

## Pre-Submittal Application Process

The pre-submittal application process begins prior to the complete submittal of a commercial site plan or preliminary subdivision plat application. The process is used to provide the applicant with basic site related information for the project. This process will enable both the developer and staff to consider the various issues concerning site development. The process is not meant to be a comprehensive review but more of an overview of the project.

The process involves submitting a no-cost application form and basic site information prior to the pre-submittal meeting. Staff will review the application in advance of the meeting and provide the developer with comments at the time of the meeting. The meeting will typically be scheduled by staff within one week of the submittal at which time a project contact will be assigned.

The goal of the process is to reduce the review processing time of all development applications and to improve the quality of the overall project.

**PRE-SUBMISSION MEETING APPLICATION**  
(Required prior to submittal of commercial site plans and subdivision plats)



TO: Department of Community Development  
City of Sierra Vista  
1011 N. Coronado Drive  
Sierra Vista, AZ 85635  
(520) 458-3315

1. Owner Name: \_\_\_\_\_  
Phone No: \_\_\_\_\_ Address: \_\_\_\_\_  
Tax Parcel ID Number: \_\_\_\_\_  
Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_
  
2. Agent Name: \_\_\_\_\_ Phone No: \_\_\_\_\_  
(If different from above)  
Address: \_\_\_\_\_  
Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_
  
3. Site Address or Location (if applicable): \_\_\_\_\_ Submittal Date: \_\_\_\_\_
  
4. Project Description: \_\_\_\_\_

**REQUIRED SUBMITTAL ATTACHMENTS:**

- 1 electronic copy of concept plan or plat;  
(The following information will enable staff to provide a more thorough review.)

**Site Plan Review**

- Property lines;
- Building Setbacks;
- Zoning on the site
- Building sizes;
- Parking;
- Buffering (if known);
- Locations of existing and proposed access points;
- Show basic drainage patterns and basin locations;
- Landscape locations;

**Subdivision Plan Review**

- Lot Sizes; Number
- of Lots; Zoning on
- the site;
- Street Layout and Circulation;
- Areas to be dedicated;
- Buffering (if known);
- Show basic drainage patterns and basin locations;
- Locate adjacent right-of-ways;

# City of Sierra Vista



## Community Development Planning Site Plan Pre-Submittal Checklist

(This checklist is provided to the applicant to help with the formal submittal requirements of the site plan application. It is not intended to constitute the formal site plan review. The information provided is based on the concept plan submitted and are subject to change based on further plan revisions.)

Date: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Description: \_\_\_\_\_

### GENERAL SITE PLAN CRITERIA

1. Proposed Use Meets Zoning District: Yes  No  Comments \_\_\_\_\_  
Zoning District is: \_\_\_\_\_
2. Building(s) size is: \_\_\_\_\_
3. Does building meet zoning setback requirements? Yes  No   
Setbacks are: Front: \_\_\_\_\_ Side: \_\_\_\_\_ Side: \_\_\_\_\_  
Rear: \_\_\_\_\_
4. Do building and improvements meet buffer requirements? Yes  No   
Buffers are: Front: \_\_\_\_\_ Side: \_\_\_\_\_ Side: \_\_\_\_\_  
Rear: \_\_\_\_\_ Right-of-Way: \_\_\_\_\_ Other: \_\_\_\_\_
5. Applicable street classification: Arterial: \_\_\_\_\_ Collector: \_\_\_\_\_ Local: \_\_\_\_\_
6. Access location and separations acceptable? Yes  No   
If not acceptable, state why? \_\_\_\_\_
7. The required number of parking stalls is: \_\_\_\_\_ Complies? Yes  No
8. Does parking stall width conform to aisle width? Yes  No   
If not shown requirement is: \_\_\_\_\_
9. Does parking stall length meet requirement? Yes  No   
If not shown requirement is: \_\_\_\_\_
10. Correct number of ADA stalls provided? Yes  No
11. ADA configuration correct? Yes  No   
If not, change to: \_\_\_\_\_
12. Internal circulation acceptable: Yes  No  Comment \_\_\_\_\_

13. Type of refuse sanitation service to be provided? Dumpster  Other \_\_\_\_\_  
 Location acceptable? Yes | No |  
 Enclosure required? Yes No Comment \_\_\_\_\_
14. Detention basin location(s) indicated? Yes  No  Comment \_\_\_\_\_
15. Existing sewer line location(s) and size(s) are: \_\_\_\_\_
16. Any applicable sewer reimbursement or augmentation fees: Yes  No  Amount: \$ \_\_\_\_\_
17. Applicable Surface Water Plan requirements provided to applicant? Yes  No  N/A
18. FEMA floodplain shown if applicable? Yes  No  N/A
19. Lighting shown? Yes  No  Comments \_\_\_\_\_
20. Landscape areas identified? Yes  No  Comments \_\_\_\_\_
21. Right-of-way dedication needed? Yes  No   
 If required the dedication width is: \_\_\_\_\_
22. Fire access and/or turnaround acceptable? Yes  No
23. Other fire issues: \_\_\_\_\_
24. Applicable plat conditions? \_\_\_\_\_
25. Building issues: \_\_\_\_\_
26. Compliance with Specific Plan requirements (if applicable)? \_\_\_\_\_
27. Other applicable requirements? \_\_\_\_\_

- For further hydrology, drainage and sewer requirements, please contact the Public Works Engineering Department at (520) 458-5775.
- For further information regarding fire related issues, please contact Fire Marshal Paul Cimino at (520) 452-7075.
- For further information regarding planning and zoning issues please contact the Department of Community Development at (520) 458-3315.

# SITE PLAN REVIEW APPLICATION



TO: Department of Community Development  
City of Sierra Vista  
1011 N. Coronado Drive  
Sierra Vista, AZ 85635  
(520) 458-3315

Date Submitted: \_\_\_\_\_

1. Applicant Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

2. Agent Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

3. Site Tax Parcel ID#: \_\_\_\_\_

4. Site Address (if applicable): \_\_\_\_\_

5. Acreage: \_\_\_\_\_

6. Project Description: \_\_\_\_\_

7. Required Attachments:

(Check those submitted)

- a. 5 bond copies of Civil Site Improvement Plans (Electronic submittal required)
- b. 2 bond copies of Landscaping plan (Electronic submittal required)
- c. 2 bond copies of Color Elevation plan (Electronic submittal required)
- c. Proof of Ownership (no more than 30 days old)
- d. Proof of Agency (Notarized letter from owner or corporate resolution)
- e. Review Fee, as per Fee Schedule
- f. Completed Engineering Review and Planning Review Checklists

8. Other Attachments (may be necessary during review, see Plan Review Coordinator).

- a. Hydrology Report (Electronic submittal required)
- b. Soil Engineering Report (Electronic submittal required)
- c. Native Plant Salvage Application (Electronic submittal preferred)
- d. Lighting Cutsheets (Electronic submittal preferred)
- e. Luminaire Worksheet (Electronic submittal preferred)

Please refer to Development Code Article 151.18, *Site Plan*, for other submittal requirements.



# City of Sierra Vista Community Development Planning Site Plan Review Check List

(This checklist is for internal staff use only. It is provided to the applicant to help with the submittal requirements of the site plan.)

Project Name: \_\_\_\_\_  
Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

**GENERAL SITE PLAN DESIGN ITEMS:**

Approved      Pending      N/A

Legend? <i>(Per Section 151.18.006.A.2.b)</i>	_____	_____	_____
North Arrow? <i>(Per Section 151.18.006.A.2.c)</i>	_____	_____	_____
Adjacent Zoning with Uses? <i>(Per Section 151.18.006.A.2.d)</i>	_____	_____	_____
Location sketch? <i>(Per Section 151.18.006.A.2.a)</i>	_____	_____	_____
Legal Description of the site? <i>(Per Section 151.18.006.A.2.f)</i>	_____	_____	_____
Scale Shown <i>(Per Section 151.18.A.2)</i>	_____	_____	_____
Proof of Ownership attached with Title Report? <i>(Per Section 151.18.006.A.9)</i>	_____	_____	_____
Proof of Agency Letter? <i>(Per Section 151.18.006.A.9)</i>	_____	_____	_____
Two Soils Reports Attached? <i>(Per Section 151.18.006.A.5)</i>	_____	_____	_____
Does creation of lot require a subdivision? <i>(Per Section 151.02.004)</i>	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**LOCATION OF STRUCTURES**

Existing and proposed with distances to lot lines? <i>(Per Section 151.18.006.A.2.j)</i>			
_____			
_____	_____	_____	_____

Percentage of site covered showing the following: <i>(Per Section 151.18.006.A.2.l)</i>			
a) Asphalt? _____	_____	_____	_____
b) Concrete? _____	_____	_____	_____
c) Buildings? _____	_____	_____	_____
d) Open Space/Pervious Surface? _____	_____	_____	_____

Floor Plan showing building dimensions? <i>(Per Section 151.18.006.A.2.k)</i>			
_____			
_____	_____	_____	_____

DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Setback requirements are met and shown?  
*(Per various sections in Article 151.22)*

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Is buffer required for development?  
*(Per Buffer Table in Article 151.15)*

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Does development show correct buffer distance  
to right-of-way?*(Per Buffer Table in Article 151.15)*

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Does development show correct buffer distance  
between zoning districts? *(Per Buffer Table in  
Article 151.15)*

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Is a wall required in buffer? *(Per Section 151.15.005)*

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Is landscaping required in buffer? (40 feet or greater)  
*(Per Section 151.15.006.B.5)*

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Ground mounted mechanical equipment screened?  
*(Per Section 151.15.005.A.1)*

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Wall or berm needed to screen headlight impact?  
(Only if adjacent to residential zoning districts)  
*(Per Section 151.09.005.N)*

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ENVIRONMENTAL

Plant salvage requirements met? (1 acre or more)  
*(Per Section 151.15.003)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Oil and/or grease separators required? (Parking lots with 250 or more parking spaces)  
*(Per Section 151.09.005.C)*

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Surface water plan requirement met?  
*(Per Surface Water Plan and Section 151.08.006.F)*

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Project fall within a FEMA floodplain?  
*(Per FEMA FIRM Maps and Per Section 151.22.029)*

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Grading Plan submitted to include existing and proposed contour lines at 1-foot intervals, flow arrows, etc? *(Per Section 151.08.006.F.4)*

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Cross lot drainage easement requirement?  
*(Per Section 151.08.006.E.4)*

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PARKING

Does the project have enough parking spaces?  
*(Per Section 151.09.006)*

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Parking stall dimensions labeled and conform to Code? *(Per Section 151.09.005.Q-Standard Parking Area Dimensions Table)*

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Parking access aisle conforms to stall dimensions?  
*(Per Section 151.09.005.Q-Standard Parking Area Dimensions Table)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Are curb stops needed in any portion of parking lot? (landscaping/sidewalks)  
*(Per Articles 151.09.005.Q-Standard Parking Area Dimensions Table and 151.15.004.A.6.e)*

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Does the project provide enough handicapped parking spaces? *(Per Americans With Disabilities Act Accessibility Guidelines ADAAG, Section 4.6)*

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Handicapped parking dimensions at 11' (stall) 5' (accessible aisle)?*(Per ADAAG universal design requirements 4.6.3)*

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\_\_\_\_\_

Location and detail drawing of the handicapped parking pole/wall sign shown? *(Per ADAAG requirements 4.6.4 and City Code Chapter 71.04)*

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Handicapped parking Citation SVCC 71.02 cited? *(Per City Code Chapter 71.04)*

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A diagram of the handicapped ramp slope provided with dimensions shown. *(Per ADAAG requirements 4.8)?*

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ADA ramps identified at a slope not exceeding 1:12? *(Per ADAAG requirements 4.8.2.)*

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ADA cross-slopes identified not exceeding 1:50? *(Per ADAAG requirements 4.8.6)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Striped or paved pedestrian pathway to public sidewalk identified on plan?  
*(Per Section 151.17.004)*

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Bike rack required for each building identified?  
*(Per Section 151.09.005.F)*

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Provide detail drawings and notes showing pavement cross section?  
*(Per Section 151.09.005.A)*

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CIRCULATION

Traffic Impact Analysis Required?  
*(Per Section 151.17.002.B2, 151.18.006.A.7, 151.19.003.B.9.a)*

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Rights-of-way dimensions shown on abutting streets? *(Per Section 151.18.006.A.2.m)*

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Rights-of-way dedication required?  
*(Per Section 151.08.003 based on Street Designation)*

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Adjoining or shared parking with adjacent parking lots shown? Cross parking agreement?  
*(Per Section 151.09.004)*

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Proposed one-way driveway and parking aisles to be labeled one way with a minimum width of 20 feet? *(Per Section 151.09.005.G and per the Standard Parking Area Dimensions Table)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Full improved street dimensions shown?  
*(Per Section 151.08.003 based on street designation)*

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Consistent with Multi-Use Path Map requirements?

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Clear vision area shown and accurate?  
*(Per Section 151.04.010)*

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Streetlights shown? Are they needed?  
*(Per Section 151.08.008)*

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Access locations for dumpster okay? Required  
separation okay? *(Per Public Works dumpster  
enclosure requirements)*

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Dumpster doors required? Are details provided?  
Meet PW criteria? *(Per Section 151.15.005.A.1 and  
the Public Works dumpster enclosure requirements)*

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Dumpster doors open 180 degrees?  
*(Per Public Works dumpster enclosure requirements)*

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Locking mechanism or cane bolt detail provided  
For dumpster door?  
*(Per Public Works dumpster enclosure requirements)*

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EXTERIOR LIGHTING

Are cut sheets for wall and pole lights attached?  
*(Per Section 151.11.003.A.2)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Location of wall and pole lighting shown on plan?  
*(Per Section 151.11.003.A.1)*

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Lighting fully shielded?  
*(Per Section 151.11.003.A.4.a)*

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Pole height with detail shown?  
*(Per Section 151.11.003.A.4.c.1)*

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Any wall mounted lighting proposed?  
*(Per Section 151.11.003.A.1)*

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Photometrics plan required?  
*(Per Section 151.11.003.A.4)*

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Total Outdoor Lumen Output Matrix  
*(Per Section 151.11.003.D)*

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UTILITIES

Existing and proposed utilities shown and show tie-ins to buildings?  
*(Per Section 151.18.006.A.2.v)*

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Are all easements shown?  
*(Per Section 151.18.006.A.2.q)*

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SIGNAGE

Free-standing signage locations shown on plan?  
*(Per Section 151.10.007 and 151.10.008)*

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Note reading, "signage by separate permit"?  
(Per Section 151.18.006.A.2.gg)

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ARCHITECTURAL

Have elevation drawings been provided for all buildings? Was height requirement met?  
(Per Section 151.18.006.A.3)

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Statement that "all roof mechanical equipment screened"? Type of screening shown?  
(Per Section 151.15.005.2)

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MISCELLANEOUS

Is project being phased? If so, Master Plan required?  
(Per Section 151.18.006.A.10)

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Any outstanding code issues?

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Note shown for the need for a future site plan?  
(Per Section 151.18.006.A.11)

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Development Agreement Conditions on property?

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**Note on plat regarding Soil Report Compliance and inspection requirements** (Site Preparation and Earthwork:  
A Geotechnical Evaluation and Report in conjunction with an appropriately sealed City of Sierra Vista Special Inspection Certificate shall be submitted prior to the issuance of a building permit. All earthwork and installation of fill materials shall be done in compliance with soils report. A qualified inspector approved by the Building Official shall conduct all compaction tests. These test results shall be submitted to the City of Sierra Vista Building Department. \_

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

LANDSCAPING

Is landscape plan provided?  
(Per Section 151.15.002.A)

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15 percent landscaping on the site?  
(Per Section 151.15.003.A.3)

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Sizes and quantities of all plants and boulders  
identified? (Per Section 151.15.004.A.1.d,  
151.15.004.A.5.a)

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Are spacing requirements being met?  
(Per Section 151.15.004.A.5.d)

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Street trees shown? (1 per 50 feet)  
(Per Section 151.15.004.A.4.b)

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Area averaging 10 feet between sidewalk and site?  
(Per Section 151.15.004.A.4.a)

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Plant quantities and percentages of the overall site  
shown (no more than 20% of one species)?  
(Per Section 151.15.004.B)

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Plants from Drought Tolerant list (or equivalent)?  
(Per Section 151.15.004.A.3, 151.15.004.A.5.c,  
151.15.004.A.6.c)

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The type and depth of groundcover provided?  
(If applicable) (Per Section 151.15.004.A.1)

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DEVELOPMENT CODE REQUIREMENTS

Approved

Pending

N/A

Irrigation Plan provided?  
(Per Section 151.15.004.A.1.b)

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Parking islands every 12 spaces shown with  
Dimensions and required landscaping?  
(Per Section 151.15.004.A.6.d)

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# City of Sierra Vista Public Works Engineering Site Plan Review Check List



Project Name \_\_\_\_\_ Date \_\_\_\_\_

Community Development Site Plan No. \_\_\_\_\_

Reviewing Engineer \_\_\_\_\_

Developer's Certification: I have reviewed and followed this checklist in the preparation of my submittal.

\_\_\_\_\_ Date \_\_\_\_\_

## Site Plan

Check  items included in plan

N/A	Included	Deficient	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans must be stamped and signed by a registered civil engineer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed improvements must be shown in heavy, darker line-work. Existing features must be shown in lighter, screened line-work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location sketch with adjacent zoning and land uses (151.18.004-A-3)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Topography; contour lines for existing and proposed elevations at one-foot intervals (151.18.004-A-4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural drainage and proposed drainage flow by directional arrows. If applicable, show that the finished floor elevation is above 100-year flood area (151.18.004-A-4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Legal description of the site to include total area of the site (151.18.004-A-5)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spot elevations of existing/proposed key drainage points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Percentage of the site covered by any and all structures (151.18.004-A-8)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right-of-way dimensions of all abutting streets, whether public or private, and all access points to the site (151.18.004-A10)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations, dimensions, and description of all existing or proposed easements (151.18.004-A12)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of any non-vehicular access strips (151.18.004-A-13)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Service areas for uses such as trash disposal (151.18.004-A18)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adequate dumpster detail (151.18.004-A-18)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All existing and proposed utility locations (151.18.044-A19)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The location of the nearest fire hydrant (151.18.004-A-20)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Street or alley rights-of-way to be dedicated and/or improved pursuant to the requirements (or 151.08.001.J)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Curb cuts, new and existing per ADA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Driveway entrances need to meet the City's modified version for MAG 250. MAG 250 does not currently meet ADA standards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abutting land uses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading, drainage, surfacing, and sub-grading details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Soils engineering report, if required (151.18.00-A-27)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are traffic control signals or signs required?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The effect of the site development on traffic conditions on abutting streets
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	One access per property
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the City have the ability to provide sewer service to the site? Are the sewer main lines public?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proper legend
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show the closest street light and calculate light levels along the road access point to see if any additional streetlights are required (151.08.008-A)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Avoid disparity in grade caused by fill between this site and adjacent sites. A slope easement or retaining walls may be required.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Curb, gutter, scupper, and handicapped curb return ramp details included on the plans (if applicable to the site)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ADOT contacted for their approval of access and improvements in their right-of-way, if applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing brick manholes are to be replaced when top needs to be adjusted to grade or new line enters manhole.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Make sure that all manholes are accessible to City maintenance trucks and are located in the public right-of-way or an easement. Check turning radii in easement, where applicable.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If access to sewer easement MUST be restricted, gates should be used in place of bollards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gates will: <ul style="list-style-type: none"> <li>• Be in accordance with City standard detail</li> <li>• Latch and lock in the middle.</li> <li>• If a gate is to be incorporated with railing, the gate is to match railing design.</li> <li>• Guidelines for gates may be adjusted to fit criteria of the area</li> <li>• Gate posts are to be set in 3 feet of concrete</li> <li>• Gates will swing open in both directions</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Laterals connecting to a new sewer main line shall be per MAG Detail 440 as modified by the City. Taps into an existing main line shall be per the old Type "B" detail.

### Drainage Report

N/A	Included	Deficient	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	To be submitted with Site Plan
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design storms to be 10-year, 1-hour storm and 100-year, 1-hour

- storm.
- All hydrology calculations to be complete. Peak flows shown in to be considered final.
- Provide detailed drainage exhibit. Exhibit to show watershed boundaries, concentration points, flow arrows, 10-year peak flows, 100-year peak flows, flow combinations, locations of drainageways, washes, proposed streets, detention basin, overland overflow route from detention basin, etc.
- Correct hydrology method used based on land area:
  1. Rational Method: < 0.5 square miles
  2. Pima County Method: 0.5 square miles - 5 square miles
  3. HEC-1: > 5 square miles
- Use City IDF curves. Available electronically from Engineering Division.
- Use C=0.35 for Rational Method calculations to determine pre-development runoff.
- Uses City of Tucson methodology (Section 4.5) for developing hydrographs based on Rational Method data.
- Detention (preferred) or retention of drainage runoff to match pre-development conditions (check 10-yr and 100-yr peak flows)
- Adequate detention basin size- show hydrograph routing
- Detention basins have bleed off pipes or other means of positive drainage
- All stormwater basins to have overland overflow path (no possibility of clogging) that allows excess flow to discharge without causing damage.
- No drywells in detention basins serving residential subdivisions
- Accommodates upstream drainage runoff from undeveloped land.
- Flow won't damage land or change the flow characteristics of the natural drainage.
- All drainage is discharged to improved public right-of-way, easement, or drainage way.
- No cross lot drainage.
- No encroachment of private land by water from public facility.
- Report to discuss drainage considerations due to phasing of construction.
- Summarize all findings in text of report
- Drainage in adjacent washes addressed in preliminary report, including:
  - Wash designation from Surface Water Plan (NDMC or FECC)
  - Wash hydrology to match FIS or Surface Water Plan
  - Discussion of proposed improvements to wash
  - Discussion of delineated FEMA floodplains. Show limits of floodplain on drainage exhibit.
  - Discussion of any special considerations for the wash
- Natural Drainage Maintenance Corridors should be platted to the most restrictive of the following:
  1. The 100-year floodway;
  2. The limits of the riparian vegetation zone:

- a) 50' setback from each bank of the low flow channel for watersheds < 1.5 square miles;
- b) 100' setback from each bank of the low flow channel for watershed > 1.5 square miles.

Up to a 100' wide drainage way centered within any Flood and Erosion Control Corridor (FECC).

Drainage Report describes collection and conveyance in text section of report. Calculations to support all aspects of collection and conveyance included in report.

Report contains complete hydraulic calculations for catch basin interception in accordance with HEC-22. Use clogging factors as follows:

- Grates in sump- 50%
- Grates on grade- 40%
- Curb openings in a sump- 20%
- Curb openings on grade- 20%
- Combination curb opening/grate in sump- 35%
- Combination curb opening/grate on grade- apply above factors separately
- Slotted drain to be analyzed in same manner as curb openings
- Clearly show bypass flows to next catch basin

Hydraulic calculations for channel conveyance, including streets  
 Depth of flow in public street does not exceed 0.6 feet during 100-year storm. Provide accurate hydraulic calculations for bends and areas where large flows come together.

Intersection depth of flow for a collector or arterial street < 0.1' during a 10-year storm.

Verify that all minor losses have been taken into account at channel entrances, and that headwater in street does not exceed 0.6 feet.

Model depressed sidewalks as broad-crested weirs. Use C=2.7

Hydraulic calculations for any necessary energy dissipators

Hydraulic analysis for improvements required in adjacent washes including:

- Local scour calculations
- Equilibrium slope calculations
- Grade control structures are of appropriate depth, width, and spacing
- Appropriate channel armor based on expected flow velocities
- Additional erosion set-back limits in areas with sharp bends

Report contains complete hydraulic calculations for storm drain systems. Analysis must include:

- Elevation of hydraulic grade line through entire system
- Peak flow in each section of pipe
- Pipe slopes

- Pipe roughness coefficients
  - Elevations of all manhole rims and catch basin grates
  - Detailed headloss coefficients for all bends, junctions, expansions, contractions, etc
  - Headloss due to momentum changes
  - Culvert calculations
- All hydraulic channels and detention basins to have at least 1-foot of freeboard
- Drainage does not discharge into a wastewater sewerage system.
- Bank protection provided in the case of intermediate or excessive velocities:
1. Excessive >6 fps for 100 year flow
  2. Intermediate 4-6 fps for 100 year flow
- Plans agree with drainage report. Check channel cross-sections, pipe sizes, detention basin sizes, catch basin sizes, etc.
- Dedication of drainageway to be used for conveyance of public runoff
- Sufficient access for channel maintenance (public channels).
- Provide minimum 20-foot right-of-way for dedicated drainageways.
- Channels in public right-of-way are trapezoidal in shape with no greater than 4:1 side slopes (more if adequate bank protection is provided).
- No depressed sidewalk (to be used as a weir) on arterials or collectors- OK on local streets.
- Channels or pipes discharging to a wash must be stable and protected from erosion due to flow in the main channel.
- Concrete and rip rap pads to have turned down edges.
- Show FHWA or ADOT rip rap gradations on plans if dumped rip rap is to be used.
- Hard channel linings to have turned down edges.
- CMP storm drains in public right-of-way are lined and coated per MAG Standard Detail 510 or Type II aluminum
- No fill materials are placed within the 100-year flood zone. Provide erosion protection in areas where fill is encroaching into the flood zone.
- Make sure storm drain manholes in public right-of-way meet MAG 520, 521, and/or 522
- Steel scuppers in public right-of-way to have spans of 12" or less. Larger scuppers are concrete only.
- Check that interim drainage in future development areas will not cause problems, particularly within the right of way.
- All pipes in public right-of-way to have at least 3 feet of cover or be RGRCP
- Show spacing between pipes if culvert has multiple pipes. See ADOT Standard Detail B-11.14 for large pipes and MAG Standard Detail 501-2 for small pipes.
- Culvert headwalls in public right-of-way to be formed concrete,

- not block (as shown in MAG Standard Detail 501).
- Lots to drain toward street (preferred) or have individual rear-lot drains.
- All catch basins in public right-of-way to have a grate for maintenance access

**NOTE:** This document is intended for use as an aid for City of Sierra Vista staff in reviewing applications and is provided to developers as a courtesy in order to facilitate their preparation of site development plans. The checklist is not intended to be all-inclusive of the City of Sierra Vista Development Code. Submission of the items in the checklist does not imply acceptability of the contents of specific documents nor of any approval requests.

**A copy of this checklist will be included in the project file.**

Revised 6/7/2017

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## Luminaire Information Worksheet

Outdoor lighting is regulated by Development Code Article 151.11. See that section for information regarding all aspects of outdoor lighting.

The following information must be provided. Additional information such as luminaire symbols, labels, catalog numbers, etc. can also be included if desired.

(It is not necessary to replicate this form, but the requested information must be provided in this, or a similar, format).

### **1. Luminaire Schedule**

<u>Description</u>	<u>Lamp</u>	<u>Quantity</u>	<u>Lumens</u>	<u>Total (Quantity X Lumens)</u>
Pole-Mounted Lights				
Wall-Mounted Lights				
Totals				

### **2. Lumens Per Acre**

Total Lumens	Total Site Acreage *	Lumens Per Acre**

\* Total Site Acreage: Consists of all improved surface area including buildings, structures, storage and service areas, parking, loading, driveway areas, required setback areas and required landscaping related to the use, but not areas that are only cleared.

\*\* Lumens Per Acre: See Development Code Article 151.11 for maximum allowed.

Note: Gas Station canopies are allowed additional lighting. See Development Code Article 151.11 for specific information.

### **3. Uniformity Ratio**

The Average/Minimum (uniformity) ratio cannot exceed 4:1. Where the information submitted indicates this ratio may not be achieved, the city may require a photometric plan or other supporting information.

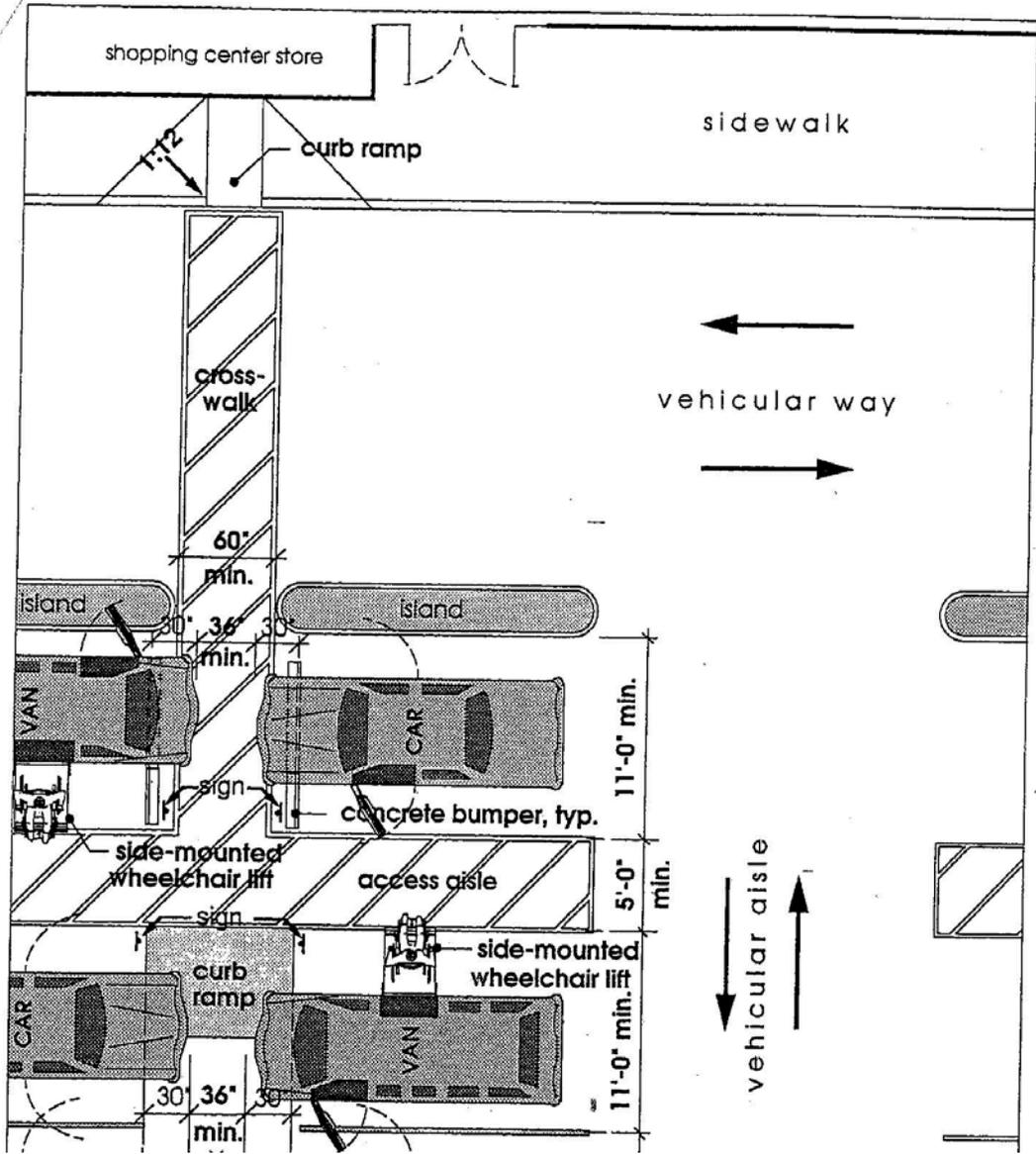
### **4. Lighting Cutsheets**

Lighting catalog cutsheets that are clearly readable must be provided for all outdoor light fixtures proposed.

### **5. Lighting Site Plan**

The site development plan must include information indicating the location of all proposed exterior lights, to include pole-mounted lights, wall-mounted lights, landscape lights, flag illumination lights, etc. The information can be shown on the site plan sheet or on a separate sheet.





shopping center store

sidewalk

1:12

curb ramp

cross-walk

60" min.

30" 36" 30" min.

island

island

VAN

CAR

11'-0" min.

sign

concrete bumper, typ.

side-mounted wheelchair lift

access aisle

5'-0" min.

vehicular way

vehicular aisle

sign

curb ramp

side-mounted wheelchair lift

CAR

VAN

11'-0" min.

30" 36" 30" min.

COCHISE BICYCLE ADVOCATES

# Bicycle Parking Facilities Guidelines

by  
Thomas Armstrong  
John Wettack

The purpose of this document is to summarize for business owners and managers factors to consider with the selection, capacity, and placement of bicycle parking facilities for customer and employees.

## Benefits of bicycle parking facilities

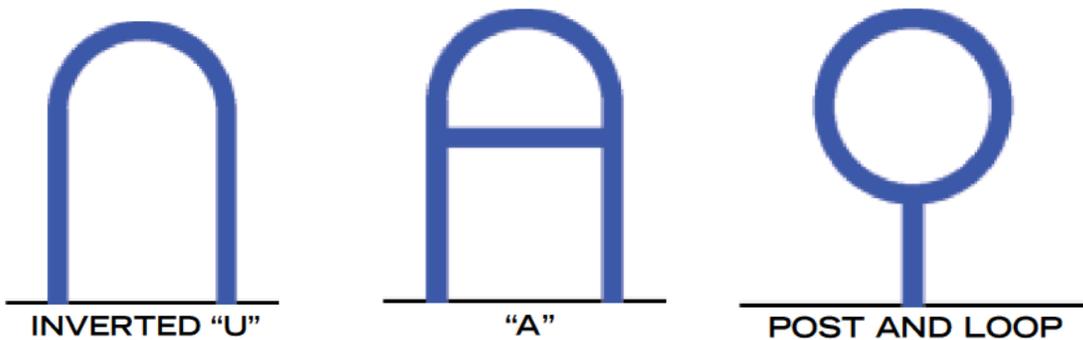
Bicycle racks benefit business by attracting bicycle-riding customer, controlling where bikes are parked to present an orderly appearance, and preventing bikes from blocking walkways or streets. Racks announce to customers this business is environmentally aware and supports sustainable transportation.

The lack of secure bicycle parking keeps many people from using their bikes for basic transportation. Leaving a bicycle unattended, even for short periods, may result in damage or theft. Finding a bike rack that can't be properly used or isn't conveniently located is a frustrating experience for bike riders.

## Types of racks

Bike racks will be used only when they provide stability and security. Racks should support the bike frame in at least one place (two places is best) so bikes cannot fall over. Racks which hold only the front wheel are not desirable, because bikes can easily fall over, damaging the wheels or other parts of the bikes. When only the front wheel can be locked to the rack, it is easy to release the wheel and steal the bicycle. Racks should enable the bike frame to be locked to the rack with a high-security U-shape lock and accommodate locking the wheels with a cable lock. Racks should be anchored so they cannot be moved.

Bicycle racks that best meet the above guidelines are the U-style, A-style, and post and loop. These racks support the bike frame in two places and enable the bike to be easily secured.



INVERTED "U" One rack element supports two bikes. "A" One rack element supports two bikes. POST AND LOOP One rack element supports two bikes.

Bicycle racks NOT meeting the above guidelines are the wave, comb, and toast type racks.

The popular wave-style rack can accommodate several bikes and support the frame at one place. However, bicyclists commonly use the “wave” rack as if it were a single inverted “U” (by placing their bikes alongside the rack.) This limits the capacity of the rack to two bikes regardless of the potential capacity. Bicycles parked perpendicular to a wave rack (as intended by the manufacturer) are not supported in two places and are more likely to fall over in the rack. The advertised capacity of a wave rack is often higher than the practical capacity.

The comb, toast, and other wheel-securing racks provide no support for the bicycle frame, making it more likely for the bicycle to fall over in the rack. Securing only the wheel increases the likelihood of bending the wheel. The advertised capacity of a wheel-securing rack is often higher than the practical capacity.



## Number of bicycles to accommodate

Business owners can determine the capacity of bike racks to provide by applying standards or considering how many bike riders they would like to accommodate. One standard requires the following parking spaces, with a minimum of 2 spaces and fractional racks being rounded up to the next whole number:

- General food sales or groceries – 1 space for each 8,000 s.f. of floor area
- Restaurant – 1 space for each 40 customer seats.
- General retail – 1 space for each 20,000 s.f. of floor area
- Office – 1 space for each 20,000 s.f. of floor area.

Business wishing to attract more bicycle riders or groups of bicycle riders may provide more parking spaces. Groups of bike riders would patronize businesses when proper bike parking facilities are provided.

## Locations of racks

- **Accessibility:** Racks should be placed close to building entrances for convenience – a maximum distance of 50 feet and be readily accessible from the street. Buildings with multiple entrances should have racks at each entrance.

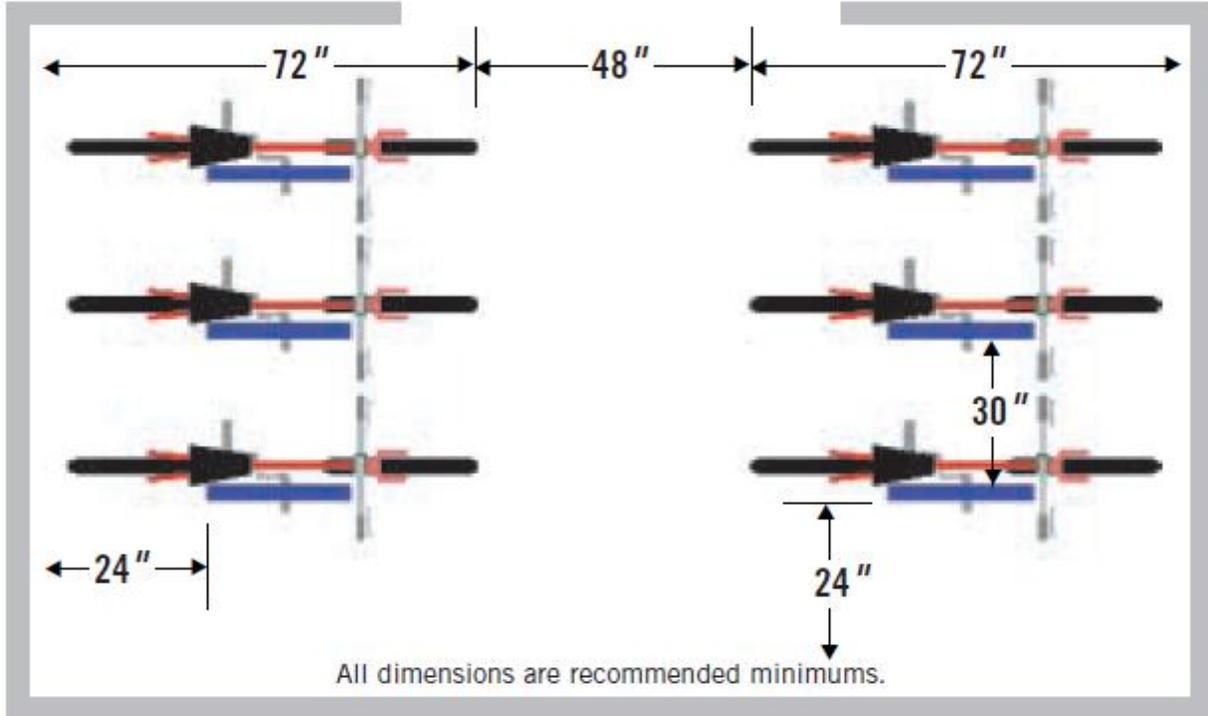
- **Visibility:** Racks should be easily spotted by cyclists as they arrive from the street or parking lot. Signs may be used to direct cyclists to the rack.
- **Security:** Racks should be in view of passers-by, retail activity, and when practical, in front of building windows to deter thieves and vandals. Where feasible, racks should be covered by roof overhangs for protection from sun and rain.
- **Avoid Conflict with Pedestrians:** Locate racks so bicycles in the racks do not block walkways, handicap facilities, building entrances or extend into roadways.
- **Positioning racks:** To serve their purpose, racks must be located so bikes can be placed in them as intended. Many racks in cannot be used as designed, because the racks' locations do not provide space for the bikes to be properly placed in the racks. The most common problems are placing racks too near building walls and not providing clearance for walkways. The following rules of thumb will permit racks to be used as designed:
  1. Provide 3 feet of clearance between bicycle racks and building walls, walkways, streets, and adjacent (side by side) racks.
  2. Provide 4 feet of clearance between bicycles parked one behind another.
  3. Wave style racks are designed to have bikes placed into the rack from both sides, so are best positioned perpendicular to walls or at least 7 feet from wall parallel to the rack.
  4. Adult bicycles are approximately 6 feet long, for considering clearance needs.

## Examples of properly installed bicycle racks

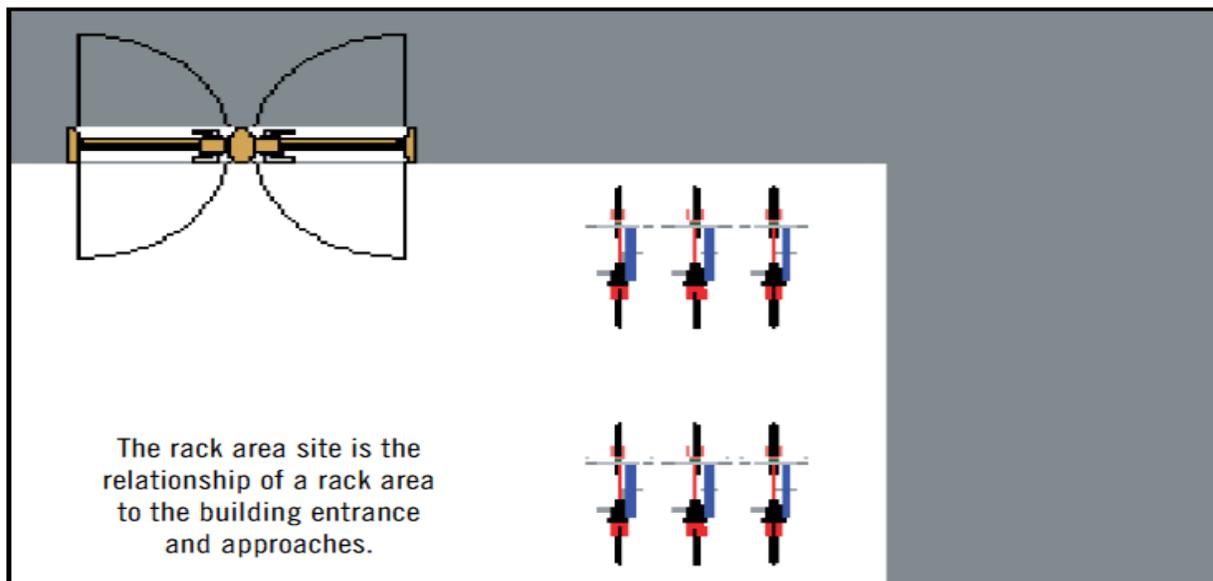
Properly installed bicycle racks may be seen at the following locations:

- U-type racks – The Cove Aquatic Center
- Ring-type racks – Fire Station #7
- Wave style rack – City Hall

Customer bicycle facility layout design



Not shown in this diagram are the pedestrian, car doors, entrance zone clearances which has a 48 inch minimum width



## **Employee Bicycle Parking**

Bicycle racks for long-term employee parking should be of the preferred types described above that enable the bike frame and wheels to be locked to the rack. The parking should be located in areas not accessible or frequented by the public and which are observed by staff of the business. Protection from the weather is more important than for short-term parking. Ideally, bicycles would be parked inside the building or bicycle storage lockers.

**Appropriate Bicycle Parking Facilities**



"U" racks support bike frame at 2 places and provide space for a trailer



"U" type racks recommended distances provide maximum flexibility



"U" type racks with angled design allows for maximum space efficiency



Good parking options for many bikes



Designs can be simple with anchored rods and a supporting bar



Designs can be artistic

### Inappropriate Bicycle Parking Facilities



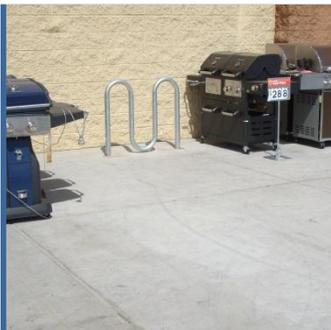
Bike blocking walkways.



Bikes blocking walkways



Bike blocking handicap access



Rack too close to the wall and not visible



Rack too close to the wall and the front wheel can easily be removed resulting in stolen bike.



Rack placed so bikes would block sidewalk and extend into driveway

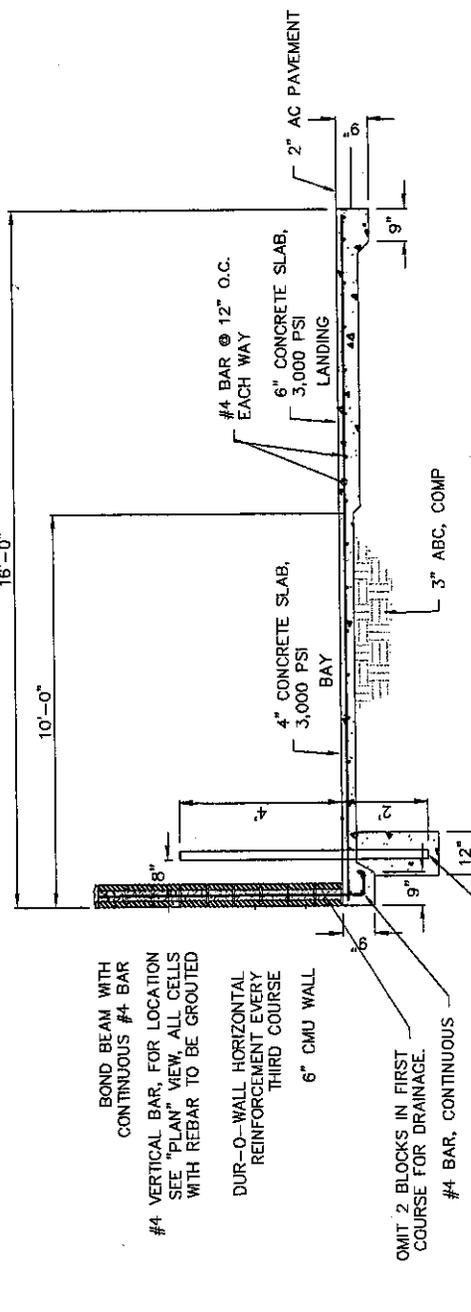
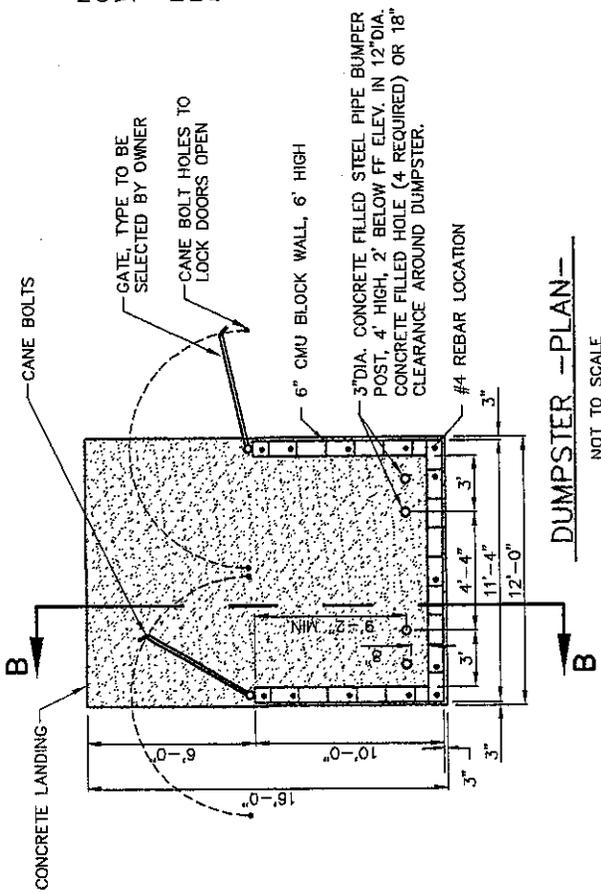
## Bicycle Parking Checklist

1. Is there at least 3 feet of clearance between the bike rack and structures or other racks – to provide room to properly place bicycles in the rack?
2. Does the bike rack support the bicycle frame at least one place (support at 2 places is preferable)?
3. Are pedestrian walkways clear when bicycles are in the bike rack?
4. Is the bike rack easily accessible from the street?
5. Is the bike rack conveniently located to the building entrance and visible from the building?
6. Are parked bicycles protected from pedestrian and vehicle traffic?
7. Is there capacity to park the number of bicycles expected at any time?
8. Is the bike rack anchored so it cannot be moved?
9. Is parking for employees' bicycles in an area not accessible or frequented by the public?
10. Individuals with questions regarding bicycle parking facilities are invited to contact Cochise Bicycle Advocates at [CochiseBicycleAdvocates@gmail.com](mailto:CochiseBicycleAdvocates@gmail.com)

### References

1. Guide for the development of bicycle facilities, American Association of State Highway and Transportation Officials, 1999. URL [http://safety.fhwa.dot.gov/ped\\_bike/docs/b\\_aashtobik.pdf](http://safety.fhwa.dot.gov/ped_bike/docs/b_aashtobik.pdf)
2. Bicycle Parking Guidelines, Association of Pedestrian and Bicycle Professionals, 2002. URL [http://www.apbp.org/resource/resmgr/publications/bicycle\\_parking\\_guidelines.pdf](http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf)
3. Bicycle Parking Guidelines 2<sup>nd</sup> Edition, Association of Pedestrian and Bicycle Professionals, 2010. URL <http://www.apbp.org/?page=Publications>
4. Pedestrian and Bicycle Information Center (bicyclinginfo.org), Bicycle Parking. URL <http://www.bicyclinginfo.org/engineering/parking.cfm>
5. City of Chicago, Bike Parking for your Business. URL [http://www.cityofchicago.org/content/dam/city/depts/cdot/bicycling/bikeparking/bikeparking\\_business.pdf](http://www.cityofchicago.org/content/dam/city/depts/cdot/bicycling/bikeparking/bikeparking_business.pdf)
6. City of Denver, Rules and Regulations Establishing the Dimensional and Equipment Standards for Bicycle Parking Areas, December 23, 1998. URL <http://www.denvergov.org/Portals/646/documents/Equipment%20Standards%20for%20Bicycle%20Parking%20Areas.pdf>
7. City of Portland, Bicycle Parking. URL <http://www.portlandonline.com/transportation/index.cfm?&a=58409&c=34813>
8. City of Portland, Minimum Required Bicycle Parking Spaces. URL <http://www.portlandonline.com/transportation/index.cfm?&a=345205&c=34813>
9. City of Madison, Bike Rack Requirements. URL <http://www.cityofmadison.com/bikeMadison/documents/bikeRackRequirements.pdf>
10. Wikipedia: Door zone. URL [http://en.wikipedia.org/wiki/Door\\_zone](http://en.wikipedia.org/wiki/Door_zone)
11. AASHTO and Door Zone Bike Lanes. URL [http://www.humantransport.org/bicycledriving/library/AASHTO\\_DZBL.pdf](http://www.humantransport.org/bicycledriving/library/AASHTO_DZBL.pdf)
12. Bicycle parking manual, The Danish Cyclist Federation 2008. URL [http://www.sfbike.org/download/Bike\\_Parking/Danish\\_Bicycle\\_Parking\\_Manual\\_Screenversion.pdf](http://www.sfbike.org/download/Bike_Parking/Danish_Bicycle_Parking_Manual_Screenversion.pdf)

NOTE:  
 GATES SHALL HAVE 180° OPEN CLEARANCE WITH CANE BOLTS AND CANE BOLTS HOLES TO MAINTAIN OPEN POSITION.  
 EACH ENCLOSURE SHALL HAVE MINIMUM DEPTH OF 9'-2" TO ALLOW SPACE FOR AN 8'YRD. DUMPSTER CONTAINER.



**5** DUMPSTER PAD

N.T.S.

**SMALL PATIO TREES (10' to 25')** continued  
 \*Littleleaf Palo Verde, E, 2-3 *Cercidium microphyllum*  
 Mexican Buckeye, T, 1-2 *Ungnadia speciosa*  
 Mimosa, FR, 3 *Albizia julibrissin*  
 \*New Mexican Locust, FR, 1-3 *Robinia neomexicana*  
 New Mexico Privet, H, FR 2-3 *Forestiera neomexicana*  
 Palo Verde, 2-3 *Cercidium Desert Museum'*  
 Russian Olive, 3 *Elaeagnus angustifolia*  
 Strawberry Tree, E, FR, 3 *Arbutus unedo*  
 Texas Ebony, E (semi) 2-3 *Pithecellobium flexicaule*  
 Texas Mountain Laurel, E, T, 3 *Sophora secundiflora*  
 Western Redbud, FR, 3 *Cercis occidentalis*

**LARGE RESIDENTIAL TREES (25' or more)**

\*Arizona Ash, FR, 3 *Fraxinus velutina*  
 \*Arizona Cypress, E, FL, 2-3 *Cupressus arizonica*  
 Blue Palo Verde, E, 2-3 *Cercidium floridum*  
 California Fan Palm, E, 2-3 *Washingtonia filifera*  
 Chinese Pistache, FR, 2-3 *Pistacia chinensis*  
 Chitalpa, 2-3 *Chitalpa tashkentensis*  
 Deodar Cedar, E, FL, 3 *Cedrus deodara*  
 \*Desert Willow, FR, 2-3 *Chilopsis linearis*  
 Eucalyptus, E, FL, 1-2 *Eucalyptus spp.*  
 Goldenrain Tree, 3 *Koelreuteria paniculata*  
 Italian Cypress, E, 2-3 *Cupressus sempervirens*  
 \*Juniper, E, FL, 1-3 *Juniperus spp.*  
 \*Mesquite, 1-3 *Prosopis spp.*  
 Mexican Blue Palm, E, 1-3 *Brahea armata*  
 \*Netleaf Hackberry, FR, 3 *Celtis reticulata/occidentalis*  
 \*Oak, local natives only, E, 2-3 *Quercus- native species*  
 Olive, E, 2-3 *Olea europaea*  
 \*Pine, E, FL, 2 *Pinus spp.*

**CACTI**

All appropriate members of the cacti family, FR, 1

**KEY:**

**Plant Supplemental Water Needs (after establishment)**  
 1: None 2: Little 3: Moderate (every 2-3 weeks)

\* - Cochise County native (may have non-native species)

Spp. - Species

A - Accent

H - Hedge

E - Evergreen

**FL** - Flammable (plant at least 30 ft from home)

**FR** - Flame resistant

**T** - May be toxic. For more information call the Arizona Poison Control Center at 1-800-362-0101.

This plant list contains some of the native and adapted plants which do well for low water landscaping in Cochise County (3,500' to 6,000' elevation) and are hardy to at least 15°F. Some plants may not be hardy in certain areas of Cochise County and hardy in others. Cochise County is in USDA Hardiness Zone 8 and Sunset Western Garden Zone 10. Remember that these plants need regular irrigation while they are being established. After establishment, they can be grown with moderate (deep soaking to the depth of the root zone every 2-3 weeks) to no supplemental irrigation according to the Sunset Western Garden Book, 2001 edition. Make sure you water at the dripline to the depth of the root zone (1' deep for groundcovers and wildflowers, 2' deep for shrubs and 3' deep for trees) each time you water. Ask about a plant's mature size and characteristics to better plan for its location and spacing relative to buildings, power lines and other plants. In general, native species are well adapted to our dry environment, provide valuable wildlife habitat, and are less susceptible to diseases than non-native species. Consult southwest gardening books, your local library, nurseries and the Cooperative Extension for assistance in choosing plants.



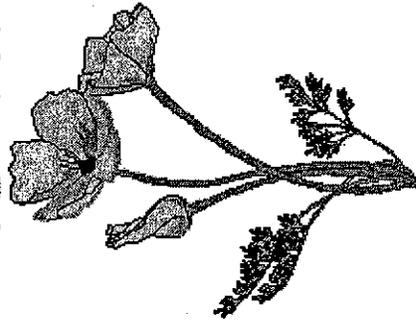
Native Plant Protection

Nowhere in the United States are there more rare and unusual native plants than in Arizona. Many desert plants fall into one of five groups protected by Arizona's Native Plant Law. To find out about Arizona's Native Plant Law, contact the Arizona Department of Agriculture at 1-520-628-6317.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James A. Christenson, Director, Cooperative Extension, College of Agriculture & Life Sciences, The University of Arizona.

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# LOW WATER PLANTS for COCHISE COUNTY



Prepared by  
 The University of Arizona  
 Cooperative Extension  
**Water Wise Program**  
 For more information, call  
 The U of A Cooperative Extension

Sierra Vista: 458-8278 x 2141

Willcox: 384-3594

Benson: 586-3467

Douglas: 364-4146

[www.ag.arizona.edu/cochise/waterwise](http://www.ag.arizona.edu/cochise/waterwise)

Water Wise Partners are: the City of Sierra Vista, Cochise County, Ft. Huachuca, Upper San Pedro Partnership and the U of A Cooperative Extension.

Additional support is provided by Arizona, Delta Vista and Pueblo del Sol Water companies, S379C and the Southwest Arizona Association of Realtors.

Common name

Scientific name

**GROUND COVER/WILDFLOWERS**

- Agastache, (some) 3
- Angelita Daisy, E, 2-3
- Alyssum, 3
- \*Arizona Blue Eyes, 1
- \*Arizona Poppy, 1
- \*Artemisia, E, 2-3
- \*Bahia, 1
- \*Betony, 3
- \*Blue Flax, FR, 3
- \*Buckwheat, E, FL, 1-3
- Chamomile, 3
- Catnip, E, 3
- \*Chocolate Flower, E, 2-3
- Coreopsis, FR, 2-3
- Cotoneaster, E, FR, 2-3
- Creeping sage, E, 2-3
- \*Dalea, E, 2-3
- Damianita, E, 2-3
- \*Desert Marigold, FR, 2-3
- \*Desert Zinnia, 1
- Devil's River, 2-3
- Dusty Miller, FR, 2-3
- \*Dyssodia, 3
- \*Fairy Duster, FR, 1-2
- \*Fleabane, FR, 2
- \*Gaillardia, FR, 3
- \*Gaura, E, FR, 3
- Germander, E, 3
- \*Gilia, 2-3
- \*Globemallow, 2
- Hybrid Baccharis, E, 2-3
- Ice Plants, E, FR, 2
- Juniper, E, FL, 1-3
- Stachys, E (some), FR, 3
- Lantana, T, 3
- Lavender, E, FR, 3
- \*California Poppy, FR, 2-3
- \*Milkweed, E (some), 1-3
- \*Monarda, 3
- Oregano, E, 2-3
- \*Paper Flower, E, 1-2
- \*Penstemon, E, FR, 2-3
- \*Primrose, E (some), FR, 2-3
- Prostrate Rosemary, E, 2-3
- Santolina, E, FR, 1-3
- Sedum, E, FR, 2-3
- \*Sun Drops, FR, 2-3
- \*Verbena, 2-3
- Yarrow, E, FR, 2-3
- Simmondsia chinensis*
- Juniperus* spp.
- Eysenhardtia* spp.
- Lantana* spp.
- Lavandula* spp.
- Cordia parvifolia*
- Lion's Tail*, E, 1-2
- Leonotis leonurus*
- Lycium* spp.
- Mahonia* spp.
- \**Manzanita*, E, 2, 3
- \**Arctostaphylos pungens*, *pringlei*
- \*Mountain Mahogany, E (some), 1-2
- Cercocarpus* spp.
- Ephedra* spp.
- Myrtle* spp.
- \**Ocotillo*, A, 1
- Fouquieria splendens*
- Nerium* spp.
- Pyracantha* spp.
- Atriplex lentiformis*
- Rosmarinus officinalis*
- C. nauseosus*
- Perovskia* spp.
- Salvia*, E, FR, 3 (some)
- Santolina*, E, 1-3
- Senna*, 2-3
- Silk Tassel*, E, FR, 1
- Garrya wrightii*
- Skeletonleaf Goldeneye*, E, 1-2
- Viguiera stenoloba*
- \**Snakeweed*, E, 1-2
- Gutierrezia sarothrae*
- Strawberry Tree*, H, E, FR, 3
- Arbutus unedo* varieties
- \**Sumac*, H, FR, 1-3
- Rhus virens* (E), *ovata* (E), *trilobata*, *microphylla*
- Texas Ranger/Sage*, H, E, 2-3
- Leucophyllum* spp.
- \**Threadleaf Groundsel*, E, 1-2
- Senecio longilobus*
- \**Turpentine Bush*, E, FL, 1-2
- Ericameria laricifolia*
- \**Wild Cotton*, FL, 1-2
- Gossypium thurberi*
- \**Winterfat*, E, 2-3
- Cercatoides lanata*
- Woolly Butterflybush*, E, 3
- Buddleja marrubifolia*
- Xylosma*, E, (semi), 3
- Xylosma congestum*
- \**Yellow Bells*, 3
- Tecoma stans*
- Yellow Bird of Paradise*, T, 1-2
- Caesalpinia gilliesii*
- \**Yucca*, A, E, FR, 1-3
- Yucca* spp.

**GRASSES**

- Native low water grasses, 1-3
- Ornamental Grasses, 1-3
- (Both FL when dry)
- Gramineae* Family
- Gramineae* Family
- VINES**
- Arizona Grape Ivy, T, 2-3
- Cat's Claw, E (semi), 3
- Japanese Honeysuckle, E, FL, 3
- \*Fringed twinevine,
- \*Morning Glory, T, 1-3
- Tombstone Rose, E, 3
- Wisteria, T, 2-3
- Cissus trifoliata*
- Macfadyena unguis-cati*
- Lonicera japonica*
- Funastrum cynanchoides*
- Convolvulus*, *Ipomoea*
- Rosa banksiae*
- Wisteria* spp.

**SHRUBS** continued

- \**Johoba*, E, 2
- Juniper, E, H, FL, 2-3
- \**Kidneywood*, 1-2
- Lantana, T, 3
- Lavender, E, 3
- Little Leaf Cordia, E, FR, 2-3
- Lion's Tail, E, 1-2
- \**Lycium*, 1-3
- \**Mahonia* (some), E, 1-3
- \**Manzanita*, E, 2, 3
- \**Mountain Mahogany*, E (some), 1-2
- Mormon Tea*, E, 1-3
- Myrtle*, E, FR, 2-3
- \**Ocotillo*, A, 1
- Oleander*, E, T, FR, 2-3
- Nerium* spp.
- Pyracantha*, E, FR, 3
- Quailbush*, H, 1-2
- Rosemary*, E, H, 2-3
- \**Rabbitbrush*, E, FR, 1-2
- Russian Sage*, FR, 2-3
- \**Salvia*, E, FR, 3 (some)
- Santolina*, E, 1-3
- Senna*, 2-3
- \**Silk Tassel*, E, FR, 1
- Skeletonleaf Goldeneye*, E, 1-2
- \**Snakeweed*, E, 1-2
- Strawberry Tree*, H, E, FR, 3
- \**Sumac*, H, FR, 1-3
- Rhus virens* (E), *ovata* (E), *trilobata*, *microphylla*
- Texas Ranger/Sage*, H, E, 2-3
- Leucophyllum* spp.
- \**Threadleaf Groundsel*, E, 1-2
- Senecio longilobus*
- \**Turpentine Bush*, E, FL, 1-2
- Ericameria laricifolia*
- \**Wild Cotton*, FL, 1-2
- Gossypium thurberi*
- \**Winterfat*, E, 2-3
- Cercatoides lanata*
- Woolly Butterflybush*, E, 3
- Buddleja marrubifolia*
- Xylosma*, E, (semi), 3
- Xylosma congestum*
- \**Yellow Bells*, 3
- Tecoma stans*
- Yellow Bird of Paradise*, T, 1-2
- Caesalpinia gilliesii*
- \**Yucca*, A, E, FR, 1-3
- Yucca* spp.

**SMALL PATIO TREES (10' to 25')**

- \**Acacia* (some T), E (some), 1-2
- Chaste Tree, 3
- Vitex agnus-castus*
- Crape Myrtle*, FR, 3
- Lagerstroemia indica*
- Desert Willow* 'Timeless Beauty', 2-3
- C. linearis* variety
- Evergreen Sumac*, E, 2
- Rhus virens*
- Golden Lead Ball Tree*, 2-3
- Leucaena retusa*
- Goldrain Tree* 'Fastigiata', 3
- Koeleruteria paniculata*
- Greg/Gooding Ash*, E, 2
- F. greggii/goodingii*
- Hollyleaf Redberry*, E, 1
- Rhamnus ilicifolia*
- \**Juniper*, E, FL, 1-3
- Juniperus* spp.

**SHRUBS**

- Agarita*, 3
- \**Agave - A*, FR, 1
- \**Apache Plume*, FR, 1
- \**Arizona Rosewood*, H, E, 2-3
- \**Artemesia*, E, 2-3
- \**Beargrass*, A, FR, E, 1-3
- \**Bee Brush*, 3
- \**Berberis*, E, FR (some), 3
- \**Blue Mist* 2-3
- Broom Dalea*, 2
- \**California Buckthorn*, 2-3
- Chuparosa*, 3
- Cinquefoil*, 3
- \**Cliffrose*, E, FL, 3
- \**Coral Bean*, T, FR, 1-3
- Cotoneaster*, E (some), FR, 2-3
- Crape Myrtle*, FR, 3
- \**Creosote Bush*, E, FL, 1-3
- \**Crucillo*, E, 1-3
- \**Dalea*, E (some), FR, 1-3
- \**Desert Broom*, male, E, 1
- \**Desert Hackberry*, H, 2-3
- \**Desert Honeysuckle*, 3
- Desert Lavender*, E, 2-3
- \**Desert Spoon*, A, E, FL, 1
- Dusty Miller*, 2-3
- Euphorbia*, E, T, 3
- \**Fairy Duster*, FR, 1-2
- \**Feather Acacia*, 1-2
- \**Fourwing Saltbush*, H, E, FR, 1-2
- Germander*, H, E, 3
- Goldenrod*, 3
- \**Green Hopbush*, H, E, FL, 2-3
- Grevillia*, E, 1-3
- Hesperaloe*, A, E, 2-3
- Heavenly Bamboo*, E, FR, 2-3
- Hollyleaf Redberry*, E, 1
- Berberis trifoliolata*
- Agave* spp.
- Fallugia paradoxa*
- Yauquelinia californica*
- Artemesia* spp.
- Nolina* spp.
- Alyosia wrightii/gratissima*
- B. haematocarpa*
- Conocinium greggii*
- Psoralea scoparia*
- Frangula californica* spp. *ursina*
- Justicia californica*
- Potentilla fruticosa*
- Furshia mexicana*
- Erythrina flabelliformis*
- Cotoneaster* spp.
- Lagerstroemia indica*
- Larrea tridentata*
- Condalia* spp.
- Dalea* spp.
- Baccharis sarothroides*
- Celtis pallida*
- Anisacanthus* spp.
- Hyptis emoryi*
- Dasylirotion* spp.
- Teucrium viravira*
- Euphorbia* spp.
- Calliandra eriophylla*
- Acacia angustissima*
- Atriplex canescens*
- Teucrium fruticosum*
- Solidago canadensis*
- Dodonea viscosa*
- Grevillia*, E, 1-3
- Hesperaloe* spp.
- Nandina domestica*
- Rhamnus ilicifolia*