

## Section 12 Landscaping Standards

### 12.1 Introduction

The street system and building form set the parameters for the landscaped areas within the community. Typically, buildings and structures dominate urban settings but it is the streetscape that contributes significantly to the social fabric. Trees, vegetation and other natural materials designed as a part of hardscape and pedestrian plazas are an important element of the community design and character. The landscape standards are intended to address landscape parameters for Mesa Proving Grounds and specifically provide landscape design parameters for landscaping within primarily hardscape urban conditions. For example, the character of the streetscape is created with landscape. The ability to install street trees close to the curb to narrow the visual width of the streets, to have trees close to walkways to shade pedestrians, have the ability to adjust for varying amounts of hardscape and vegetation to support adjacent uses are provided in these urban landscape standards. These standards will permit the various landscapes as depicted in various imagery throughout the CP especially in Section 10.2 - Urban Great Streets, Section 10.10 - Walkways and Sidewalks and Section 11.

The Stormwater Drainage and Retention Standards, refer to Section 13, will ensure that the landscape not only can provide the character for the connective fabric of the community, but also that it lives well over time. Watering larger landscaped areas with a non-potable system will reduce the demand on the potable system of pumping, filtering, storing and distributing. The drainage and stormwater standards will provide a wide variety of ways to retain stormwater to irrigate landscapes further reducing the potable water needs while increasing the efficiency of the stormwater management system and the water quality.

The landscaping standards for Mesa Proving Grounds as contained herein, are intended to provide minimum provisions to guide the placement and design of landscaping features for the Property. These standards are intended to complement the built environment and integrate open space and landscaped areas into the community. As an alternative to utilization of the specific requirements enumerated herein, submittal of different landscaping treatments and standards can be proposed and approved at the Development Unit level.



Note: photos are intended to be representative of the character and quality of the types of street perimeter landscape within Mesa Proving Grounds and are not intended to express specific design details, colors or materials.

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Landscaping requirements are divided into two (2) major sub-areas including Street Perimeter Landscape areas and Off-Street Surface Parking Areas. The specifics for the Street Perimeter Landscaping are as depicted generally on **Exhibit 12.1 - Perimeter Landscaping Requirements** below and within Section 12.2. Specific requirements for Off-Street Surface Parking Areas are depicted in Section 12.3.

**Exhibit 12.1 - Perimeter Landscaping Requirements**



## 12.2 Street Perimeter Landscaping

- A. Street Perimeter Landscaping areas include those areas measured from back of curb to a point up to twenty (20) feet into the site (exclusive of buildings and structures) and shall be exclusively maintained as landscaped areas. Within the Street Perimeter Landscaping area vegetation and hardscape materials are allowed which may include, but not be limited to, paving, decomposed granite, pavers, flatwork, pots, street furniture, play structures, shade structures, ramadas, trellises, pergolas, arbors, steps, ramps, railings, fences, walls, art, water features (fountains, spas, pools, ponds, lakes, streams), fire elements (bar-b-ques, fire pit, gas lights), lighting, drainage ways, manhole covers, utility covers, signage, sports equipment, misting systems and boulders, signs, parking screen walls, fire hydrants, transformers, service entrance section (“SES”) equipment, back flow preventers, telecommunications boxes and retention basins.

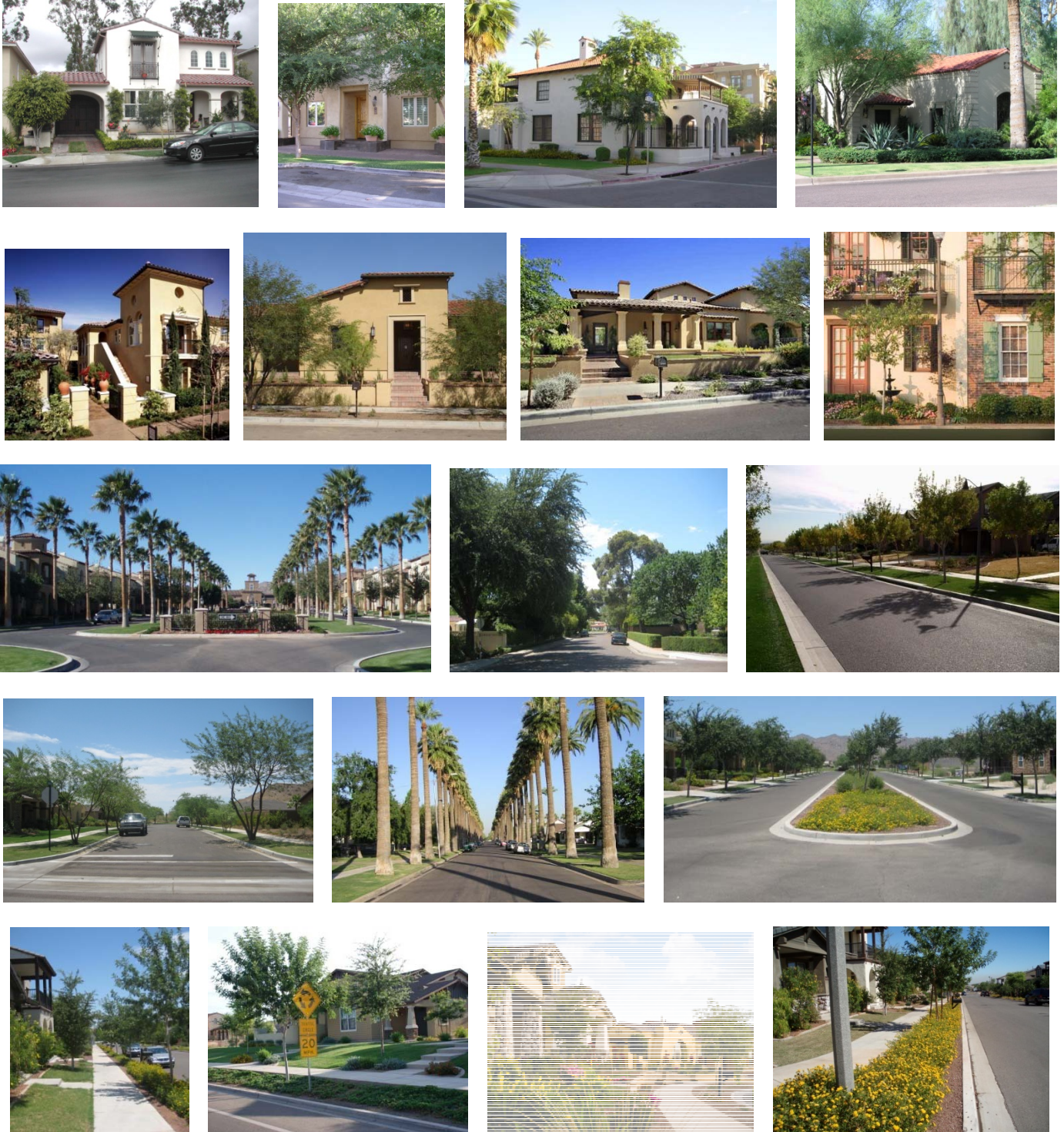
**Exhibit 12.2 - Street Perimeter Landscape Character**



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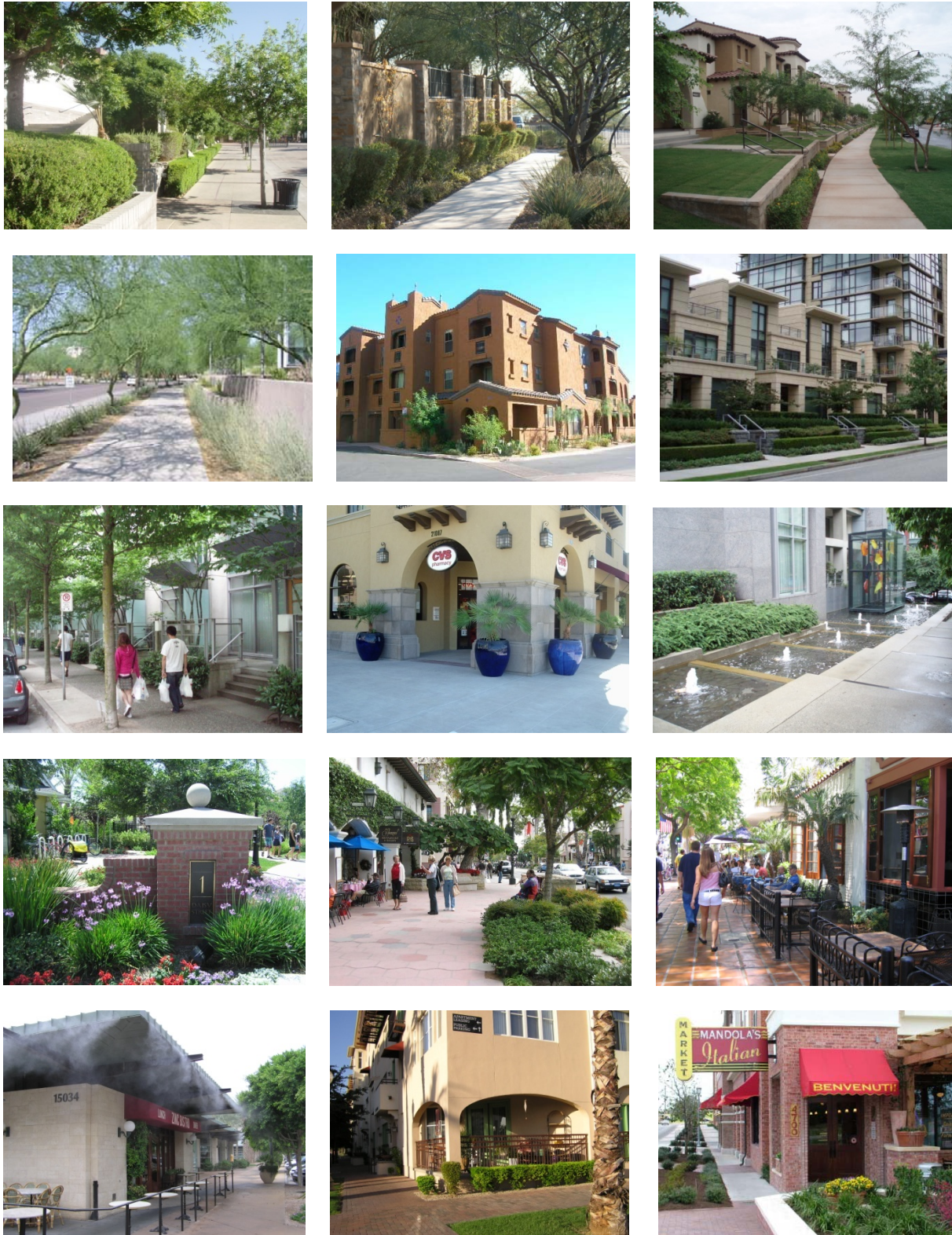
## Exhibit 12.3 - Street Perimeter Landscape Character



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## Exhibit 12.4 - Street Perimeter Landscape Character



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- B. If a building or structure is located ten (10) feet or less from the back of curb the following conditions shall apply:
1. Trees. No trees are required.
  2. Ground Plain or Understory. Areas located between buildings and the back of curb must be either vegetation or hardscape. If vegetation, the area shall be covered by ground cover vegetation, flowers or shrubs at a density of one (1) plant per every fifty (50) square feet and areas of vegetation may be clustered.
- C. If a building or structure is located a minimum of ten (10) feet and twenty (20) feet from the back of curb the following conditions shall apply:
1. Trees shall be required at a density of one (1) tree per fifty (50) feet of linear street frontage. Trees may be clustered or formalized.
  2. Ground plain or understory. Areas between the building and the back of curb must be either vegetation or hardscape. If vegetation is utilized the area shall be covered by ground cover vegetation, flowers, or shrubs at a density of one (1) tree per fifty (50) square feet. Vegetation may be clustered or formalized.
- D. If a building or structure is located more than twenty (20) feet from the back of curb or in conditions where there is no building frontage along the street (plaza, parking area, undeveloped parcel), the first twenty (20) feet must be landscaped per the requirements noted above. For areas beyond twenty (20) feet, there is no required landscaping area or material except for the required landscape in surface parking areas.

### 12.3 Off-Street Surface Parking Area Landscaping

- A. The off-street parking lot landscaping shall apply to all off-street parking lots containing twenty (20) or more parking spaces. They shall not apply to vehicle/equipment storage lots or vehicle and equipment sales lots or to structured parking solutions (above or below grade). Within the landscape areas of the off-street surface parking areas, vegetation and hardscape materials are allowed which may include, but not be limited to, paving, decomposed granite, pavers, flatwork, pots, play structures, shade structures, ramadas, trellises, pergolas, arbors, steps, ramps, railings, fences, walls, art, water features (fountains, spas, pools, ponds, lakes, streams), fire elements (bar-b-ques, fire pit, gas lights), lighting, drainage ways, sports equipment, boulders, parking screen walls, transformers, SES equipment, back flow preventers, telecommunications boxes and retention basins.
- B. Required Landscaping
1. Total Parking Area shall include all paved areas contained by curb on a property for the use and purpose of parking vehicles or maneuvering vehicles into parking stalls. Total Parking Area shall include the curb and be calculated to the back of curb dimension. Total Parking Area shall not include landscape areas within or adjacent to parking areas. Total Parking Area shall not include passenger drop off areas, loading zones or drive aisles that are not used to maneuver into or out of individual parking stalls. If an unpaved alternative is used for the parking surface, the parking surface shall be considered paved for the purpose of calculating Total Parking Area. If a curb is not used to contain the parking surface, the edge of pavement shall be used to calculate the Total Parking Area.
  2. If parking is provided in a parking structure, above or below ground, the footprint of the parking structure shall be subtracted from the Total Parking Area. Total Parking Area shall not include any of the parking levels in a parking structure including the ground level.
  3. If a portion of the Total Parking Area is covered by a shade structure (including but not limited to solar cells, arbors, trellises, shade sails, canopies, awnings), then the area of the shaded structure and the adjacent drive aisle will be subtracted from the Total Parking Area used to calculate the required number of trees.
  4. Trees shall be provided at a density of one (1) tree per 2,300 square feet of Total Parking Area minus the area covered by shade structures and parking structures.

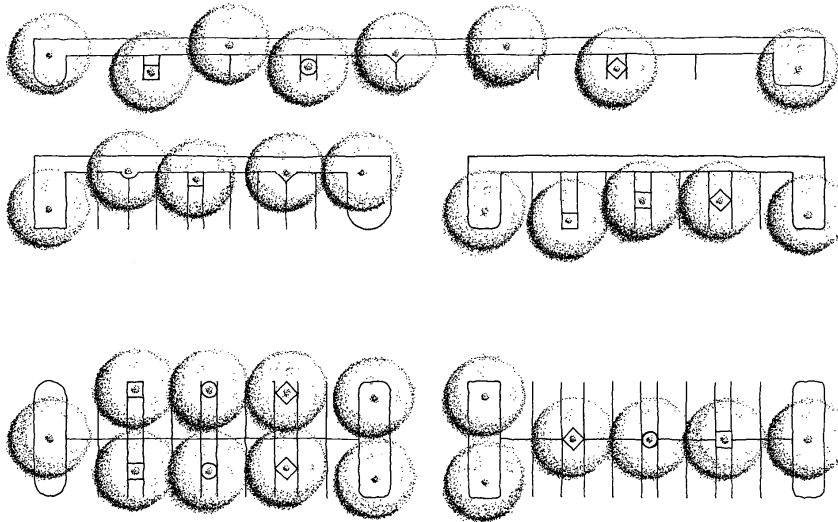
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5. Ground plain or understory. If landscape areas are provided, they must be either vegetation or hardscape (including tree grates). If vegetation is utilized, the area shall be covered by ground cover vegetation, flowers, or shrubs a density of one (1) per fifty (50) square feet. Vegetation may be clustered or collected.

## C. Landscape Islands

1. Parking lot landscape within parking lot islands, medians, planting areas or tree grates shall be installed at the end of each row of parking stalls and within the rows so that there are not more than eight (8) contiguous parking spaces without landscaping. Refer to *Exhibit 12.5* - Permitted Tree and Landscape Placement in Off-Street Surface Parking for methods of tree placement within Off-Street Surface Parking areas.
2. Required landscape islands, medians, planting areas or tree grates shall be a minimum of four (4) feet diameter as measured by a circle inscribed within the landscape area. This minimum landscape area shall be exclusive of all curbs or hardscape other than lighting or tree grates. Landscape island medians or planting areas may include hardscape elements so long as the minimum landscape area is met exclusive of these elements. Refer to *Exhibit 12.6* - Off-Street Surface Parking Area Landscape Character for depictions of off-street parking area character.

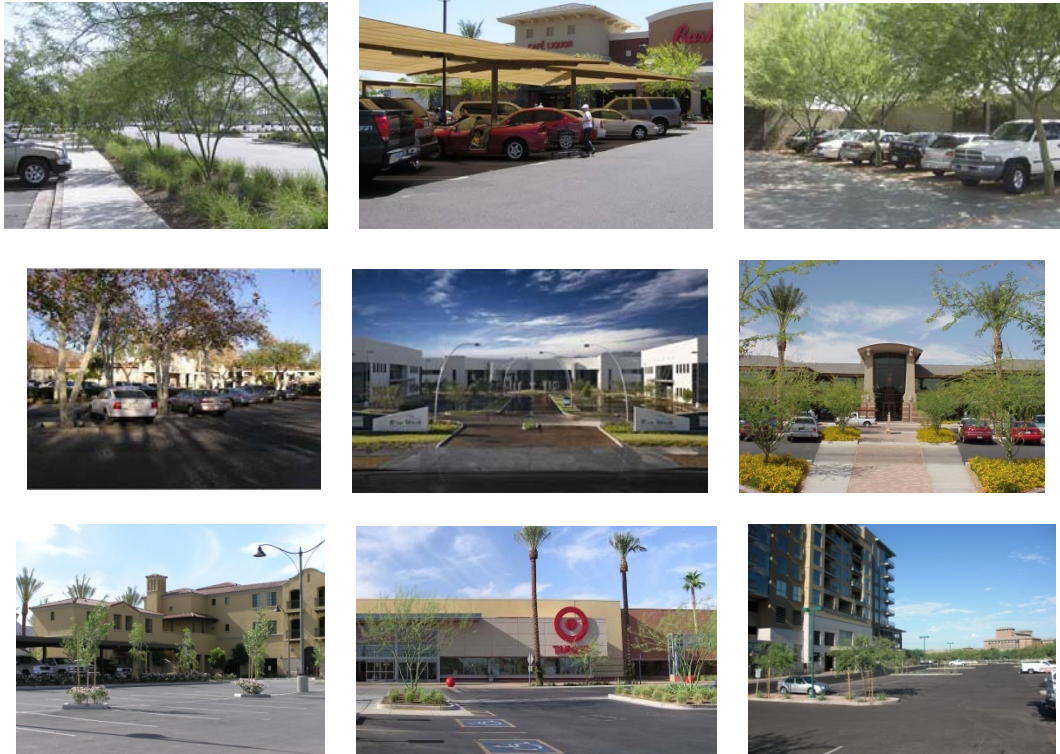
**Exhibit 12.5 - Permitted Tree and Landscape Placement in Off-Street Surface Parking**



Note: Tree density, planter size, tree size and parking lot landscape areas are shown for reference only and do not reflect required or intended planting densities.

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## Exhibit 12.6 - Off-Street Surface Parking Area Landscape Character



Note: photos are intended to be representative of the character and quality of the types of off street surface parking areas within Mesa Proving Grounds, and are not intended to express specific design details, colors or materials.

3. When curbing is used within two (2) feet of the edge of the drive isle or travel lane, provide radius curbing at a minimum two (2) feet.
4. Where divider medians occur adjacent to head-in parking, allow for a maximum of two (2) feet of vehicle overhang.

### D. Shade Structures

1. Parking area shade structures may include but are not limited to solar cells, arbors, trellises, shade sails, canopies, and awnings.
2. If a portion of the parking area is covered by a shade structure the area of the shaded parking stalls and the adjacent drive isle will be subtracted from the total parking area used to calculate required landscape.
3. Shade structures shall not impede the flow of traffic.

## 12.4 Adjacent Property Lines

- A. No landscape area is required between LUGs or parcels. No landscape buffer is required between uses or adjacent properties.

## 12.5 Foundation Base

- A. A foundation base of vegetation including but not limited to trees, shrubs, ground cover vegetation or accent plants; or hardscape including but not limited to decorative pavement, planter wells with surface grates, pots, tree grates, raised planter walls, benches or other street furniture will be utilized adjacent to the exterior walls as appropriate for the given LUG and site context.

## 12.6 Retention Basins

- A. Retention basin layout may be one of the following:
  - 1. Irregular in shape, contoured and designed as an integral part of the landscaping theme,
  - 2. Designed in a formal and structured manner as an extension of the architecture or urban setting,
  - 3. A combination of forms if they are appropriate or in intentional contrast to their setting.
- B. Retention basins may be entirely surrounded by retaining walls and accessed only by steps or ramps.
- C. Landscaping in the form of vegetation or hardscape shall be provided in all areas of the retention basin not occupied by structures or parking.
- D. Refer to Section 13 - Stormwater Drainage and Retention Standards for additional requirements



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## Exhibit 12.7 - Typical Retention Character



Note: photos and plans are intended to be representative of the character and quality of the types of retention areas within Mesa Proving Grounds, and are not intended to express specific design details, colors or materials.

## 12.7 Minimum Plant Size

Minimum size of plant materials for all required plants shall be as follows:

- A. Trees. American Nursery Association twenty-four (24) inch box (determined by tree caliper). A minimum sixteen (16) foot tall palm may be substituted for a required tree.
- B. Shrubs. fifty percent (50%) of shrubs shall be a minimum of five (5) gallons in size; the remainder shall be a minimum of one (1) gallon in size.
- C. Turf. The use of turf as ground cover vegetation shall not be limited or restricted out side of public ROW subject to State requirements.

## 12.8 General Requirements

- A. Landscaped areas including required landscaped vegetation areas shall be maintained free from encroachment by any use, structure, vehicle, or feature not a part of the landscaping design.
  - 1. Where turf abuts decomposed granite or similar inorganic landscape material, provide a hardscape edging material or strip.
- B. Ground Cover. Required ground cover may be of two (2) types:
  - 1. Vegetative ground cover consisting of living plant materials characterized by general horizontal, and limited vertical growth, generally not exceeding eighteen inches (18") in height.
  - 2. Inert ground cover consisting of gravel, decomposed granite, crushed rock, bark, mulch or other similar materials.
- C. Active Play Areas. No trees shall be required in active play areas. Shade shall be added at the edge of active play areas.
- D. Irrigation Systems. Required irrigation systems shall be underground automatic watering systems, unless the area is served by functioning flood irrigation or a sustainable design alternative. Permanent above ground irrigation systems may be used so long as they are maintained and part of the overall landscape design.
- E. Maintenance of Landscaping
  - 1. The Master Developer shall maintain landscape materials and landscaped areas in accordance with a landscape plan.
  - 2. An irrigation system shall be provided to all landscaped areas containing living plant materials, unless the vegetation can survive without such a system or a daily watering routine is committed to by the Master Developer.
  - 3. Landscaping must be designed and maintained so as not to create a hazard by blocking the view of bicyclists, pedestrians and drivers at points of potential conflict.
- F. Installation of Landscaping. Landscaping shall be installed with adequate precautions to insure survival, as shown on the development plan or landscape plan for a particular site, prior to the issuance of a Certificate of Occupancy for the building or use.

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- G. ROW. Landscaping of adjacent undeveloped ROW is required in addition to the minimum on-site requirements. The minimum landscaping shall be:
1. Trees. Trees shall be provided at a density of one (1) tree per 2,300 square feet of total area.
  2. Ground Plain or Understory. Areas located on adjacent undeveloped ROW must be either vegetation or hardscape. If vegetation, the area shall be covered by ground cover vegetation, flowers or shrubs at a density of one (1) plant per every fifty (50) square feet and areas of vegetation may be clustered.
- H. Landscaping installation shall be in substantial conformance with the plans. Significant alteration in the design or installation without appropriate plan amendment approval is subject to the withholding of final inspection approval.
- I. Curbing. Where wheel stops are required to prevent vehicular intrusion, a curb, wheel stop, vertical element (such as bollards, pots, or other street furniture) or bumper guard shall be installed.
- J. Parking. When a parking space abuts a landscape island, median, planting areas or planter, provide a curb, wheel stop, vertical element (such as bollards, pots, or other street furniture) or bumper guard shall be installed.
- K. Artificial options may be allowed as appropriate alternative to groundcover during the DUP and Site Plan processes.