

# TATU CITY

## Soft Landscaping guidelines

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## 1. Introduction

The information contained within this Landscape Manual for Tatu City applies to all new development governed by the permitting process defined in the Tatu City Development. Property developed or substantially changed under a permit approved by the Tatu City is subject to the Regulation-based requirements of this Landscape Manual. ***Periodic updates to the Landscape Manual may be made by the management after review and approval.***

**A. Application.** The Landscape Manual is a compilation of the latest accepted landscaping practices. It is meant to be used by development and design professionals, landscape contractors and individual citizens to maximize the chances for success of newly installed landscape plantings. This document has two main components defining the guidelines.

- i) **Required elements for landscaping.** This will define procedures that must be followed as relates to landscaping work within Tatu City.
  - ii) **Recommended** practices to be followed in order to maximize the survivability and success of these plantings. The recommended or informational elements include suggestions for best landscape management practices for the installation and maintenance of plant materials and other landscaping elements.
- B.** This *Landscape Manual* will be used by staff to assess proposed Regulation-required landscape installations. The information is designed as a supplement to landscaping requirements set forth for Tatu City. Landscape designers and/or landscape contractors are expected to follow the required parameters of this Manual to guide them in implementing landscape installations within Tatu City.
- C.** The *Landscape Manual* incorporates water-wise landscaping principles. Notes that emphasize on opportunities for efficient use of water within the landscape are included in this guideline. The seven principles of Water-Wise Landscaping include:
- i) Planning and design;
  - ii) Soil improvement;
  - iii) Efficient use of watering and irrigation;
  - iv) Use of mulch;
  - v) Water-appropriate selection of plant materials;
  - vi) Appropriate maintenance practices.

## 2. Landscape Plans

### **A. Required items**

Landscape plans shall be prepared by a person demonstrating knowledge and experience in the field of landscaping and/or site design such as a landscape architect, landscape designer or landscape contractor. The landscape plan shall adequately detail the requirements of the Tatu City and this *Manual*. Plans shall include the following:

- i) A plant list or table showing: quantity, scientific names, common names, sizes, and intended uses; and a key that identifies the species of all plant material on the landscape plan.
- ii) The size of the proposed plant material. Sizes of upright shrubs shall be specified by height only. Tree sizes shall be shown by caliper and/or height, as applicable.
- iii) The location of all required landscape materials, including trees, shrubs, and structural elements, both existing and proposed.
- iv) The location of preserved tree coverage and tree replacement areas, as applicable.
- v) The location of tree protection fences and silt fences.

- vi) Proposed drives, paving areas, decks, walks, pools, and other man-made structures, elements, and utilities which are to remain or be constructed on the property.
- vii) All construction notes and details relating to construction, specific material, and planting procedures.
- viii) Demonstration of compliance with the driveway/intersection sight distance triangle requirements. Safe sight distances within parking lots. Plants located within driveway medians, at the ends of parking lot islands, and within sight distances shall be a species with a maximum mature height of no more than 750mm.
- ix) Easements, plantings proposed within easements shall be approved by the utility provider. Trees proposed for planting within overhead electrical line (power line) easements also shall utilize tree species that are short growing and subject to approval for use under the power lines by the operating utility.

### ***B. Recommended Design Considerations***

**Water-Wise Tip:** Shrub, annual, perennial, and turf grass areas have different water requirements. Reduce over-watering by grouping plants with similar water needs into separate irrigation zones.

- i) Planting trees under overhead utilities should be avoided. However, in some cases, an overhead utility is not located within an easement (or a public right-of-way). In these cases, it is recommended that tree plantings have a minimum setback of 30 feet from the centerline of an overhead utility. If a tree needs to be planted within this recommended set-back, only tree species approved for use under power lines should be planted.
- ii) Plants should not be placed where they will block or interfere with the operation of site features and utilities such as those associated with fire safety, site lighting, water and sewer connections, and electrical access. The designer should show the location of all proposed utilities to verify that there are no conflicts with either underground or above-ground utilities. On planting plans, site utilities can be shown as half-toned to make it easier to see the proposed plantings, and their relationship to the utilities.
- iii) Avoid conflicts between trees and site lighting. Tree shadows can interfere with lighting performance. Pruning of the obstructing trees could result in the loss of a regulation-required tree, resulting in possible violation of the Regulation. To avoid such conflicts, the site designer should provide a minimum 4.5meters horizontal clearance from the tree-trunk center to the center point of overhead lighting elements.
- iv) Location of proposed irrigation lines and sprinkler heads should be clearly shown (if proposed).

## **3. Tree Preservation**

Existing mature trees will be preserved as much as possible.

- i) ***Required Procedures***
  - a. Protection of Existing Vegetation, areas of vegetation to be preserved in order to meet Regulation requirements shall not be disturbed or encroached upon.
  - b. Install tree protection fencing around areas of vegetation to be preserved.

- c. The minimum size of the “Tree Preservation Area” shall be the area within the root protection zone (RPZ) of the tree or group of trees to be preserved. Additional area can be preserved.
- d. When installing tree protection fencing for preserved trees along a wood’s edge, the fence shall be located at the edge of the RPZ of the outermost-protected trees, and on the wooded side of any silt fencing to be installed in the same location.
- e. Tree protection fencing, including warning signs shall be installed prior to starting any grading or land disturbing activity.
- f. Trees should be staked where necessary.

ii) **Recommended Procedures**

**Water-Wise Tip:** Preservation of existing trees is preferable over tree replacement for several reasons:

- i) Existing trees require no water to become established and can typically be maintained with rainfall.
- ii) Areas of tree coverage absorb rainfall and allow for groundwater recharge on site.
- iii) Undisturbed soils prevent moisture loss that can occur when soils are graded and exposed to air.

## 4. Selection of Plant Material

### A. Plant Selection

i. *Required Plant Selection Practices*

- a. **Plants Not Allowed.** Trees and other plants which have invasive tendencies, are prone to disease, are not hardy, or other factors shall not be planted as landscaping for any purpose in Tatu city. The landscape designer should therefore avoid specifying such in the plant list.
- c. **Approval of Plants.** Plants list will be submitted for approval before they are used. Approval will be guided by the criteria in the tables below. Additionally, the plants must be suitable for the proposed growing environment, and have a non-invasive nature (or, if the plant has invasive tendencies, they would not be manifested under the proposed planting conditions).

ii. **Recommended Plant Selection Parameters.**

The degree of tolerance of a plant to drought and/or wet conditions should be a basic guideline for suitability of plants within the areas to be planted. Visual aesthetic will only be achieved if the plant is comfortable in the environment being put into. Please keep the following in mind when selecting plants for drought-tolerance:

Drought-tolerance does not mean the plants prefer hot, dry weather or that they will not be adversely affected by extended dry weather. High temperatures and wind, heat and light reflection from nearby hard surfaces, and high fertilization can increase the potentially damaging effects of low moisture on plant growth and survival.

**Water-Wise Tip:** The water needs of each plant being specified can be utilized during the design process to group plants with similar water needs and achieve a landscape that is easy to maintain. Consideration of site characteristics such as soil drainage and nutrient-holding capacity, preferred sun exposure, and urban conditions when selecting plants.

**B. Criteria for Determining Allowed Locations for Use of Regulation-Required Plant Material**

The following tables describe the typical criteria to be used for determining allowed locations for use of the trees and shrubs. Each site is unique and a designer should consider these criteria, along with the recommendations provided in the tables when selecting plants for a particular project’s landscape requirements.

**i) Allowed trees**

<b>Allowed Use/Location Category</b>	<b>Typical Criteria for Specific Category of Use/Location</b>
<b>Street Trees, Residential and Suburban</b>	Trees that need large areas (35 feet minimum) between the street and building(s)
<b>Street Trees, Urban</b>	Trees which are adaptable to poor soil conditions and restricted growth areas; tolerant of pollution and possible (road) salt conditions; and tolerant of reflected heat from pavement and building surfaces.
<b>Street Trees, Downtown and Compact</b>	Trees which are adaptable to urban conditions and smaller planting areas between the street and building(s); especially suitable for use in engineered planting areas and restricted spaces having pavement encroaching on the growing area.
<b>Street Trees, Under Power Lines</b>	Short trees that don’t grow to the level of power lines. Must meet conditions for street trees.
<b>Parks</b>	Recommended canopy trees that typically need larger growth areas; or understory trees that tolerate shade and Competition from canopy trees, or will be used as canopy trees in the Urban, Compact Neighborhood, or Downtown Tiers. Pollution- and heat-tolerance is preferred when used in urban parks.
<b>Vehicle Use Areas</b>	Trees which tolerate pollution, tight growing conditions, and reflected heat and typically have branching starting at six to seven feet above finished grade. Trees that are multi-stemmed or full to the ground shall be planted where their mature size and shape will ensure required sight clearances are provided and maintained, or specified as limbed up to at least six feet above finished grade.
<b>Buffers, Constructed</b>	Typically, trees native to the Tatu city area and generally suited to the growing conditions found within a constructed buffer; trees should be selected for each site based on adaptability to the unique site conditions. Non-invasive, non- native trees suited to the growing conditions within the proposed buffer can also be used.
<b>Buffers, Solid Hedge</b>	Evergreen understory trees which are dense and full to the ground, and capable of meeting Regulation requirements.

ii) **Allowed Shrub Table Category Criteria**

<b>Allowed Use/Location Category</b>	<b>Typical Criteria for Specific Category of Use/Location</b>
<b>Urban Conditions</b>	Typically, shrubs adaptable to poor soil conditions and restricted growth areas; tolerant of pollution and possible (road) salt conditions; and tolerant of reflected heat from increased pavement and building surfaces
<b>Vehicle Use Areas</b>	Shrubs that tolerate pollution, poor soils, reflected heat, and tight spaces. Recommended shrubs shall be planted where the mature shrub size and shape will allow required sight clearances to be provided and maintained.
<b>Sight Distance Triangles</b>	Shrubs less than 30 inches in height at maturity, or easily maintained at that height while also maintaining all of the natural characteristics of the plants' form, leaves, and structure. These shrubs can be planted where safe sight clearances within parking lots, and at driveway and street intersections, are required.
<b>Under Tree Coverage</b>	These species are adaptable to shade conditions and to competition with trees, and can be used in tree coverage areas that serve to fulfill multiple Ordinance requirements. Similar to Constructed Buffers, shrubs should be selected for each site based on adaptability to the unique site conditions.
<b>Buffers, Constructed</b>	Shrubs native to Kenya and East Africa region and generally suited to the growing conditions found within a constructed buffer; shrubs should be selected for each site based on adaptability to the unique site conditions. Non- invasive, non-native shrubs suited to the growing conditions within the proposed buffer can also be used.
<b>Buffers, Solid Hedge</b>	Evergreen, understory trees (or large evergreen shrubs with mature heights of at least eight feet) which are dense and full to the ground.

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