



K I R T L A N D

A I R F O R C E B A S E

architectural compatibility plan



COORDINATION SHEET

Synopsis: This Architectural Compatibility Plan for 2009 has been prepared in accordance with the Chugach Management Services, JV (CMSJV) Statement of Work (SOW) for the Civil Engineer (CE) Services Contract F29650-00-D0002, signed 14 July 2000 and revised 01 August 2007.

//E-Signed/DKD/
DONNA DUNN
Base Community Planner

30Sep09
Date

JAMES R. DOYLE, PE
Director Engineering

Date

D. BRENT WILSON, PE
Base Civil Engineer

Date

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ARCHITECTURAL COMPATIBILITY PLAN FOR OCTOBER 2009

RECORD OF ANNUAL REVIEW AND CHANGES

All changes should be posted as they are received and recorded below. A line in the margin adjacent to changed material highlights changed portions of this document.

RECORD OF ANNUAL REVIEW

<u>Reviewed By</u>	<u>Date</u>	<u>Remarks</u>	<u>Change No.</u>
Donna Dunn	30 Sep 2009	Reviewed. Provided updated information.	01
T. Bandeka	30 Sep 2009	Formatted for consistency. Added Required information.	02
Wm. Kellis Jones	28 Oct 2009	Reviewed. Provided comments and recommended changes	03
Dwight Velarde	29 Oct 2009	Submitted requested changes; pg 56	03
Donna Dunn	29 Oct 2009	Submitted requested changes; pg. 55	03
Donna Dunn	18 Nov 2010	Submitted Change to pg. 36; Appendix G ref. should be ref. to Appendix C	04
Tim Turner	05 Dec 2009	Submitted change to pg. 5	05
ACPB	14 Dec 2009	ACPB Meeting Minutes	06
Donna Dunn	23 Dec 2010	Changes to Appendix B	07
Tammy Bandeka	04– 10 Mar 2010	Reviewed for consistency; recommended changes to Appendix B and page 48.	08

RECORD OF CHANGES

<u>Change No.</u>	<u>Date Posted</u>	<u>Posted By</u>	<u>Remarks</u>
01	30 Sep 2009	T. Bandeka	Inserted updated information.
02	30 Sep 2009	T. Bandeka	Formatted for consistency. Created redlined copy, "Coordination Sheet", and "Record and Annual Review and Changes" page.
03	29 Oct 2009	T. Bandeka	Made requested changed.; pgs. 55 & 56
04	18 Nov 2010	T. Bandeka	Made submitted changes.
05, 06, 07	28 Feb - 04Marc 2010	T. Bandeka	Made recommended changes.
08	04-10 Mar 2010	T. Bandeka	Made revisions.

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CONSCIOUS EFFORT

The purpose of this document is to layout the long-term architectural design objectives for Kirtland Air Force Base (KAFB) as the mission and tenants evolve. The specific components for architectural development as directed in this plan include standards for the site, landscape and buildings, as well as for implementation of this plan. The intent is to use these elements to unify the visual character of each district and the entire base.

The Architectural Compatibility Plan (ACP) will be used to inform decisions by commanders, military personnel, planners, architects, engineers, facility managers, maintenance organizations, contractors, and other entities involved with design, construction, and maintenance on KAFB. This document is vital to the communication of ideas between design professionals and clients in a thorough and specific fashion.

Rigorous controls will be employed by the installation during design and construction phases to ensure compliance with the ACP. Designs may be subject to multiple reviews during planning, programming, design, and construction depending on project scope. The information in the ACP shall be applied to renovations, additions, maintenance, and all construction efforts large and small.

Ultimately, this plan will function to improve mission capability and enhance quality of life through significant enrichment of the architectural environment on the installation.



DESIGN PROFESSIONALS

Design professionals need a thorough understanding of the ACP before planning or programming a project. For easy navigation, the ACP is divided into four main sections of Building Design Standards, Site Design Standards, Landscape Design Standards, and Implementation. All standards, except visual district requirements, apply to the occupied area of KAFB as shown on page two. When these are understood, the next step is to determine the visual district where the project is located. The visual district will give additional specific requirements for that particular area. The implementation section will provide the designer with information about reviews and documentation. Appendices A and B are useful as a quick reference for specifying approved building materials, site furnishings, and plantings.

CONSTRUCTION CONTRACTORS

During construction it is important to know the standards used for the design. Contractors should use this document as a reference. Contractors will find assistance regarding approved materials in Appendix A and B. At least two manufacturers are given for most products so that problems associated with availability and lead times can be mitigated.

CLIENTS & USER GROUPS

Concerned, architecturally aware clients are essential to ensuring that projects built on KAFB continue to create a community of design excellence. It is important for clients to understand this document so that everyone has the same idea about budget, site constraints, landscaping, building materials, and overall design concepts for KAFB.

This document coordinates with the General Plan to create positive synergy by collocating similar activities, missions, and organizations.



THE BUILT ENVIRONMENT

The high altitude, desert landscape at KAFB provides unique opportunities to compose a built environment that works with the natural environment of the southwest. Buildings are influenced by the climate and respond with thick walls, recessed windows, deep overhangs, horizontal emphasis, earth tones, sunshading, and building massing. Exemplary design on KAFB will create buildings that fit into the existing context as opposed to captivating individual attention.



BUILDINGS

- Use only KAFB standard materials as listed in the appendices.
- The requirements in this document are applicable to the populated areas of the base, including host and tenant organizations, as highlighted in aerial photo on this page.
- Renovations that demolish more than 75% of the building systems and non-structural interior components shall bring the whole building into compliance with the exterior requirements of this document.
- Additions that add more than ½ the existing building footprint, shall bring the exterior of the existing facility into compliance with this document.
- Consolidate related functions within larger buildings to restrict the proliferation of multiple smaller structures.
- All designs shall adhere to architectural values of rhythm, balance, scale, proportion, contrast, unity, character, and texture.
- Buildings shall relate to human scale along street-facing facades, at ground level on large facilities, and at entries through the use of smaller massing elements and other architectural details.
- Building masses shall be articulated with recessed areas, sun shading devices, submassing, material expression, parapet walls, varying roof forms or other architectural features to create visual interest on every side.
- Provide simple and contemporary forms combined with accents of curved and angular masses.
- Buildings shall incorporate regional design concepts that emulate building blocks.
- Large walls shall be broken up with detailing such as windows, parapet walls, pilasters, repetitive elements, and varied massing.
- Variations on elevations will create a sense of shade and shadow.
- Exterior, shaded, pedestrian areas shall be provided as an integral part of the overall building design for all projects, including MILCON, renovations, and additions.
- Exterior shaded areas shall be located to block the majority of the summer sun and away from any air intake louvers for the building.
- Renovations and additions shall incorporate existing wall types, massing, horizontal or vertical emphasis, windows and fenestration rhythm.
- All emergency egress elements shall be contained within the building envelope.
- Industrial and service buildings shall limit use of accent color and architectural features to main entries, street facing facades, and high visibility areas.
- To avoid unsightly barriers and walls, interior and exterior, security measures shall be incorporated into the overall design concept.
- Transitional buildings, those connecting one visual district to another, shall incorporate color and materials from adjacent districts with Architectural Compatibility Review Board (ACRB) approval.
- Plan buildings with flexibility in mind to allow for future alterations or additions.
- Promote a southwestern image through use of modern forms and styles.
- Architectural detailing is encouraged on high visibility facilities, but decorative appliques, such as stylized figures, are not allowed.





WALL SYSTEMS

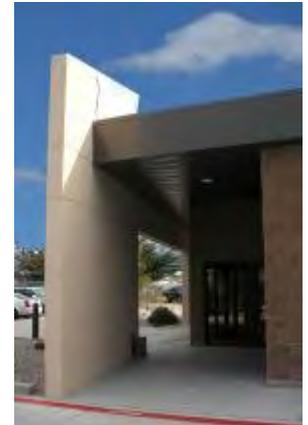
- Wall material options are stucco, architectural concrete masonry units (CMU), and integral colored concrete.
- Stucco shall be sand-finished or lightly textured, with control joints that accentuate architectural features.
- Primary accent colors shall cover no more than 20% of any elevation.
- Secondary accent colors shall cover no more than 10% of any elevation.
- Exposed ductwork, conduit, piping, and other utilitarian items are not allowed on the exterior of any facility.
- Integrate expansion joints with linear building elements such as downspouts, recessed areas, reveals and other similar elements.
- Sealants shall match or blend with adjacent material color.
- Architectural metal panels are not allowed as the main material for any facility. See visual districts for areas where these are allowed for specific building types.
- System components such as downspouts, electrical boxes, louvers, and similar elements shall match the color of the wall surface.
- Operating parts such as sensing devices, regulators, controls and gas meters shall be a standard manufacture finish and screened.
- All elements including downspouts, windows, and mechanical louvers shall be designed to create rhythm and definition.
- Provide integrally-colored or factory-finished corrosion-resistant materials.
- Do not paint factory-finished materials where the existing color complies with ACP.
- Painted CMU or stucco is not allowed as an exterior finish material, except to maintain existing painted materials.
- New repairs to existing painted block shall be stucco in accent and field colors for that district.
- Users of a painted block building who want to improve the appearance of their facility can re-paint. The board can identify opportunities to add accent colors.
- Door assemblies, including the door and frame, shall match in finish and color.
- Storefront systems and window frames shall be medium bronze with thermal breaks.
- Glazing shall be bronze tinted, have a low-emittance energy coating, and comply with Anti-Terrorism Force Protection (AT/FP) standards.
- Glass block is allowed as an accent material where translucent light is desired.
- Provide operable windows when desirable for manual climate control.
- Translucent glazing is encouraged for clerestories and areas where daylighting is desired, but visual access is prohibited.
- Handrails shall be steel or aluminum, integrated with the structure, and factory-finished or powder coated to match the facility.
- Integrally-colored precast concrete is encouraged for sills, lintels, parapets, bandings, and other accents.
- Exterior Insulated Finish Systems (EIFS) shall be protected and reinforced under 6'-0" where high impact is a concern.
- Avoid visual clutter on elevations through consistent application of colors and materials, and by minimizing exterior appurtenances.

ROOF SYSTEMS

- All roof types shall minimize the number of system components, penetrations, ducts, conduits and other utility functions.
- Penetrations on all roof types shall be consolidated and organized on the least visible side of the building to minimize the visual impact.
- Rooftop or package mechanical units are only allowed on low slope roofs. They are not allowed on sloped roofs, stands next to buildings, or on the ground.
- Roof drains shall be directed to splash blocks or underground drainage, divert water away from structure and paved surfaces, and prevent erosion or ponding.
- Full length downspouts are required for all facilities over 2500 sq ft. of roof area and shall match the color of the adjacent wall material.
- All roof access shall be provided on the interior of the facilities and integrated in the interior space away from the most populated areas.
- All roof s shall include access located at least 6'-0" from the roof edge, be equipped with tie off points for maintenance workers, provide platforms and railing, and meet current Occupational Safety & Health Administration (OSHA) requirements.
- Skylights are discouraged, but vertical glazing elements and clerestories are encouraged for bringing natural light into interior spaces.

Pitched Roofs

- Provide brown standing seam metal for roof pitches of 3:12 and greater.
- The height of fascias shall typically be no larger than 12 inches.
- Penetrations on a sloped roof shall match the roof color.
- Gutters shall be factory finished to match the color of the roof and continuous across the entire elevation where provided.
- All roof gable ends must terminate at a parapet end wall. Metal panels at the end of gable roofs are not allowed.
- Dormers must match the pitch of the main roof slope.
- Shingles of any material are not allowed.
- Mansard and gambrel roofs are not allowed.
- Deep roof overhangs are encouraged to minimize heat gain in the summer and to provide shadows and shade on the elevations.





Low-Slope Roofs

- Low-slope roofs shall have pitches of 2:12 or less and constructed of white Thermoplastic Polyolefin (TPO), Polyvinyl Chloride (PVC), Galva-ply metal or standing seam metal.
- Parapet walls and architectural screening are required on all low-slope roofs and shall be designed into the overall building concept.
- Parapet walls shall be capped by metal coping with Kynar finish to match the facility.
- Penetrations shall be painted or factory finished to match the exterior wall material at the top of the wall.
- Equipment shall be screened through extension of parapet walls, louvered screens, flat metal panels, perforated metal panels or designs approved by the ACRB.
- Roofs shall typically be designed to slope toward the perimeter to prevent ponding and assure proper drainage.
- Interior valleys and depressions are not allowed.
- Gutters are not allowed on low-slope roofs.
- All low-slope roofs shall include protective walking surfaces to equipment for protection of the roofs during maintenance.
- Built-up Roofs (BUR) are allowed for repair of existing BUR, but require ACRB for approval of whole roof replacements and new building roofs.
- All BUR shall provide a white or highly reflective coating to meet Energy Star Ratings for a reflective roof.
- Low-slope roofs, for new buildings, shall be designed so that the structure creates the slope.

ENTRANCES

Primary Entrances

- Shall be obvious, well lit, and protected from the elements.
- Emphasize with different materials, larger massing, articulated surfaces, texture, or accent colors that distinguish it from the rest of the building.
- Shall be clearly identifiable from the street and act as a focal point for the façade.
- Defines the importance of the building by the size, scale, and detailing.
- Enhance with covered passageways, courtyards, landscaping, paving, and plazas.
- Main building identification signage shall be provided in close proximity to this entrance.
- Entrance elements shall not contain covered ledges or soffit areas where bird nesting can occur.

Secondary Entrances

- Shall be placed on sides other than the one where the main entry is located.
- Shall be similar in form to the main entrance with understated scale and detail.
- Lighting shall be provided to illuminate the entrance, circulation to the parking lot, and adjacent outdoor areas.
- Exterior gathering spaces for personnel are encouraged, to include informal patios, break areas and seating.

Service & Utility Entrances

- Shall not be located on the same elevation as the main entry
- Shall provide visual separation from secondary entrances.
- Deemphasize by matching the adjacent wall material color.
- Loading docks shall be screened with an architectural wall or landscaping.
- Emergency egress doors shall not be placed on the main entry elevation.



ANCILLARY STRUCTURES



POLYGON PARK ARCHITECTURE



- Use only KAFB standard materials as indicated in the appendices.
- Ancillary structures shall match the adjacent building design, style and character.
- Shade structures shall be included as an integral part of buildings as the first option. Separate shade structure are not preferred and will be allowed on a limited bases with approval from the ACRB.
- All ancillary structures shall meet wind uplift and snow loads as dictated in the most current version of the applicable Unified Facilities Criteria (UFC).
- Weather resistant, factory finished, and corrosion resistant materials shall be used.
- Wood structures are not allowed for any type of ancillary facility

Shade Structures

- Pavilions shall be sited for functional and efficient use of the site.
- Pavilions should be located to serve multiple facilities.
- Provide plantings and landscaping for pavilions over 500 sq ft.
- Shelters shall be oriented to take advantage of climatic factors and seasonal conditions.
- Prefabricated metal pavilions shall have beige metal columns, a brown metal roof, a rectangular shape, and are allowed basewide.
- Prefabricated trellis pavilions shall have beige metal columns, brown metal slats, are acceptable only in park settings, and can be enhanced with vines for additional shading.
- Tensile membrane shade structures shall have a beige canopy, brown columns, and are only allowed for playground areas.
- All shade shelters shall be made accessible by concrete pads, pavers, or crusher fine paths.
- Asphalt is allowed under a pavilion only if it is used for vehicle washing or maintenance.

Storage Facilities

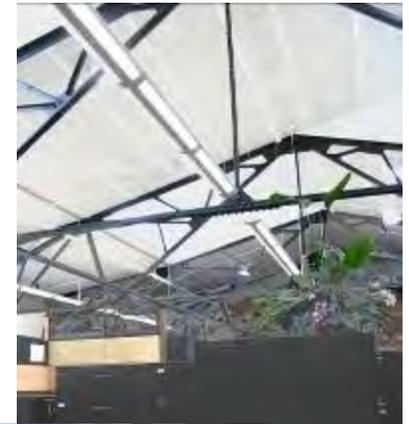
- Storage buildings shall comply with KAFB standard materials and colors.
- When more storage is needed, one large facility shall be provided in lieu of adding multiple smaller storage buildings.
- Shall be located away from high visibility areas.
- Prefabricated metal buildings, tuff (e.g., TUFF SHED®) sheds, and similar storage buildings are not allowed within the occupied area of the base, as shown on the map on page two.

Temporary Facilities

- All temporary trailers shall be accessible and include stairs, a ramp, site lighting and accessible walkways.
- Temporary facilities shall match base standard colors for the district where they are located.
- If more than one temporary facility is provided, all shall be uniform in color and materials when placed in close proximity.
- Temporary facilities shall be in good condition, have metal siding, include a skirt, and be void of dents, chipped paint, or other exterior visible blemishes.
- Temporary facilities are only allowed upon approval from Headquarters Air Force Material Command (HQ AFMC) through the 1391 planning process.

S U S T A I N A B I L I T Y

- The Air Force goal is to 100% of the Military Construction (MILCON) program in FY09 capable of achieving Leadership in Energy & Environmental Design (LEED) Silver certification.
- All new construction shall be developed to minimize energy consumption through building shape, window placement, daylighting, Heating Ventilation & Air Conditioning (HVAC) systems, material choices, insulation, sunshading, and building orientation.
- Heat gain shall be addressed through shading elements, overhangs, coatings on glazing or other innovative techniques on the south, east, and west elevations of all buildings as an integrated part of the building design. Sun shading devices that appear to be tacked on are not allowed except as retrofits for existing buildings.
- Designs shall meet requirements for energy efficiency and performance as set forth in American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) 90.1
- Projects shall incorporate at least 25% recycled building materials.
- A plan for erosion and sediment control shall be provided that meets or exceeds the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) regulation (40 CFR 122) and Environmental Protection Agency (EPA) EPA-833-R-060-4. Additionally, erosion and sediment plans are required for individual construction sites that impact more than one acre.
- Compliance is mandatory for environmental issues as stated in National Environmental Policy Act (NEPA), Underground Storage Tank (UST), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the Clean Air Act, the Toxic Substance Control Act (TSCA), the Resource Conservation and Recovery Act (RCRA), the Occupational Safety and Health Act (OSHA), the National Historic Preservation Act, and all local regulations that are more strict.
- Projects shall not be sited on land where threatened or endangered species reside, within 100 feet of any wetlands, or areas where the elevation is lower than the 100 year flood plain.
- Provide an easily accessible area specifically for the purpose of collecting and storing recycled glass, paper, plastic, and metals.
- Roof construction shall include materials with high reflectance and low emissive properties that meet Energy Star ratings on all retrofit and new low slope roofs. Sloped roofs do not need to meet this criteria.
- All substantial interior renovations, additions, and new construction shall include a bicycle rack and are encouraged to provide at least one changing/shower room.





S U S T A I N A B I L I T Y

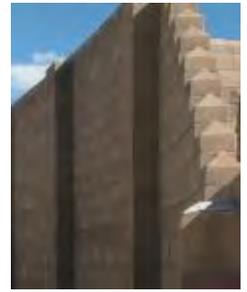
- The foot-candle requirements set forth by the Illuminating Engineering Society of North America (IESNA) shall not be exceeded.
- Interior and exterior lighting shall not allow any direct beam illumination from the site.
- Chlorofluorocarbon (CFC) based refrigerants shall not be used in new construction. Old CFC based systems shall be removed at the earliest opportunity with renovations.
- Metering shall be installed to ensure that energy and water savings are being achieved for all new facilities and remodel projects with new services.
- Sealants, paints, adhesives, composite products, and carpet shall be low-emitting volatile organic compounds (VOC).
- Parking lots should aim to provide 30% shading over impervious surfaces, use light colored materials, or provide a 50% open grid pavement systems to reduce heat island effects.
- High efficiency irrigation or recycled site water systems are encouraged to reduce the need to use potable water for site irrigation.
- Fundamental building commissioning is recommended for all new MILCON projects.
- It is recommended that a plan be included for all alterations, additions, and MILCON projects concerning management of construction waste in order to divert as much material as possible away from landfills.
- The use of locally sourced materials within a 500 mile radius is recommended.
- Electrical car charging stations should be considered as an option for alternative transportation credits.
- Design elements to minimize cross contamination of regularly occupied areas by chemical pollutants.
- It is highly encouraged to employ a LEED certified professional for all new construction.
- Indoor environmental quality concepts including thermal comfort, moisture control, daylighting, and low-emitting materials shall be employed in all projects.

*** These criteria are loosely derived from the LEED rating system developed by the United States Green Building Council (USGBC).



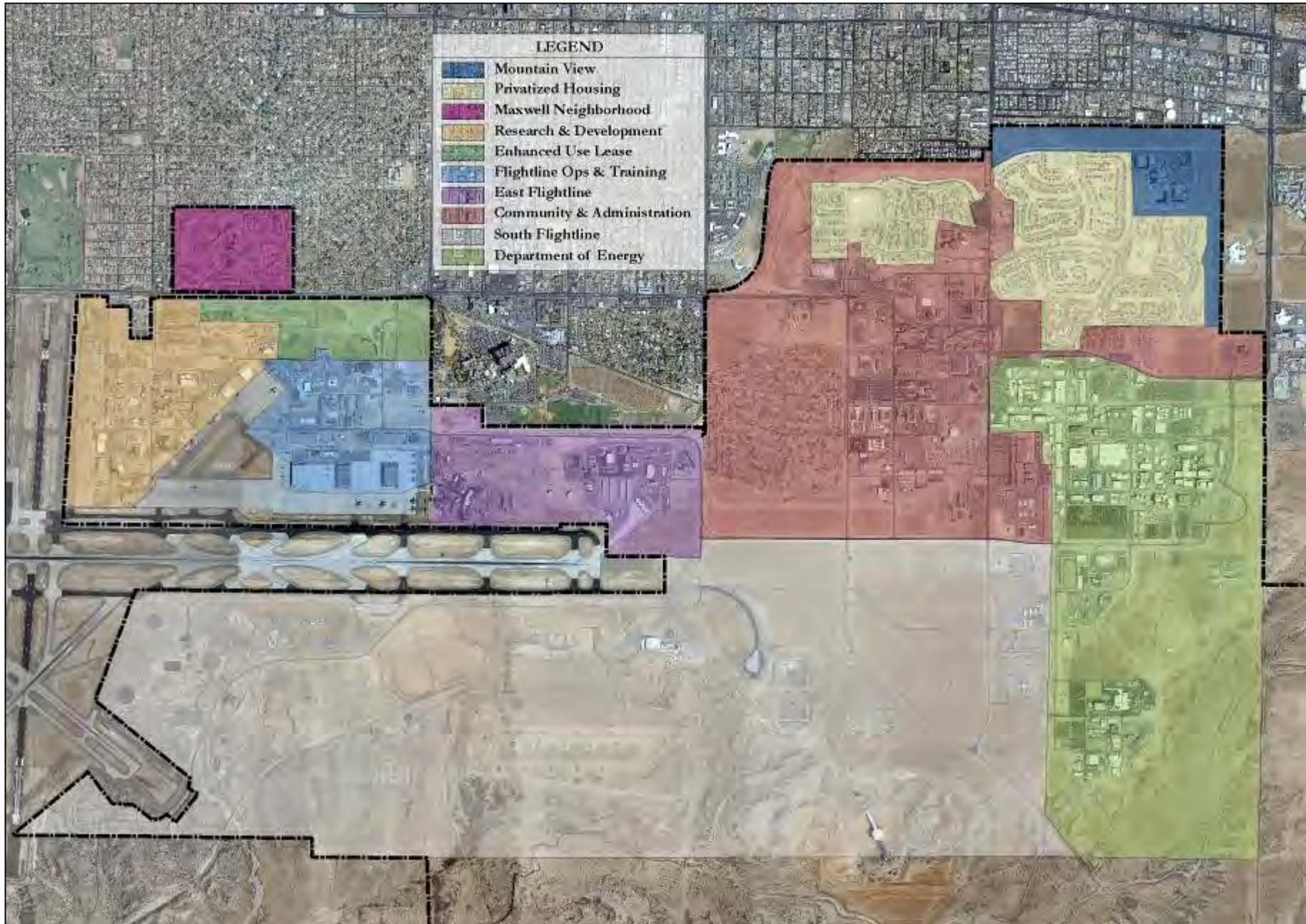
SCREENS & ENCLOSURES

- Screens shall be used for transformers, HVAC units, service and storage yards, equipment, dumpsters, and other similar utilitarian items.
- All stand-alone, above-ground utilities shall be screened and located away from building entrances, main streetscapes, pedestrian paths and high visibility areas.
- Screening shall be constructed with integrally colored CMU, stucco walls, or landscape elements such as berms, boulders and plant materials.
- Landscaping is an acceptable screening material only if it will be effective year round and easily maintained.
- All screen walls shall extend to a height where equipment is not visible at eye level to pedestrians. Painting equipment behind screen walls is not required
- Screen walls shall be located away from sidewalks and main traffic areas.
- Screen walls shall provide the necessary clearances for maintenance and air circulation for all equipment.
- Dumpster enclosures shall be located near the service entrance, on the side opposite from the main entry, and meet AT/FP requirements.
- Cable-barrier and industrial type systems are only permitted with ACRB approval.
- All AT/FP walls and site measures shall be approved at the programming stage by the ACRB and the Anti-Terrorism Officer (ATO).
- Architectural metal gates shall be provided where secure screened areas or AT/FP standoff is implemented and vehicle access is needed.
- Metal gates (shown to the right attached to an AT/FP wall) shall be rectangular in form, shall compliment the color and character of the wall where attached, and be powder coated.
- Decorative metal fencing materials are allowed for areas that don't require visual screening, but do need security.
- Chain link and wood plank fences or gates are not allowed for any type of screening or enclosures.
- Fabric screening is not allowed except for temporary applications during construction.
- Jersey barriers are not allowed as a permanent force protection measure and will be removed after 6 months.
- Concrete pads are encouraged for entire screened area.



UNITY AND DISTINCTION

Architectural style on Kirtland AFB is an ongoing evolution of materials, roof forms, colors, massing, details, functions, and building scales within a unique cultural and historical context. Each visual district in our community has distinct characteristics that work together to create a pleasant environment. Visual continuity in each district is derived from shared design traits and details, as well as from functional groupings. Existing strengths should inform every project, and new designs should enhance the character of each district by reinforcing relationships with surrounding structures.



GENERAL DESCRIPTION

The Community & Administration District is diverse in functional and aesthetic traits. It includes administrative buildings, the Commissary, gas station, fire station, dormitories and other community facilities. The southernmost areas currently host transportation yards and warehouses, though these functions will likely be relocated to another district. In daily use, this district is the town center for military and civilian activities. This area is typically the first impression for visitors. Creating a distinctive, neighborly and accessible community will help unify this district formally and functionally. Building super-blocks that focus on pedestrian circulation and human scale will reinforce the community ideals, while still serving our commuter population.



SPECIFIC REQUIREMENTS

- No building in this area is permitted to exceed three stories in height.
- Low-slope roofs are required to fit the context.
- The primary finish material is sand-finished tan stucco with accents of brick.
- Brick may be used as an accent for no more than 30% of any elevation surface.
- Primary building entries should incorporate open beam, shade structure elements that are already prominent in this district.
- Wall openings shall be deeply set and shaded to provide visual texture and climate control.
- Layered massing and varied heights shall be used on all facades to further develop indoor-outdoor spatial relationships responsive to pedestrians.
- Decorative horizontal elements are encouraged, especially as accents on parapets walls and entry structures.
- A combination of shade structures, plazas, site furniture, and site lighting shall be included for all new construction in this area.
- Enhanced paving shall be used for pedestrian paths to connect adjacent sites.
- New building projects will consolidate parking requirements with neighboring facilities.

ACCENT COLORS

- The primary accent material in this district is brick. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, and massing elements.
- The secondary accent color in this area is Refuge. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.



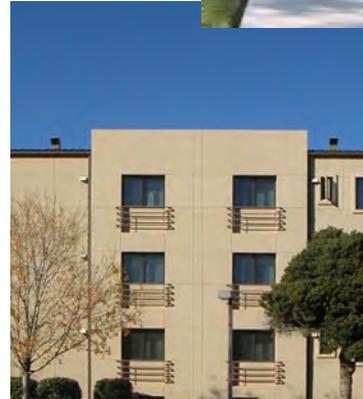
GENERAL DESCRIPTION

The Mountain View District is in the northeast corner of the base and wraps around privatized housing. The City of Albuquerque is directly adjacent to the north of the district and contains light industrial and housing areas. The district contains visitor lodging, a large community swimming pool, picnic shelters, visiting officers' quarters, and future recreational facilities. The Mountain View Club serves military and civilians for gatherings and ceremonies. Short-term visitors and new arrivals receive their first impression of the base and the southwest from this district. Structures in this area generally have a low profile, horizontal proportions, sloped metal roofs, and stucco finishes.



SPECIFIC REQUIREMENTS

- Create low profile buildings, predominately horizontal, that are three stories or less.
- Provide stucco, standing seam sloped metal roofing, and staggered massing.
- Tan stucco shall be the primary surface material, accented by darker stucco or masonry.
- Parapet walls may be used to define entrances, break up large massing, or provide rhythm to façades.
- Design windows to create interest and definition.
- The limited use of wood as lintels is allowed.
- Reinforce the pedestrian scale by organizing buildings around exterior spaces, courtyards, and patios.
- Provide site lighting, furniture, pavers, and enhanced paving to encourage use of outdoor spaces.
- Arrange buildings and outdoor amenities to take advantage of the mountain views.
- Include pedestrian connections to housing and the Visiting Officers' Quarters (VOQ) from the future recreation area in all new projects.
- Enhance service areas, enclosures, and parking lots with plantings and landscaping.



ACCENT COLORS

- The primary accent color in this district is Reddened Earth. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, sun-shading devices, and massing elements.
- The secondary accent color in this area is Exclusive Plum. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.



GENERAL DESCRIPTION

The East Flightline District is composed of the Air National Guard (ANG) campus and an undeveloped area adjacent to the flightline. New development will unify the appearance of this district. Projects should provide a visual link between the east and west side of the base through at least one landscaped corridor with pedestrian and vehicular circulation. The architecture will continue to develop with forms and materials that relate to flightline functions and aesthetics. Future development should strive to improve the appearance of this industrial area.



SPECIFIC REQUIREMENTS

- Pitched standing-seam metal roofs are preferred in this district. Low slope roofs can be used when required for large scale facilities.
- Tan stucco is the dominant wall material in this district.
- Accent color coverage on each elevation shall be reduced to 15% for primary and 5% for secondary accents.
- Gallup Gold CMU shall be used for no more than 40% of the overall building material, but should always be included to provide a cohesive appearance with the ANG campus and other buildings in the district.
- Complementary materials of naturally finished concrete, integrally colored CMU, flat composite metal panels, and other innovative materials are encouraged, provided they do not exceed 15% of any elevation.
- Dynamic forms and massing are encouraged, including shed roofs, angled entry walls, non-orthogonal sites and floor plans, and opposing massing elements.
- Architectural walls that reduce the scale of large building masses and provide sun shading are encouraged in this district.

ACCENT COLORS

- The primary accent color in this district is Refuge. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, sun-shading devices, and massing elements.
- The secondary accent color in this area is Reddened Earth. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.



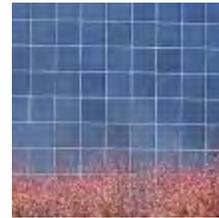
GENERAL DESCRIPTION

The buildings in the Flightline Ops & Training District are primarily occupied by the 58th Special Operations Wing. These include facilities for training, administration, simulators, and hangars of various sizes. The area has an active, dynamic feeling of movement created by the ongoing activities and proximity to flightline functions and aircraft. The environment should convey a mission-oriented campus and demonstrate aircraft influence. Future planning should create distinctive reference points within the campus for location of vehicle parking and pedestrian access. The buildings and landscape should be organized for students and visitors to easily find their way in this district.



SPECIFIC REQUIREMENTS

- Provide either low-slope membrane or sloped standing seam metal roofs.
- Gallup Gold CMU shall be used for no more than 60% of any elevation surface, but should always be included to provide a cohesive appearance with significant existing structures in this district.
- Accent color coverage on each elevation shall be reduced to 15% for primary and 5% for secondary accents.
- Flat composite metal panels are allowed in this district for large scale facilities such as hangars and simulators. Masonry, textured or colored concrete, and stucco should be included on no less than 40% of each elevation.
- Large buildings shall use large scale massing elements to break the visual impact into smaller masses and pedestrian scale elements.
- Gateway features and enhanced paving should be considered at campus entries.
- Transitional spaces outside entries shall be improved with plantings and enhanced paving.
- Smaller scale buildings and shared parking lots are encouraged except where programmatic functions dictate the size of the facility.



ACCENT COLORS

- The primary accent color in this district is Downpour. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, sun-shading devices, and massing elements.
- The secondary accent color in this area is Reddened Earth. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.

GENERAL DESCRIPTION

The Research & Development District is mainly occupied by the Air Force Research Laboratory (AFRL) Directorates for Space Vehicles and Directed Energy . The area will continue to accommodate a variety of small-scale, one- and two-story administrative buildings and laboratories with varied massing. The general image of this district should convey a high-tech campus, with travel corridors appropriately designed, landscaped, and maintained to impress distinguished visitors and guests.



SPECIFIC REQUIREMENTS

- Low-slope membranes are preferred, with standing seam metal panels permitted on accent features.
- Tan stucco is the primary building material with accents of darker stucco.
- Accent color coverage on each elevation shall be reduced to 15% for primary and 5% for secondary accents.
- Brick, colored concrete, masonry, and metal surfaces are permitted only at entrances, retaining walls, and architectural accent elements. They shall not exceed more than 15% of any elevation.
- Flat composite metal panels and tilt-up concrete are allowed in this district for large scale facilities such as hangars, and warehouses. These materials shall not exceed 40% of the materials on the elevations.
- Focus on landscaping and overall appearance for areas frequented by distinguished visitors.
- New AT/FP walls shall be constructed of Gallup Gold CMU and detailed to match adjacent buildings.
- Consolidate parking and improve with landscape design to reinforce a unified campus environment.

ACCENT COLORS

- The primary accent color in this district is Refuge. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, sun-shading devices, and massing elements.
- The secondary accent color in this area is Exclusive Plum. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.



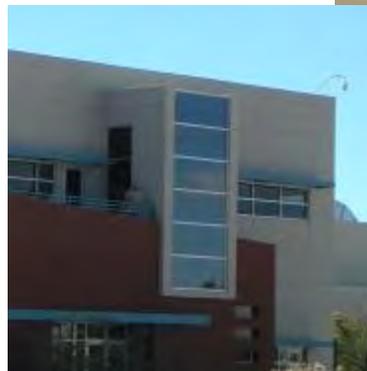
GENERAL DESCRIPTION

The Enhanced Use Lease (EUL) District presents a positive image for Kirtland AFB to the surrounding community. This district will be leased to a developer in the near future. The main functions are expected to be research, administration, technology development, and laboratories. The district should incorporate cutting edge technology and building techniques to enhance the interior functions of the facilities. The area should provide a visual connection from the east to west through use of forms, materials, and colors.



SPECIFIC REQUIREMENTS

- The developer is asked to comply with all standards given in this document (buildings, site & landscape) except for those specifically given for other districts.



GENERAL DESCRIPTION

The Maxwell Neighborhood District is currently occupied by housing, an altered historical structure, a child development center, and a lodging facility. The housing is scheduled to be demolished in the near future and should not be used as a precedent for new construction. Gibson Boulevard creates a significant separation from the rest of the base. The detached location of this district permits a more distinct character for future uses. Creating an inviting presence to the community on the south side of the district should be emphasized as this area continues to develop.



SPECIFIC REQUIREMENTS

- Building heights can vary with massing, but the majority of the buildings should be no taller than three stories.
- Incorporate standing seam metal roofs on all new construction.
- Clay tile roofs should be used when multiple historical elements are incorporated into a design.
- All roof slopes shall match the existing facilities of 3:12.
- Provide tan stucco as the primary material for new facilities in this district.
- White trim, frames, fascia, gutters, downspouts and doors are allowed in this district in addition to the secondary accent color options listed below.
- Include entrance elements with rectilinear or gabled forms.
- New construction facing Gibson Boulevard shall address both the community and relate to the EUL district.
- Individual buildings or clusters of separate buildings should create interior courtyards and areas for pedestrian circulation.
- Parking lots shall be sited to serve multiple facilities and reserve area for future expansion.



ACCENT COLORS

- The primary accent color in this district is Reddened Earth. Approved applications are lintels, entry elements, accent panels, recessed areas, railings, banding, parapet wall accents, sections of the building base, sun-shading devices, and massing elements.
- The secondary accent color in this area is White. Approved applications shall be used in conjunction with the primary accent color and are limited to entry accents, massing elements on the main entry elevation, and recessed or projected areas in repetitive applications.



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A SENSE OF PLACE

The base is defined by site and landscape elements in addition to structures in the built environment. Landscape features and landmarks continue to evolve into an enduring pattern as the base develops. Site development and amenities should be designed in a holistic manner to enhance natural and built features. Vehicular and pedestrian circulation throughout the base is intertwined with the other site elements, working together, providing a consistent language in the landscape.



GENERAL DESCRIPTION

Many factors have to be taken into consideration when siting a new building, an addition, park, or landscaped area. Relationships to other buildings and adjacent sites become as important as the physical appearance of the building or landscape. Environmental factors to consider include sun angles, wind direction, local temperatures, topography, noise, and drainage. It is important to study the architectural palette surrounding the site during the development of any project. Proper site development and planning will create visual clues for individuals as they navigate through the base.

SPECIFIC REQUIREMENTS

- Siting shall be coordinated with the Future Land Use Plan. Exceptions can only be approved by the ACRB.
- Orient buildings to reflect project requirements and respond to conditions identified with a comprehensive site analysis.
- Reduce the environmental impact during and after construction.
- Permanent development shall not encroach on parks or areas designated for recreational activities.
- New buildings shall be integrated into the existing landforms and topography.
- All sites shall be graded for positive drainage away from buildings, pedestrian paths, and main traffic areas.
- Provide crushed rock drainage areas around the perimeter of buildings.
- Create a strong connection between buildings and the exterior spaces.
- Vehicular and pedestrian circulation shall be addressed and enhanced with all additions, site improvements, new landscapes, and new facilities.
- Future development shall address view corridors and gateways.
- Buildings shall be located to take advantage of exterior views.
- Ensure that future improvements are planned to maintain the current development strategy.
- Site selection that promotes infill, reduces utility extensions, and encourages public transportation are favored.
- Reduction of the building footprint by building up is preferred over large extended footprints.
- Incorporate retention and detention ponds in natural configurations into the landscape and away from the main entrances.
- Water runoff should be considered as a natural method of irrigation for the surrounding site.



GENERAL DESCRIPTION

Special attention should be given to pedestrian connections within the districts and across the base. Creating inviting pathways for pedestrians eases passage between buildings, through parking lots, to public transit stops, and to other destinations without vehicular interference.



SPECIFIC REQUIREMENTS

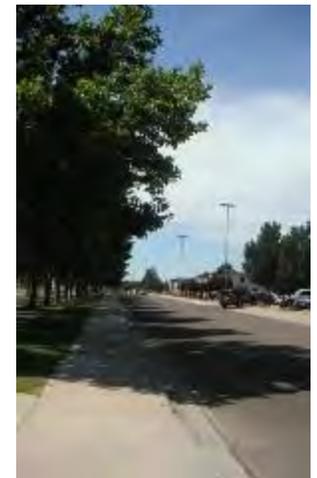
- Paved walkways to building entrances, connections to adjacent sites, and intermediate pathways within the site shall be included for all new construction.
- Sidewalks shall be a minimum of 6'-0" wide, and should increase in width where there is significant pedestrian traffic.
- A buffer zone shall be provided between roadways and walkways with a minimum width of 3'-0" that includes landscape elements.
- Typical concrete sidewalks shall have a natural color, broom finish, and troweled edges.
- Primary roadways shall have sidewalks on both sides of the street and secondary roadways shall have a sidewalk on at least one side of the street.
- Direct paths should be provided for areas that connect buildings and ancillary structures.
- Sidewalks and recreational paths shall be placed at intersections and cross at a 90 degree angle.
- Connections between sidewalks and recreational paths are encouraged.
- Recreational paths shall be easily accessed from all districts, be at least 6 feet wide, setback a minimum of 10' from roads and include gentle meandering elements.
- Recreational trails shall provide paved rest areas that include a bench and trash receptacle at least every mile and are encouraged to provide water fountains and shade at the same interval.
- Asphalt and athletic surfaces are only to be used for jogging, walking and recreational field uses.
- Provide enhanced paving of integrally colored concrete or pavers for entries, parks, and ceremonial areas.
- Control and expansion joints shall be integral to the score pattern of the enhanced paving.
- The scale of the score pattern shall be relative to the size of the paved area.
- Press pattern concrete may be allowed with ACRB approval.

GENERAL DESCRIPTION

Vehicular transportation on base should be accommodated with paved driving corridors that exhibit pleasing visual characteristics. Enhanced aesthetics should be programmed to improve the safety and appeal of vehicular and pedestrian travel. Roads are a transitory space integral to the function of the base and should properly organize traffic flow.

SPECIFIC REQUIREMENTS

- New construction projects shall assess the transportation network of the immediate area for possible improvements.
- All roadways shall be constructed with asphalt paving.
- All roadways in developed areas shall be bounded with an integrated 6-inch concrete curb and gutter.
- Where feasible, use curb cuts to direct water from roadways into landscaping and ponds.
- The minimum distance between street intersections is 400 feet.
- Intersections that occur in areas with heavy pedestrian traffic shall incorporate crosswalks at all corners.
- Every opportunity should be taken to accommodate pedestrian and bicycle travel in areas parallel, but separate from, roadways.
- Intersections shall maintain a clear zone of 45 feet at corners to create unobstructed views of traffic. Landscaping inside this zone shall be maintained at a maximum height of 2'-6".
- Trees planted near intersections may be used inside the 45 foot setback if they are limbed up to 10'-0", to maintain visibility.
- To encourage shared parking lots and the super block concept, redundant roads shall be eliminated at the earliest opportunity.
- Gravel paving is not permitted in the populated area of the base defined in the basewide standards on page two.
- All utility work that crosses pavement shall be jack and bore, unless the condition of the pavement is evaluated and determined acceptable for trenching.
- All paving repairs shall be made to match existing surfaces and materials.
- Where paved roads encounter unpaved roads, reinforced aprons shall separate the different surfaces.
- The Manual on Uniform Traffic Control Devices (MUTCD) shall be used for all traffic signs, pavement markings and related items.





SPECIFIC REQUIREMENTS

Primary Roadways

- Permit higher-speed traffic to include multiple traffic lanes in each direction.
- Shall minimize intersections, stops, turns, and discourage individual curb cuts.
- Dedicated parking areas and individual buildings shall be separated from primary roadways by screens and setbacks.
- On street parking is not allowed.
- Cross streets from primary roadways that have on-street parking shall not interfere with traffic flow.

Secondary Roadways

- Secondary roadways funnel traffic to and from primary roadways and destination access points.
- On street parking is encouraged, but will only be allowed in areas specifically marked for parking.
- Curb cuts shall be minimized to maintain proper vehicular circulation.
- Secondary and tertiary roadway intersections shall have a reduced turning radius to limit vehicle speed.

Tertiary Roadways

- Permit traffic to access individual facilities and parking areas.
- Contain a single lane of traffic in each direction.
- Shall be properly designed to accommodate parking and service areas that reduce circulation conflicts.
- Lane widths and turning radii shall accommodate large trucks, vans, and emergency vehicles.

Service Drives

- Service drives permit access for vehicles to service portions of a building or site.
- Neighboring facilities are encouraged to share common service drives.
- Service drives shall not be within the view of primary entrances or parking lots.
- Emergency access roads behind ATRP walls shall not be asphalt or concrete. Crusher fines, grass pavers or other aesthetic options shall be provided and integrated with the building and pedestrian areas.

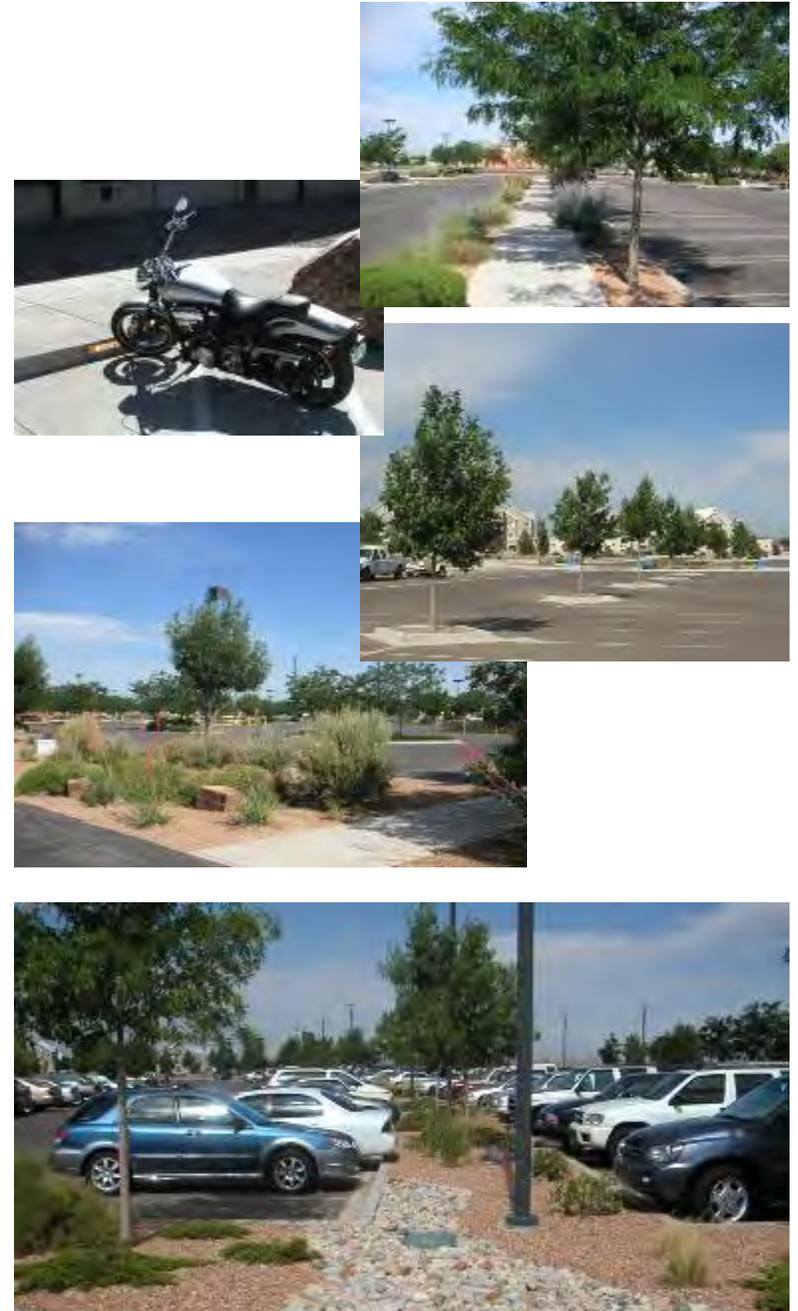


GENERAL DESCRIPTION

Parking areas are an essential element in the built environment, but care should be taken to provide appropriate capacities according to building occupancies. The design of parking lots creates opportunities to integrate design concepts from the adjacent landscape and buildings into a much larger surface area. A functional and navigable parking lot can provide smooth and safe traffic flow while creating a positive appearance and transition for drivers and pedestrians.

SPECIFIC REQUIREMENTS

- The visual impact of parking lots shall be minimized with landscape areas and built elements along the main roadways.
- During the planning process, a parking study of existing parking around the site shall be completed to ensure the correct number of spaces is provided through new or shared parking lots.
- Parking lots shall be located to the side or behind the street facing facade. The main view should be of the entrance, not the parking lot.
- Provide parking lots shared between multiple facilities to reduce overall size and heat island effect.
- The angle of parking shall be determined by the density and turnover. Ninety degrees shall be used for low turnover and sixty degrees for high turnover.
- Parking angles shall be consistent within one parking area.
- The typical stall width is 10'-0" for all parking and will vary in depth depending on the angle of parking.
- All parking striping and symbols shall be reflective markings, using paint or tape.
- Provide integrated curbs and islands. Wheel stops are not allowed.
- Reserved parking shall be minimized and consolidated in one area. Reserve signs shall be mounted on the curb.
- Planting islands shall be provided for every other row of cars. Alternate islands shall be a walking aisle.
- New parking lots shall be designed to accommodate shade trees that have spreading shade canopies at intervals of 1 tree for every 10 parking stalls.
- Shade trees shall be provided for all planted islands in the middle of the parking lot as well as at the perimeter to ensure even shaded coverage.
- Separation of vehicular and pedestrian circulation shall be maintained in the parking areas. Designated areas for pedestrian cross traffic shall be included.
- Dead end parking lots are not allowed.
- Parking aisle turn-arounds shall be located within the parking lot to avoid sending cars into the street to reach the next aisle.
- Roadway circulation patterns shall be evaluated prior to placing entries into parking lots.
- Motorcycle parking shall be constructed of concrete or an adhered metal plate and be clearly designated in each parking lot.
- Covered spaces for motorcycle parking shall be provided for dorm areas.



GENERAL DESCRIPTION

Consistent exterior signage should communicate directions or identify elements on the installation without cluttering the overall base appearance. Signage is important for newcomers to enhance traffic flow and indicate locations of importance on the base.



SPECIFIC REQUIREMENTS

- The Air Force Sign Standard regulates placement, colors, font, type size, placement of lettering, and symbol for exterior and interior signage.
- A consistent style, color, language, and placement shall be achieved across the installation.
- Each facility shall have only one exterior sign at the main entrance, identifying the building's function.
- Wall mounted building signs shall be posted for maximum visibility, be factory finished beige or brown, and contrast color with the adjacent wall surface.
- Combine building identification at roadways on one sign when multiple facilities are in close proximity to each other.
- The background color, metal posts, the back of the sign, and the fasteners shall be brown.
- Reflective white lettering shall be used on all identifying signs.
- Building numbers shall be placed in one location, in a visible area on the front or side of the facility.
- Army and Air Force Exchange Service (AAFES) and commercial signage shall comply with the AF regulations and be neutral in color.
- Provide directional signs to essential buildings at key locations and intersections. Combine multiple destinations on one sign.
- Monumental signs are only allowed at entry gates, headquarters buildings, housing neighborhoods, or other special cases approved by the ACRB.
- Landscape and lighting shall be integrated with monumental signage.
- Electronic marquee type signage is only allowed with ACRB approval.
- Regulatory signage shall be provided for traffic control, parking, and base warnings.
- The MUTCD shall be followed for color, size, shape, and display requirements of regulatory signage.

GENERAL DESCRIPTION

Elements such as benches, planters, water fountains, bike racks and play equipment introduce functional and enjoyable architectural features that provide a unified impression of the installation. Introduction of site furniture in an outdoor space creates an inviting environment for gathering and respite.

SPECIFIC REQUIREMENTS

- Seating, to include benches and picnic tables, shall be placed on a concrete pad in shaded areas.
- Seating shall be provided at building entries, plazas, playgrounds, parks, along recreational trails, and other areas where seating is desired.
- Picnic tables shall be provided at pavilions, parks, and other recreational areas.
- Picnic tables shall be arranged to allow for large parties and individual family outings in park settings.
- Provide factory finished metal benches and picnic tables.
- Trash receptacles and ash urns shall be factory finished metal.
- Trash receptacles shall be provided in all locations where benches are present and other areas of public concentration.
- Trash receptacles and ash urns shall be placed to avoid visual clutter and away from high visibility areas.
- Ash urns shall be provided no closer than 18' from a building entrance.
- Drinking fountains shall be provided near fitness centers, youth centers, recreational trails, picnic pavilions, and park areas and be placed on a concrete pad.
- Provide free-standing, factory finished metal drinking fountains.
- Drinking fountains shall provide a sump or French drain to prevent water from ponding.
- Drinking fountains shall not be mounted on buildings except at restroom facilities in a park.
- Bike racks shall be ribbon style, accommodate at least five bikes, and have a brown factory finish.
- When possible, consolidate bike racks to serve multiple buildings.
- Bike racks shall be placed on concrete pads, near established bike routes, and near secondary entrances.
- Smoking environments shall be a minimum of 50' from building entry, and provide approved and identified ash receptacles.



LANDSCAPEFORMS



HAWS CORPORATION



LANDSCAPEFORMS



RUBBERMAID ARCHITEK

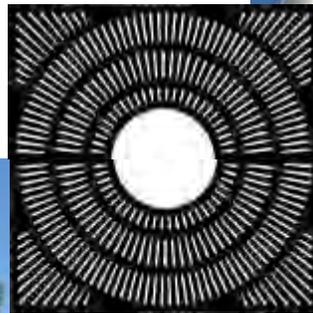


SPECIFIC REQUIREMENTS

- Play equipment shall be located in parks, housing areas, child development centers, youth centers, community centers, and recreational centers.
- Pre-manufactured play equipment shall be built to industry standards.
- Play equipment color shall be approved through the ACRB.
- Shaded areas, rubberized surfacing, benches, litter receptacles, and landscaping are required for all playground areas.
- Playground equipment and access to the areas shall be configured to meet ADA regulations.
- Pedestrian access shall be provided to and from the play areas.
- Black enamel finished pedestal grills placed on a concrete pad are the standard.
- Built-in grills shall include materials complimentary to the area where they are located and require ACRB approval.
- Flagpoles shall be located within prominent landscaped areas or plazas. Placement requires approval through the ACRB.
- The flagpole finish shall be brushed aluminum set in a concrete base.
- Black cast iron tree grates, recessed in concrete may be used in formal or urban landscapes.
- Grates shall include expandable openings to accommodate growth.
- Slot openings in tree grates shall be no larger than 1/2" and placed so that elongated openings do not run parallel to pedestrian traffic.
- Tree grates shall be accented with enhanced paving.
- Planters may be provided for various applications and located with other exterior site elements.
- All planters shall include irrigation for plant materials.
- Lighting, security, and removable bollards located in the same area shall all have the same detailing.
- The standard height of bollards shall be consistent for all bollard types throughout an area.
- Bollards that are meant to protect equipment and buildings shall be painted to match the adjacent surface.
- Yellow bollards are only allowed in traffic areas where safety is a concern.



LACOR STREETSCAPE



LANDSCAPEFORMS

GENERAL DESCRIPTION

The rhythm of light fixtures on the installation provides a linear pattern during daytime, and security, comfort, and visibility at night. Special attention should be given to light pollution to allow base missions and the Albuquerque Airport to continue operations without interference.

SPECIFIC REQUIREMENTS

- Specific exterior lighting requirements including allowed lamp and fixture types are located in Appendix A & C.
- The base is split into two zones with different lighting requirements. The occupied area of the base as shown on page two of this document is considered Zone Two. The southern part of the base is considered Zone One. Please see tables in Appendix C for further information on these zones.
- Light levels for streetscapes, parking, and pedestrian areas shall be no more than 5 foot candles (fc) and not less than 0.2 fc unless stated otherwise in Appendix C.
- Timer/Photocell combination controls that turn on at dusk and turn off at a selected times shall be used for all exterior fixtures.
- All exterior lights shall be full cut-off fixtures unless stated otherwise in Appendix C.
- All service to exterior lighting shall be underground or solar powered.
- All pole mounted fixtures shall be shoebox type, factory finished medium bronze, tapered square pole, with one or two arms depending on the light level needed.
- Primary, secondary, tertiary, and service roadways shall all use the same luminaries, poles, and mounting heights.
- Roadway and parking lights shall be mounted at a height of 30'-0", including concrete piers.
- Poles mounted along roads shall be spaced evenly and alternate sides.
- Lighting shall be provided on all corners of intersections.
- Pole placement shall be coordinated with the layout of parking islands.
- Pole mounted fixtures in parking lots or unprotected areas of traffic shall be mounted on a 3'-0" concrete pier.
- Pole mounted walkway lighting shall be 12'-0" high.
- Bollard lighting is encouraged in pedestrian areas to provide a sense of scale.
- Pedestrian scale lighting shall be provided along sidewalks and recreational trails that are not directly adjacent to lighted roadways.
- Wall mounted light fixtures are encouraged for wall washing architectural features and lighting plazas, enhanced paving, and stairs.
- Accent lights should be used sparingly to create hierarchy of architectural and landscape features.
- High pressure sodium lamps are not allowed.
- New traffic signals shall match the style and form of those on Wyoming Blvd.



GENERAL DESCRIPTION

Utilities are a functional and unavoidable element that should be blended into other site features. These elements can create visual clutter, therefore every effort should be made to minimize the negative impact to increase focus on more aesthetic areas in the landscape. Relocating significant utilities lines and equipment away from high visibility areas will have the greatest impact in improving the overall character of the installation.

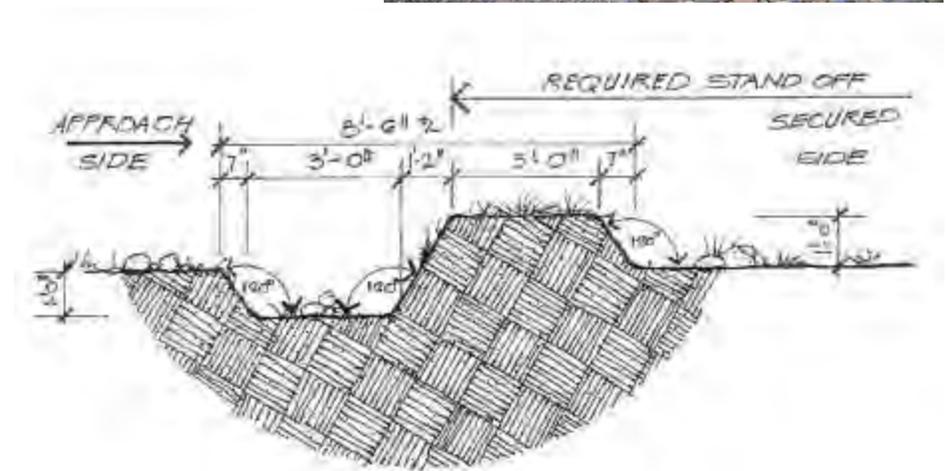


SPECIFIC REQUIREMENTS

- Pole mounted utility lines and building feed shall be relocated underground at the earliest opportunity.
- Exposed cables, conduit, and wires are not allowed.
- Utility structures shall be incorporated with building designs to avoid free standing elements.
- Pad mounted equipment shall be located in less visible areas and screened.
- Fire hydrants shall have a 2'-6" clear area and be located at least five feet from other structures.
- Fire hydrants shall be painted red for non-potable water and yellow for potable water.
- When mechanical equipment is placed within 10'-0" of a building, it shall be painted to match the adjacent surface. When it is located further away it shall be painted beige.
- Externally attached control devices and meters are discouraged, and should be minimized and grouped together when used.
- All backflow preventors shall meet University of Southern California (UCS) standards.
- Fire suppression back flow preventor housing shall be well insulated and supplied with electricity to provide freeze protection.
- Irrigation back flow preventors may use solar powered housing.
- Utilities shall be collocated prior to entering the service side of the buildings.
- All electrical transmission poles shall be metal.
- Careful consideration should be made when placing utilities, services, and equipment.
- Underground utility vaults are preferred for communications, but not allowed for electrical distribution.

SPECIFIC REQUIREMENTS

- Critical buildings that must be crash rated will be identified at pre-definition meeting.
- All projects that require ATFP setback will have ATFP compliant landscaping included. The landscape will be of the intensity required for the landscape zone in which the project is located.
- Existing trees can be considered a barrier if they are 5" cal. or more, and/or have been planted for a year or more.
- New trees can be planted as a barrier to be augmented with another barrier element until to the condition is reached as described above for an existing tree.
- Trees can be used within the 10m or 25m setback from the building to the ATFP barrier.
- Shrubs must be established for 3 years, or be multi trunk with 5 trunks at 1" cal or more.
- Shrubs must not be able to hide a satchel or backpack of 1' square if they area within the 10m setback.
- Boulders must be 18" or higher above ground, 6" or more below ground, be 500 lbs or more and be spaced at no less than 4'6" from edge to edge. Minimum width required will be 2'
- Bollards must be spaced 4'6" O.C. min., crash rated at K4.
- Bollards and Cable: Bollards to conform to ACP color, 4" diameter, min 100' o.c., cable to be 1/2" dia. Contact Civil Engineering for detailed specifications and BCE approval.
- Fencing must be crash rated and comply with ACP for decorative fencing.
- Walls must be 18" min. height. If using block it can be a single block wide, on a footer and have a solid cap top. The blocks must be filled every 32 to 36 inches with steel rebar and fill concrete for re-enforcement.
- Planters: 4'6" clear space between planters; must be used for planting materials and be provided with irrigation.
- Curbs: Must be 8" min. with dirt behind, placed at required setback from building of 10m or 25m
- Access to Driving Lanes: Place removable bollards at 4'-6" O.C.
- Berms and Swales: To be used together as shown in figure. As rock mulch may not stay on slope with filter fabric, best application for berms and swales is in areas where vegetation covering can be used, such as reclamation seeding or turf grass.



SPECIFIC REQUIREMENTS

- AT/FP walls shall match the character of the building and be used in conjunction with boulders, trenches, and other landscape barriers.
- Force protection measures shall be integrated into the landscape and building design through the use of complementary landscape and built features.
- AT/FP retrofit projects and new buildings shall include emergency vehicle access inside the standoff distance.
- Cable-barrier and industrial type systems are only permitted with ACRB approval.
- All AT/FP walls and site measures shall be approved at the programming stage by the ACRB and the Anti-Terrorism Officer (ATO).
- Eight inch curbs can be used



ENHANCING THE NATURAL ENVIRONMENT

Built landscapes are essential to the quality of life at KAFB. They provide shade, beauty, opportunities for gatherings, and recreation for residents and base employees. The natural vegetation on the plains and the distant mountain views beyond provide a backdrop that enhances the built landscape and provides a regional reference. Landscaping and grounds are highly visible and a key component to presenting a positive image of the base.

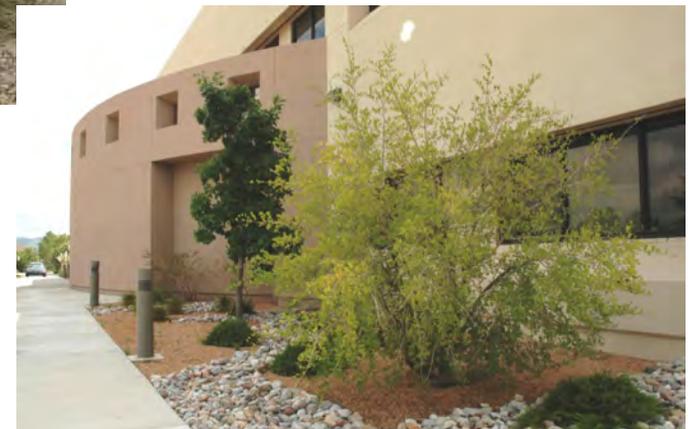


GENERAL DESCRIPTION

The base is located in a Plains-Mesa Grassland, composed almost entirely of grasses when left undisturbed. The east side of the base is wooded and slopes westward to a riparian area near the Rio Grande Valley. KAFB plant palette uses native plants and includes adaptable, drought tolerant plants to provide a greater variety of plant material than would typically occur naturally in this area.

SPECIFIC REQUIREMENTS

- All new MILCON projects, roads, parking lots, and site modifications shall include landscaping elements consistent with this document.
- A portion of the project funding shall be specifically allocated for landscaping and shall be used only for that purpose.
- Use only KAFB approved plant materials as listed in the appendices.
- All landscapes will be designed or reviewed by a professional landscape architect or designer.
- Abide by AT/FP guidelines when choosing plants near buildings.
- Designs shall provide a plant schedule with the common and scientific names, size of container, size of plant (height, width, and caliper) when installed, and number of plants.
- Icons of plants located on plan shall be shown at mature size and identified with labels or a symbol legend.
- Clearly identify types of mulches, paving, and other hardscape on plans.
- Plant materials and arrangements shall be used to complement architectural forms and rooflines through color, texture, and density.
- Allow for 2'-0" minimum distance from the edge of plant at maturity to the base of buildings.
- When rock mulch is used adjacent to buildings, plantings shall be included to reduce heat gain but should meet AT/FP height requirements.
- Avoid an excessive amount of one tree species to reduce the probability of disease and pollen overload.
- Planting beds for trees shall be a minimum of 10'-0" square.
- Planting beds with tree grates shall be at least 5'-0" square.
- Deciduous trees should be used on the south and west side of buildings for shade in the summer and heat gain in the winter.





SPECIFIC REQUIREMENTS (CONT.)

- Cordon off trees at the dripline during new construction and during underground work to avoid soil compaction.
- Do not cut tree roots during trenching.
- Where a trench must pass near or under a tree a power auger shall be used to avoid substantial injury to the roots. If that is not possible, the trench shall be placed no closer than 8'-0" from the trunk.
- When trenching does sever roots, clean root cuts and refill trenches as soon as possible.
- Spacing of plant materials shall anticipate mature growth to avoid unnatural pruning.
- Where plants are located, provide two inches of organic matter tilled into the soil to a depth of six inches.
- Native plants may not need amendments, but preparation shall include loosening the soil.
- Areas of rock mulch over 350 square feet (SF) require some type of plantings and irrigation.
- Weed control fabric of a minimum thickness of 5 mil. shall be placed under all rock mulch.
- Albuquerque grass mix (Falcon Fescue, Pennfine Perennial Rye grass, and Blue grass at a ratio of 1:1:1) shall be provided as turf grass, but only at high visibility facilities, recreation areas, parks, and parade grounds.
- Turf grass shall be no more than 10% of new landscapes and be designed for efficient irrigation.
- High water use turf grasses that are not in parks, parade grounds or athletic fields shall be replaced with irrigated xeriscapes using drought tolerant plant materials.
- A wildflower and grass mix with temporary or permanent irrigation may be an acceptable alternative to a Xeriscape with rock mulch and plantings, provided it is not used in high visibility areas or at main entrances to facilities.
- Avoid long, narrow, or odd shaped turf areas that are difficult to irrigate and hard to maintain.
- Aging Siberian Elms on KAFB shall be gradually replaced with trees that are adapted to the local climate and soils, provide ample shade, are disease resistant, and listed in the appendix.
- Promote construction practices that minimize adverse effects on the natural habitat.

GENERAL DESCRIPTION

The concept of Xeriscape was developed by the Denver Water Department in 1978. Xeriscape is a method of landscaping that promotes water conservation, derived from the Greek word “Xeros” meaning dry. Rather than a style or a limited group of plants, Xeriscape is a combination of sound landscaping principles. These include good design, wise plant selection, minimal turf areas, minimum watering, preserving soil moisture with mulches, avoiding run-off, proper soil nutrients, and

SPECIFIC REQUIREMENTS

- All new landscapes will adhere to Xeriscape principals.
- Plants shall be located in areas that are compatible with their inherent properties.
- Plants with similar light and water requirements shall be grouped together
- Place high water-use plants in low lying drainage areas, near downspouts, or in the shade of other plants.
- Provide mulch to keep plant roots cool, prevent soil from crusting, minimize evaporation and reduce weed growth.
- Organic mulches, such as bark, wood chips, and pecan shells, shall be applied at least 4 inches deep.
- Organic mulches shall be used where groundcover plants are used and at tree bases.
- Inorganic mulches include rocks and gravel, and shall be applied at least two inches deep.
- Inorganic mulch will be placed over a permeable landscape fabric.
- Boulders should be provided to compliment plant materials and for ATRP measures where appropriate.
- Boulders shall be a minimum of 2-3’ or sized for the scale of the project.
- Where dry river bed concepts are provided, the river rock shall be recessed below the field rock mulch.
- A variety of rock mulch sizes and colors is encouraged to provide visual interest.



GENERAL DESCRIPTION

Irrigation is an important aspect of landscape design in a desert environment. Turf grasses cannot thrive without extensive irrigation. Drought tolerant plants have adapted to the environment, but still need irrigation when placed in an urban setting.



SPECIFIC REQUIREMENTS

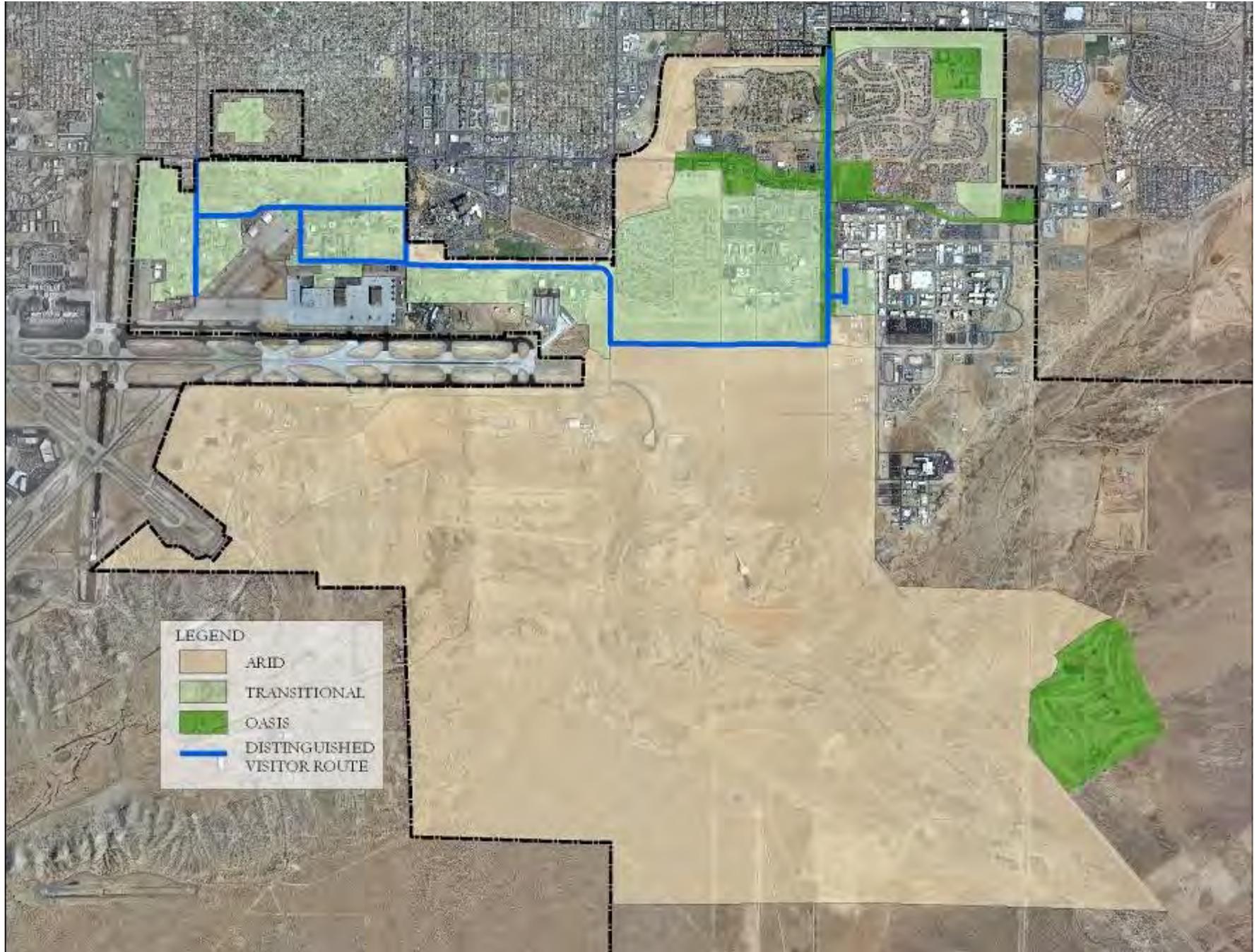
- All new landscape installations shall have permanent underground irrigation in the Oasis and Transitional zones of the base.
- All irrigation systems shall be designed to accommodate non-potable water.
- New irrigation shall be incorporated into the current Maxicom Control System for central control of base irrigation.
- Drip, spray or bubbler emitters shall be provided for trees, shrubs, flowers, and groundcovers.
- Provide drips and bubblers to the root zone of the plant.
- Turf areas will be zoned separately from other plantings.
- Trees and shrubs can be on the same zone. There shall be three bubblers or emitters per tree.
- Arrange plants in zones according to watering requirements.
- When turf grass is eliminated from under a tree, ensure continued irrigation of that tree with bubblers.
- Sprinkler heads next to curbs, sidewalks, or roadways shall be placed at least 6" from the edge of the hard surface.
- Sprinkler heads for turf shall be of consistent size and type.
- Water from irrigation shall not spray or flow onto vertical or horizontal hard surfaces.
- Provide low-pressure, low-angle sprinklers for turf grass irrigation.
- To develop deep roots, irrigation will be infrequent and deep.
- Scale irrigation plans at the same scale as planting plans.
- Plans shall include location of irrigation heads, laterals, main lines, valves back flow preventors, tie-in to base water supply, sizes of all irrigation equipment, and legend.
- Valves shall be labeled on plans to show valve number, valve size, and gallons per minute.
- Laterals and main lines shall be sized on plans.
- Call the Utilities Branch at 505-846-5065 for static water pressure and base water supply line.

LANDSCAPE ZONES

Oasis, Transitional, and Arid

GENERAL DESCRIPTION

Kirtland AFB has three zones of landscape development; Oasis, Transitional, and Arid. The Oasis Zone is highly significant to the image of the base since it presents the first impression to visitors. The Transitional Zone contains most of the facilities that are important to the daily lives of the Air Force community. The Arid Zone is the flight line and clear zones, open space and facility support, and all areas outside of the occupied area of KAFB.



OASIS ZONE

- The goal for this zone is to create lush and intensive landscapes using drought tolerant and native plants, attractive mulches, hardscape, and site furnishings.
- The water use in this zone is regular and will include some high use water plantings.
- Facilities in the this zone are headquarter buildings, clubs, distinguished visitor routes, main traffic corridors, base entry points, parade grounds and parks.
- As this zone is considered the zone with the highest visibility, it will receive the greatest attention to landscape development.

TRANSITIONAL ZONE

- Easily maintained landscapes, use of native and drought tolerant plant materials that enhance the community is the design goal in this zone.
- Use of site furnishing and ample shade from trees and shade structures is appropriate in this zone.
- Occasional watering is typical for maintaining varied plantings.
- The areas included in this zone are: static displays, community centers, dormitories, Squadron Operations Facilities, Administration Facilities, Credit Unions, Banks, Family Camp, Shopette, and similar facilities.
- The plant palette in this zone will provide a transition from the highly visible intensive plantings of the Oasis area to the native open spaces in the Manzano Mountatins and the withdrawn areas.

ARID ZONE

- This area is to remain as undisturbed native landscape.
- Watering in this area is usually provided strictly through rainfall.
- If any supplemental water is needed dry-water, key-lining, or trenching shall be used.
- This zone includes tanks, munitions storage, test areas, operations side of runway, storage and shops, withdrawn areas, service roads, water treatment facilities, test cells and other similar facilities.
- Some visual screening or windbreaks requiring extra water may be applicable in this zone.



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ACHIEVING DESIGN EXCELLENCE

The success of creating design excellence on KAFB is contingent upon all individuals involved with planning, design and construction complying with the guidelines set forth in this document. It is important that this document be used from the project inception through completion. This section outlines the five fundamental elements necessary to implement this plan.



IMPORTANT FEATURES

There are five crucial elements to ensuring implementation of the ACP:

- Distribution of the ACP
- Enabling the ACRB
- Engaging exceptional Design Professionals
- Developing an easy submittal process
- Utilizing the ACP Checklist

DISTRIBUTION OF THE ACP

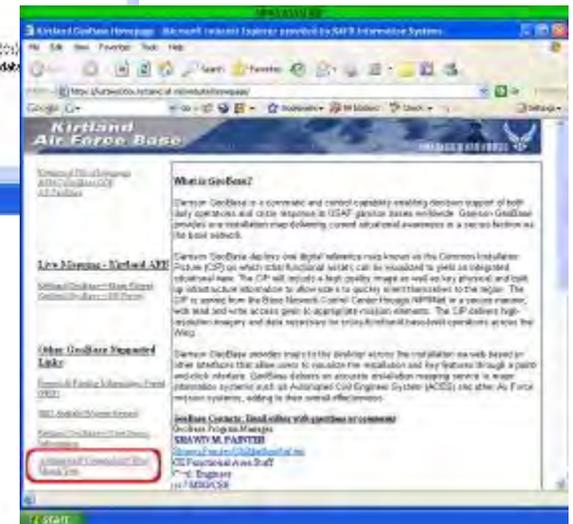
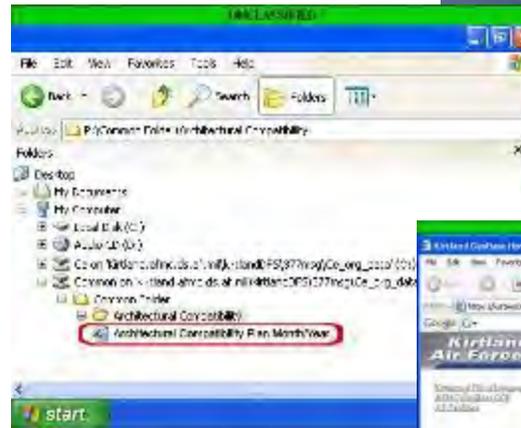
The ACP should be circulated through the installation commander, commanders of significant tenant organizations, all architectural and engineering (A/E) firms working on KAFB, the Army Corps of Engineers (COE), and throughout the civil engineering division including operations, branch chiefs, architects, engineers, and the community planner. Copies will be provided to HQ AFMC for review and coordination.

The plan will be available on the GeoBase homepage for easy basewide access. A digital copy, in portable document format (PDF), will also be easily accessible in a shared folder on the CE computer network. The digital copy will be less than 4 MB for easy distribution via email to A/E firms and other contractors outside the base. Hard copies will be available on a limited basis.

THE ARCHITECTURAL COMPATIBILITY REVIEW BOARD

The ACRB has three primary roles. It is charged with reviewing projects to enforce compliance with the ACP. The board has authority to approve projects that deviate from the standards given in the ACP. It is also responsible for ensuring that the ACP is reviewed and revised annually.

The board is chaired by an appointee of the Base Civil Engineer (BCE), and its members are the base architect and community planner. The board will meet on an as-needed basis.



**ACRB Chairperson
Appointed by BCE**



QUALITY DESIGN PROFESSIONALS

Choosing A/E firms that respect and adhere to the ACP is important in achieving designs compatible with base standards. Contracted designers are expected to coordinate their efforts with government representatives throughout the design process. The ACP will be distributed to A/E firms during conceptual development phases. Successful projects are realized through collaboration and dedication to the common goal of design excellence.

THE SUBMITTAL PROCESS

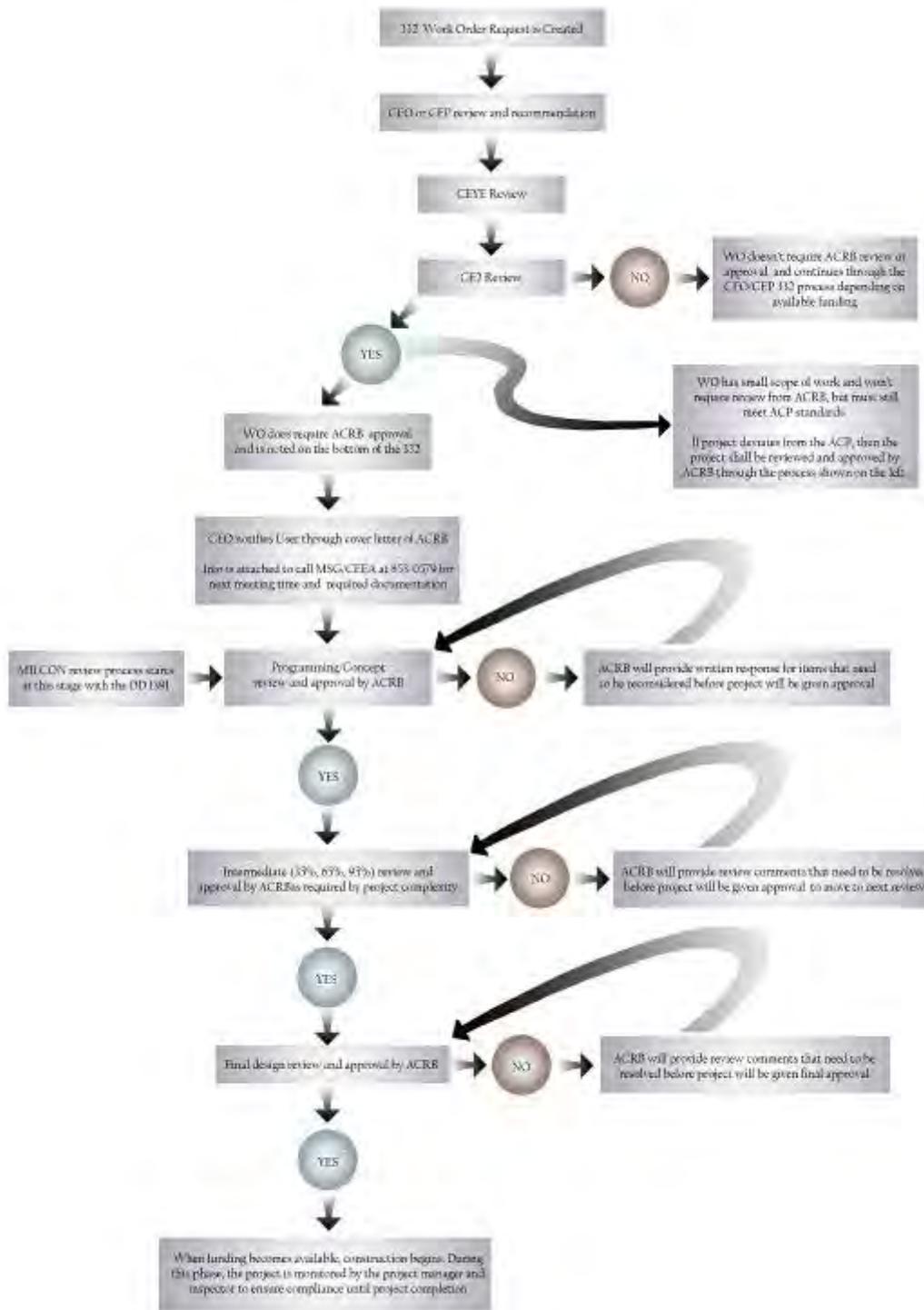
The goal is to implement a review process that will not delay project schedules or increase costs. The ACRB will review projects at the normal stages of concept, RFP, 35%, 65%, and 95% as required by the complexity of the project. Smaller O&M projects will typically require fewer reviews, while MILCON projects will require a thorough review at every submittal stage.

The flowchart on this page depicts a typical review cycle for an O&M project. All MILCON projects will require a complete review starting with the programming/concept stage (DD 1391). Design-Bid-Build submittals will be required starting with the charrette documents. Design-Build submittals are required at the RFP phase. The project checklist outlines the required data for each of these phases.

Projects that do not fully adhere to ACP standards may require multiple submittals before approval is granted.

THE PROJECT CHECKLIST

Each project reviewed by the ACRB must include the project checklist, given in Appendix D. The project manager will complete only the general project information section. The checklist shall be provided with the submittal package to the base architect not later than one week prior to the ACRB meeting.



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APPENDICES

APPENDIX A - COLORS & MATERIALS

- Paint Guidelines
- Building Materials
- Site Materials & Furnishings

APPENDIX B - LANDSCAPE MATERIALS

- Trees
- Desert Accents & Ornamental Grasses
- Shrubs
- Flowering Plants
- Groundcover & Vines

APPENDIX C - EXTERIOR LIGHTING REQUIREMENTS

- Exterior Lighting Requirements
- Fixtures & Lighting Levels

APPENDIX D - CODES, GUIDES, & REQUIREMENTS

- Building Regulations
- Landscape Regulations
- General Regulations

APPENDIX E - PROJECT CHECKLIST

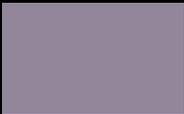
APPENDIX F - ABBREVIATIONS

APPENDIX G - INDEX

MATERIALS AND COLORS

The appendices are a quick reference for all approved exterior building and landscape materials. Physical samples of most of the materials are on file with the design section of the Base Civil Engineer. Colors provided in this document are representational. Actual samples shall be used when trying to match colors and materials.

<i>STANDARD FIELD COLORS</i>		<i>AREAS OF USE</i>
Sherwin Williams 6099 Sand Dollar		<ul style="list-style-type: none"> Main field color for walls unless specified differently in a districts' guidelines. Exposed exterior utilities, bollards against beige walls, and utility enclosures
Sherwin Williams 6101 Sands of Time		<ul style="list-style-type: none"> Secondary field color for use in combination with Sand Dollar, used over less area as a color pair Should not be used as the main color for any building
Sherwin Williams 6069 French Roast		<ul style="list-style-type: none"> For all painted ferrous metals

<i>ACCENT COLORS & DISTRICT LOCATIONS</i>	<i>PRIMARY ACCENT</i>	<i>SECONDARY ACCENT</i>	
Sherwin Williams 6263 Exclusive Plum		Mountain View Research & Development	
Sherwin Williams 6228 Refuge		East Flightline Research & Development	Community & Admin
Sherwin Williams 6053 Reddened Earth		Mountain View Maxwell Neighbor- hood	Flightline Ops & Training East Flightline
Sherwin Williams 6516 Down Pour		Flightline Ops & Training	
Snowbound SW 7004			Maxwell Neighborhood
Brick		Community & Admin	

PAIN T GUIDELINES

- Factory finish materials that match the base standard paint colors shall be used to reduce maintenance.
- Overall paint schemes should be kept simple and strictly adhere to the allowed accents for the district where the project is located.
- Factory finished materials shall not be painted, unless they do not comply with the base standard colors.
- Colors should be applied consistently on similar elements.
- Super graphics in the form of logos, insignia, or letterings are not allowed.
- Stucco shall not be painted.
- Conduits, piping, ducts, louvers, vents, gable ends, or other utilitarian elements shall not be accented with contrasting colors to the elevation finish and color.
- Bollards shall be finished to match the adjacent building material color; typically beige or brown. Yellow bollards are only allowed when located in areas where vehicles typically operate (streets, parking lots, etc.)
- Concrete building or site elements shall not be painted
- Tanks, water towers, and other large site elements shall be painted Sand Dollar.
- Exterior building signage shall be finished to match Sand Dollar on dark colored facades and French Roast on lighter colored facades.
- The back of traffic signs, sign posts, and traffic signal structures shall be finished to match French Roast.
- Yellow hazard paint shall not be used on buildings, bollards, or other site elements without ACRB approval.

* All manufacturers listed indicate quality, color, style, and design detailing. Other manufacturers are acceptable as long as they are comparable in design and match the color given. All deviations from the indicated building materials, site furnishings, or landscape materials must be approved by the ACRB.

▪ **Field Stucco - Light Beige**

Mfg: El Rey Stucco, Parexlahabra, Inc.
Color: 5063
Finish: Sand, Light Lace

Mfg: Sto Corporation
Color: Custom color match to Sherwin Williams 6099 Sand Dollar
Finish: Medium, Swirl

▪ **Accent Stucco - Medium Beige**

Mfg: El Rey Stucco, Parexlahabra, Inc.
Color: 5062
Finish: Sand, Light Lace

Mfg: Sto Corporation
Color: Custom color match to Sherwin Williams 6101 Sands of Time
Finish: Medium, Swirl

▪ **Field EIFS - Light Beige**

Mfg: Parex
Color: 5063
Finish: Sand, Light Lace

Mfg: Sto Corporation
Color: Custom color match to Sherwin Williams 6099 Sand Dollar
Finish: Medium, Swirl

▪ **Accent EIFS - Medium Beige**

Mfg: Parex
Color: 5062
Finish: Sand, Light Lace

Mfg: Sto Corporation
Color: Custom color match to Sherwin Williams 6101 Sands of Time
Finish: Medium, Swirl

▪ **Concrete Masonry Units Light Beige**

Mfg: Rinker
Color: El Paso Buff
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

Mfg: Utility Block
Color: #220 Elk Horn
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

▪ **Concrete Masonry Units Medium Beige**

Mfg: Rinker
Color: Crego Tan
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

Mfg: Utility Block
Color: #230 Corral
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

▪ **Concrete Masonry Units Brown**

Mfg: Rinker
Color: Gallup Gold
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

Mfg: Utility Block
Color: #260 Chestnut
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

Mfg: Southwest Block
Color: #306 Brown
Finish: Splitface, Burnished, Ribbed, Offset, and Striated

▪ **Accent Brick**

Mfg: Summit Brick & Tile Co.
Color: Light Red, Plum, or Brown
Finish: Grain, Matte, or Bark
Mortar: To match brick

Mfg: Acme Brick
Color: Peach & Dark Red
Finish: Varies
Mortar: To match brick

▪ **Storefront Doors**

Mfg: Kawneer
Color: Classic Bronze (Medium)
Type: Wide Stile
Standard: UFC 4-010-01, ASTM F2248

▪ **Curtain Wall**

Mfg: Kawneer
Color: Classic Bronze (Medium)
Standard: UFC 4-010-01, ASTM F2248

- **Standing Seam Metal Roof**
* All standing seam metal roof panels shall comply with UFC 3-310-01
Design: Structural Load Data

Mfg: Berridge
Color: Copper Brown
Finish: Kynar 500/Hylar 5000
Style: 2" Zee Double Lock
Size: 16"

Mfg: ATAS International, Inc.
Color: Chocolate Brown
Finish: Kynar 500/Hylar 5000
Style: Field Lok 2" Seam
Size: 14-1/2" and 18-3/4"

Mfg: Englert
Color: Mansard Brown
Finish: Ultra Cool Low Gloss
Style: S2500 Mechanically Seamed, 90 Degree Seam, No Ribs
Size: 12" - 18"

Mfg: Fabral
Color: Mansard Brown
Finish: Kynar 500/Hylar 5000
Style: Stand N' Seam
Size: 12" and 16"

- **Low Slope Roof**

Mfg: GAF
Color: White
Style: PVC or EPDM
Thickness: 60 mm minimum
Fastening: Fully Adhered

Mfg: Johns Manville
Color: White
Style: PVC or EPDM
Thickness: 60 mm minimum
Fastening: Fully Adhered

Mfg: Crego Metal Systems
Color: White
Style: Galvply
Thickness: Single Ply
Fastening: Low-profile exposed

- **Rooftop Equipment Screens**

Mfg: CityScapes
Color: RAL 1014 Ivory, or, RAL 8016, Brown
Style: Wide Rib or Texture
Top Trim: Flat

- **Metal Wall Panels - Light Beige**

Mfg: Fabral
Color: Custom color to match Sherwin Williams Sand Dollar
Finish: Kynar 500/Hylar 5000
Style: CFP-6 and CFP-12, No Ribs
Size: 12"

- **Metal Wall Panels - Medium Beige**

Mfg: Fabral
Color: Sierra Tan
Finish: Kynar 500/Hylar 5000
Style: CFP-6 and CFP-12, No Ribs
Size: 12"

- **Metal Wall Panels - Brown**

Mfg: Berridge
Color: Copper Brown
Finish: Kynar 500/Hylar 5000
Style: Thin-Line or FW-12
Size: 3-5/8" and 12"

Mfg: Fabral
Color: Mansard Brown
Finish: Kynar 500/Hylar 5000
Style: CFP-6 and CFP-12, No Ribs
Size: 12"

- **Glazing**

Mfg: PPG Industries
Color: SolarBronze
Standard: UFC 4-010-01, ASTM F2248

- **Translucent Panels**

Mfg: Kalwall
Frame Color: Bronze #85
Panel Color: White

Mfg: Major Industries
Frame Color: Dark Bronze
Panel Color: White

Mfg: Polygal
Frame Color: Bronze
Panel Color: White

- **Glass Block**

Mfg: Pittsburgh Corning Glass Block
Color: Clear
Type: Premiere Series Glass Block
Pattern: Argus, Decora, Icescapes, and Vue

Mfg: WECK Glass Block
Color: Clear
Type: Imperial Clear
Pattern: Nubio, Cortina, Clarity, and X-Rib

- **Building Lettering/Signage**

Mfg: Century Plus
Color: See paint guidelines
Font: Helvetica
Type: Wall mounted

Mfg: ASI - Modulex
Color: See paint guidelines
Font: Helvetica
Type: Wall mounted

- **Pavers**

Mfg: Rinker
Color: Old Town Blend
Style: Pavestone

Mfg: Summit Brick & Tile Co.
Color: #656 Academy

Mfg. Pavestone available at Kinney Brick
Style: Eco-Priora
Color: Winter Blend or Three-Tone Brown

- **Colored Concrete Paving**

Mfg: Davis Colors
Color Option 1: # 5237 San Diego Buff
Color Option 2: # 5084 Omaha Tan
Color Option 3: # 6058 Dune
Finish: Light broom, Salt finish, Smooth
Pattern: Scored pattern - varies

Mfg: Scofield Systems - CROMIX
Admixtures
Color Option 1: # 5460 Timberline Tan
Color Option 2: # 5402 Taos Taupe
Color Option 3: # 1014 Canyon Tan
Finish: Light broom, Salt finish, Smooth
Pattern: Scored pattern - varies

- **Retaining Walls**

Mfg. Keystone Block
Color: Sandstone Tan
Style: Straight Face w/ fiberglass pins & cap

- **Rock Mulch**

Mfg: LaFarge
Field Color: Santa Ana Tan, 3/4"
Accent Color: Gray, Round River Rock, 4-6"

Mfg: Vulcan
Field Color: Santa Ana Tan, 3/4"
Accent Color: Gray, Round River Rock 4-6"

- **Shade Structures**

Mfg: Sun Port International
Fabric Color: Arizona
Structure Color: Brown
Style: Super Span
Shape: Rectangular or Square
Standard: UFC 3-310-01 Design:
Structural Load Data

Mfg: Parasol
Fabric Color: Desert Sand
Structure Color: Tudor Brown
Style: Hipped Roof Shelters
Shape: Rectangular or Square
Standard: UFC 3-310-01 Design:
Structural Load Data

- **Removable Bollards**

Mfg: Landscape Forms
Color: RAL8016, Bronze, or Black
Size: 6" Diameter
Style: Annapolis
Finish: Powdercoat

- **Protective Bollards**

Mfg: Landscape Forms
Color: RAL8016, Bronze, or Black
Size: 6" - 12" Diameter
Style: Annapolis
Finish: Powdercoat

- **Drinking Fountains**

Mfg: Haws Corporation
Color: Brown Pedestal
Finish: Stainless Steel Bowl
Style: Pedestal
Model : #3377G

Mfg: Murdock
Color: Brown Pedestal
Finish: Stainless Steel Bowl
Style: Pedestal
Model : M43

- **Heat Box for Irrigation Back Flow Preventor**

Mfg: Pro-Box
Frame Color: Powder Coat Beige
Panel Color: Smoke Lexan
Style: Pro-Box

Mfg: HotBox
Finish: Fiberglass
Color: Tan or Beige

- **Heat Box for Fire Protection Back Flow Preventor**

Mfg: Hot Box
Color: Beige or Brown
Style: Fiberglass or Aluminum

- **Fence**

Mfg: Amazing Fence
Color: Black
Finish: Powdercoat
Style: Arche Fence

- **Street & Parking Lighting**

Mfg: Kim Lighting
 Color: Bronze
 Style: The Archtype AR, Horizontal Lamp
 Size: 30' Tall
 Arms: Standard, 1-2 per pole

Mfg: Gardco Lighting
 Color: Bronze
 Style: Gullwing G18, Horizontal Lamp
 Size: 30' Tall
 Arms: Standard, 1-2 per pole

- **Pedestrian Lighting**

Mfg: Kim Lighting
 Color: Bronze
 Style: The Archtype SAR, Horizontal Lamp
 Size: 12' Tall
 Arms: Standard, 1-2 per pole

Mfg: Gardco Lighting
 Color: Bronze
 Style: Gullwing G13, Horizontal Lamp
 Size: 12' Tall
 Arms: Standard, 1-2 per pole

- **Bollard Lighting**

Mfg: Landscape Forms
 Color: RAL8016, Bronze, or Black
 Size: 6" Diameter
 Style: Annapolis
 Finish: Powdercoat

Mfg. Se'lux
 Color: RAL8016, Bronze, or Black
 Size: 7 7/8" Diameter
 Style Corral
 Finish Powdercoat

- **Passenger Waiting Shelters**

Mfg: Lacor Streetscape
 Roof Color: Mansard Brown SR
 Frame Color: RAL 8017 Brown
 Style: Heritage Series
 Type: HE 10 or HE 10BS with Solar Lighting System
 Roof: Hip Standing Seam Metal
 Size: 5'-6" x 10'
 Standard: UFC 3-310-01 Design: Structural Load Data

Mfg: Brasco Inc.
 Color: Bronze Anodized
 Style: Slimline Series
 Type: Cantilever
 Roof: Hip Standing Seam Metal
 Size: 5' x 10'
 Standard: UFC 3-310-01 Design: Structural Load Data

- **Pavilions**

Mfg: Poligon Park Architecture
 Roof Color: Tudor Brown
 Structure Color: Almond
 Style: Square or rectangular, standing seam metal roof
 Standard: UFC 3-310-01 Design: Structural Load Data

Mfg: Litchfield Industries
 Style: 8100 or 8200 Series
 Roof Color: Chocolate
 Structure Color: Adobe Tan
 Style: Square or rectangular, Medallion-Lok profile panels
 Standard: UFC 3-310-01 Design: Structural Load Data

- **Trellis Pavilions**

Mfg: Poligon Park Architecture
 Roof Color: Tudor Brown
 Structure Color: Almond
 Style: Santa Fe Trellis
 Size: 20' x 20'

Mfg: Litchfield Industries
 Roof Color: Chocolate
 Structure Color: Adobe Tan
 Style: Custom Design
 Size: 20' x 20'

- **Bench Backless**

Mfg: Landscape Forms
 Frame Color: Black
 Seat Color: RAL 8016 or Bronze
 Style: Petoskey
 Finish: Powdercoat
 Type: Perforated metal

Mfg: Fusion
 Frame Color: Black
 Seat Color: Brown
 Finish: Plasticol Coated
 Style: Ultra Flat
 Type: Slotted, perforated, or expanded metal seat

▪ **Bench with Back**

Mfg: Landscape Forms
 Frame Color: Black
 Seat Color: Polysite Finish - Bark or
 Powdercoat - RAL 8016 or Bronze
 Style: Petoskey
 Finish: Powdercoat
 Type: Slotted or perforated metal, or
 Polysite recycled plastic

Mfg: Fusion
 Frame Color: Black
 Seat Color: Brown
 Finish: Plastico Coated
 Style: Ultra Contour
 Type: Slotted, perforated, or expanded
 metal seat

▪ **Picnic Tables**

Mfg: Landscape Forms
 Frame Color: Black
 Table & Seat Color: RAL8016 or
 Bronze
 Finish: Powder Coated
 Style: Petosky
 Shape: Rectangular

Mfg: Fusion Coatings Inc.
 Frame Color: Black
 Table & Seat Color: Brown
 Finish: Plastico Coated
 Style: Portable w/ Traditional Edge
 Shape: Rectangular

▪ **Ash Receptacles**

Mfg: Landscape Forms
 Color: RAL8016, Bronze, or Black
 Style: Plexus
 Size: 9" Freestanding bowl with funnel
 Finish: Powder coat*

Mfg: Rubbermaid
 Color RAL8016, Black
 Style: Architek Series
 Finish: Powdercoat*

*Stenciled Text to read "smoking material
 only", " on one side and "designated
 tobacco use area" on the opposite.

▪ **Litter Receptacles**

Mfg: Landscape Forms
 Color: RAL8016, Bronze, or Black
 Style: Petosky Freestanding
 Finish: Powder coat
 Opening: Side, no sand pan

Mfg: Creativepipe Inc.
 Color: Standard Bronze
 Style: Decatur DCT-HT-PS-FS-P
 Finish: Powdercoat
 Opening: Hinged

▪ **Tree Grate**

Mfg: Neenah Foundry Company
 Color: Black
 Style: Metropolitan with expandable
 opening

Mfg: Ironsmith
 Color: Black
 Style: Sunrise with expandable opening

▪ **Bike Racks**

Mfg: Fusion Coatings
 Color: Brown
 Finish: Plastico Coated
 Style: High Style
 Size: 5 Bike minimum

Mfg: Creative Pipe
 Color: Standard Bronze
 Finish: Thermoplastic or Powder coat
 Style: Thunderbolt - TB Series
 Size: 5 Bike minimum

▪ **Playground Structures**

Mfg: Landscape Structures
 Style: Steel frame, plastic components
 Finish: Powder Coat
 Color: Blend with district colors &
 requires review by ACRB

Mfg: Gametime
 Style: Steel frame, plastic components
 Finish: Powder Coat
 Color: Blend with district colors &
 requires review by ACRB

DECIDUOUS				
SCIENTIFIC NAME	COMMON NAME	HEIGHT	WATER	COMMENTS
<i>Acer grandidentatum</i>	Bigtooth Maple	20'	Low	Native, good fall color, best in shade, shrubby in habit
<i>Acer negundo var. Sensation</i>	Box Elder	40'	Low to Medium	Native, rough
<i>Albizia julibrissin</i>	Mimosa	20'	Medium	Flat topped spreading canopy makes it a good patio tree, however, it produces lots of litter., soft pincushion like flowers bloom in late spring., delicate leaves fold in evening.
<i>Catalpa speciosa</i>	Catalpa	80'	Medium	Flowers are showy, large tree good for parks
<i>Celtis occidentalis</i>	Common Hackberry	60'	Medium	Native, resembles elm, to which it is related
<i>Celtis reticulata</i>	Netleaf Hackberry	25'	Medium	Rangy native tree, branching can be unruly
<i>Cercis Canadensis</i>	Eastern Redbud	20'	Medium High	Deep pink flowers in spring
<i>Cercis occidentalis</i>	Western Redbud	20'	Medium	Flowers and fruit
<i>Cercis reniformis</i>	Oklahoma Redbud	25'	Medium	
<i>Cercocarpus montanus</i>	Mountain Mahogany	10'	Low	Native, grows to 10', Cercocarpus ledifolius is closely related, but is evergreen
<i>Chilopsis linearis</i>	Desert Willow	25'	Low	Multi-trunk native, tree or shrub, showy flowers
<i>Cotinus coggygria</i>	Smoketree	25'	Medium Low	Unusual tree, amorphous growth, puffy flowers in early summer
<i>Crataegus crus-galli Inermis</i>	Thornless Cockspur Hawthorn	20'	Medium	
<i>Crataegus laevigata</i>	English Hawthorn	20'	Medium	Multi-trunk, thorny
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	20'	Medium	Multi-trunk, thorny
<i>Forestiera neomexicana</i>	New Mexico Olive	20'	Low	Native, adaptable, multi-trunk, good accent or privacy screen
<i>Fraxinus cuspidada</i>	Fragrant Ash	20'	Medium	Native
<i>Fraxinus greggii</i>	Littleleaf Ash	20'	Medium	Native to region, useful desert tree, leaves leathery
<i>Fraxinus oxycarpa</i>	Raywood Ash	35'	Medium High	Purple/red autumn color, Borer has been a problem
<i>Fraxinus velutina</i>	Arizona Ash	40'	Medium	Borer has been a problem, withstands hot dry weather with regular water, yellow fall color
<i>Gleditsia triacanthos var. inermis</i>	Thornless Honey Locust	60'	Medium	Leafs out late into, divided leaflets that fall early. Casts filtered shade that allows plantings underneath
<i>Gymnocladus dioica</i>	Kentucky Coffee tree	60'	Medium	Large tree with sparse branching and flowers in spring, option for Siberian Elm replacement

DECIDUOUS				
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>HEIGHT</i>	<i>WATER</i>	<i>COMMENTS</i>
<i>Juglans major</i>	Arizona Walnut	50'	Medium	Do not plant where mowers can make nuts into missiles
<i>Juglans microcarpa</i>	Little Walnut	30'	Medium	Native to eastern New Mexico and the western parts of Oklahoma, Texas, and Kansas. Has its most active growth period in the spring and summer. The greatest bloom is usually observed in the mid spring, with fruit and seed production starting in the summer and continuing until summer.
<i>Koelreuteria paniculata</i>	Golden Rain Tree	35'	Medium	Yellow flowers in summer, attractive fruit capsules in late summer and early fall. Good small patio tree
<i>Liriodendron tulipifera</i>	Tulip Tree	50'	Medium High	Flowers, large - not conspicuous in late spring, yellow fall color
<i>Malus spp.</i>	Crabapple	30'	Medium High	Choose newest disease resistant varieties.
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	90'	Medium	Deciduous conifer with about a 20' base, best in well-drained soil and regular water, will do well in lawns.
<i>Pistacia chinensis</i>	Chinese Pistache	35'	Medium	Good fall color, tolerates a wide range of conditions
<i>Platanus acerfolia</i>	London Plane Tree	50'	Medium High	Bark sheds to create interesting pattern, leaves large, Drops ball shaped seed clusters
<i>Platanus occidentalis</i>	American Sycamore	60'	Medium High	Irregular branching habit, best in large lawns or parks
<i>Platanus wrightii</i>	Arizona Sycamore	60'	Medium High	Native to streams and canyons in Arizona and New Mexico, creamy white bark
<i>Populus acuminata</i>	Lanceleaf Cottonwood	50'	Medium High	Large pollen load on male trees, females produce cotton
<i>Populus fremontii</i> var. <i>wislizenii</i>	Western Cottonwood	50'	Medium High	Large pollen load on male trees, females produce cotton
<i>Prosopis glandulosa</i>	Honey Mesquite	20'	Low	Native in southern in the Southwest and Mexico, 'Maverick' is an excellent cultivar. Little leaflets create airy, light shade
<i>Prosopis pubescens</i>	Screwbean Mesquite	20'	Low	Native. Shrubby open canopy of bluish-green foliage, can be trained as a tree
<i>Prunus cerastifera</i>	Purpleleaf Plum	20'	Medium	Soil should be well-drained. Acidic soil is preferred, though it can tolerate a wide variety of soils. Purple leaf plum does not tolerate compacted soil or pollution. Prone to Japanese beetle, mealy bugs, borers, tent caterpillars, and scale. Susceptible to leaf spot, gray mold, verticillium wilt and cankers.
<i>Pyrus calleryana</i>	Callery Pear	50'	Medium High	White blooms very early. Even pyramidal or columnar branching pattern
<i>Quercus bucklii</i>	Texas Red Oak	40'	Medium	Native to Texas and Oklahoma, tolerates alkaline soils, bright red fall color

DECIDUOUS				
SCIENTIFIC NAME	COMMON NAME	HEIGHT	WATER	COMMENTS
<i>Quercus gambelii</i>	Gambels Oak	30'	Medium	Native to Nevada, Colorado, Arizona and New Mexico, grows as wide as it does tall, can form colonies, variable intense fall color
<i>Quercus gravesii</i>	Chisos Red Oak	25'	Medium	Native to mountain areas in west Texas. Appears tolerant of acid or alkaline soils; if well drained.
<i>Quercus macrocarpa</i>	Bur Oak	70'	Medium Low	Rugged-looking, tolerates adverse conditions, good for this locale
<i>Quercus muhlenbergii</i>	Chinquapin Oak	60'	Medium High	Native to central and eastern U.S. Tolerant of alkaline soils, but difficult to transplant and establish
<i>Quercus robur</i>	English Oak	50'	Medium	Fairly fast grower, width to 30', insignificant fall color
<i>Quercus shumardii</i>	Shumard Oak	60'	Medium High	Native to eastern U.S. Tolerates a wide range of soils
<i>Sambucus mexicana</i>	Mexican Elder	20'	Low	Native, Fast growing, interesting form, flowers in early summer, blue berries follow.
<i>Sapindus drummondii</i>	Western Soapberry	40'	Medium Low	Native to the Southwest, drought resistant, produces bitter poisonous berries that will lather into soap
<i>Sophora japonica</i>	Japanese Pagoda Tree	40'	Medium	Sweet-pea shaped blossoms in summer, Good for shading lawn or patio
<i>Syringa reticulata</i>	Japanese Lilac Tree	30'	Medium High	White blooms in late spring
<i>Taxodium distichum</i>	Bald Cypress	60'	Medium High	Deciduous conifer, pyramidal shape, spread to 30', takes alkaline soils, feathery delicate foliage, interesting winter silhouette.
<i>Taxodium mucronatum</i>	Mexican Bald Cypress	60'	Medium High	Evergreen conifer in mild climates, deciduous in cold climates. Good tree for parks and large lawns
<i>Ulmus Americana</i>	American Elm	60'-80'	Medium	Variety sold in Albuquerque is Valley Forge
<i>Ulmus parvifolia</i>	Lacebark Elm	40'	Medium	Varieties include Allee and Athena
<i>Ulmus spp</i>	Elm varieties	-	-	Several elm varieties have been developed recently that are acceptable in the Albuquerque area
<i>Vitex agnus-castus</i>	Chaste Tree	25'	Medium	Multi-trunk, lavender-blue blooms in summer
<i>Zelkova serrata</i>	Japanese Zelkova	60'	Medium High	Resembles Elm, to which it is related, good shade tree, fall color varies.

EVERGREEN				
SCIENTIFIC NAME	COMMON NAME	HEIGHT	WATER	COMMENTS
<i>Abies concolor</i>	White Fir	70'	Medium High	Large symmetrical conifer, allow for 20' spread, pruning will ruin symmetry. Bluish green 1-2" needles.
<i>Cedrus atlantica</i>	Atlas Cedar	60'	Medium	Conifer that needs deep well-drained soils, 1" needles, allow for 30' spread.
<i>Cedrus deodora</i>	Deodar Cedar	70'	Medium	Conifer with lower branches that droop, then sweep up at ends, allow for 40' spread
<i>Cedrus libani</i>	Cedars of Lebanon	70'	Medium	Growth habit varies, mature tree can be as broad as high. Can be hard to obtain, because of time it takes to get to a salable height.
<i>Cupressus sempervirens</i>	Italian Cypress	60'	Medium	Five to 10' wide at maturity, branches are upright, but can droop
<i>Cupressocyparis Leylandii</i>	Leyland Cypress	40'	Medium	Eight to 15' wide, Good for screening, can be pruned as a hedge
<i>Ilex vomitoria</i>	Yaupon Holly	15'	Medium	Shallow toothed dark green leaves, red berries, can be sheared, tolerates alkaline soils
<i>Juniperus deppeana</i>	Alligator Bark Juniper	50'	Medium Low	Males banned in the City of Albuquerque pollen ordinance.
<i>Juniperus monosperma</i>	One-seed Juniper	30'	Low	Males banned in the City of Albuquerque pollen ordinance
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	50'	Low	Males banned in the City of Albuquerque pollen ordinance
<i>Juniperus virginiana</i>	Eastern Red Ceder	40'	Medium Low	Males banned in the City of Albuquerque pollen ordinance
<i>Picea engelmannii</i>	Engelmann Spruce	60'	Medium High	Pyramidal, with pendent cones, leave room for eventual spread to 25'
<i>Picea pungens</i>	Colorado Spruce	60'	Medium High	Pyramidal, with pendent cones, spread to 35' wide, color varies from dark green to all shades of blue
<i>Pinus brutia var. eldarica</i>	Afghan Pine	70'	Medium	Good pine for the desert, 25' wide
<i>Pinus flexilis</i>	Limber Pine	30'	Medium	Spreads to 25' wide, needles are 3" long, tolerates wind

EVERGREEN				
SCIENTIFIC NAME	COMMON NAME	HEIGHT	WATER	COMMENTS
<i>Pinus nigra</i>	Austrian Pine	40'	Medium	25' wide,, tolerates urban conditions
<i>Pinus Pinea</i>	Italian Stone Pine	60'	Medium	Heat tolerant, in maturity is broad and flat topped, grows as wide as tall, forms umbrella shape.
<i>Pinus sylvestris</i>	Scotch Pine	60'	Medium	At maturity, habit is open and picturesque, spread to 25'
<i>Pinus thunbergii</i>	Japanese Black Pine	40'	Medium	Irregular and spreading habit at maturity, often with leaning trunk, 10' to 20' in width
<i>Pseudotsuga menziesii</i>	Douglas Fir	70'	Medium High	Eventual spread to 30' Pyramidal, foliage to the ground
<i>Quercus. emoryi</i>	Emory Oak	50	Low	Native to Texas, Arizona, and Mexico. Needs periodic soaking in summer, holly like leaves turn golden and are persistent in winter
<i>Quercus. fusiformis</i>	Escarpment Oak	30'	Low	Equally wide as tall, briefly deciduous, prefers well drained, alkaline soils, needs monthly soakings
<i>Quercus grisea</i>	Gray Oak	30'	Low High	
<i>Quercus suber</i>	Corkbark Oak	25'	Medium	Native to western Mediterranean, North Africa. Tolerant of a variety of soils, foliage may turn yellow in highly alkaline soils, occasional winter damage.
<i>Quercus turbinella</i>	Shrub Live Oak	10'	Low	Native to Pinon-Juniper belt, shrubby , tough, good hedge for dry cold winter areas
<i>Sequoiadendron giganteum</i>	Giant Sequoia	80'	Medium High	In native habitat, grows to over 300', When young, in terms of 3,000 years, will stay between 60' to 100'. Good specimen tree in park area, roots may surface

DESERT ACCENTS AND ORNAMENTAL GRASSES

<i>Desert Accents</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Agave americana</i>	Century Plant	Low
<i>Agave havardiana</i>	Havard Agave	Low
<i>Agave parryi/ neomexicana</i>	Parry's/Mescal Agave	Low+
<i>Dasyllirion leiophyllum/ texanum</i>	Green/Texas Sotol	Low+
<i>Dasyllirion wheeleri</i>	Blue Sotol/Desert Spoon	Low+
<i>Hesperaloe capanulata</i>	Bell-flowered Hesperaloe	Low+
<i>Hesperaloe funifera</i>	Giant/Coahuilian Hesperaloe	Low+
<i>Hesperaloe parviflora</i>	Red/Yellow-flowering Yucca	Low+
<i>Nolina microcarpa</i>	Beargrass	Low+
<i>Nolina texana</i>	Beargrass	Low+
<i>Opuntia ellisiana/ cacanapa</i>	Spineless Prickly Pear	Low
<i>Yucca aloifolia</i>	Spanish Dagger	Low+
<i>Yucca baccata</i>	Datil/Banana Yucca	Low
<i>Yucca baileyi/ harrimaniae</i>	Bailey/Harriman Yucca	Low
<i>Yucca Brevifolia</i>	Joshua Tree	Low+
<i>Yucca decepiens</i>	Mexican Tree Yucca	Low
<i>Yucca elata</i>	Soaptree Yucca	Low
<i>Yucca faxoniana/ carnerosana</i>	Palm Yucca	Low
<i>Yucca filamentosa</i>	Adam's Needle Yucca	Low+
<i>Yucca glauca</i>	Soapweed	Low
<i>Yucca neomexicana</i>	New Mexico Yucca	Low
<i>Yucca pendula/ recurvifolia</i>	Soft-leaf Yucca	Low+

<i>Desert Accents</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Yucca rigida</i>	Blue Yucca	Low
<i>Yucca rostrata</i>	Beaked Yucca	Low
<i>Yucca schidigera</i>	Mojave Yucca	Low
<i>Yucca schottii</i>	Mountain Yucca	Low+
<i>Yucca thomsoniana</i>	Thompson Yucca	Low
<i>Yucca torreyi</i>	Torrey Yucca	Low
<i>Ornamental Grasses</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Calamagrostis arundinacea</i>	Karl Foerster Feather Reed Grass	Medium
<i>Calamagrostis acutiflora "Overdam"</i>	Varigated Reed Grass	Medium
<i>Cortaderia selloana 'Pumila'</i>	Dwarf Pampas Grass	Medium+
<i>Eragrostis tricolor</i>	Sand Lovegrass	Medium
<i>Erianthus ravennae</i>	Ravenna Grass	Medium
<i>Festuca ovina glauca</i>	Blue Fescue	Low
<i>Helictotrichon sempervirens</i>	Blue Avena Grass	Medium
<i>Miscanthus spp.</i>	Maiden Grass	Medium+
<i>Muhlenbergia capillaries</i>	Gulf Muhly (Regal Mist)	Medium
<i>Muhlenbergia lindheimerii</i>	Lindheimer Muhly	Low+
<i>Muhlenbergia proteri</i>	Bush Muhly	Medium
<i>Muhlenbergia rigens</i>	Deer Grass	Medium
<i>Muhlenbergia rigida</i>	Purple Muhly	Medium
<i>Ophiopogon japonicus spp</i>	Mondo Grass	Low

DECIDUOUS		
Oramental Grasses		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Panicum spp.</i>	Switch Grass	Medium
<i>Pennisetum alopecuroides</i>	Hardy Fountain Grass	Medium
<i>Pennisetum villosum</i>	Dwarf Feathertop	Medium
<i>Schizachyrium scoparium</i>	Little Bluestem	Medium
<i>Sporobolus wrightii</i>	Giant Sacaton	Medium
Deciduous Shrubs		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Anisacanthus quadrifidus var wrightii</i>	Flame Anisacanthus	Low
<i>Anisacanthus thurbergii</i>	Desert Honeysuckle	Low
<i>Berberis thunbergii</i>	Japanese Barberry	Medium
<i>Berberis thunbergii 'Atropurpurea Nana'</i>	Crimson Pigmy Barberry	Medium
<i>Berberis thurbergii Atropurpurea</i>	Redleaf Barberry	Medium
<i>Buddleia davidii nanboensis</i>	Dwarf Butterfly Bush	Medium
<i>Buddleia marrubifolia</i>	Wooly Butterfly Bush	Medium
<i>Caesaplina gilliesii</i>	Yellow Bird of Paradise	Low+
<i>Caryopteris clandonensis</i>	Blue Mist Spirea	Medium
<i>Cercocarpus montanus</i>	True Mountain Mahogany	Low+
<i>Chaenomeles japonica</i>	Flowering Quince	Medium
<i>Chamaebatiaria millefolium</i>	Fernbush	Low+
<i>Chrysactinia mexicana</i>	Damianita	Low
<i>Cornus alba</i>	Tartarian Dogwood	High
<i>Cornus stolonifera</i>	Redtwig Dogwood	High
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster	Medium
<i>Cotoneaster divaricatus</i>	Spreading Cotoneaster	Medium
<i>Ericameria nauseosus</i>	Chamisa, Rabbitbrush	Low
<i>Fendlera rupicola</i>	Cliff Fendlerbush	Medium
Deciduous Shrubs		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Forsythia intermedia</i>	Forsythia	Medium+
<i>Genista tinctoria</i>	Summer Broom	Medium
<i>Hibiscus syriacus</i>	Rose of Sharon	Medium
<i>Lagerstromemia indica x fauriei</i>	Crape Myrtle, "Pecos, Zuni"	Medium+
<i>Leucophyllum frutes.</i>	Green Cloud Ceniza	Low+
<i>Philadelphus cultivars</i>	Mock Orange	Medium
<i>Philadelphus microphyllus</i>	Littleleaf Mock Orange	Medium
<i>Potentilla fruticosa</i>	Shrubby Cinquefoil	Medium+
<i>Prunus besseyi</i>	Western Sand Cherry	Medium
<i>Prunus tomentosa</i>	Nanking Cherry	Medium
<i>Prunus X cistena</i>	Purpleleaf Plum Bush	Medium+
<i>Rhus glabra</i>	Smooth Sumac	High
<i>Rhus glabra var. cismontane</i>	Cutleaf Sumac	Medium
<i>Rhus microphylla</i>	Littleleaf Sumac	Low+
<i>Rhus trilobata</i>	Three-leaf Sumac	Low+
<i>Rhus trilobata Prostrata</i>	Prostrate Sumac	Low+
<i>Ribes aureum</i>	Golden Currant	High
<i>Rosa foetida</i>	Austrian Copper Rose	Medium+
<i>Rosa rugosa</i>	Species Rugosa Roses	Medium+
<i>Salvia greffii</i>	Autumn or Cherry Sage	Medium
<i>Shepherdia argentea</i>	Silver Buffaloberry	Medium+
<i>Syringa spp.</i>	Lilac	Low

EVERGREEN			EVERGREEN SHRUBS		
<i>Evergreen Shrubs</i>			<i>Evergreen Shrubs</i>		
SCIENTIFIC NAME	COMMON NAME	WATER	SCIENTIFIC NAME	COMMON NAME	WATER
<i>Artemisia filifolia</i>	Sand Sage	Low	<i>Leucophyllum zygophyllum</i>	Cimarron Rainsage	Low+
<i>Atriplex confertifolia</i>	Shadscale	Low	<i>Nandina domestica cultivars</i>	Heavenly Bamboo	Medium+
<i>Berberis gladyensis</i>	William Penn Barberry	Medium+	<i>Parthenium incanum</i>	Mariola	Low
<i>Berberis haematocarpa</i>	Algerita	Low+	<i>Pinus mugo pumilo</i>	Dwarf Mugho Pine	High
<i>Berberis julianai</i>	Wintergreen Barberry	Medium	<i>Pinus mugo var. mugbus</i>	Mugho Pine	High
<i>Berberis mentorensis</i>	Mentor Barberry	Medium	<i>Purshia tridentate</i>	Antelope Bitterbush	Low
<i>Buxus spp.</i>	Boxwood	Medium	<i>Rhus ovata</i>	Sugarbush	Low+
<i>Cercocarpus ledifolius</i>	Curl-leaf Mtn. Mahogany	Low+	<i>Rhus virens/choriophylla</i>	Evergreen Sumac	Low+
<i>Cercocarpus breviflorus</i>	Hairy Mountain Mahogany	Medium	<i>Rosmarinus officinalis</i>	Upright Rosemary	Low+
<i>Cistus spp.</i>	Rockrose	Low+	<i>Vauquelinia spp.</i>	Rosewood	Low+
<i>Cotoneaster buxifolius</i>	Grayleaf Cotoneaster	Medium	<i>Viburnum X burkwoodii</i>	Burkwood Viburnum	High
<i>Cotoneaster congestus</i>	Pyrenees Cotoneaster	Medium			
<i>Cotoneaster salicifolius</i>	Willowleaf Cotoneaster	Medium			
<i>Cotoneaster lacteus</i>	Parney or Clusterberry Cotoneaster	Medium			
<i>Cowania mexicana</i>	Cliffrose	Low			
<i>Cytisus scoparius</i>	Scotch Broom	Medium			
<i>Elaeagnus pungens</i>	Silverberry	Medium			
<i>Ephedra spp.</i>	Mormon Tea	Low			
<i>Ericameria laricifolia</i>	Turpentine Bush	Low+			
<i>Fallugia paradoxa</i>	Apache Plume	Low			
<i>Genista hispanica</i>	Spanish Broom	Medium			
<i>Larrea tridentate</i>	Creosote Bush	Low			
<i>Lavandula angustifolia</i>	English Lavender	Medium			
<i>Leucophyllum frutescens</i>	Texa Ranger or Ceniza	Low+			
<i>L. frutescens 'Compactum'</i>	Compact Ceniza	Low+			
<i>Leucophyllum langmaniae</i>	Rio Bravo Rainsage	Low+			

FLOWERING PLANTS

<i>Flowering Plants</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Abronia sp.</i>	Sand Verbena	Low
<i>Achillea ageratifolia</i>	Greek Yarrow	Low
<i>Achillea millefolium</i>	Yarrow	Medium
<i>Achillea taygetea</i>	Moonshine Yarrow	Medium
<i>Artemisia abrotanum</i>	Southernwood	Medium
<i>Artemisia frigida</i>	Fringed Sage	Low
<i>Artemisia ludoviciana</i>	Prairie Sage	Low+
<i>Asclepias tuberosa</i>	Butterflyweed	Low
<i>Aster novae-angliae</i>	Aster	High
<i>Callirhoe involucrate</i>	Poppy Mallow/Winecups	Low+
<i>Centaurea cineraria</i>	Dusty Miller	Low+
<i>Centranthus ruber</i>	Red Valerian	Medium
<i>Cerastium tomentosum</i>	Snow-In-Summer	Medium
<i>Ceratostigma plumbaginoides</i>	Dwarf Plumbago	Medium
<i>Cooperia drummondii</i>	Rain Lily	Low+
<i>Coreopsis lanceolata</i>	Coreopsis	Medium
<i>Coreopsis verticillata</i>	Threadleaf Coreopsis	Medium
<i>Echinacea purpurea</i>	Purple Coneflower	Medium
<i>Gaura lindbeimeri</i>	Gaura	Medium
<i>Geum ciliatum</i>	Prairie Smoke	High
<i>Hemerocallis hybrids</i>	Daylilies	Medium+
<i>Heuchera sanguinea</i>	Coral Bells	High
<i>Kniphofia uvaria</i>	Red Hot Poker	Low+
<i>Lamium maculatum</i>	Spotted Nettle	High

<i>Flowering Plants</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Liatris punctata</i>	Gayfeather	Low+
<i>Liatris scariosa</i>	Tall Gayfeather	Medium
<i>Linum perenne</i>	Blue Flax	Medium
<i>Oenothera berlandieri</i>	Mexican Evening Primrose	Low+
<i>Penstemon spp.</i>	Penstemon or Beardtongue	Low+
<i>Penstemon ambiguus</i>	Bush Penstemon	Low
<i>Penstemon angustifolius</i>	Narrowleaf Penstemon	Low
<i>Penstemon barbatus</i>	Scarlet Bugler Penstemon	Medium
<i>Penstemon cardinalis</i>	Cardinal Penstemon	Low+
<i>Penstemon clutei</i>	Sunset Penstemon	Low
<i>Penstemon jamesii</i>	Penstemon, James	Low+
<i>Penstemon palmeri</i>	Palmer Penstemon	Low
<i>Penstemon pinifolius</i>	Pineleaf Penstemon	Low+
<i>Penstemon pseudospectabilis</i>	Desert Beardtongue	Low
<i>Penstemon secundifloris</i>	Sidebells	Low
<i>Penstemon strictus</i>	Rocky Mtn Penstemon	Medium
<i>Perovskia atriplicifolia</i>	Russian Sage	Medium
<i>Potentilla tabernaemontani</i>	Spring Cinquefoil	Medium
<i>Psilostrophe tagetina</i>	Paperflower	Low
<i>Ratibida columnifera</i>	Coneflower	Low+
<i>Salvia azurea grandiflora</i>	Pitcher Sage	Medium
<i>Salvia chamaedryoides</i>	Mexican Blue or Chihuahuan Sage	Low+
<i>Salvia officinalis</i>	Garden Sage	Medium

FLOWERING PLANTS

<i>Flowering Plants</i>		
<i>SCIENTIFIC NAME</i>	<i>COMMON NAME</i>	<i>WATER</i>
<i>Sedum spectabile</i>	Stonecrop	Low+
<i>Sedum telephium</i>	Autumn Joy Sedum	Low+
<i>Stachys byzantina</i>	Woolly Lamb's Ear	Medium
<i>Tanacetum densum-amani</i>	Partridge Feather	Low+
<i>Tanacetum vulgare</i>	Tansy	Medium
<i>Thymus spp.</i>	Thyme	Medium
<i>Verbena spp.</i>	Verbena	Low+
<i>Verbena bipinnatifida</i>	Fern Verbena	Low
<i>Verbena rigida</i>	Sandpaper Verbena	Low
<i>Verbena wrightii</i>	Western Vervain	Low
<i>Verbena x hybrida</i>	Garden Verbena	Medium
<i>Veronica spp.</i>	Speedwell	Medium
<i>Veronica incana</i>	Silver Speedwell	Medium
<i>Veronica limanensis</i>	Turkish Speedwell	Medium
<i>Veronica pectinata</i>	Wooly Speedwell	Medium
<i>Veronica spicata</i>	Veronica	High
<i>Sauschneria californica</i>	Hummingbird plant	Medium
<i>Zephyranthes candida</i>	Rain Lily	Medium
<i>Zephyranthes sulphurea</i>	Rain Lily	Medium
<i>Zinnia grandiflora</i>	Desert Zinnia	Low+

GROUNDCOVER & VINES

Ground Covers

SCIENTIFIC NAME	COMMON NAME	WATER
<i>Artemisia fricida</i>	Fringed Sage	Low
<i>Baccaris pilularis</i>	Dwarf Coyotebush	Low
<i>Cerastium tomentosum</i>	Snow-In-Summer	Medium
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster	Medium
<i>Cotoneaster salicifolius</i> 'Repens'	Willowleaf Cotoneaster	Medium
<i>Cytisus decumbens</i>	Creeping Broom	Medium
<i>Euonymus fortunei</i> 'Coloratus'	Purpleleaf Wintercreeper	Medium+
<i>Juniperus chinensis</i>	Juniper, groundcover	Low+
<i>Juniperus horizontalis</i>	Juniper, groundcover	Low+
<i>Juniperus sabina</i>	Juniper, groundcover	Low+
<i>Rosmarinus officinalis</i> 'Prostrata'	Creeping Rosemary	Low+
<i>Teucrium aronianum</i>	Greek Germander	Medium
<i>Teucrium chamaedrys</i>	Trailing Germander	Medium
<i>Zinnia grandiflora</i>	Desert Zinnia	Low

Turf Grasses

SCIENTIFIC NAME	COMMON NAME	WATER
<i>Bouteloua gracilis</i>	Blue Grama	Low+
<i>Buchloe dactyloides</i>	Buffalograss	Medium
<i>Festuca elatior</i> & all <i>Festuca</i>	Turf Tall Fescue	High
<i>Festuca ovina</i> except 'Glauca'	Sheep's Fescue	High
	Albuquerque Mix (<i>Falcon Fescue</i> , <i>Pennfine Perennial Rye grass</i> , and <i>Blue grass</i> at a ratio of 1:1:1)	High

Reclamation Seed Mix

SCIENTIFIC NAME	COMMON NAME	POUNDS PURE LIVE SEED (PLS) PER ACRE
<i>Bouteloua gracilis</i>	Blue Gramma	2
<i>Oryopsis hymenoides</i>	Indian Ricegrass	2.5
<i>Hillaria jamesii</i>	Galleta Grass	2.5
<i>Sphaeralcea coccinea</i>	Scarlet Globemallow	.5

Native Grass & Wildflower Mix

SCIENTIFIC NAME	COMMON NAME
<i>Native Grasses</i>	
<i>Agropyron smithii</i>	Western Wheat Grass
<i>Bouteloua curtipendula</i>	Side Oats Gramma
<i>Bouteloua gracilis</i>	Blue Gramma
<i>Buchloe dactyloides</i>	Buffalograss
<i>Hillaria jamesii</i>	Galleta Grass
<i>Festuca ovina</i>	Sheep fescue
<i>Oryopsis hymenoides</i>	Indian Ricegrass
<i>Sporobolus airoides</i>	Alkali Sacaton
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Wildflowers</i>	
<i>Achillea</i> spp	Yarrow
<i>Coreopsis tinctoria</i>	Plains Coreopsis
<i>Gaillardia aristada</i>	Blanket Flower
<i>Linum lewisii</i>	Blue Flax
<i>Macharathera biglovii</i>	Purple Aster
<i>Oenothera pallida</i>	White Evening Primrose
<i>Penstemon</i> spp	Penstemon
<i>Petalostemum purpureum</i>	Purple Prairie Clover
<i>Ratibida columnaris</i> forma <i>pucherrima</i>	Mexican Hat
<i>Sphaeralcea coccinea</i>	Scarlet Globemallow

Vines

SCIENTIFIC NAME	COMMON NAME	WATER
<i>Campsis radicans</i>	Trumpet Vine	Medium
<i>Gelsemium sempervirens</i>	Carolina Jessamine	Medium
<i>Lonicera japonica</i> 'Purpurea'	Purple leaf Honeysuckle	Medium
<i>Periploca graeca</i>	Silkvine	Low+
<i>Polygonum aubertii</i>	Silver Lacevine	Low+

Intent

To set forth lighting standards for outdoor uses that serve to create a safe and comfortable nighttime environment, while protecting the public's ability to view the night sky. These lighting standards are designed to ensure personal safety and prevent motor vehicle and pedestrian conflicts by reducing the negative effects of glare, light pollution, and light trespass.

Applicability

The outdoor lighting regulations contained herein shall apply to all exterior lighting and to interior lighting to the extent that it impacts the outdoor environment, including lighted sign.

Exceptions

- Lighting required by the FAA for the air traffic control and warning purposes.
- Airfield operations, aprons, and adjacent areas that use lighting requirements from UFC 3-535-01 Design Standards for Visual Air Navigation Facilities.
- Requirements stated in UFC 3-530-01 Design: Interior and Exterior Lighting and Controls that conflict or are more stringent than those listed in this document.
- Lighting required temporarily for emergency purposes or repairs.
- Temporary use of low-wattage lighting for public festivals or events, and the observance of holidays provided they do not create disability glare.
- Single-family residential lighting, except as prohibited in this appendix..

Prohibited Lighting

- High pressure sodium, Low pressure sodium and Mercury vapor lamping.
- Blinking, flashing, or changing intensity lights including those proposed for signage.
- Lighting that could be confused with traffic control devices.
- Lighting of a type, style or intensity determined to interfere with the safe flow of traffic.
- Strobe lights, searchlights, beacons, and laser light or similar upward or outward oriented lighting.
- Lighting creating a public hazard, including lighting that creates disability glare, particularly where such disability glare has a detrimental effect on motor vehicle traffic.
- Light mounted on poles for the purpose of illuminating the building façade.
- High-intensity floodlighting except as approved for sport facility lighting.
- Wall pack light fixtures that are not classified as full cutoff.

Outdoor lighting shall meet the following requirements:

- Light fixtures, except as otherwise permitted in this appendix, are required to be full cutoff as defined by the IESNA. Full cutoff light fixtures result in a light distribution pattern where no light is permitted at or above a horizontal plane at the bottom of the fixture.
- All outdoor light fixtures should utilize one of the following lamp types:
 - metal halide
 - induction lamp
 - compact fluorescent
 - incandescent (including tungsten-halogen) or
 - Light Emitting Diodes (LED)
- Alternative lamp types are permitted provided they are approved by the ACRB and can be demonstrated to be more effective for the proposed use, based on IESNA recommendations.
- Full cutoff fixtures may not be tilted or aimed in a manner that results in light distribution above the horizontal plane.
- Light fixtures associated with canopies, including but not limited to fuel islands, seasonal outdoor areas, and bank drive thrus, shall be full cutoff or mounted so that the bottom of the lens is recessed or flush with the bottom surface of the canopy.
- All light emitted from canopies shall be substantially confined to the ground plane directly beneath the perimeter of the canopy.
- No lighting of any kind shall be allowed on the top or sides of a canopy, unless approved by the ACRB.
- Spacing between fixtures and height of canopies shall be designed so that the luminance level under the canopy does not exceed 20 foot-candles.
- All light fixtures within 15'-0" of Kirtland Family Housing or base boundaries adjacent to residential areas shall be classified as IES Type II or Type III. Fixtures shall be fitted with "house side shield" reflectors on the sides facing the residential areas.
- Illuminance levels shall not exceed 10 foot-candles measured as initial horizontal illuminance unless stated otherwise in this appendix. The initial illuminance level is measure following 100 hours of operation.
- The illuminance levels at building entrances and windows may exceed 10 foot-candles by 100% up to a distance 5'-0" from the building to accommodate light spillage from within the building and light from signage.

LIGHTING REQUIREMENTS(CONT)

- The protective pole standard/base may not exceed a height of 2'-6" above grade.
- Parking lot and street lights shall always be mounted with a pole height 30'-0" above grade.
- A maximum of two light fixtures per pole is recommended for parking lots; except for perimeter lighting, which should be limited to one fixture per pole.
- Perimeter lighting shall be classified by IES and Type II or Type III.
- The use of semi-cutoff or cutoff (as opposed to full cutoff) fixtures shall be permitted to illuminate areas other than parking lots provided the pole or mounting point is no more than 10'-0" in height and the maximum lumen output does not exceed 1800 lumens per lamp.
- When semi-cutoff or cutoff fixtures area used, a maximum of one lamp per fixture and two fixtures per pole or mounting point is required.
- Fixtures located on pole or at mounting points more than 10'-0" in height, or that exceed 1800 lumens per lamp, shall be full cutoff fixtures.
- Lighted bollards intended to illuminate landscape features or walkways are permitted, but lamps shall not exceed 900 lumens for any single lamp.
- All lighting, except those required for security as listed below, shall be reduced to security levels within one hour after the end of business until one hour prior to the commencement of business.
- Security lighting at entrances, stairways, loading docks, and parking lots is permitted.
- Motion sensors for security lighting is strongly encouraged and shall not be located so that it is triggered by normal pedestrian and vehicular traffic.
- All signage lighting shall be turned off within one hour of the end of business and remain off until one hour prior to commencement of business.
- All exterior recreational areas lighting used for the purpose of illuminating the playing area shall be turned off following the conclusion of the final event of the night. The remainder of the lighting around the field shall be turned off within on hour after the event and remain of until one hour prior to the next event.
- Lighting in residential areas and open spaces should be limited to 2400 lumens per fixture unless shielded.
- Illuminance for a building façade to enhance architectural features may be permitted provided it is approved by the ACRB. Building facades may be illuminated to a maximum of 20 foot-candles as measured on the façade.
- Lights mounted on poles for the purpose of lighting the building façade are not permitted.
- Illumination of a flag on a flagpole is permitted provided a narrow spread 39-watt PAR metal halide or 50-watt PAR-halogen lamp or equivalent lamp with narrow spear is used and aimed to only illuminate the top of the flagpole. The source of illuminance from any fixture, including interior fixtures visible through windows, shall not create disability glare on adjacent sites.
- Illuminance of a sign face by a ground mounted fixture shall not exceed 50 foot-candles. It is recommended that lighter lettering on a dark background be used to maximize visibility.
- Signage that is internally lit shall be limited to a maximum of 1,000 nits.
- No sign shall be illuminated with fixtures that allow for the unshielded upward transmission of light.
- The ACRB will review lighting plans for compliance with the requirements of this appendix. All drawings sets shall include:
 - A narrative describing how the design of the proposed lighting, including the fixture types, mounting heights, lamp types, locations, illuminance levels, controls, and sign lighting complies with the intent of the context and regulation contained in this document.
 - Identification and description of all light fixture locations including whether they are pole-, ground-, or building-mounted. The location of the light fixtures shall also be shown on the Landscape Plan.
 - Description of light-level-reduction controls for each fixture or grouping of fixtures, and resulting after-hours light levels.
 - Maximum outdoor illuminance levels shall include signage lighting and light spillage from within a building. The impact of this illuminance shall be described in the lighting plan narrative.

* The standards provided in Appendix C are based on the Mesa Del Sol Master Plan lighting sections and appendices.

ALLOWABLE FIXTURES & MAXIMUM ALLOWABLE LIGHT LEVELS						
Lighting Zone 1	Maximum Mounting Height	Full-Cutoff	Cutoff	Semi-Cutoff	Indirect	Non-Cutoff
Surface Parking Lots	30'-0"	5.0 fc	Not Allowed	Not Allowed	May be used if source is shielded & doesn't increase light levels above those state for full-cutoff fixtures.	Not Allowed
Roadways & Alleys	30'-0"	5.0 fc	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Point of Service Canopies and Awnings	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Outdoor Sales & Displays	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Security Storage & Loading	30' Allowed	5.0 fc	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Pedestrian Circulation	12'-0"	6,000 Lumens	6,000 Lumens	4,000 Lumens	4,000 Lumens concealed lamp within fixture required	3,500 Lumens
Architectural Accent Lighting	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Architectural Entry Lighting	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Architectural Landscape & Display Lighting	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Outdoor Recreational Facilities	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed

ALLOWABLE FIXTURES & MAXIMUM ALLOWABLE LIGHT LEVELS						
Lighting Zone 2	Maximum Mounting Height	Full-Cutoff	Cutoff	Semi-Cutoff	Indirect	Non-Cutoff
Surface Parking Lots	30'-0"	5.0 fc, 12.0 fc for drive aisles and service drives	Not Allowed	Not Allowed	May be used if source is shielded & doesn't increase light levels above those state for full-cutoff fixtures.	Not Allowed
Roadways & Alleys	30'-0"	5.0 fc	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Point of Service Canopies and Awnings	15'-0" above the highest grade under the canopy	20.0 fc	Not Allowed	Not Allowed	May be used if source is shielded & doesn't increase light levels above those state for full-cutoff fixtures.	Not Allowed
Outdoor Sales & Displays	30'-0"	10.0 fc	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Security Storage & Loading	30' Allowed	5.0 fc	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Pedestrian Circulation	12'-0"	6,000 Lumens	6,000 Lumens	4,000 Lumens	4,000 Lumens concealed lamp within fixture required	3,500 Lumens
Architectural Accent Lighting		200 lumens per linear foot, No single fixture may exceed 3500 lumens	200 lumens per linear foot, No single fixture may exceed 3500 lumens	200 lumens per linear foot, No single fixture may exceed 3500 lumens	200 lumens per linear foot, No single fixture may exceed 3500 lumens	Only one identify symbol on cultural, religious, or community structures
Architectural Entry Lighting	Width of entry plus 3'-0" on each side	500 lumens per linear foot, No fixture may exceed 3500 lumens.	500 lumens per linear foot, No fixture may exceed 3500 lumens.	500 lumens per linear foot, No fixture may exceed 3500 lumens.	500 lumens per linear foot, No fixture may exceed 3500 lumens.	Not Allowed
Architectural Landscape & Display Lighting		2400 lumens per fixture	2400 lumens per fixture	2400 lumens per fixture	2400 lumens per fixture	Not Allowed
Outdoor Recreational Facilities	30'-0" for tennis courts, 100'-0" for driving ranges, 100'-0" for sports/athletic fields light fixtures.	Allowed	Lights shall not be aimed above 62 degrees from vertical and must use internal shields as defined in IESNA Recommended Practice 33	Lights shall not be aimed above 62 degrees from vertical and must use internal shields as defined in IESNA Recommended Practice 33	Not Allowed	Lights shall not be aimed above 62 degrees from vertical and must use internal shields as defined in IESNA Recommended Practice 33

BUILDING REGULATIONS

- International Building Code (IBC) 2006
- National Fire Protection Agency (NFPA) 101 Life Safety Code
- NFPA 70 National Electric Code
- Unified Facilities Criteria (UFC) - Webpage: <http://dod.wbdg.org>
- UFC 1-200-01 General Building Requirements
- UFC 3-120-01 Air Force Sign Standard
- UFC 3-220-01N Geotechnical Engineering Procedures for Foundation Design of Buildings and Structures
- UFC 3-310-01 Design: Structural Load Data
- UFC 3-400-01 Design: Energy Conservation
- UFC 3-410-01FA Design: Heating, Ventilation, Air conditioning and Dehumidifying Systems
- UFC 3-410-02N Design: Heating, Ventilation, Air conditioning and Dehumidifying Systems
- UFC 3-420-01 Design: Plumbing Systems
- UFC 3-600-01 Design: Fire Protection Engineering for Facilities
- UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings
- UFC 4-010-02 DoD Minimum Antiterrorism Standoff Distances for Buildings
- American Society of Civil Engineers (ASCE) 31-03 Seismic Evaluation of Existing Buildings
- Federal Emergency Management Agency (FEMA) 356 Prestandard and Commentary for the Seismic Rehabilitation of Buildings 2000
- Interagency Committee on Seismic Safety Construction (ICSSC) RP6/ National Institute of Standards and Technology (NISTIR) 6762 Standards of Seismic Safety for Federally Owned and Leased Buildings 2002
- Uniform Federal Accessibility Standards (UFAS) & Americans with Disabilities Act Accessibility Guide (ADAAG)
- National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual
- Manual on Uniform Traffic Control Devices (MUTCD)

LANDSCAPE REGULATIONS

- City of Albuquerque Water Waste Ordinance and the Pollen
- Albuquerque Bernalillo County Water Utility Authority (ABCWUA) R-05-13 Water Conservation
- ABCWUA R-04-12 Water Conservation Strategy

GENERAL REGULATIONS

- The Environmental Protection Agency Federal Register 40837, August 10, 1995
- AFI 32-1026 Airfield Clearance Criteria AFI 32-1026
- AFM 19-10 Noise Siting Compliance AFM 19-10

***Architectural and Engineering Firms doing work on Kirtland AFB are responsible for meeting all current & local codes, federal requirements, and DoD regulations. This list is for reference only and doesn't not include every regulation that may be required for a specific project. All codes and regulations supersede the standards given in this document if a conflict arises.

ARCHITECTURAL COMPATIBILITY PLAN CHECKLIST

Project Title:					Building Number:					
Work Order #:		Task Order #:		Project Address:						
Project #:			Submitted by:							
Type of Project	MILCON	O&M		Contract by Requestor		Other				
ACRB Review Required	Partial	Full		ACP Provided to Designer?		Yes	No			
PROGRAMMING/CONCEPT PHASE (FOR ACRB USE ONLY)										
Project Description:					Date Submitted					
					Design Complies with ACP Standards		Yes	No		
					Re-submittal Required		Yes	No		
Developed & Scaled Concept Sketches (CAD drawings not necessary)		Site Plan	Perspective		Comments Attached		Yes	No		
		Elevations	Renderings	Floor Plan	Date Resubmitted					
Other Requirements		Visual District Specifics								
		Adjacent Area/Facility Photos		RFP	Design Complies with ACP Standards		Yes	No		
		Materials	Site Inventory / Analysis		Signed by		Date			
INTERMEDIATE DESIGN REVIEWS - 35%, 65%, 95% (FOR ACRB USE ONLY)										
Building Design Standards		Buildings	Wall Systems	Screens & Enclosures		Date Submitted				
		Entrances	Roof Systems	Sustainability		Design Complies with ACP Standards		Yes	No	
		Ancillary Structures		Materials	Accent Colors		Re-submittal Required		Yes	No
		Visual District Specifics			Comments Attached			Yes	No	
Site Design Standards		Site Development		Parking	Roadways		Date Resubmitted			
		Pedestrian Circulation		Signage	Utilities		Design Complies with ACP Standards		Yes	No
		Exterior Lighting		Site Furniture		Re-submittal Required		Yes	No	
Landscape Design Standards		Xeriscape	Irrigation	Design & Materials		Comments Attached		Yes	No	
		Oasis	Transitional	Arid						
Explanation of approved exceptions:					Design Complies with ACP Standards		Yes	No		
					Signed by		Date			
FINAL DESIGN (FOR ACRB USE ONLY)										
Building Design Standards		Buildings	Wall Systems	Screens & Enclosures		Date Submitted				
		Entrances	Roof Systems	Sustainability		Design Complies with ACP Standards		Yes	No	
		Ancillary Structures		Materials	Accent Colors		Re-submittal Required		Yes	No
		Visual District Specifics			Comments Attached			Yes	No	
Site Design Standards		Site Development		Parking	Roadways		Date Resubmitted			
		Pedestrian Circulation		Signage	Utilities		Design Complies with ACP Standards		Yes	No
		Exterior Lighting		Site Furniture		Re-submittal Required		Yes	No	
Landscape Design Standards		Xeriscape	Irrigation	Design & Materials		Comments Attached		Yes	No	
		Oasis	Transitional	Arid		Design Complies with ACP Standards		Yes	No	
Cost Reduction Proposal/Scope Changes comply with ACP				Yes	No	Signed by		Date		
JUSTIFICATION FOR NONCOMPLIANCE (FOR ACRB USE ONLY)										
Explanation:					Design does not meet ACP standards					
					Signed By		Date			

ABBREVIATIONS

AAFES - Army & Air Force Exchange Service
ABCWUA - Albuquerque Bernalillo County Water Utility Authority
ACP - Architectural Compatibility Plan
ACRB - Architectural Compatibility Review Board
A/E - Architecture & Engineering
ANG - Air National Guard
AFRL - Air Force Research Laboratories
ASHRAE - American Society of Heating, Refrigerating, and Air Conditioning Engineers
ATO - Anti-Terrorism Officer
AT/FP - Anti-Terrorism Force Protection

BCE - Base Civil Engineer
BUR - Built-up Roof

CFC - Chlorofluorocarbons
CGP - Construction General Permit
CMU - Concrete Masonry Unit
COE - Corps Of Engineers
CWA - Clean Water Act

D

EPA - Environmental Protection Agency
EPDM - Ethylene Propylene Diene Monomer
EUL - Enhanced Use Lease

FC - Foot Candles

G

HQ AFMC - Headquarters Air Force Materiel Command
HVAC - Heating Ventilation & Air Conditioning

IESNA - Illuminating Engineering Society of North America

J

KAFB - Kirtland Air Force Base

LED - Light Emitting Diodes
LEED - Leadership in Energy & Environmental Design

MILCON - Military Construction
MUTCD - Manual on Uniform Traffic Control Devices

NEPA - National Environmental Policy Act
NPDES - National Pollution Discharge Elimination System

OSHA - Occupational Safety and Health Act

PDF - Portable Document Format
PVC - Polyvinyl Chloride

Q

RCRA - Resource Conservation and Recovery Act

SDWA - Safe Drinking Water Act
SF - Square Feet

TSCA - Toxic Substance Control Act

UCS - University of Southern California
UFC - Unified Facilities Criteria
USGBC - United States Green Building Council
UST - Underground Storage Tank

VOC - Volatile Organic Compound
VOQ - Visiting Officers Quarters

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PREPARED BY:

377th Civil Engineering Division
Kirtland Air Force Base, NM 87117
505.846.7911

PHOTOGRAPHY BY:

Donna Dunn
Jack Logan
Melanie Archibeque
Tim Stephens
Priscilla Williams



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