

A black and white photograph of a landscape. In the foreground, there is a path or a clearing surrounded by dense, dark foliage and trees. The path leads towards a bright, overexposed area in the middle ground, possibly a body of water or a very bright clearing. The background shows more trees and a hazy horizon. The overall scene is a natural, somewhat overgrown landscape.

LANDSCAPE DESIGN MANUAL

LANDSCAPE DESIGN MANUAL

THIS MANUAL CONTAINS REFERENCES AND STANDARDS NEEDED TO IMPLEMENT THE REQUIREMENTS OF THE PIMA COUNTY, ARIZONA ZONING CODE; CHAPTER 18.73, LANDSCAPING, BUFFERING AND SCREENING STANDARDS.

PIMA COUNTY DEVELOPMENT SERVICES, PLANNING DIVISION

201 NORTH STONE AVENUE, TUCSON, ARIZONA 85701

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Cover Photo: Plants for Dry Climates, HP Books, Duffield & Jones

BUFFERYARD REQUIREMENTS FOR SECTION 18.73.040

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- A. Illustrations I through VI depict the bufferyards required between two uses. The number of plant units required per one hundred linear feet of yard are specified, and options of these plant units are illustrated which vary by alternate permitted width of the yards. The types of plants for each bufferyard are specified. The requirements may be satisfied by any of the options illustrated.
- B. The "plant unit multiplier" is a factor by which the basic number of plant materials required for a given bufferyard is determined given a change in the width of that yard.
- C. Existing plants may be used to satisfy the requirements.
- D. When a wall, fence or berm is required within a bufferyard, it is identified as a "structure required," and its specifications are given. Required structures are the responsibility of the higher intensity use.
- E. Within a bufferyard containing a fence or masonry wall:
 - 1. At least fifteen percent of the total plants required shall be located between the fence or wall and the higher intensity use;
 - 2. Suitable species and varied heights of plants shall be chosen to effectively break up and absorb sound; and
 - 3. The wall or fence shall be located between the berm and the higher intensity use.
- F. Bufferyard areas not covered with required plants, inorganic groundcover or established ground cover shall be seeded with a desert plant seed mix.

Table 1: BUFFERYARD REQUIREMENTS (Minimum Bufferyard Required)

Proposed Use/Zone	Existing Adjacent Use/Zone																				Streetscape Bufferyards											
	IR	GC	SRa	SR-2	RH	CR-1	ML	GR-1	CR-2	CR-3	SH	CR-4	CR-5	CMH-1	CMH-2	TRa	TH	MR	RVC	CB-1a	CB-2a	MUa	CPI	CI-1	CI-2	CI-3	Public Street - Front Yard	Public Street - Side or Rear Yard	Scenic Route	Gateway Route	Major Highway	
IR Institutional Residential ²	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²			D ² a	D ² a	D ² a						A ²	C ²	D ²	D ²	D ²	
GC Golf Course																												B	B	B	B	B
SR Suburban Ranch ²	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	C ²	C ²	C ² a	C ² a	C ² a	C ²		C ²	C ² a	C ² a	C ² a					B ²	C ²	D ²	D ²	D ²	
SR-2 Suburban Ranch Estate ²	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	C ²	C ²	C ² a	C ² a	C ² a	C ²		C ²	C ² a	C ² a	C ² a					B ²	C ²	D ²	D ²	D ²	
RH Rural Homestead ²	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²		C ²	C ² a	C ² a	C ² a					A ²	C ²	D ²	D ²	D ²	
CR-1 Single Residential	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²		C ²	C ² a	C ² a	C ² a					A ²	C ²	D ²	D ²	D ²	
ML Mount Lemmon																																
GR-1 Rural Residential ²	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²		C ²	C ² a	C ² a	C ² a					A ²	C ²	D ²	D ²	D ²	
CR-2 Single Residential	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²		C ²	C ² a	C ² a	C ² a					A ²	C ²	D ²	D ²	D ²	
CR-3 Single Residential	Ca	C	Ca	Ca	Ca	C	C	C	C	C	C ² a	C															A ²	C	C	C	C	
SH Suburban Homestead	D ² a	D ²	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ² a	D ²		C ²	C ² a	C ² a	C ² a					A ²	C ²	D ²	D ²	D ²	
CR-4 Mixed Dwelling	Ca	C	Ca	Ca	Ca	C	C	C	C	C	C	C			C												A	C	D	D	D	
CR-5 Multiple Residence	Ca	C	Ca	Ca	Ca	C	C	C	C	C	C	C			C												A	C	D	D	D	
CMH-1 Manufactured and Mobile Home ¹	C ¹ a	C ¹	C ¹ a	C ¹ a	C ¹ a	C ¹	C ¹	C ¹ a	C ¹	C ¹	C ¹																A	D	D	D	D	
CMH-2 Manufactured and Mobile Home ¹	D ¹ a	D ¹	D ¹ a	D ¹ a	D ¹ a	D ¹	D ¹	D ¹ a	D ¹	D ¹	D ¹	D ¹	D ¹	D ¹	D ¹												B	D	D	D	D	
TR Transitional	Da	D	Da	Da	Da	D	D	Da	D	D	D	D	D	D	D		D										B	C	D	D	D	
TH Trailer Homesite ¹	D ¹ a	D ¹	D ¹ a	D ¹ a	D ¹ a	D ¹	D ¹	D ¹ a	D ¹	D ¹	D ¹	D ¹	D ¹	D ¹	D ¹	D ¹			D ¹								B	D	D	D	D	
MR Major Resort	Da	D	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	D			Da	Da	Da						B	D	D	D	D
RVC Rural Village Center	Da	D	Da	Da	Da	D	D	Da	Da	Da	Da	Da	Da	Da	Da	Da	D			Ca	Ca	Da						A	D	D	D	D
CB-1 Local Business	D	D	Da	Da	Da	D	D	Da	D	D	D	D	D	D	D	Da	D	D	D	Ca		Da						(A)	D	D	D	D
CB-2 General Business	D	D	Da	Da	Da	D	D	Da	D	D	D	D	D	D	D	D	D	D	D	Da	Da	Da						B	D	D	D	D
MU Multiple Use	D ² a	D	Da	Da	D ² a	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	Da	D	D	D	Da	Da	Da						A	D	D	D	D
CPI Campus Park Industrial	D	D	Da	Da	Da	D	D	Da	D	D	D	D	D	D	D	Da	D	D	D	Da	Da	Da						B	D	F	F	F
CI-1 Light Industrial	F	F	Fa	Fa	F	F	F	Fa	F	F	F	F	F	F	F	F	F	E	E	E	E	Ea	F					B	E	G	G	F

18-150.3

(Pima County 5-95)

Existing Adjacent Use/Zone

Streetscape Bufferyards

Table 1: BUFFERYARD REQUIREMENTS (Minimum Bufferyard Required)

	Existing Adjacent Use/Zone																											Streetscape Bufferyards				
	IR	GC	SRa	SR-2	RH	CR-1	ML	GR-1	CR-2	CR-3	SH	CR-4	CR-5	CMB-1	CMB-2	TRa	TH	MR	RVC	CB-1a	CB-2a	MUa	CP1	CT-1	CT-2	CT-3	Public Street - Front Yard	Public Street - Side or Rear Yard	Scenic Route	Gateway Route	Major Highway	
CI-2 General Industrial	F	G	Ga	Ga	F	G	G	F	G	G	G	G	G	G	G	G	F	F	F	F	F	F	F	F			B	F	H	H	G	
CI-3 Heavy Industrial	O	II	IIa	IIa	O	II	II	O	H	II	II	II	H	H	H	II	O	O	G	G	O	F	F	E			B	G	I	I	II	
115 KVA Substations	J	I	Ja	Ja	J	J	J	J	J	J	J	J	J	J	J	J	II	I	I	I	J	I	H	O	F		J	J	J	J	J	

- 1 – Proposed Mobile Home Park or Subdivision
- 2 – Proposed Nonresidential Use
- a – Adjacent Residential Use/Zone


*Notes:

- The letter designations in this table refer to the bufferyard requirements and standards found within the Landscape Design Manual.
- Where adjacent land has the same existing or officially planned residential density or land use intensity as the proposed development, the director of planning and development services may allow a reduction of bufferyard requirements. Reductions will be determined on a site-specific basis.

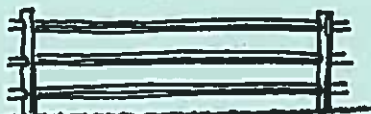
12-13-94

STRUCTURAL ELEMENTS

FENCES AND WALLS

SYMBOL	HEIGHT	MATERIAL
CL 40	40"	
CL 60	60"	
CL 72	72"	
CL 84	84"	
CL 96	96"	

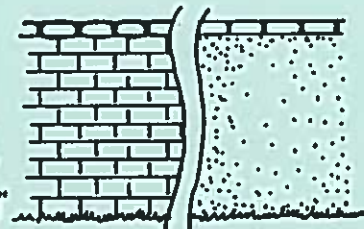
WOOD-SLATED CHAIN LINK

OF 40	40"	
OF 60	60"	
OF 72	72"	

OPEN WOOD

CF 40	40"	
CF 60	60"	
CF 72	72"	
CF 84	84"	

CLOSED WOOD

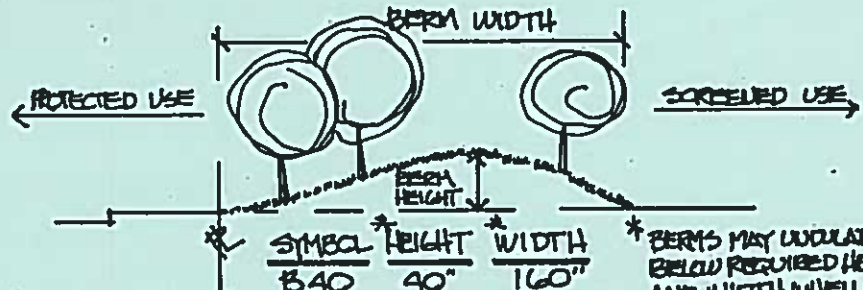
MW 40	40"	
MW 60	60"	
MW 72	72"	
MW 84	84"	
MW 96	96"	
MW 120	120"	

MASONRY WALL: CONCRETE, BRICK, BLOCK, ROCK; PAINTED, STUCCOED, ETC.

D = DECORATIVE*

*DECORATIVE REQUIREMENT FOR MATERIALS, TEXTURE, COLOR, FORM AND ARCHITECTURAL CONTEXT.

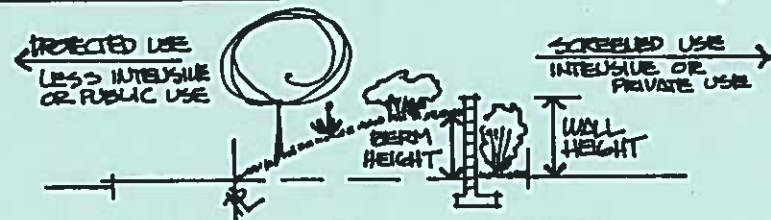
EARTH BERMS



SYMBOL	HEIGHT	WIDTH
B40	40"	160"
B60	60"	240"
B72	72"	288"

*BERMS MAY UNDULATE BELOW REQUIRED HEIGHT AND WIDTH WHEN OTHER LANDSCAPE ELEMENTS COMPENSATE FOR SPATIAL WIDTHS TO PROVIDE BUFFERING.

BERM WALLS



SYMBOL	HEIGHT
BW-1	30" BERM WITH 40" MASONRY WALL
BW-2	36" BERM WITH 48" MASONRY WALL
BW-3	48" BERM WITH 60" MASONRY WALL
BW-4	60" BERM WITH 72" MASONRY WALL
BW-5	72" BERM WITH 84" MASONRY WALL

ILLUS. 1

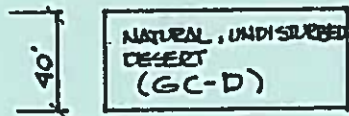
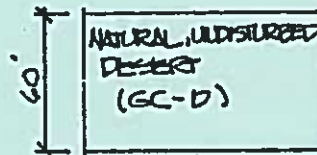
STREETSCAPE BUFFERYARDS

NOTE 1:
 BUFFERYARD MAY BE REDUCED BY 10% OF SPECIFIED WIDTH, EACH 100 FEET FOR EACH APPROVED SCULPTURE OR STREET FURNITURE PIECE APPROVED BY THE DESIGN REVIEW COMMITTEE.

NOTE 2:
 SINGLY DESIGNATED, OR COMBINATIONS OF LISTED TYPES OF GROUND COVER (GC) IS REQUIRED FOR ENTIRE BUFFERYARD AREA.

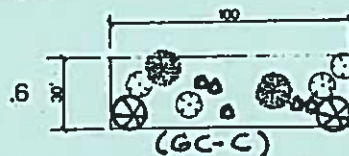
TYPES:

- A. INORGANIC G.C.
- B. ORGANIC FROM FLATS
- C. DESERT PLANT SEED MIX
- D. UNDISTURBED NATURAL DESERT PLANTS & GRASSES AT LOCALLY-OCCURRING DENSITIES.



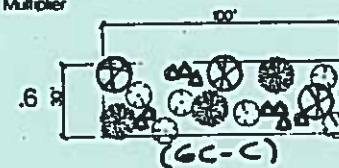
Plant Unit Multiplier

Structure Required



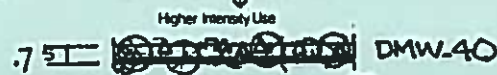
Plant Unit Multiplier

Structure Required



REQUIRED PLANT UNITS / 100'

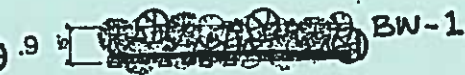
- 6 Canopy Trees
- 6 SHRUBS
- 9 ACCENTS, FLOWER, VINES
- GC - SEE NOTE 2



BUFFERYARD A

REQUIRED PLANT UNITS / 100'

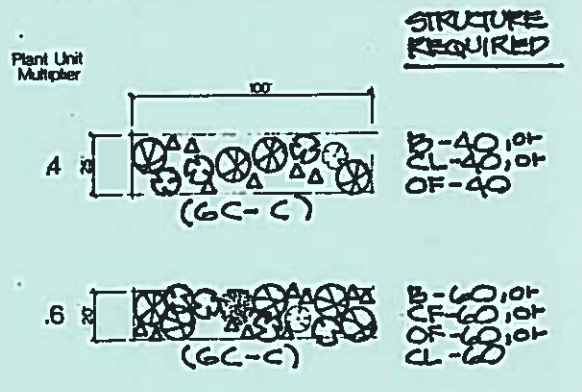
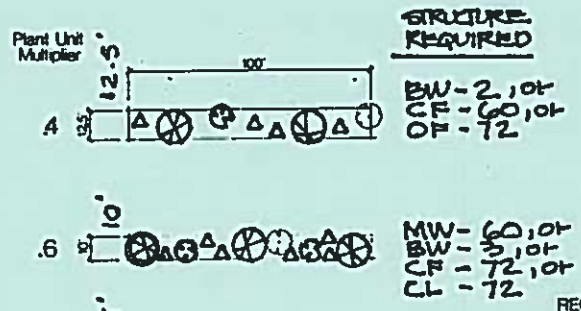
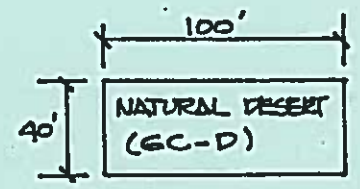
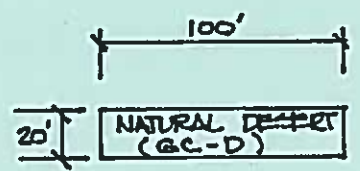
- 10 Canopy Trees
- 10 SHRUBS
- 15 ACCENTS, FLOWER, VINES
- GC - SEE NOTE 2



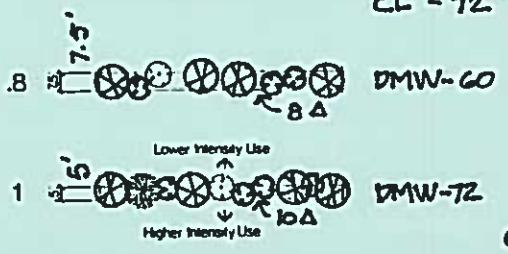
Higher Intensity Use

BUFFERYARD B

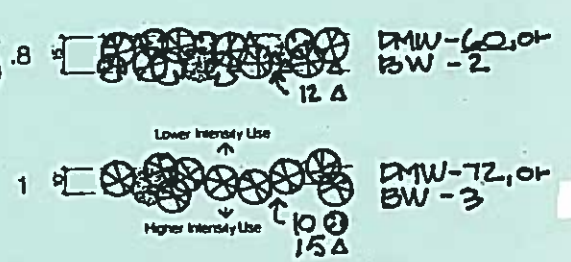
MIXED RESIDENTIAL BUFFERTARDS



- REQUIRED PLANT UNITS / 100'
- 5 Canopy Trees
 - 5 SHRUBS
 - 10 ACCENTS
 - FLOWERS
 - VINES
- GC - SEE NOTE 2



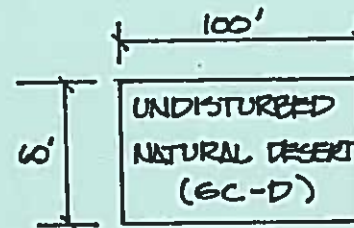
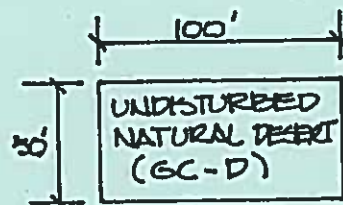
- REQUIRED PLANT UNITS / 100'
- 10 Canopy Trees
 - 10 SHRUBS
 - 15 ACCENTS
 - FLOWERS
 - VINES
- GC - SEE NOTE 2



BUFFERYARD C

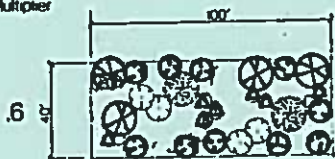
BUFFERYARD D

COMMERCIAL & INDUSTRIAL BUFFERYARDS






Plant Unit
Multiplier




Structure
Required



REQUIRED PLANT UNITS / 100'

- 10 CANOPY TREES 
- 24 SHRUBS 
- 12 ACCENTS 
- FLOWER VINES
- GC - SEE NOTE 2

REQUIRED PLANT UNITS / 100'

- CF-72, or 13 CANOPY TREES 
- CL-72, or 30 SHRUBS 
- 15 ACCENTS 
- FLOWER VINES
- CF-84, or GC - SEE NOTE 2
- CL-84

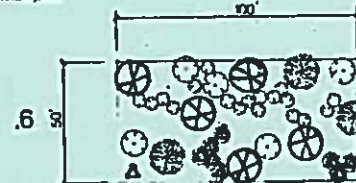
PUBLIC VIEW OR
Lower Intensity Use

Higher Intensity Use
SCREENED USE

BUFFERYARD E

Plant Unit
Multiplier

Structure
Required

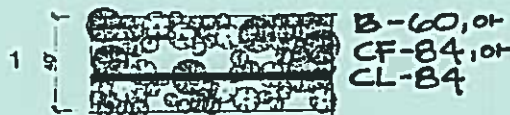
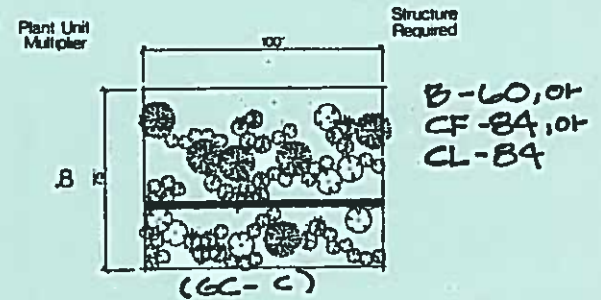
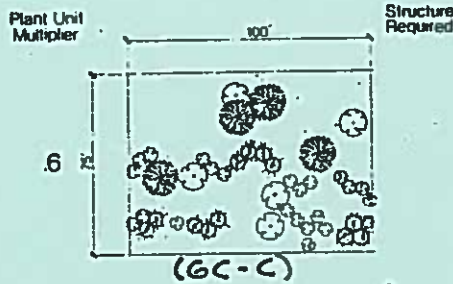
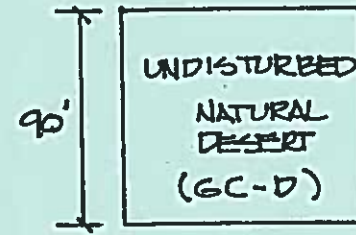
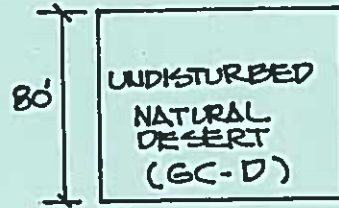


PUBLIC VIEW OR
Lower Intensity Use

Higher Intensity Use
SCREENED USE

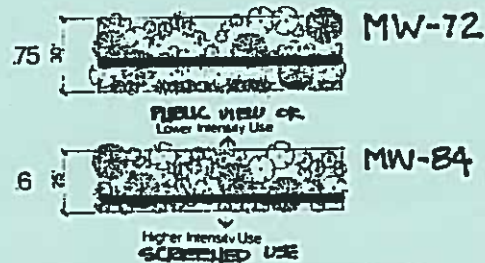
BUFFERYARD F

HEAVY INDUSTRY BUFFERTARDS



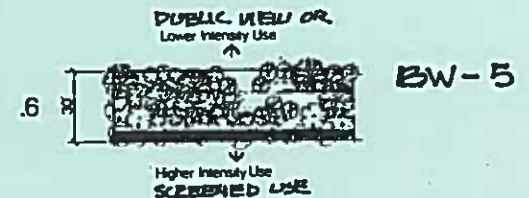
REQUIRED PLANT UNITS / 100'

- 15 CANOPY TREES
- 36 SHRUBS
- 18 ACCENTS
- FLOWER VINES
- GC-SEE NOTE 2



REQUIRED PLANT UNITS / 100'

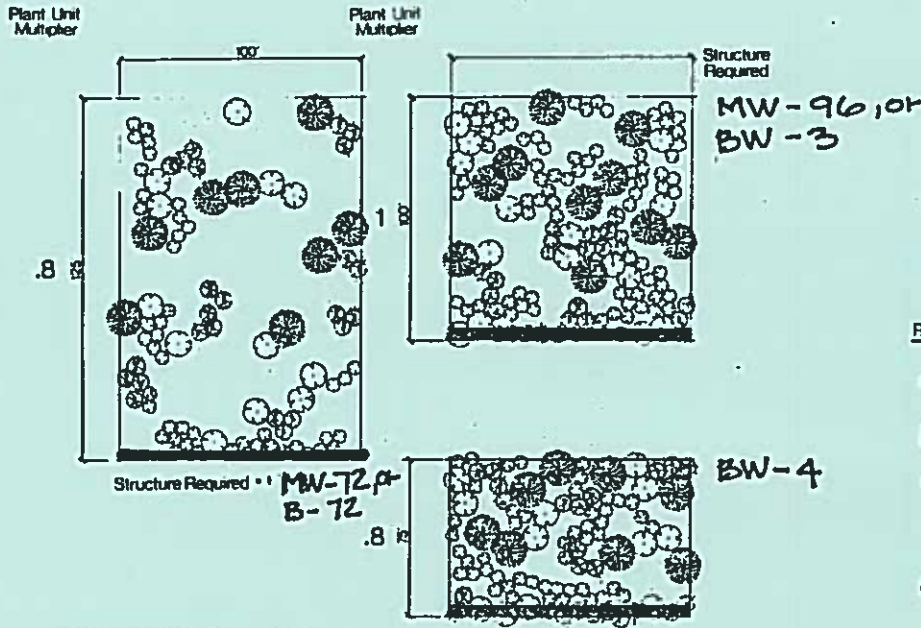
- 20 CANOPY TREES
- 48 SHRUBS
- 24 ACCENTS
- FLOWER VINES
- GC-SEE NOTE 2



BUFFERYARD G

BUFFERYARD H

SPECIAL BUFFERYARD APPLICATIONS



REQUIRED PLANT UNITS / 100'

- 30 CANOPY TREES
- 80 SHRUBS
- 40 ACCENTS
- FLOWER VINES
- GC- SEE NOTE 2

REQUIRED PLANT UNITS / 100'

- 25 CANOPY TREES
- 60 SHRUBS
- 30 ACCENTS
- FLOWER VINES
- GC- SEE NOTE 2

BUFFERYARD I

BUFFERYARD J

ILLUS. VI

STREETSCAPE SCULPTURE AND FURNITURE STANDARDS

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A. Sculpture and furniture should:

1. Contain materials, textures, colors and shapes that promote and enhance the cultural and historic context of the region.
2. Be vandal-resistant.
3. Be appropriately scaled to the site.
4. Be functionally located for ease of public access or experience.
5. Be of a design and of materials that are safe to the general public.

MINI-OASIS DESIGN STANDARDS

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- A. Mini-oases shall be reviewed to conform to the following standards and may be approved when the proposed mini-oasis:
1. Is functionally oriented on the site near main buildings or assembly areas where pedestrian activities are designed to occur;
 2. Is designed for maximum, close exposure to proposed users;
 3. Is part of an area of repose, such as a seating, assembly, rest, dining, or employee break area, or is designed to enhance a main pedestrian entryway;
 4. Is located in an area of relative low evaporation potential from wind and heat;
 5. Contains plant materials from the County approved lists that have compatible watering requirements and that are compatible with the environmental zone selected;
 6. Is irrigated to a substantial degree by a water harvesting system or storm water runoff.