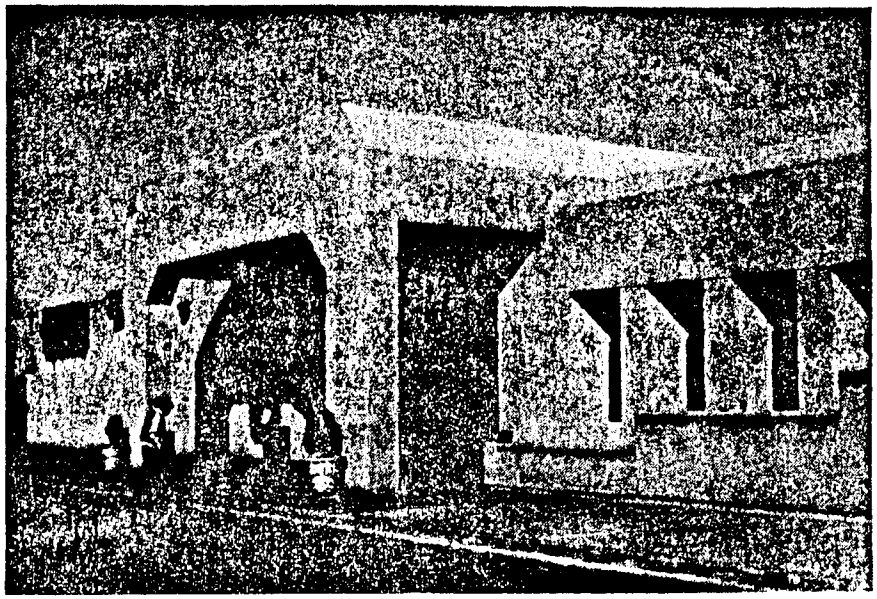
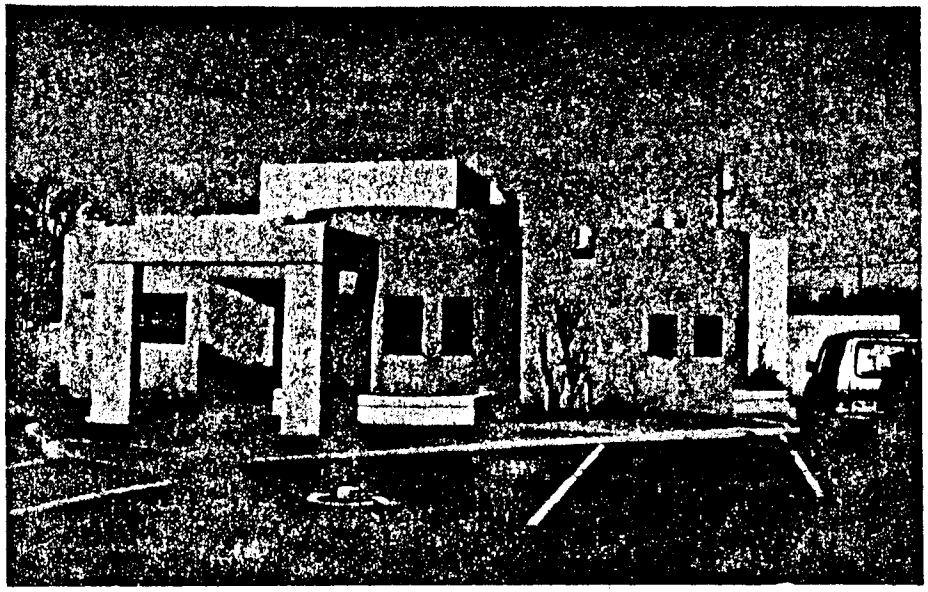
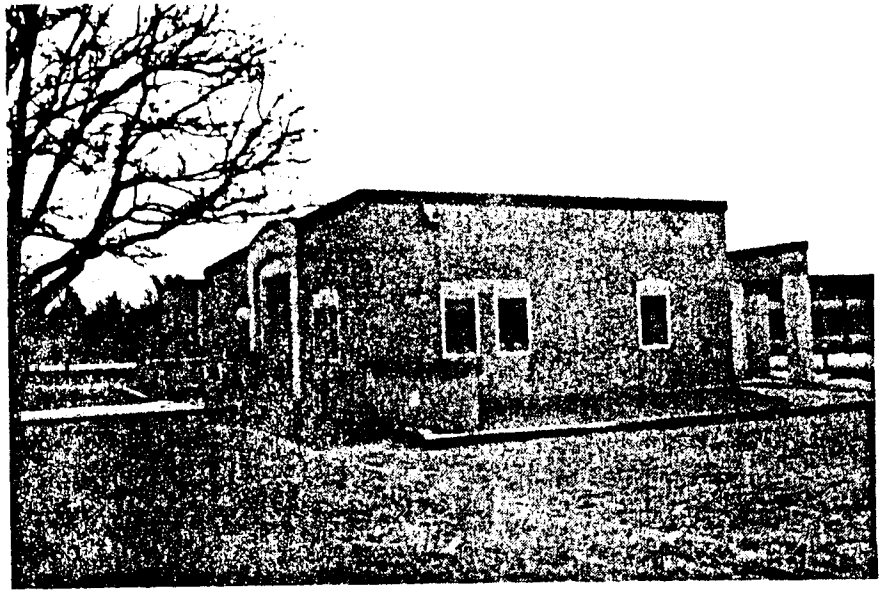
5.2 REPRESENTATIVE EXAMPLES OF COMPATIBILITY



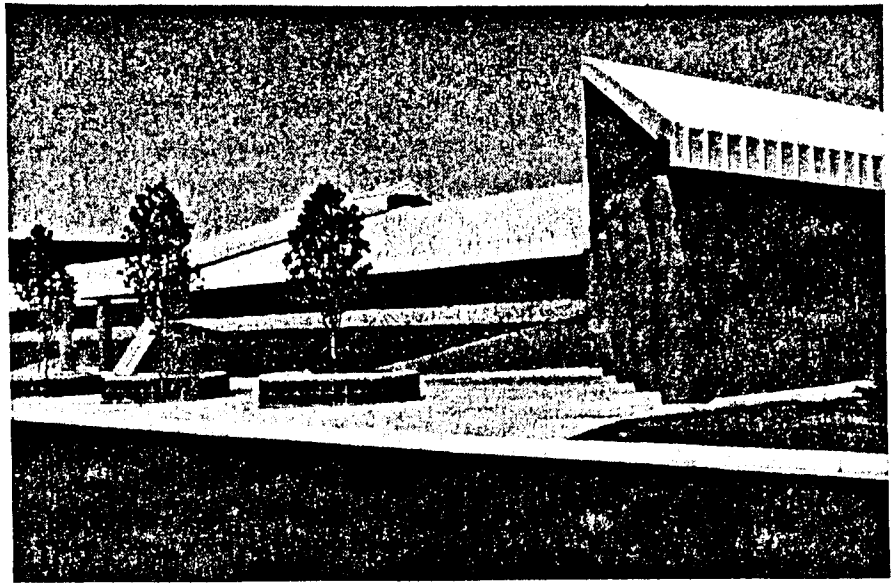
Area 2, Bldg. 20170 Base Exchange



Area 2, Bldg. 20168 - Veterinary Clinic

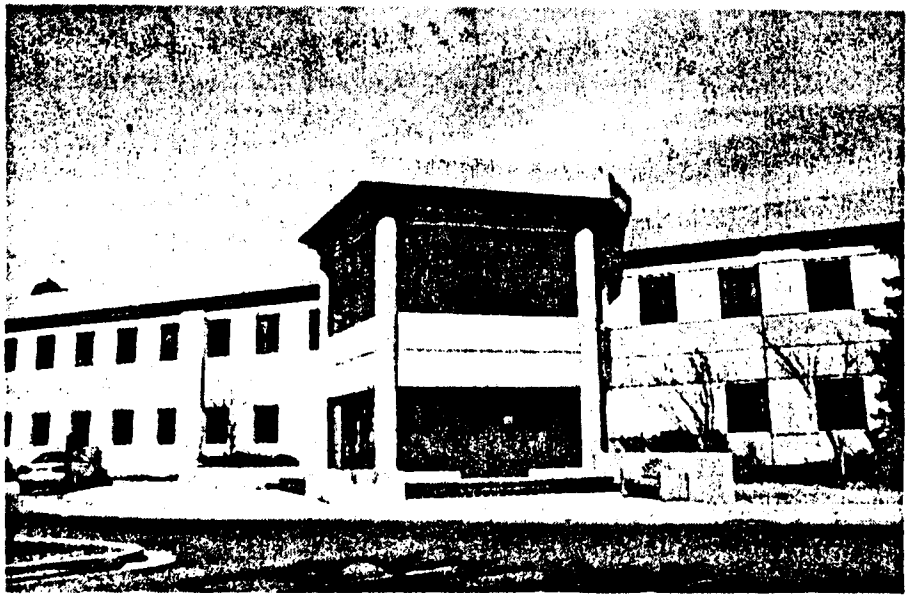


Area 4, Bldg. 22016 - Billeting

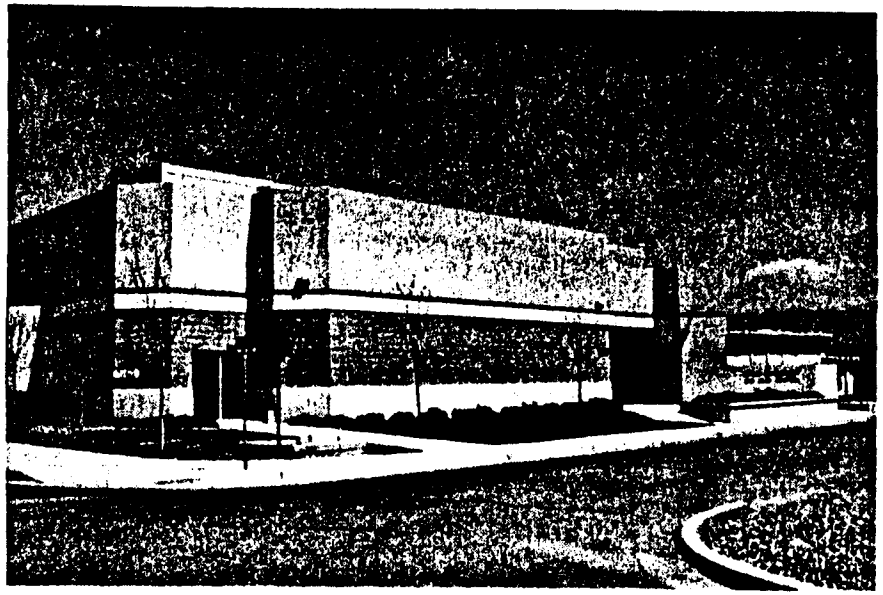


Area 9, Bldg. 975, Field Training Facility

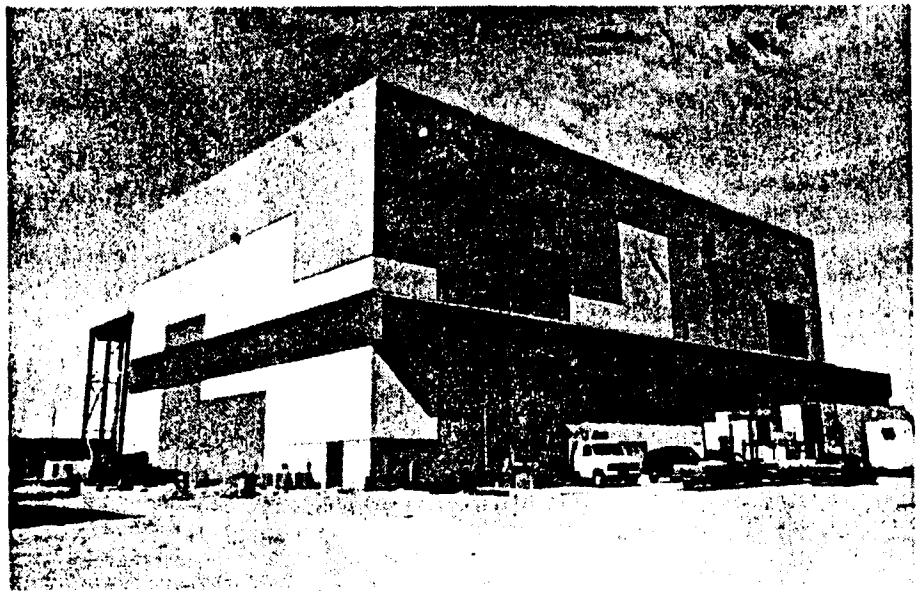
5.2 REPRESENTATIVE EXAMPLES OF COMPATIBILITY



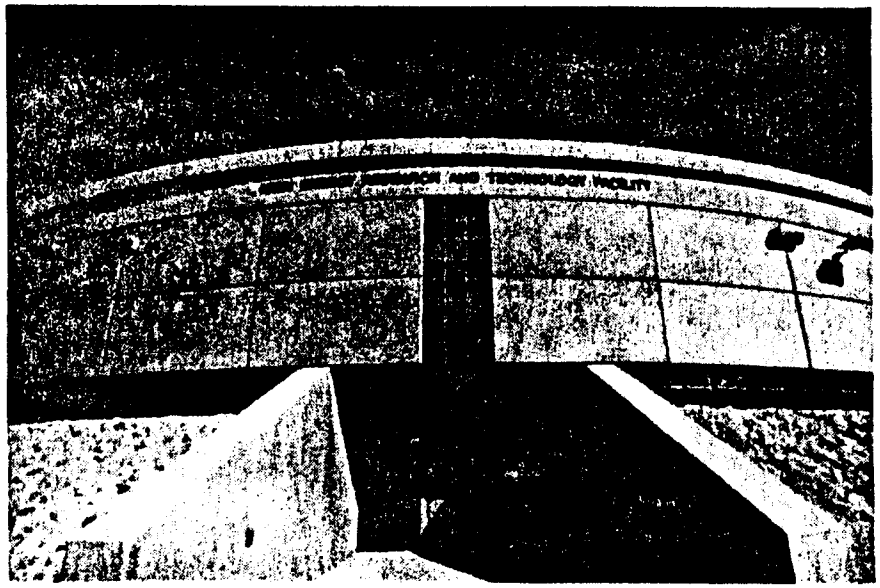
Area 11, Bldg. 499 - Procurement



Area 11, Bldg. 422 - Optic Beam Development



Area 11, Bldg. 323 - Microwave Facility



High Energy and Research and Technology Facility

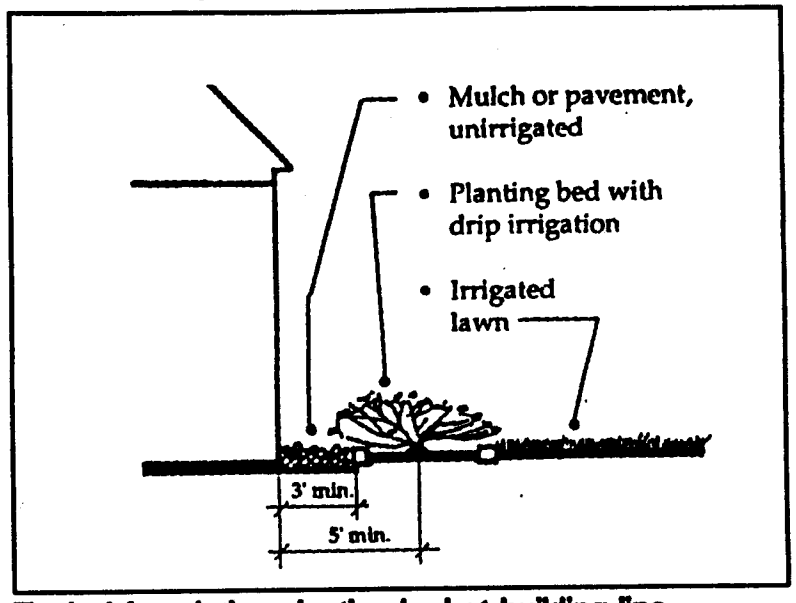
5.3 LANDSCAPE ARCHITECTURE

When designing landscape architecture, A/Es should first consult with the base civil engineer who can provide guidance and direction to the selection of plant materials that are indigenous to the area. (See "List of Approved Plants" that follow.) Landscape architects need to understand that maintenance of landscape materials will be minimal. All landscaping design schemes should include provisions for irrigation via a shallow well; irrigation devices should throw water away from buildings. Trees and shrubbery should be planted a sufficient distance apart, and from buildings, sidewalks and streets to allow for adequate growth. Mature landscaping materials should either be trimmed or selectively replanted.

Uncontrolled irrigation adjacent to buildings can stain stucco surfaces and etch window glass. The detail at right recommends a foundation planting scheme to help eliminate this problem.

Major objectives of landscape architecture at Kirtland should follow the guides of **Xeriscape Landscaping** (working with water-conserving landscapes and nature to create a harmonious landscape). These objectives are described as follows:

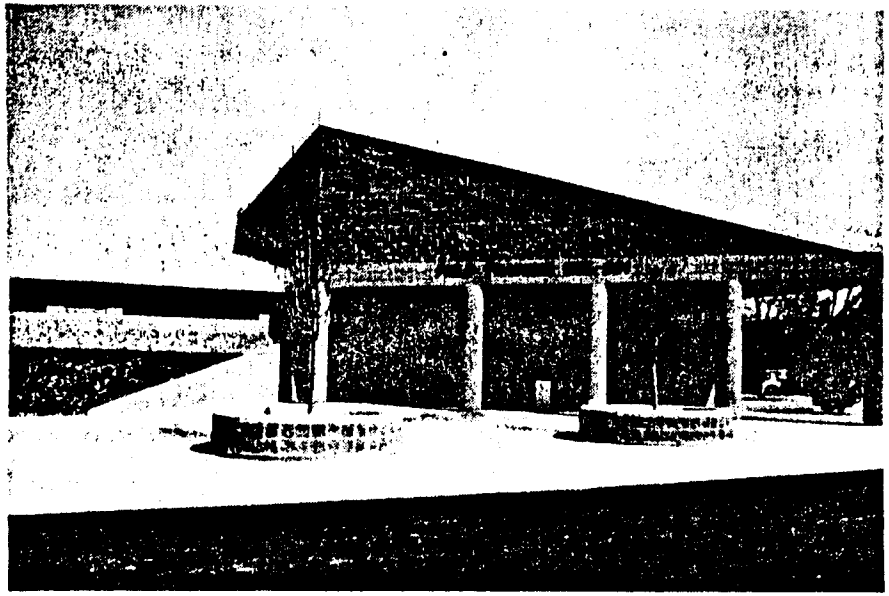
- Plan and design.
  - to unify the base
  - to provide shaded areas where people congregate near building entrances, but low plantings in other common spaces to allow cooling breezes to blow.
  - to select trees with tall foliage to shield buildings from the sun's radiation.
  - to break up large expanses of parking lots
  - to plant trees and shrubbery sufficient distances from each other and buildings, sidewalks, etc.



Typical foundation planting bed at building line

  - to use selected plantings to screen visual clutter or unattractive facility elements.
- Limit turf areas.
  - to select plants indigenous to the area.
  - add interest and reduce maintenance in limited areas with hard surfaces such as Bomanite patterns, tile pavers, and crushed river rock (2" to 3" in size) in selected areas.
- Efficiently irrigate.
  - to use automatic watering systems.
- Improve the soil.
- Use mulches.
- Use low water-demanding plants.
- Appropriately maintain.
  - to keep design simple with low maintenance in mind.

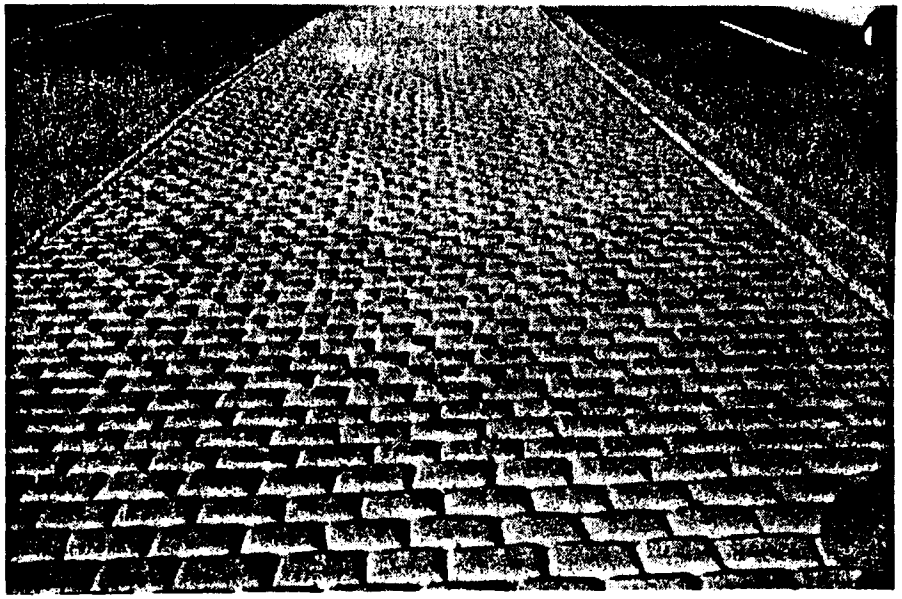
5.3 LANDSCAPE ARCHITECTURE



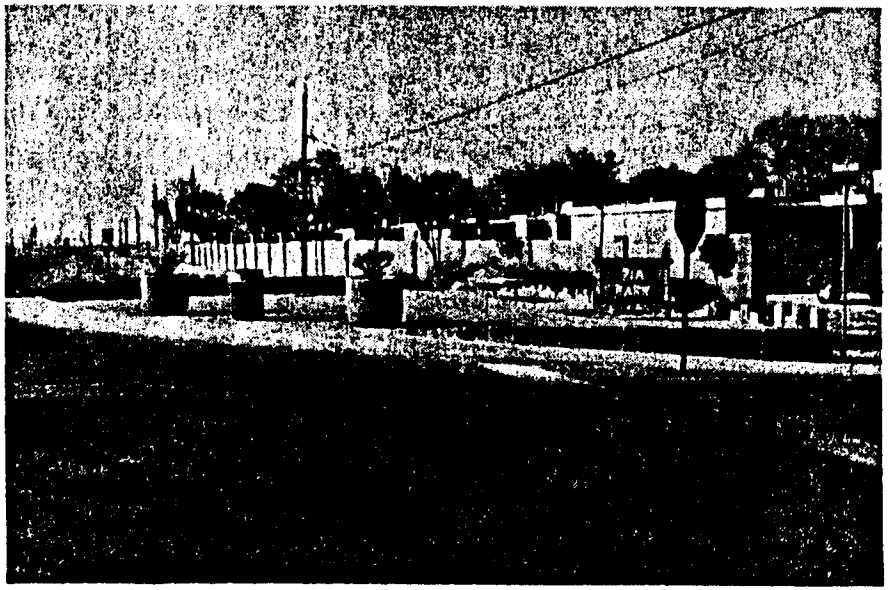
Landscaped berm and split-faced planters

LANDSCAPING TREATMENTS USED AT KAFB

- Landscape elements that integrate with architectural forms are demonstrated at the Flight Training Facility, Bldg. 975. Examples are:
  - split faced tree planter wells, and
  - landscaped earth berm.
- Bominite Paving, shown at lower left, is used here excessively. Future use of Bomanite is encouraged, however, use in smaller quantities, and press with a more shallow stamp.
- Entrance identity to housing area is enhanced by landscape treatment shown below.



Bominite paving at Gibson Boulevard Island



Tastefully done landscaping at the entry to a housing area

LIST OF APPROVED PLANTS FOR KIRTLAND AFB

Ground Covers

Botanical Name	Common Name
Bouteloua gracilis	Blue Grama
Buchloe dactyloides	Buffalo Grass
Festuca spp.	Fescue Grass
Hedera helix 'Needlepoint'	Needlepoint Ivy
Oryzopsis hymenoides	Indian Ricegrass
Parthenocissus quinquefolia	Virginia Creeper
Petalostemon purpureum	Purple Prairieclover
Poa spp.	Bluegrass
Trifolium repens	White clover

Shrubs

Arundo donax	River Cane
Berberis thunbergii	Japanese Barberry
Cercocarpus montanus	Mountain Mahogony
Cortaderia selloana	Pampas Grass
Cotoneaster lacteus	Parney Cotoneaster
Elaeagnus pungens	Silverberry
Fallugia paradoxa	Apache Plume
Forestiera neomexicana	Desert Olive
Forsythia spp.	Forsythia
Hibiscus syriacus	Rose of Sharon, Althea
Juniperus chinensis 'Armstrong'	Armstrong Juniper

Shrubs (continued)

Botanical Name	Common Name
Juniperus chinensis 'Pfitzerana'	Pfitzer Juniper
Juniperus sabina 'Broadmoor'	Broadmoor Juniper
Ligustrum spp.	Privot
Lonicera spp.	Honeysuckle
Mahonia aquifolia	Oregon Grape
Nandina domestica	Heavenly Bamboo
Opuntia spp.	Cholla, Prickly Pear
Photinia fraseri	Frasers Photinia
Phyllostachys aurea	Golden Bamboo
Pinus mugo mughus	Mugho Pine
Pyracantha spp.	Firethorn
Spiraea spp.	Spiraea
Syringa spp.	Lilac
Viburnum opulus 'Roseum'	Snowball Bush

Trees

Acer palmatum	Japanese Maple
Acer platinoides	Norway Maple
Acer saccharinum	Silver Maple
Catalpa speciosa	Western Catalpa

LIST OF APPROVED PLANTS FOR KIRTLAND AFB (Cont'd.)

Trees

Botanical Name	Common Name
Celtis occidentalis	Common Hackberry
Chilopsis linearis	Desert Willow
Cowania mexicana	Cliffrose
Cupressocyparis leylandii	Leyland False Cypress
Cupressus arizonica	Arizona Cypress
Cupressus sempervirens	Italian Cypress
Elaeagnus augustifolia	Russian Olive
Fraxinus pennsylvanica lanceolata	Green Ash
Gleditsia triacanthos inermis	Thornless Honey Locust
Geditsia triacanthos inermis 'Sunburst'	Sunburst Honey Locust
Malus spp.	Crabapple
Morus alba	Fruitless Mulberry
Picea pungens 'Glauca'	Colorado Blue Spruce
Pinus eldarica	Afghan Pine
Pinus nigra	Austrian Pine
Pinus ponderosa	Ponderosa Pine
Pinus sylvestris	Scotch Pine
Platanus acerifolia	London Plane Tree
Platanus occidentalis	American Sycamore
Platanus wrightii	Arizone sycamore
Populus fremontii	Mountain Cottonwood

Medium to Large Trees 35' and over

Botanical Name	Common Name
Populus nigra 'Italica'	Lombardy Poplar
Prunus armeniaca	Silktree
Prunus cerasifera Atroutoropurpurea'	Purple Leaf Plum
Pyrus spp.	Ornamental Pear
Quercus turbinella	Shrub Live Oak
Robinia pseudoacacia	Black Locust
Salix Babylonica	Weeping Willow

Flowers

Alcea rosea	Hollyhock
Bailey multiradiata	Desert Marigold
Chrysanthemum morifolium	Chrysanthemum
Coreopsis tinetoria	Calliopsis
Gaillardia grandiflora	Blanket Flower
Homerocallis spp.	Daylily
Iris varieties	Iris
Kniphofia uvaria	Red-hot Poker
Liatris punctata	Gayfeather
Machaeranthera bigelovii	Purple Aster

5.4.1 SCREENING

Example of integrating enclosure with building architecture-Bldg. 499

Screening walls and fencing should be of appropriate design and materials to fulfill their function while instilling harmony with the character and appearance of their setting.

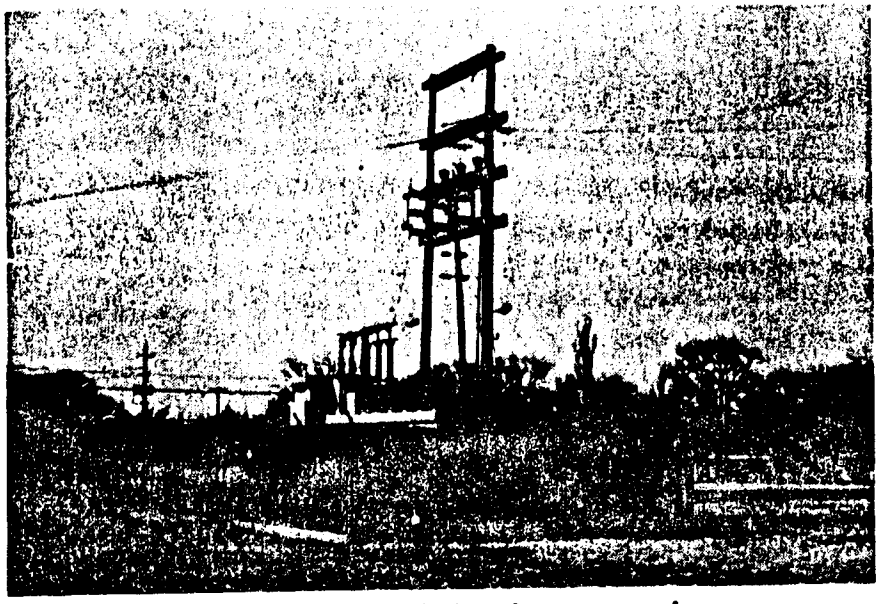
CONCERNS

- ***Visual clutter is created primarily by on-grade mechanical units, electrical transformers, trash dumpsters, above-ground storage tanks, portable storage sheds.***
- ***There is an inordinate amount of chain link fencing with attempts to make opaque with wood or metal slats inserted.***

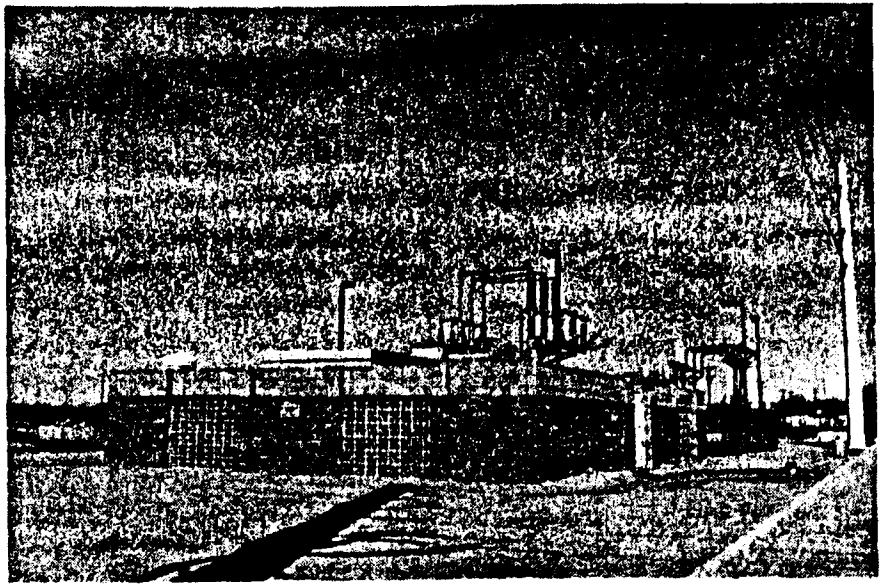
RECOMMENDATIONS

- ***Wood, masonry, or stucco screen walls and fencing are generally the most compatible and harmonious materials to use in the residential housing areas.***
- ***Precast concrete fence sections anchored with masonry piers should be considered. These are constructed with form liners of varying patterns and textures.***
- ***Trash containers and on-grade mechanical elements should be screened effectively with opaque fences or walls of appropriate design and materials compatible with the architectural character of the installation.***
- ***Anodized aluminum or steel (painted to match closest building) with shadow box style planking, should be used in the industrial and warehousing areas.***
- ***Earth berms and plant materials — if space allows — are preferrable to either walls or fencing when screening parking lots, loading and storage areas, or similar functions from view.***
- ***No split rail or chain-link fencing should be allowed outside of industrial areas (except as required for physical security) unless approved by the BCE.***

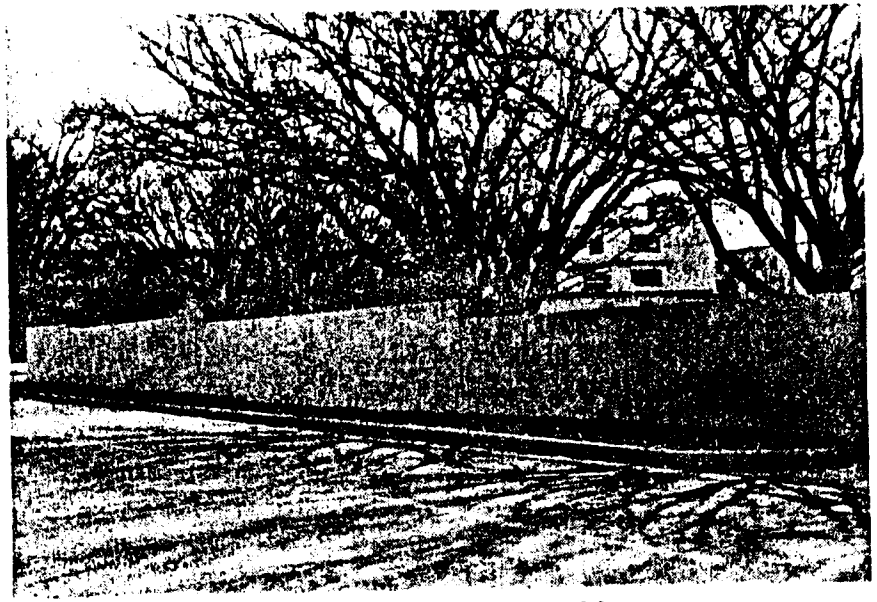
5.4.1 SCREENING



Chain-link fencing with wood slats is unattractive



Split-faced/decorative CMU is effective, maintenance-free



Painted CMU wall is a maintenance problem

An attractive, typical slump block screen wall

5.4.2 SIGNAGE

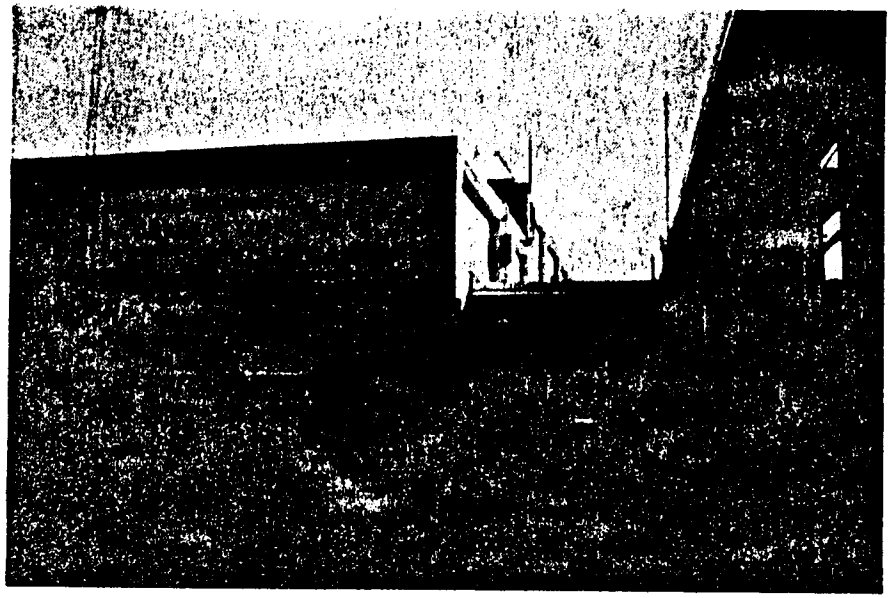
Observations: Kirtland AFB recently has done an excellent job of establishing, and maintaining signage that provides needed information in a clear and consistent manner. However, the signage at Kirtland varies slightly from the AMC standards in that some of the signs are mounted on unpainted galvanized metal posts, rather than brown painted posts. In the future, the metal sign posts should have factory-applied brown paint to reduce maintenance. All existing and future signage will comply with AMC-approved Sign Standards.

Recommendations:

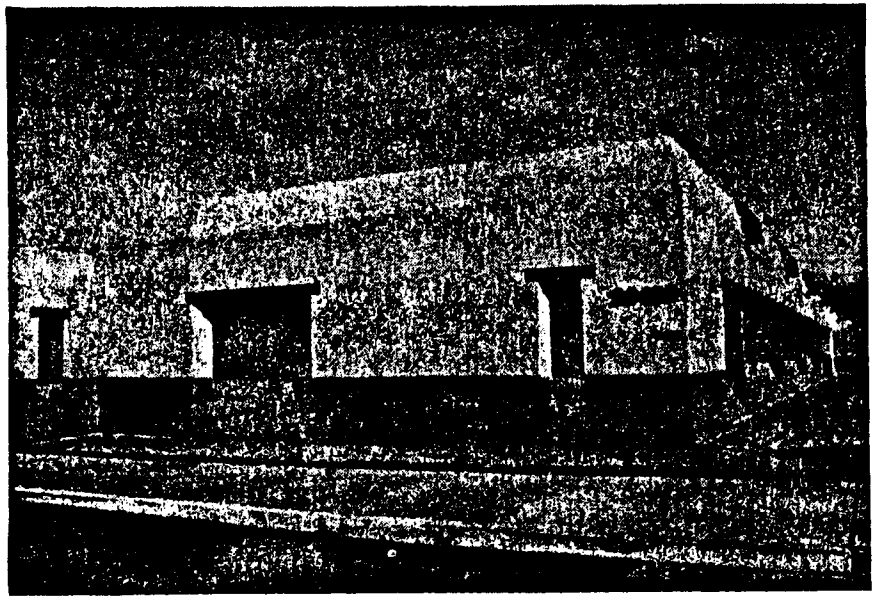
- Continue to use a consistent base-wide signage system in accordance with Sign Standards (SHARP EAGLE Memo #11). Older signs not in compliance with this regulation should be replaced.
- Use free-standing signs to identify buildings.
- Provide building numbers only on facility walls, except cast letters where improved identity is required.
- Continue the use of brown and white signs, especially for directional signage. Phase in the AMC emblem and white border by geographic areas in an orderly, consistent and complete manner. Also, continue to use brown-colored backgrounds and sign posts for free-standing signs.
- Use uniform size for numbers as much as possible, but adapt to size and scale of use.
- All signage must be professionally done. Signs having a homemade look must be avoided or removed.

5.4.2 SIGNAGE

- ***Signage of the type depicted in the photo at right should not be permitted on the sides of buildings.***
- ***Photo at lower right illustrates proper sign face. However, use brown posts with factory-applied paint only.***
- ***Photo at lower left illustrates the importance of scaling size of building numbers.***



Bldg. 20684 - wall painted signs like this are not allowed



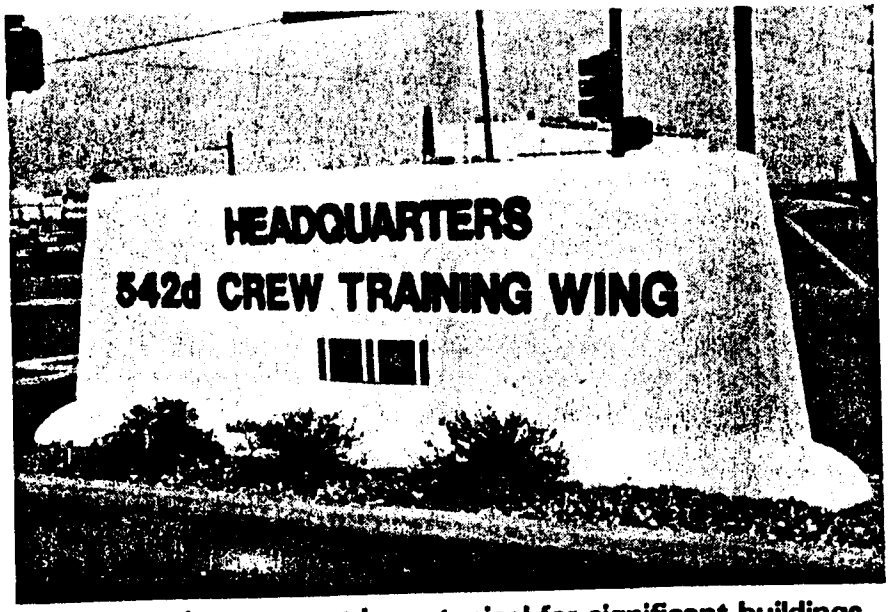
Select appropriate lettering size for building scale

AMC Standard sign face, wrong post color

5.4.2 SIGNAGE

- *Individual letter-type signage affixed to buildings is permitted using only formed or cast metal letters, such as the example pictured at right. Letters should be in scale with the size of the building and distance from the street. Color should be coordinated with the building color.*
- *The most modern type of signage is pictured at lower right. It incorporates a free-standing base and a message board featuring the latest technology in electronic graphics.*
- *Photo at lower left shows a monumental sign typical for significant buildings on base. An approved sign face mounted in an architecturally compatible base should be used in the future.*

An acceptable building-mounted sign

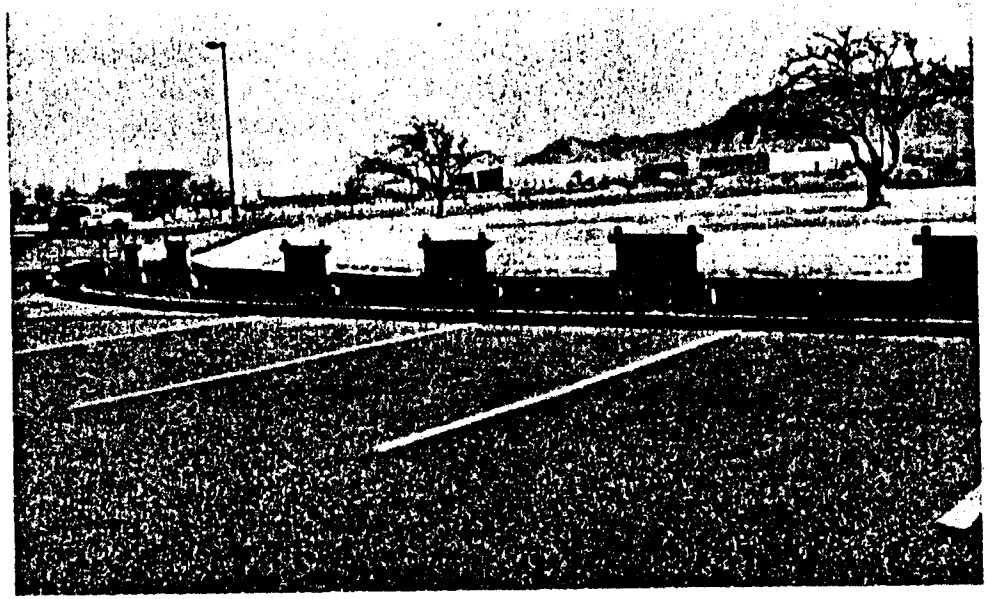


Architectural monument base typical for significant buildings

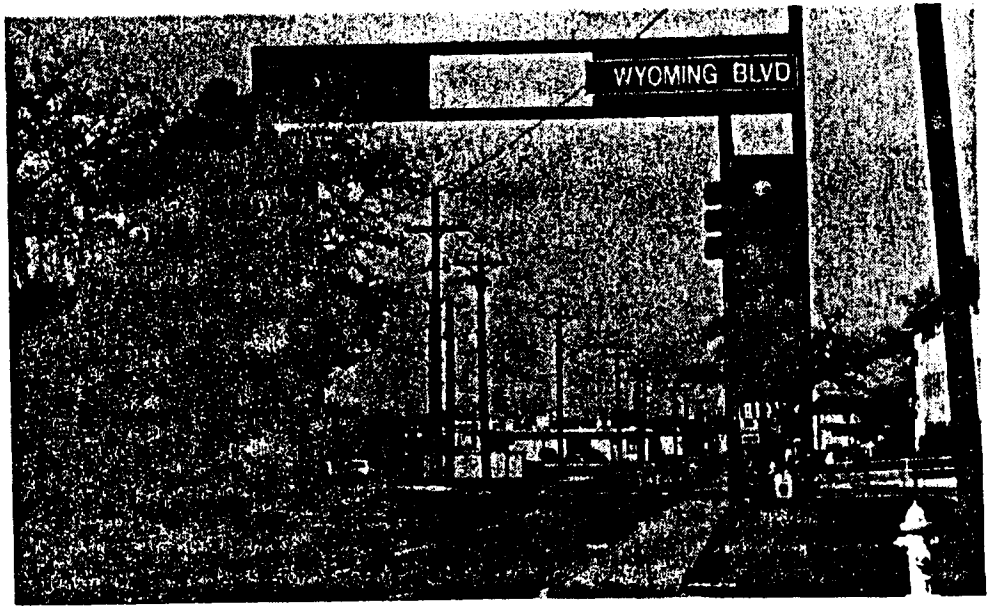
Electronic message sign located on Gibson Boulevard

5.4.2 SIGNAGE

- *Vertically mounted reserved parking signs are discouraged — curb mounted signs are preferred.*
- *Photo at lower right illustrates a good example of integrating street signs with the traffic signal for important streets. KAFB should receive special recognition for their concern of overcoming visual clutter by selecting signs of this quality.*



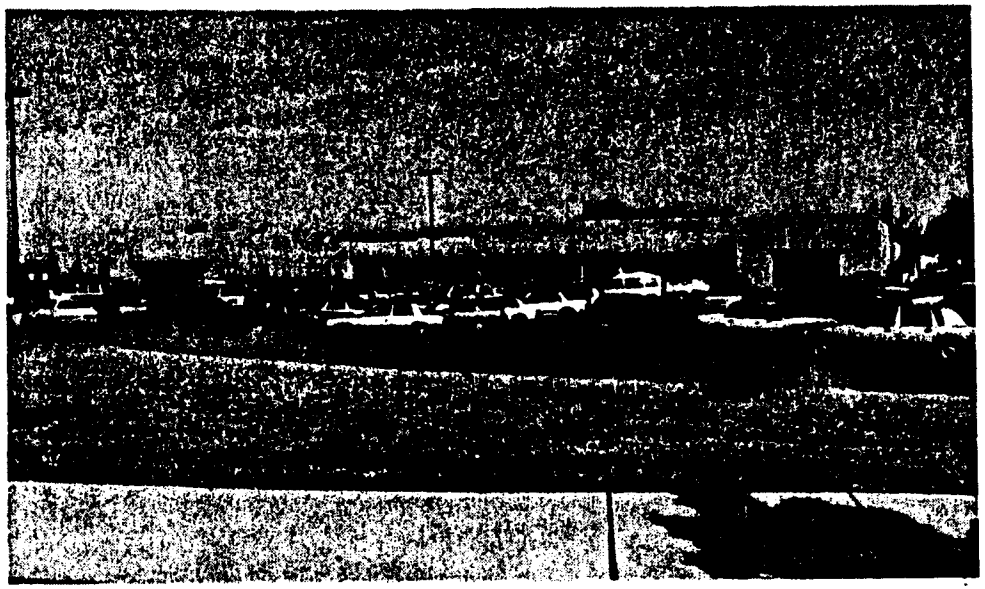
Vertically mounted reserved parking signs should be discouraged



Integrated street sign with traffic signal

5.4.3 PARKING LOTS

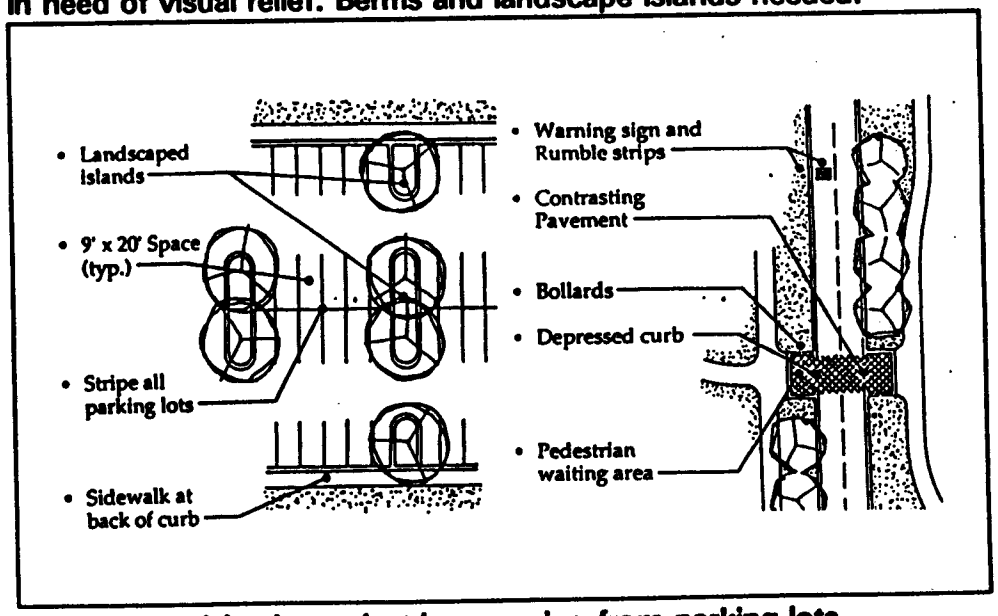
Parking is one of the most space-consuming land uses on a military installation and typically dominates the landscape setting facilities. It usually is one of the most visually disruptive elements within an installation. While the provision of convenient parking facilities is essential, appropriate site planning and design treatments can be used to minimize their negative visual impact. Appropriate berming and landscaping also can serve to shield the view of parked cars. Other general recommendations for improving parking areas follow.



From Gibson Boulevard, Commissary looking north. Expansive parking in need of visual relief. Berms and landscape islands needed.

RECOMMENDATIONS

- *Locate parking areas convenient to building entrances.*
- *Avoid dead-end parking lots.*
- *Provide the opportunity for vehicular/pedestrian separation in large parking lots.*
- *Use trees, shrubs and islands to aid in circulation within parking lots, and on lot perimeters to visually screen parking areas from adjacent facilities or other parking bays.*
- *Limit the number of reserved parking spaces base-wide, and avoid the use of post-mounted reserved parking signs.*
- *Implement the Gibson Corridor Landscape plan to improve landscaping along that major thoroughfare.*
- *All curbing shall include handicapped curb cuts and ramps.*



Landscaping islands; pedestrian crossing from parking lots.

5.4.4 PAVILIONS/STORAGE SHEDS

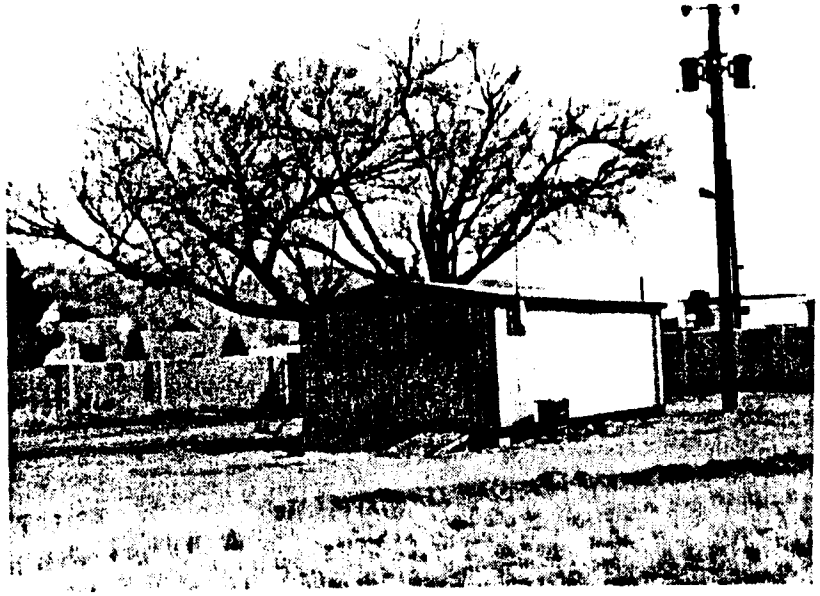
BUS STOPS

- ***Pictured top right is a well-chosen bus stop enclosure used at KAFB.***
- ***Sketch at lower right illustrates a recommendation for bus drop-off lane for main arterials.***

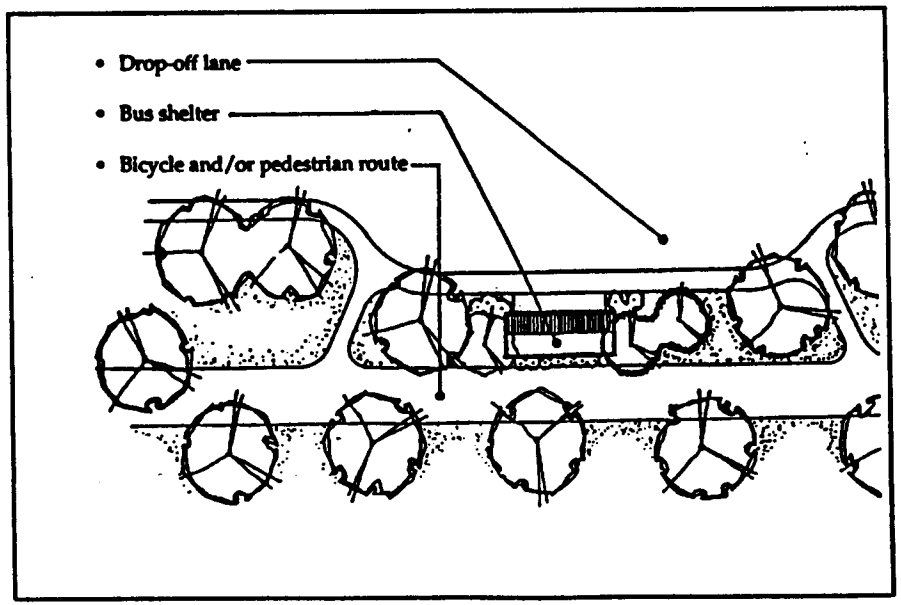
STORAGE SHEDS

- ***Storage sheds of the type shown below should be considered a temporary measure and should not receive the amenities of a permanent structure.***
- ***Consult Base Civil Engineering for plans of storage unit replacement for permanent structures if storage requirements are justified.***

Typical bus stop in use at KAFB



Typical Storage sheds located around base



Suggested bus drop-off area for main arterials

5.4.4 PAVILIONS/STORAGE SHEDS

PAVILIONS

There are no established standards for pavilions at KAFB. Therefore a variety of pavilion types are in place as depicted in the photos at right.

RECOMMENDATIONS

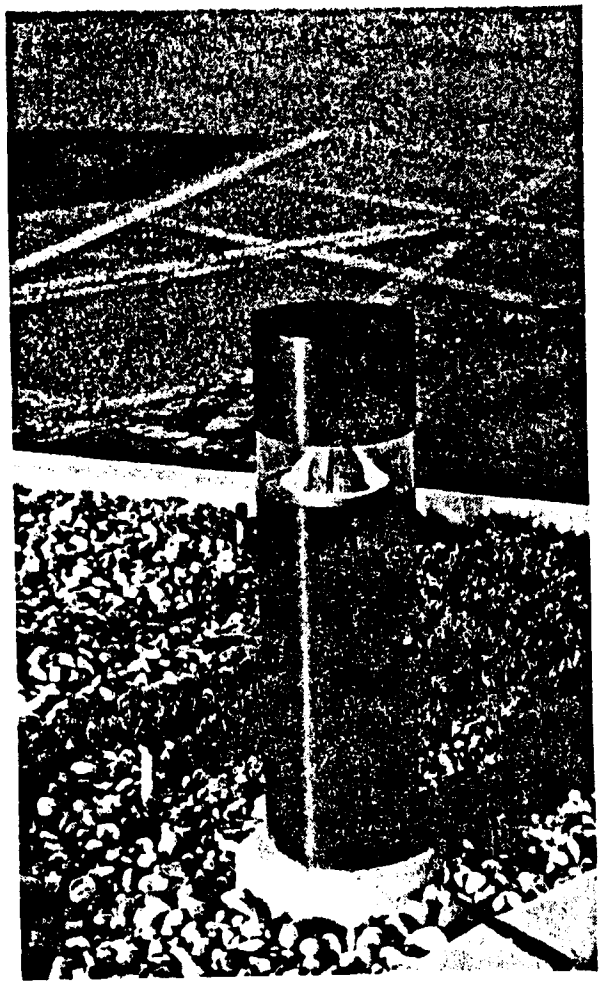
- *Establish a standard roof material of bronze standing seam metal.*
- *Roof type, gable, hip or octagonal shape should be selected based on adjacent architecture and site geometry.*
- *Painted steel columns should be in proportion to roof size, but not less than 6" x 6".*
- *Consider low screen walls around pavilion constructed of materials to match adjacent architecture.*
- *Provide adequate hard surface paving around pavilions including paving patterns to create interest.*
- *Consider attached enclosed storage for outdoor furniture, as well as for bicycles in dorm area.*

Pavilion located in Area 8

Pavilion located in Area 9 - not considered architecturally compatible

5.4.5 EXTERIOR LIGHTING

Lighting should be related to the functions and scale of activities it serves. Lighting design should vary with the volume and type of traffic and with the visual character of development. Street and pedestrian lighting should be coordinated with other elements of the streetscape, such as signage, landscape planting, paving materials and bus shelters. In some cases, outdoor lighting of buildings is used to highlight or accent a building at night. In general, this type of lighting should be avoided, except where building security is essential or where special effects are needed. The base Architectural Review Board should be consulted for exterior lighting of a building.



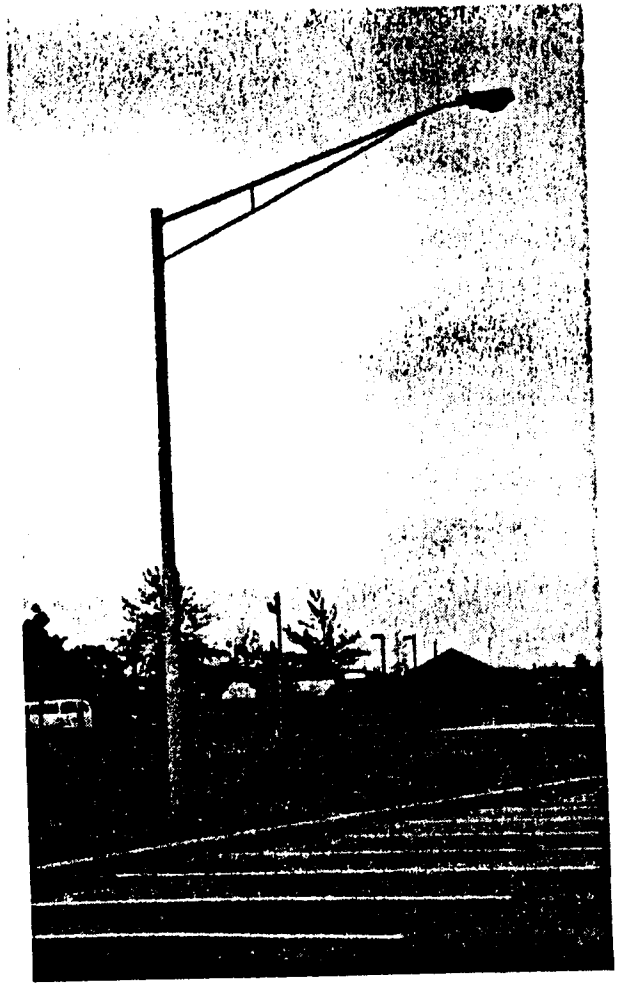
Typical bollard lighting standard

ROADWAY LIGHTING

This type of lighting is provided by fixtures mounted at average heights of 30 ft. to 50 ft. and will typically be used in roadway applications.

Specifications:

- ***Standard highway luminaire (cobra head), dual and single arm equal to KW Industries Pole Structure 4000 Series.***
- ***400-watt H.I.D. lamp at 1 foot candle minimum maintained.***
- ***Round tapered brushed aluminum break-away pole.***



Typical roadway lighting fixture

LOW LEVEL LIGHTING

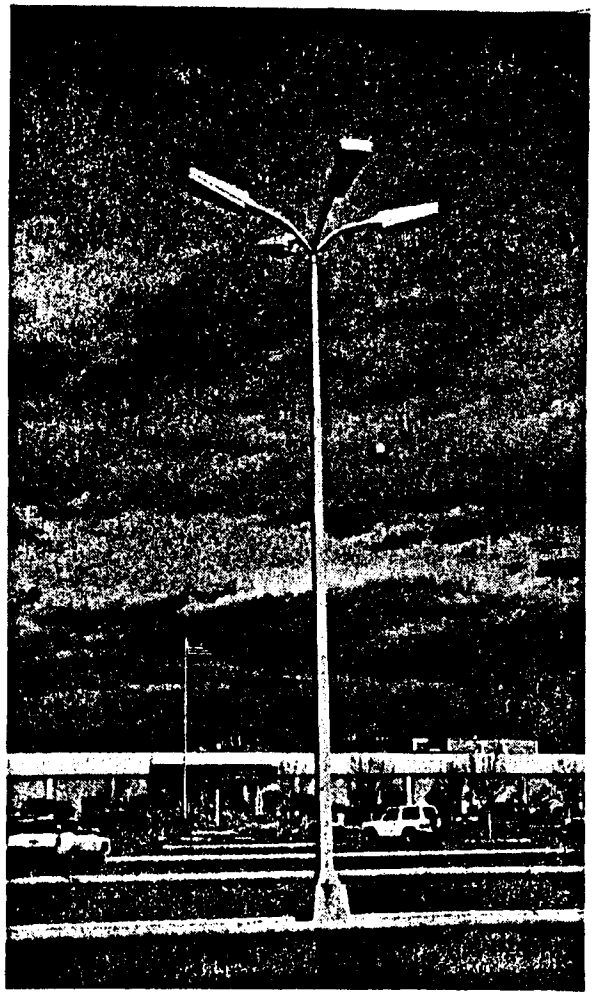
This type of lighting is provided by fixtures mounted at heights below eye-level and typically will be used for special pedestrian walkways. Light sources should be H.I.D. These fixtures are easily maintained, however, they are susceptible to vandalism.

5.4.5 EXTERIOR LIGHTING

(Continued)

PARKING LOT AND WALKWAY LIGHTING

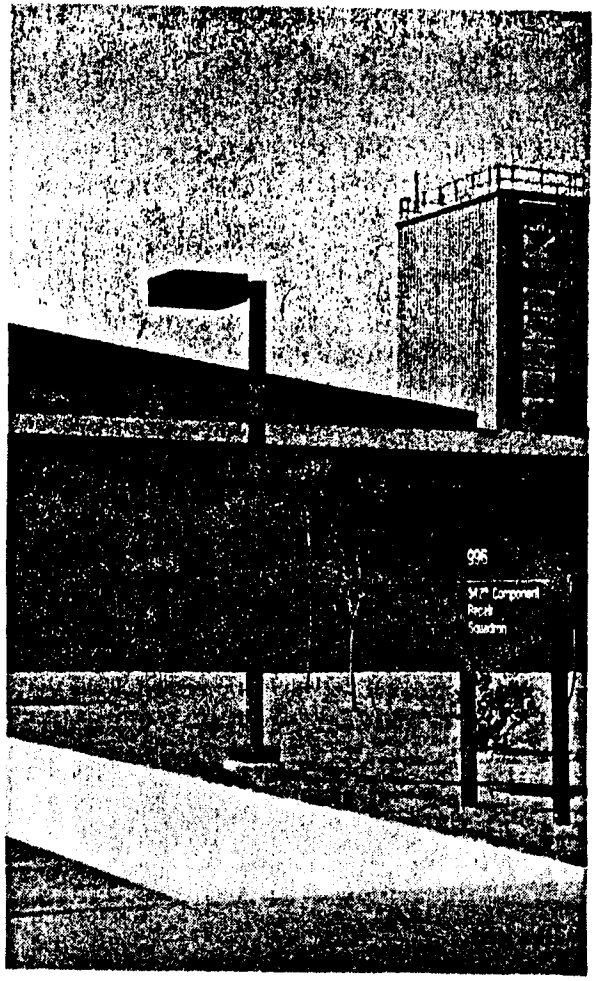
The parking lot lighting fixtures are mounted at an average height of between 25 and 30 ft. and are used in large parking lots. Walkway lighting fixtures are mounted 10 to 15 ft. high and are similar in fixture geometry to parking lot lighting.



Typical parking lot fixture

Specifications:

- ***Equal to Spaulding Lighting, Cordova II; EMCO Infinity II***
- ***Rectangular (shoe box) luminaires; dual and single arms***
- ***H.I.D. lamp of wattage to produce .5 foot candle minimum***
- ***Square tapered anodized medium bronze finish pole.***



Typical walkway and plaza lighting standard

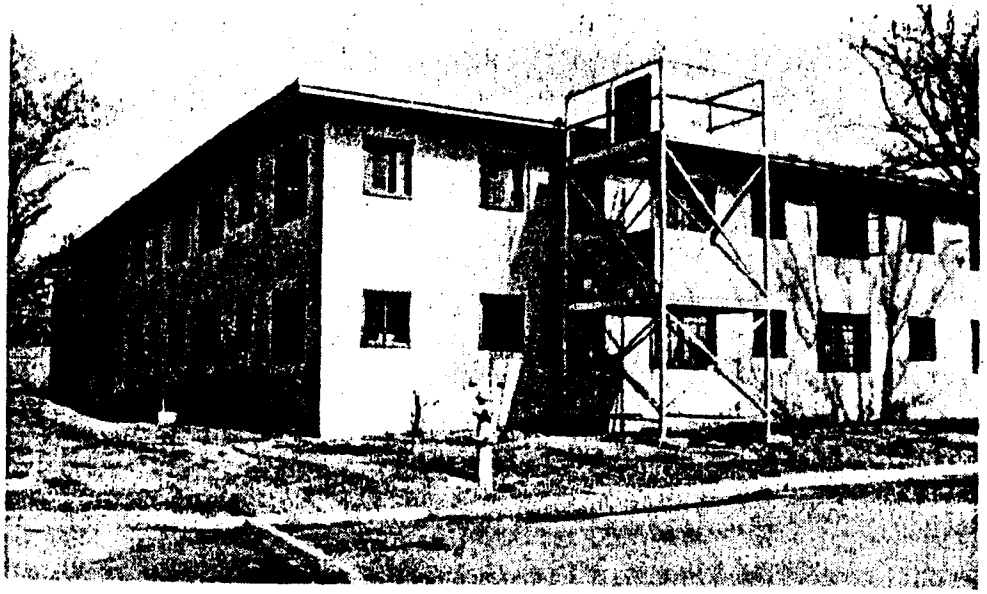
5.4.6 MISCELLANEOUS CONCERNS

CONCERNS

EXPOSED MECHANICAL EQUIPMENT

Evaporative coolers are prevalent throughout the entire base. The mounting of this equipment in the past has completely disregarded the resultant visual impact.

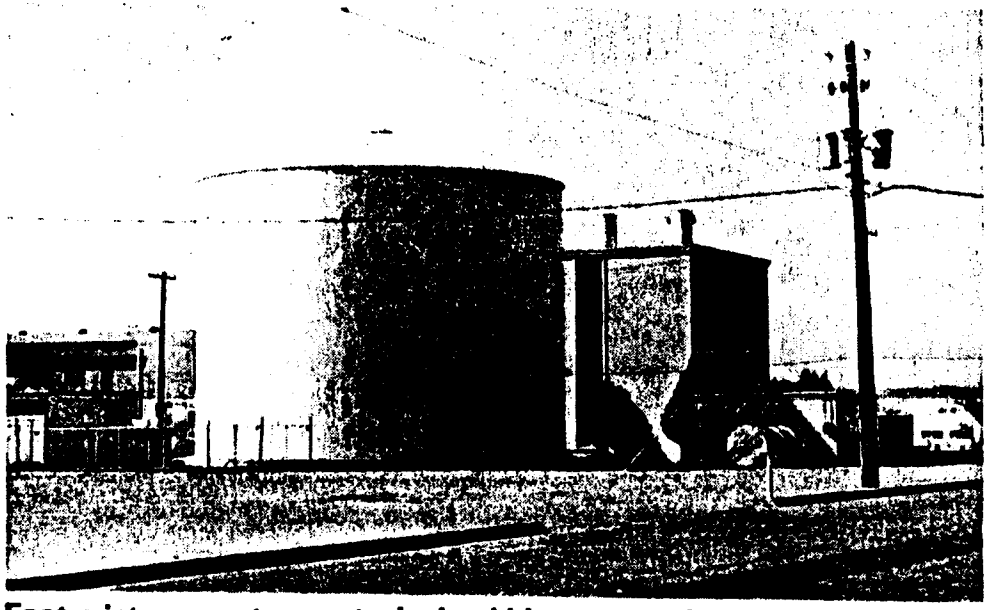
- *Tower structure should be removed, placed on roof or out of view at grade and screened.*
- *Recent renovations provide parapets at the building edge to help conceal roof top equipment.*



Evaporative cooler tower is an eyesore

FOOT PRINTS

- *Foot prints painted on a storage tank are clever to describe one of the base's missions, however, the large graphics draw attention to a misplaced tank.*
- *Remove the foot prints and plant tall canopy trees to screen the tank.*
- *Solid screening or berms around tank with landscaping would also help.*



Foot prints on a storage tank should be removed.

5.4.6 MISCELLANEOUS CONCERNS

AIRCRAFT STATIC DISPLAYS

Multiple locations of aircraft displays exist on base and are visually unattractive the way they are presented.

RECOMMENDATIONS

- ***Consolidate all aircraft displays in one area, preferably adjacent to a base entrance per the KAFB plan.***
- ***Provide displays in a park setting with trees, path and an information kiosk or informational stands about the aircraft.***

View of existing aircraft static display

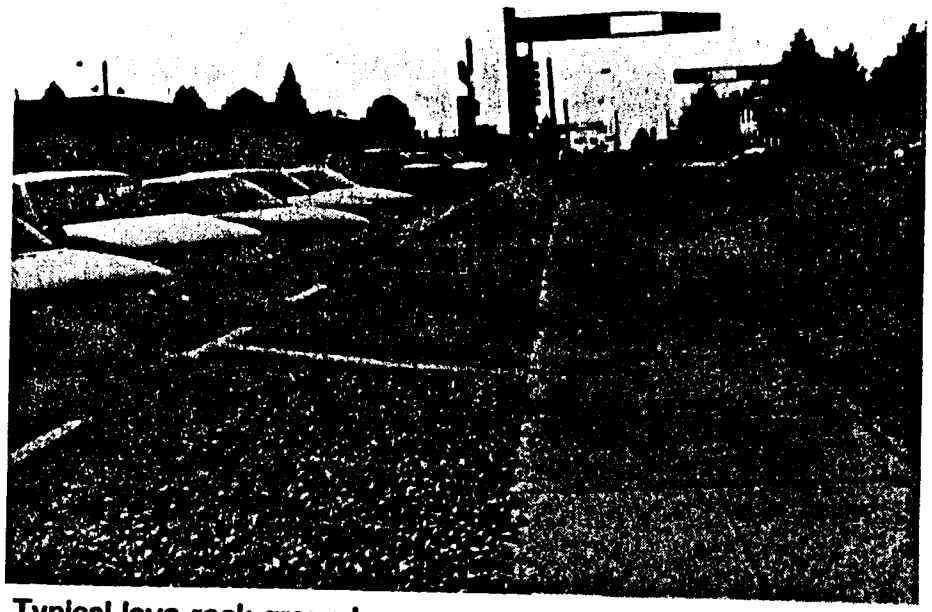
LAVA ROCK LANDSCAPING

CONCERNS

- ***Lava rock is difficult to contain.***
- ***Alternating color patters of rock is artificial and does little to promote regionalism.***

RECOMMENDATIONS

- ***Remove lava rock and replace with a native landscape and ground cover material in accordance with xeriscape concepts defined in Section 5.4 Landscape Architecture.***



Typical lava rock ground cover

6.0 SUMMARY

This guide has endeavored to provide pertinent, fundamental guidelines an architect or designer needs to begin design of a base construction project.

By providing an overview of the base, analyses and recommendations for existing buildings, architectural themes, and lists of construction and landscaping materials, the basic architectural concerns of the base have been made apparent. If applied consistently, the guidelines and recommendations just presented will help the base to achieve a unified, functional climate everyone can enjoy and take comfort in no matter how long or short the stay. Designers of future projects will be challenged to build upon these established guidelines to create structures that respect the base standards of architectural compatibility.

The process for designing and building base structures should not be viewed as forbidding or restrictive. Although anyone proposing alterations or additions to the built environment is asked to complete and submit all the required documentation to the Base Civil Engineer when considering a design, this is a necessary step to inform base personnel of a designer's intent. All design proposals must be approved by the base Architectural Compatibility Review Board. Nonetheless, the design process should be approached positively as a means to enhance and maintain a coherent built environment.

When the principles of architectural compatibility are successfully applied, the result is a comfortable, aesthetically pleasing environment in which to live and work.