-efficient, low-e, double-pane glazing is encouraged; provide triple-pane glazing in extreme environments.
2. Glazing color will follow Installation Facilities Standards (IFS).
3. Translucent wall panels may be integrated into wall systems.
4. Do not use mirrored glazing.
5. Fully integrate applicable shading designs for overhangs, louvers, light shelves, and grilles.
6. Where appropriate for the facility use, 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.
6. Provide locking mechanisms operable from the interior, utilizing a thumb turn or similar keyless means.

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: Gr 1: Clear anodized (silver), Gr 2: Dark bronze anodized or powder coat

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



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

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

Mfr: Steelcraft (or equivalent)

Color: Group 1: Silver or dark bronze, Groups 2 and 3 dark 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

D06.5.4. Other

☐ Applicable ☒ N/A

D07. ROOF SYSTEMS

Comply with AF Corporate Standards for Facilities Exteriors:
<http://afcfs.wbdg.org/facilities-exterior/index.html>
Comply with AF Corporate Standards for Roof Systems:
<http://afcfs.wbdg.org/facilities-exterior/roof-systems/index.html>
Comply with AFCFS Recommended Materials:
<http://afcfs.wbdg.org/facilities-exterior/roof-systems/materials/index.html>

Insert 3 photos for each facility group.

Image Tool 250 x 188

Group 1



Group 2



Group 3



Group 4



D07.1. Roof Type and Form

1. Comply with ANGETL 15-01-06, Roof Design Guidance.
2. 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.
3. Generally, match the roof type and form of immediately adjacent facilities in new construction.
4. Group 1, 2 and 3 facilities under 5,000 sf and narrow in plan geometry, may use low-sloped shed, gabled or hipped standing seam metal roofs. Larger facilities may use sloped-roof features in conjunction with predominantly minimal-sloped "flat" membrane roofs.
5. Utilize PVC roof membranes for flat roofs.
6. 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.
7. Snow/Ice Protection for Sloped Roofs
 - a. Protect each and every exterior doorway from snow and ice falling from the roof by one of the following means, listed in order of preference:
 - i. Gabled dormer roof over entry way.
 - ii. Protective canopy, use the type cantilevered from the exterior wall whenever possible.
 - iii. Mechanically fastened bar or pipe snow guard.
 - iv. Clamped individual snow guard.
 - b. Protect each vent pipe penetrating through the roof with snow/ice diverter of appropriate design and size and a guy wire.
 - c. Protect wall mounted exhaust fans housing and other appendages that project beyond the edge of roof overhang by means of bar type snow guard on the roof or wall-mounted canopy.
 - d. Place walkways and mechanical equipment such as chillers either entirely under roof overhang or well beyond the reach of snow and ice sliding off the roof.
8. Provide screens for roof-mounted appendages and equipment, which are clad to match standing seam roofs or parapet walls.
9. Roof translucent panels and skylights are not permitted in roofs.
10. Roof eaves will extend beyond the exterior wall to avoid drainage onto wall surfaces and mitigate buildup of snow against wall surfaces.
11. South-facing eaves will coordinate with adjacent wall-mounted shading devices.
12. The color, shape and slope of the eave and soffit will be compatible with adjacent facilities.
13. Keep roofs uncluttered and minimize penetrations.
14. Diminish massive roofs into coordinated smaller components consistent with adjacent facilities; avoid random, arbitrary changes.
15. Increase the insulation value of existing roofing systems during renovations if supported by life-cycle cost and structural analysis.
16. Roofs will be maintained for the life of the system and replaced in accordance with UFC 3-110-04 and AFI 32-1051. A warranty is required on all new roofs.
17. Manufacturers listed in sections D07.9.1. - D07.9.10. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

18. Warranties: All roofing warranties must be in accordance with UFC 3-110-03 for roofing.
 - a. Warranty wind speed must be specified.

D07.2. Roof Slope

1. Group 1 and 2 buildings with sloped roofs will use slope of 4:12 wherever possible, with a minimum slope of 3:12 and a maximum slope of 6:12.
2. Low-sloped roofs are allowed for larger structures or to match existing conditions on renovation projects. Minimal-sloped roofs may also be used for Group 3 facilities in high-visibility areas.
3. Ensure adequate drainage and connect to the subsurface rain collection system where available.
4. Provide roof slopes to accommodate solar photovoltaic, solar thermal, passive systems and daylighting when applicable following UFC 1-200-02.
5. Provide underlayment 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. Roof membranes are to extend up the parapet, across the top, and wrap down the opposite side under the copings.

D07.4. Color and Reflectivity

1. Roofs in Groups 1, 2 and 3 may be Sherwin Williams Spartan Bronze, or for less visible roofs on tall buildings, Valspar Snowdrift may be used; generally, match adjacent facilities and follow requirements of IFS.
2. All minimal-slope membrane roofs may use low-albedo because heat island effect is not applicable.
3. Comply with UFC 3-110-03 and ASHRAE 90.1 for Solar Reflectance Index (SRI) and thermal requirements.
4. All roof flashing will match the color of the predominant background material.

D07.5. Gutters, Downspouts, Scuppers, Drains

1. Roofs will not use gutters and downspouts due to ice formation.
 - a. Gutters/water diverters may be considered above entrances but must be approved on a case-by-case basis by the BCE.
2. Internal roof drainage systems with overflow scuppers are required for minimal-sloped roofs.
3. Size the roof drainage system per IBC and SMACNA for the region.
4. Use scuppers as required in parapet walls. Arrange scuppers in an orderly manner consistent with other elements of the wall system.
5. When open scuppers are connected to downspouts, provide transitions consistent with adjacent facilities.
6. Integrate downspouts with the architectural details of the wall system and arrange in an orderly, non-prominent appearance. Generally, blend downspouts with the color of the wall (not contrasting it).
7. Fabricate downspouts from non-corrosive materials such as aluminum or zinc-coated steel. Provide powder-coated finishes in medium bronze.
8. All downspouts will be solid.
9. Provide angled transitional pieces for downspouts to fit closely against the wall for their entire length.
10. Coordinate locations of downspouts to conceal control joints in masonry walls when possible.

11. 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 to the greatest extent 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. Arrange Lightning Protection Systems (LPS) components in an ordered, uncluttered and inconspicuous appearance; integrate components into the organization of the roof and wall systems. Ensure LPS components are resistant to sliding snow & ice.
9. Ensure that LPS roof mounting systems are approved by the roofing manufacturer.
10. Additions to a roof will not interfere with LPS or other rooftop systems that may be required.
11. Include permanent fall protection with any addition to a roof with a slope above 3:12 per UFC 3-110-03.

D07.7. Clerestories and Skylights

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

D07.8. Vegetated Roof

1. 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: **Low to Moderate Sloped Roofs**

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

Mfr: ATAS

Color: Factory Finished - Sherwin Williams Spartan Bronze or Valspar Snowdrift

Finish: Matte

Model #: Dutch Seam

Other: Shed, gabled or hipped standing seam metal

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

D07.9.2. Membrane Single-ply

☐ Applicable ☒ N/A

D07.9.3. Built-up Multi-ply

☐ Applicable ☒ N/A

D07.9.4. Concrete Tile

☐ Applicable ☒ N/A

D07.9.5. Clay Tile

☐ Applicable ☒ N/A

D07.9.6. Slate Shingles

☐ Applicable ☒ N/A

D07.9.7. Vegetated System

☐ Applicable ☒ N/A

D07.9.8. Ribbed Metal Sheetting

☐ Applicable ☒ N/A

D07.9.9. Composite Shingles

☐ Applicable ☒ N/A

D07.9.10. Other

☒ Applicable ☐ N/A

Number of base standards 1



Type: **PVC (Polyvinyl Chloride) Single-Ply Membrane**

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

Mfr: Carlisle SynTec Systems

Color: White

Finish: Factory

Model #: Sure-Flex PVC Roofing System, fully adhered

Other: Provide manufacturer accessories for full warranty

UFGS: Section 07 54 19 Polyvinyl-Chloride Roofing

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 with deflection criteria for masonry veneer; 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, provide concrete or non-ferrous metals such as aluminum or stainless steel. Exposed ferrous metals are only permitted with weatherproof non-ferrous metal cladding or precast concrete cladding. Metal cladding must be factory finished and will not be field painted.
7. When structure is exposed on building interiors, is exposed 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. Specify that the Contractor must actively monitor concrete temperature throughout the cold weather concrete period via embedded sensors, frequent surface temperature readings, or other approved methods.
11. Structural systems for alterations and additions (foundation and structural framing systems for floors and roof) are not required to match the existing facility structural system. Select structural systems that are most suitable based on durability, cost and feasibility and provide a written outline, along with a cost comparison (in the same unit of measure) for each applicable structural system for review and selection.
12. Roof framing systems must maximize the usability of the ceiling plenum for installation of utility systems such as mechanical equipment and systems, electrical systems, communication and data systems, fire alarm systems, and fire protection systems.
13. Design of facilities must conform to the minimum seismic design criteria for the local seismic parameters in accordance with the latest version of UFC 3-301-01, Structural Engineering.
14. Manufacturers listed in sections D08.2.1. - D08.2.9. are provided only to establish a level of quality for use when designers write the salient characteristics of the brand-name item in project specifications following Federal Acquisition Regulations (FAR).

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: **Concrete Framing**

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

Mfr: Custom

Color: Natural gray

Finish: Light texture

Model #: Post and beam and/or waffle slab

Other: N/A

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

UGFS: Section 05 12 00 Structural Steel
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 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 (or equivalent)

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: **Concrete Masonry Units**

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

Mfr: Custom, TBD

Color: Natural Gray

Finish: Natural Gray

Model #: Standard Manufacturer's CMU shapes

Other: N/A

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



Type: **Light Gauge Steel Framing**

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

Mfr: Steelrite

Color: Factory

Finish: Galvanized

Model #: Structural framing shapes

Other: N/A

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

D08.2.8. Lumber Framing

☐ Applicable ☒ N/A

D08.2.9. Other

☐ Applicable ☒ N/A

D09. MECHANICAL, ELECTRICAL AND PLUMBING

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

Comply with AF Corporate Standards for Mechanical, Electrical and Plumbing:
<http://afcfs.wbdg.org/facilities-exterior/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 and include heat recovery measures to improve efficiency; 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 permitted following a LCCA.
6. Integrate shading into building exteriors to reduce solar heat gain during when designed for the specific orientation and exposure.

D09.2. Functionality and Efficiency

1. Fully coordinate mechanical, electrical, plumbing (MEP) and fire protection systems with each other and with the building structure, enclosure, thermal envelope and interior design.
2. Ensure direct exterior access is provided (for CE) to main mechanical and electrical rooms.
3. Screen exterior equipment from primary views (landscape, building masses, screen walls) and comply with AT requirements.
4. Keep equipment away from main building entrances; locate service area/yard on least visible side of a building.
5. Coordinate the location of all exterior meters, equipment and devices to provide convenient access and an overall coordinated and orderly appearance.
6. Design emergency generator systems integrally with all other building systems and avoid incompatible building additions; locate generators near service areas and ensure they are not visible from primary entrances.

- End of Section -

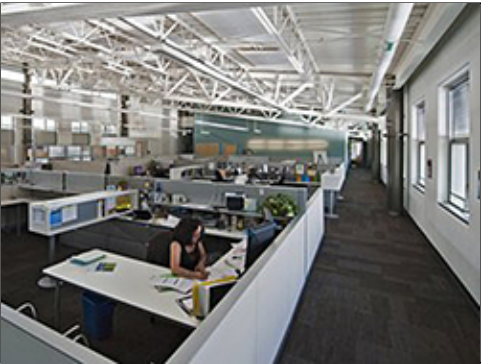
E. FACILITIES INTERIORS

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

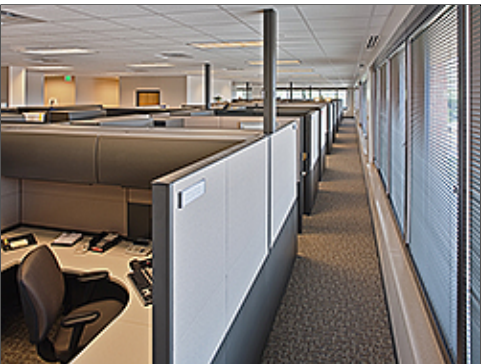
Insert 3 photos for each facility group.

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. Comply with UFC 4-010-05 – Sensitive Compartmented Information Facilities Planning, Design, and Construction if the project involves a SCIF.
2. Comply with IDC-ICS 705 Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities if the project involves a SCIF.
3. Comply with ANGETL 24-01-02, SCIF & AT Guidance.
4. Comply with ANGETL 15-01-01, Sustainable Design, Development, and Resource Conservation.
5. 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 lifespan.
6. Create flexible interior configurations using Furniture, Fixtures & Equipment (FF&E) and limit private offices and private rooms. Refer to ANGH 32-1084 for space requirements. To the greatest extent, limit permanent partitions to core areas such as toilet rooms, stairs, mechanical and utility rooms.
7. 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.
8. Provide high-performance building configurations following UFC 1-200-02. Ensure passive design strategies are cost effectively incorporated before active mechanical systems are designed.
9. 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, AT, security, high performance and sustainability requirements, and safety.
10. Meet security and force protection requirements in UFC 4-010-01: DoD Minimum Antiterrorism Standards for Buildings.
11. 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.
12. 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 3. Refer to Facility Hierarchy.
13. Through open-plan configurations, preserve all passive and natural design strategies and fully integrate facility interiors with overall building systems.
14. Professional interior designers, or architects with significant interior design experience, must accomplish the design and review of applicable new construction, renovations and maintenance projects.
15. 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.
16. Maintain architectural compatibility following AFCFS and this Installation Facilities Standards (IFS) document to create continuity while avoiding monotony.
17. When structure is exposed as a finished ceiling, fully integrate MEP and fire protection systems to provide an organized, uncluttered appearance.
18. Conceal ducts, piping, conduits, devices, etc., when permanent walls, suspended ceilings or raised floors are provided; locate sprinkler heads in orderly configuration.

19. Limit interior wall-mounted equipment in occupied personnel spaces; avoid surface-mounted conduit and pipes.
20. 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.
21. Separate mechanical and electrical and communications rooms.
22. Integrate recessed and wall-mounted fixtures such as fire standpipe cabinets and drinking fountains within permanent walls.

E01.1. Layout and Common Areas

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

<http://afcfcs.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. Proportion lobbies and common spaces based on type of function, activity and facility group.
4. Allow no direct sight lines into restrooms (other than single occupancy).
5. Provide one or more unisex / single occupancy restrooms in addition to the designated male / female restrooms. This may be utilized as the accessible restroom to mitigate accessibility design for the main restrooms; include an accessible shower.
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 ANGH 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 HQ AFCEC standards.

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). Follow ANGETL 24-01-03 Fire Protection Design Guidance.

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, Resinous

Facility Group 2 floor materials will be as follows.

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

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: N/A
- Secondary: N/A
- Tertiary: N/A

1. 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



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: **Style 2, 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: 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

E02.1.4. Ceramic Tile

☒ Applicable ☐ N/A

Number of base standards 1

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 and toilet rooms. 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>

E02.1.5. Resilient Floor

☒ Applicable ☐ N/A

Number of base standards 3

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>



Type: **Style 2, Rubber Floor Tile**

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

Mfr: Roppe

Color: Neutral tones

Finish: Factory

Model #: SafeTcork

Other: Break rooms, stairwell landings

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



Type: **Style 3, Standard Resinous Flooring**

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

Mfr: Duraflex

Color: Neutral tones

Finish: Decorative with aggregate

Model #: TBD

Other: Break rooms, Toilet rooms

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 1

Image Tool 250 x 188



Type: **Style 1, Carpet Tile**

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

Mfr: Shaw

Color: Neutral multi-colored tones/patterned/solid

Finish: Yarn: Nylon 6

Model #: 24" x 24" Tile, Embellish 59573, Embossed 71504, Engraved 71761

Other: Conference rooms, offices

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

Facility Group 2 wall materials will be as follows.

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

1. Comply with supplementary document Appendix G04, Paragraph G04.2.3 "Standard Building Interior Colors."
2. Follow UFC 3-450-01 (Vibration and Noise Control) for acoustic design issues including speech privacy, sound isolation or sound masking.
3. Select and apply paint with sheens (gloss levels) appropriate for the application following UFGS Section 09 90 00 Paints and Coatings.
4. Provide ceramic tile on wet walls of kitchens, toilet rooms, locker rooms, etc., in all facility groups.
5. Neutral split-face or ground-face integrally colored block with a clear sealer may be used in Group 3. Do not paint block.
6. Provide ROPPE rubber base on drywall partitions in Groups 1 and 2.
7. Hardwood base may only be used in Group 1 as approved on a case basis.
8. 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.
9. Decorative moldings may be used only in Group 1 when approved on a case basis.
10. 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.
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 or neutral integrally colored concrete

Finish: Integral color

Model #: N/A

Other: Stairwells

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

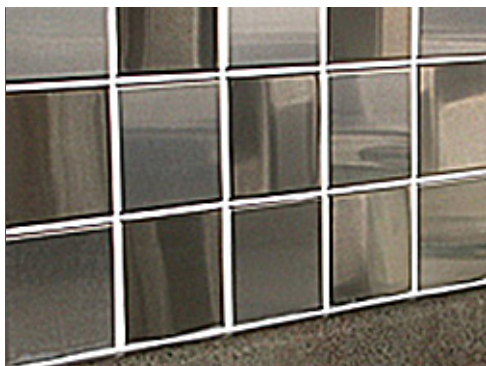
☐ Applicable ☒ N/A

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

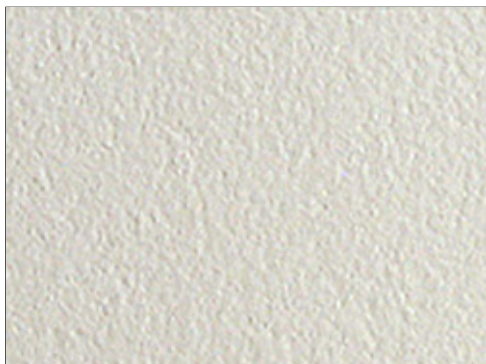
UFGS: Section 09 30 10 Ceramic, Quarry, and Glass Tiling
<http://www.wbdg.org/FFC/DOD/UFGS/UFGS 09 30 10.pdf>

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: Per Appendix G04 Architecture and Interiors

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://afcf.wbdg.org/facilities-interiors/ceilings/index.html>

E04.1. Ceiling Materials

Facility Group 1 ceiling materials will be as follows.		Facility Group 3 ceiling materials will be as follows.	
Primary:	Exposed Framing (Roof / Floor Structure Above)	Primary:	Exposed Framing (Roof / Floor Structure Above)
Secondary:	Grid and Acoustical Tile	Secondary:	Exposed Framing (Roof / Floor Structure Above)
Tertiary:	N/A	Tertiary:	Gypsum board (painted)

Facility Group 2 ceiling materials will be as follows.		Facility Group 4 ceiling materials will be as follows.	
Primary:	Exposed Framing (Roof / Floor Structure Above)	Primary:	N/A
Secondary:	Grid and Acoustical Tile	Secondary:	N/A
Tertiary:	Gypsum board (painted)	Tertiary:	N/A

1. Follow UFC 3-450-01 (Vibration and Noise Control) for acoustic design issues including speech privacy, sound isolation or sound masking.
 2. 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: Local, TBD

Color: Neutral color, charcoal gray, or black

Finish: Field painted (Sheen per UFGS)

Model #: TBD

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

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: Local, TBD

Color: Natural concrete or neutral integrally colored concrete

Finish: Integral color

Model #: TBD

Other: N/A

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

E04.1.3. Grid and Acoustical Tile

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

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

Mfr: Armstrong

Color: White

Finish: Factory

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

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

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

E04.1.4. Gypsum Board

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Style 1**

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

Mfr: US Gypsum

Color: Per Appendix G04 Architecture and Interiors

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://afcf.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)
Tertiary:	N/A

Facility Group 3

door (leaf) materials will be as follows.

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

Facility Group 4

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

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

Facility Group 4

door (leaf) materials will be as follows.

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

1. Hardwood casings may be provided over metal frames in Group 1 as approved on a case basis.
2. Provide vision panels in all interior doors except those for utility rooms, storage rooms, custodial rooms, closets, and single occupancy toilet rooms. Fit translucent glazing in locker and toilet room doors. Provide blinds for vision panels on doors to private offices.
3. Do not use hollow-core wood doors.
4. Generally match original hardware in renovations.
5. Cylinder cores must be Stanley Security Solutions / BEST Access – Best Peaks, 150 Series 7 pin with KABA patented key cut to be compatible with the base's existing master keying system, with mortise lever locksets. Door are to be lockable from the interior side with a thumb-turn or similar keyless mechanism.
6. Doors requiring STC ratings must be designed and constructed as complete sound control door assemblies. Refer to specification section 08 34 73 – Sound Control Door Assemblies. Doors with optional applied weather stripping, accessories, etcetera will not be accepted.
7. Manufacturers listed below are only provided to establish a baseline of equivalency among all applicable manufacturers.

8. For secure areas, comply with: UFC 4-010-05 – Sensitive Compartmented Information Facilities Planning, Design, and Construction, IDC-ICS 705 Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities, and ANGETL 24-01-02, SCIF & AT Guidance.

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 must 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

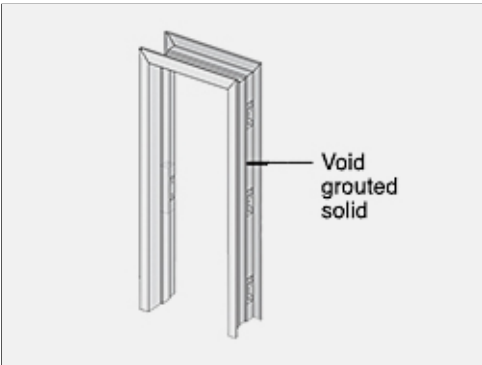
Other: Satin stainless steel hardware

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 1

Image Tool 250 x 188



Type: **Style 1, Administrative**

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

Mfr: Simpson

Color: Natural hardwood veneer

Finish: Clear Sealer, satin (aqueous)

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

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

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

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. Metal cabinets and countertops will be provided in heavy-use operations and in Group 3.
3. Refer to AFCFS for approved materials.
4. Countertops for labs will be as required by design guides for specific space, if there is no information then standard industry practices must be followed.
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: Provide in break rooms and Office Storage. 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

E06.1.3. Rapidly-Renewable Products

☐ Applicable ☒ N/A

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 without sinks**

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

Mfr: Formica

Color: Medium Earth tones and neutral tones

Finish: Smooth

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.

UGFS: Section 06 41 16.00 10 Plastic-Laminate-Clad Architectural Cabinets
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 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: Smooth

Model #: Solid Surface

Other:

UGFS: Section 12 36 00 Countertops
<http://www.wbdg.org/FFC/DOD/UGFS/UGFS 12 36 00.pdf>

E06.2.3. Natural Stone

☐ Applicable ☒ N/A

E06.2.4. Cast Stone

☐ Applicable ☒ N/A

E06.2.5. Metal

☒ Applicable ☐ N/A

Number of base standards 1

Image Tool 250 x 188



Type: **Heavy Use**

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>

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. Interior signs to be white letters on blue background (PMS 287) similar to those in Buildings 100, 145, 245,253, and 254.

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. See G07. APPENDIX – Electrical, Telecommunications, and Security.

- End of Section -

F. APPENDIX - Facility Districts

- ☐ Applicable
- ☒ N/A

G. APPENDIX - References

Comply with Air Force Corporate Standards:

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

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

G01 Offices of Responsibility

https://www.wbdg.org/FFC/AF/AFIFS/G01_Pease_ANGB_IFS_Offices_of_Responsibility.pdf

G02 General Requirements

https://www.wbdg.org/FFC/AF/AFIFS/G02_Pease_ANGB_IFS_General_Requirements.pdf

G03 Environmental Requirements

https://www.wbdg.org/FFC/AF/AFIFS/G03_Pease_ANGB_IFS_Environmental_Requirements.pdf

G04 Architecture and Interiors

https://www.wbdg.org/FFC/AF/AFIFS/G04_Pease_ANGB_IFS_Architecture_Interiors.pdf

G05 Plumbing

https://www.wbdg.org/FFC/AF/AFIFS/G05_Pease_ANGB_IFS_Plumbing.pdf

G06 Mechanical

https://www.wbdg.org/FFC/AF/AFIFS/G06_Pease_ANGB_IFS_Mechanical.pdf

G07 Electrical, Telecommunications, and Security

https://www.wbdg.org/FFC/AF/AFIFS/G07_Pease_ANGB_IFS_Electrical_Telecom_Security.pdf

G08 Fire Protection

https://www.wbdg.org/FFC/AF/AFIFS/G08_Pease_ANGB_IFS_Fire_Protection.pdf

G09 Pease ANGB Reference Documents

https://www.wbdg.org/FFC/AF/AFIFS/G09_Pease_ANGB_IFS_Reference_Documents.pdf

G10 Painting Standards

https://www.wbdg.org/FFC/AF/AFIFS/G10_Pease_ANGB_IFS_Painting_Standards.pdf
