

ORDINANCE NO. 2022-02-03

DATE: 02/14/2022

AN ORDINANCE OF THE KEARNS METRO TOWNSHIP COUNCIL  
ADOPTING NEW WATER EFFICIENCY STANDARDS

**WHEREAS**, Utah Code § 10-9a-102 grants the Metro Township Council of the Kearns Metro Township (“**Council**”) authority to enact ordinances that it considers necessary or appropriate for the use and development of land in the Kearns Metro Township (“**Kearns**”), including Kearns' aesthetics; and

**WHEREAS**, Utah Code §10-2a-414(3) provides that a Salt Lake County ordinance in effect in 2017 when Kearns incorporated shall remain in effect as a Kearns ordinance “until the metro township council amends or repeals the ordinance;” and

**WHEREAS**, the Jordan Valley Water Conservancy District, which includes Kearns in its service area, has adopted and recommended updated Water Efficiency Standards (“**Standards**”) with the goal of reducing overall per capita water use in its service area; and

**WHEREAS**, water is a limited resource and the recommended Standards will result in the conservation of water and help keep water rates reasonable for Kearns residents; and

**WHEREAS**, the Council held a public hearing and reviewed the recommended Standards as proposed for adoption in Exhibit A; and

**WHEREAS**, the proposed amendment to Kearns Code Section 19.77 replaces the prior water efficiency standards with the Jordan Valley Water Conservation District water efficiency Standards, establishes minimum plant quantity standards for residential and non-residential uses, and amends the buffering standards for non-residential uses when located next to residential uses; and

**WHEREAS**, the Council finds that the Standards will enhance the public health, safety and welfare, and will promote the goals of the General Plan.

**NOW, THEREFORE, BE IT RESOLVED AND ORDAINED BY THE KEARNS METRO TOWNSHIP COUNCIL:**

**SECTION 1. Adoption and Repeal.** The Council hereby repeals Chapter 19.77 of the Kearns Metro Code and hereby adopts and replaces Chapter 19.77 of the Kearns Metro Code in its entirety with the revised City Code sections of Chapter 19.77, attached hereto as **Exhibit A**.

**SECTION 2. Severability.** If any section, part or provision of this Ordinance is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Ordinance and all sections, parts, provisions and words of this Ordinance shall be severable.

**SECTION 3. Effective Date.** This Ordinance shall become effective immediately upon publication and posting as required by law.

KEARNS METRO TOWNSHIP COUNCIL

By: Kelly F. Bush  
Kelly Bush, Mayor

ATTEST

APPROVED AS TO FORM:

Sherrie Swensen  
Sherrie Swensen, Clerk/Recorder

Nathan Bracken  
Nathan Bracken,  
Metro Township Attorney

VOTING

Council Member Bush voting	<u>Aye</u>
Council Member Butterfield voting	<u>Excused</u>
Council Member Peterson voting	<u>Aye</u>
Council Member Schaeffer voting	<u>Aye</u>
Council Member Snow voting	<u>Aye</u>

(Complete as applicable)

Summary of ordinance published on Utah Public Notice Website: February 17, 2022

Date of publication: February 17, 2022

Effective date of ordinance: February 17, 2022

**EXHIBIT A**  
**REVISED CHAPTER 19.77**

## Chapter 19.77 WATER EFFICIENT LANDSCAPE DESIGN AND DEVELOPMENT STANDARDS

### 19.77.010 Purpose and intent.

- A. The purpose of this chapter is to establish standards for the protection and enhancement of Salt Lake County's environmental, economic, recreational, and aesthetic resources. The landscape design and development standards set forth in this chapter are intended to promote the following:
1. ~~More efficient use~~Conservation of the public's water resources by establishing water conservation standards for landscape irrigation purposes indoor plumbing fixtures and outdoor landscaping;
  2. Preservation and enhancement of the county's environmental and aesthetic character;
  3. Enhancement of land use compatibility and promotion of design continuity between adjacent land uses;
  4. Reduction of energy consumption through the prudent placement of plant materials;
  5. Improved management of stormwater runoff;
  6. Reduction in the absorption and re-generation of heat from paved vehicular parking areas and other impervious surfaces;
  7. Separation of vehicular and pedestrian functions within on-site vehicular circulation and parking areas;
  8. Spatial and visual separation of parked vehicles from public view and adjacent vehicular travel ways;
  9. Reduction of vehicular headlight glare and intrusive artificial light onto area residences;
  10. Reduction of development-related environmental impacts through improved management of erosion, noise, dust, air pollution and glare;
  11. Re-introduction of native and low water use plant species into the developed environment;
  12. Reduction of landscape maintenance responsibilities and costs.

(Ord. 1609 § 2 (part), 2007)

### 19.77.020 Scope and applicability.

~~Homeowner provided landscape improvements within the front, side and rear yards of single and two family dwellings are exempt from the requirements of this chapter.~~

- ~~A. — Newly Established Land Uses. Except as noted above, these landscape standards shall be applied to all new developments in the unincorporated area of Salt Lake County. Residential development projects such as but not limited to planned unit developments, condominiums, multifamily residential developments and residential subdivision projects in which improvements such as but not limited to the dwelling units, common area, recreational amenities and infrastructure improvements are provided by the developer shall be landscaped in accordance with the requirements of this chapter.~~
- A. The following standards shall be required for all developer/contractor installed residential, commercial, institutional, and industrial construction, as applicable, including remodels or refurbishments of existing developments. The Outdoor Landscaping Standards shall also be required for new landscaping construction installed by homeowners.
- B. Existing Developments. Land use developments in existence at the effective date of this chapter shall, to the maximum extent feasible, be brought into compliance with the chapter's provisions if:

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1. The gross floor area of improvements existing on the property at the effective date of this chapter are changed, modified, or expanded by more than twenty percent. Compliance under the noted circumstances applies whether the changes, modifications, or expansions occur in a single event or in incremental stages.
- C. Off-Street Parking.
1. New Developments. Off-street parking facilities for all new developments shall be landscaped in accordance with the requirements of this chapter. These include:
    - a. Surface or at-grade parking areas;
    - b. The exterior perimeter of parking structures at all levels, as well as the open-air top parking level of such structures.
  2. Existing Parking Areas. Off-street parking areas in existence on the effective date of this chapter shall be brought into compliance with the provisions of the chapter as noted below:
    - a. Expansion by Fifty Percent or Less. When an existing off-street parking area is expanded by fifty percent or less the newly established expansion area shall be brought into compliance with both the interior and exterior/perimeter landscape requirements of this chapter.
    - b. Expansion by More Than Fifty Percent. When an existing off-street parking area is expanded by more than fifty percent, the entire expansion area shall be brought into compliance with both the interior and exterior/perimeter landscape standards of this section. The pre-existing parking area, while not required to be retroactively brought into compliance with this section's interior parking area landscape requirements, shall be made to conform to exterior/perimeter area landscape standards.
    - c. Repeated Expansions. Repeated expansions of a parking lot area over a period of time commencing with the effective date of this chapter shall be combined in determining whether the fifty percent threshold has been reached.
- D. Exemptions. The provisions of this chapter do not apply to the following:
1. The interior undercover portions of parking structures;
  2. The interior undercover portions of carports containing no more than ten parking spaces;
  3. The interior display areas of vehicle and equipment sales lots;
  4. The interior areas of vehicle and equipment storage lots;
  5. Properties listed on the national or state historic registers.

In addition, areas dedicated and used for the following specific purposes ~~are~~may be exempt from the ~~landscape outdoor water allowance limitation efficiency landscaping standards~~ of this chapter and are evaluated on a case-by-case basis:

- a. Sports fields;
- b. Turf areas within public parks;
- c. Golf courses;
- d. Cemeteries.

~~Although exempt from landscape water allowance limitations, all other provisions of this chapter shall apply. In particular, landscaping shall be provided in the interior and perimeter areas of off-street parking facilities, adjacent to buildings, and along walkways.~~

~~(Ord. 1609 S 2 (part), 2007)~~

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### 19.77.030 Promotion of maximum water efficiency.

A. ~~Establishment and Maintenance of a Site-Specific Landscape Water Allowance. So as to assure more efficient water consumption in the establishment and long-term maintenance of site landscape improvements, an annual landscape water allowance shall be established and maintained for each property improved as set forth in this chapter.~~

~~The landscape water allowance shall be calculated using the following equation:~~

~~Landscape Water Allowance =  $ET_0 \times 1.0 \times 0.62 \times A$  where landscape water allowance is in gallons per year.~~

~~$ET_0$  = Reference evapotranspiration in inches per year.~~

~~1.0 =  $ET_0$  adjustment factor, one hundred percent of turf grass  $ET_0$  (water year adjustment factor).~~

~~0.62 = Conversion factor (to gallons per square foot).~~

~~A = Total irrigated landscape area in square feet.~~

~~The  $ET_0$  or reference evapotranspiration for Salt Lake County is 31.18 inches per year. Converting this figure so that a landscape water allowance can be expressed in gallons per year requires the use of the conversion factor to obtain an equivalent amount in gallons per square foot (19.33). An  $ET_0$  adjustment factor of one is used in order to accommodate the use of turf under circumstances that promote maximum water efficiency.~~

~~Acceptable water efficiency shall be deemed to have been achieved when the approved landscape plan indicates a landscape water allowance of no more than fifteen gallons per square foot average for the entire landscaped area of the site. Multiplying this figure by the total irrigated landscape area in square feet yields the annual water budget for landscape use for the property.~~

B. ~~Introduction and Use of Native and Other Drought-Tolerant Plants. In order to promote maximum water conservation, not less than eighty percent of the trees and shrubs used on a site shall be water conserving species capable of withstanding dry conditions once established. Native plants shall be used to the maximum extent feasible. Drought-tolerant grass varieties shall be used in areas planted in turf or lawn. Lists of plants that satisfy these requirements and that are available locally may be obtained from the director.~~

C. ~~Plant Establishment and Arrangement on the Basis of Water Consumption. Among the many ways in which plants may be distinguished from one another is categorization on the basis of water use. Establishment and arrangement of plants on a site according to the water needs of those plants is commonly referred to as hydrozone management. Hydrozone management is required by this chapter and shall be implemented through the use of the following:~~

~~1. Plants with similar water needs shall be grouped together as much as possible.~~

~~2. Areas landscaped with high water use plants shall be, whenever possible, separated from those with low and very low water use by moderate water use landscape zones.~~

~~3. For projects located at the interface between urban areas and natural (nonirrigated) open space, drought-tolerant plants that will blend with the native vegetation shall be selected. Plants that tend to accumulate excessive amount of dead wood or debris are to be avoided. Plants with low fuel volume or high moisture content are preferred. Every effort is to be taken to minimize fire hazards. Lists of plants that satisfy these requirements and that are available locally may be obtained from the director.~~

~~4. Areas with slopes greater than thirty percent shall be landscaped with deep-rooting, water-conserving plants for erosion control and soil stabilization.~~

~~5. Park strips and other landscaped areas less than ten feet wide shall be landscaped with water-conserving plants.~~

D. ~~Irrigation System Requirements.~~

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1. ~~Designer Qualifications. All sprinkler irrigation systems shall be designed by a qualified professional who is licensed under Utah Code Title 58 or by a person who is exempt from professional licensure requirements for the scope of work performed.~~
  2. ~~Design Standards. Irrigation design standards applicable to this chapter shall be as outlined in the latest version of the minimum standards for efficient landscape irrigation system design and installation prepared by the Utah Irrigation Association, subject to the following modifications and additions:~~
    - a. ~~Pressure Regulation. A pressure regulating valve shall be installed and maintained if the static service pressure exceeds eighty pounds per square inch (psi).~~
    - b. ~~Automatic Controller. All irrigation systems shall include an electric automatic controller with multiple programs, multiple repeat cycle capabilities so as to reduce runoff on slopes and soils with slow infiltration rates, and a flexible calendar program. All controllers shall be capable of utilizing an automatic rain shut-off device, and the ability to adjust run times based on a percentage of maximum ETO.~~
    - c. ~~Slope Adjustments. On slopes exceeding thirty percent, the irrigation system shall consist of low precipitation rate rotors or spray heads, drip emitters, or bubblers with a maximum precipitation rate of 0.85 inches per hour and adjusted irrigation cycle times to eliminate runoff.~~
    - d. ~~Irrigation Zones and Use. Each zone shall irrigate a landscape with similar site, slope and soil conditions and plant materials with similar watering needs. Turf and nonturf areas shall be irrigated on separate zones. Drip emitters and sprinklers shall be placed on separate zones.~~
    - e. ~~Tree Irrigation. Drip emitters or bubblers shall be provided for each tree not planted in a turf area. Irrigation in the vicinity shall be factored in to prevent under or over watering and to ensure deep root growth. Bubblers shall not exceed one and one-half gallons per minute per device. Bubblers for trees shall be placed on a separate valve as warranted by tree species and area conditions.~~
    - f. ~~Turf Zones. Sprinklers shall have matched precipitation rates with each zone.~~
    - g. ~~Elevation Adjustments. Check valves shall be required where elevation differences will cause low-head drainage. Pressure regulating valves and pressure compensating heads and drip emitters with a pressure regulating device shall be required where a significant variation in water pressure will occur within the irrigation system due to elevation differences.~~
    - h. ~~Requirements for Drip Irrigation. Drip irrigation lines shall have filters and automatic end flush valves and be protected by organic or rock mulch.~~
    - i. ~~Automatic Controller Zones. Zones with spray or stream sprinklers shall not be scheduled to operate between the hours of ten a.m. to seven p.m. so as to reduce water loss from wind and evaporation. Drip irrigation systems are subject to no such operational constraints.~~
    - j. ~~Operational Efficiency. The minimum efficiency required for irrigation systems established in accordance with the requirements of this chapter is as follows:~~
      - i. ~~The distribution efficiency for all fixed spray systems shall be sixty percent.~~
      - ii. ~~The distribution efficiency for all rotor systems shall be seventy percent.~~
    - k. ~~Scheduling of System Operations. A schedule shall be developed which allows for plant material to be established. This shall have a maximum two-year time period. Once established, a revised schedule shall be developed for maintenance of the plant material. The schedule presently in effect shall be posted at the controller. The schedule shall reflect an application rate which achieves optimum system efficiency, a minimum one-hour time interval between all applications, and provisions against irrigation during restricted hours.~~
- ~~(Ord. 1609-5-2 (part), 2007)~~

### **19.77.030 Indoor Fixture Requirements**

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It is recommended and encouraged, but not mandated, that all new and future construction and future additions, remodels, or refurbishments install plumbing fixtures that have the WaterSense label, including: lavatory faucets, shower heads, sink faucets, water closets (tank and flushometer-valve toilets), and urinals, to the extent Utah law allows municipalities or local districts to require these fixtures

**19.77.040 ~~Landscape Water efficient landscape design and buffer standards and guidelines.~~**

~~A. Standards Applicable to All Developments. Required site landscape improvements shall be provided in accordance with the standards and design guidelines set forth in this chapter. The standards set forth herein are numerically measurable so as to readily facilitate the preparation, review and approval of landscape plan submittals and the subsequent verification of compliance with the requirements of the chapter. Design guidelines, though not precisely measurable, are intended to clarify the principles associated with specified standards, provide guidance for the review and approval of submitted landscape plans, and provide flexibility for design professionals who wish to propose alternative compliance approaches.~~

~~B. Retention of Significant Natural Features. Features that are unique to a property, such as but not limited to that property's natural topography, existing vegetation, or riparian features shall be taken into consideration in the planning and design of landscape improvements for that property. Priority is to be given to the preservation or protection of existing natural areas, particularly where mature or specimen trees or wooded riparian areas are a part of a proposed development site. The proposed locations of streets, buildings and lots shall, as much as possible, minimize disturbance to significant existing trees.~~

~~CA.~~ Tree Preservation, Removal and Replacement.

1. All healthy trees having a caliper of four inches in size or larger shall be preserved to the maximum extent feasible. Preserved trees shall be credited to the satisfaction of replacement trees on a three to one caliper-to-caliper basis.
2. Preserved trees shall be credited toward the satisfaction of the tree planting requirements of this chapter.
3. Where existing trees are to be protected, the following standards shall apply:
  - a. A fenced tree protection zone shall be established around each tree or cluster of trees to be retained. The perimeter of this zone, which shall coincide with the drip line of the tree or trees to be protected, shall be clearly marked with high-visibility materials at a minimum height of four feet.
  - b. The storage or movement of equipment, material, debris or fill is prohibited within the fenced tree protection zone so as to minimize soil compaction.
  - c. The cleaning of equipment or material or the storage and disposal of waste material such as paints, oils, solvents, asphalt, concrete, motor oil or any other material harmful to the life of a tree is prohibited within the drip line of any protected tree or group of trees.
  - d. No cut or fill is permitted within the drip line of any protected existing tree or group of trees unless a qualified arborist, forester or landscape architect has evaluated and approved the disturbance.
  - e. All protected existing trees shall be pruned as specified by a qualified arborist or forester.
  - f. No damaging attachment, wires, signs or permits may be fastened to any protected tree.
  - g. Large property areas containing protected trees and separated from construction or land clearing areas, road rights-of-way and utility easements may be "ribboned off," rather than erecting protective fencing around each tree as required above. This may be accomplished by placing metal t-post stakes a maximum of fifty feet apart and tying ribbon or rope from stake-to-stake along the outside perimeters of such areas being cleared.
4. The removal of trees is allowed under the following circumstances:



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- a. Where trees have naturally fallen or are determined by a licensed arborist to be dead or dying.
  - b. Where trees have been diagnosed by a qualified arborist as unhealthy beyond reasonable rehabilitation.
  - c. Where trees are determined to be potentially harmful to the public health, safety or welfare.
  - d. Where it has been determined by the county that tree removal is necessary to restore clear visibility at driveways and intersections.
  - e. Where the preservation of trees would prevent reasonable site grading to accommodate a functional arrangement of buildings and related improvements on the property. Written documentation of the above is required prior to the removal of any tree.
5. Trees having a caliper of four inches in size or greater which are removed shall be replaced on the development site by trees of no less than two-inch caliper in size. The required replacement ratio shall be one tree for every two caliper inches (cumulative) of trees removed. Replacement trees shall not be credited toward the satisfaction of the tree planting requirements of this chapter but shall be in addition to that otherwise specified.

~~D. Exposure to Sun and Wind. Plant selection and placement shall recognize the importance of energy conservation. Deciduous trees which are sun tolerant shall be planted on the south and west sides of buildings so as to provide shade from summer sun while allowing winter sun to radiate into buildings. Shade tolerant plants and evergreen trees shall be planted on the north to northwest sides of buildings in order to reduce the chilling effects of winter winds.~~

B. Outdoor Water Efficiency Landscaping Standards. All new and rehabilitated landscaping for public agency projects, private development projects, developer-installed landscaping in multi-family and single-family residential projects within the front and side yards, and homeowner provided landscape improvements within the front and side yards of single and two-family dwellings shall comply with the landscaping standards below:

1. All irrigation shall be appropriate for the designated plant material to achieve the highest water efficiency. Drip irrigation or bubblers shall be used except in Lawn areas. Drip irrigation systems shall be equipped with a pressure regulator, filter, flush-end assembly, and any other appropriate components.
2. Each irrigation valve shall irrigate landscaping with similar site, slope and soil conditions, and plant materials with similar watering needs. Lawn and Planting Beds shall be irrigated on separate irrigation valves. In addition, drip emitters and sprinklers shall be placed on separate irrigation valves.
3. Landscaped areas shall be provided with a WaterSense labeled smart irrigation controller which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities.
4. At least 3-4 inches of Mulch, permeable to air and water, shall be used in Planting Beds to control weeds and improve the appearance of the landscaping.
5. At maturity, landscapes are recommended to have enough plant material (perennials and shrubs) to create at least 50% living plant cover at maturity at the ground plane, not including tree canopies.
6. Lawn shall not be installed in Park Strips, Paths, or on slopes greater than 25% or 4:1 grade and be less than 8 feet wide at its narrowest point. To the extent reasonably practicable, Lawn shall be free from obstructions (trees, signs, posts, valve boxes, etc.).
7. In residential landscapes, the landscaping shall adhere to the following Localscapes requirements:
  - a. If size permits, the landscaped areas of the front yard and back yard shall include a designed Central Open Shape created by using Lawn, Hardscape, groundcover, gravel, or Mulch.
  - b. Gathering Areas shall be constructed of Hardscape and placed outside of the Central Open Shape. In a landscape without Lawn, Gathering Areas may function as the Central Open Shape.

- c. Activity Zones shall be located outside of the Central Open Shape and shall be surfaced with materials other than Lawn.
  - d. Paths shall be made with materials that do not include Lawn, such as Hardscape, Mulch, or other groundcover.
  - e. Lawn areas shall not exceed the greater of 250 square feet, or 35% of the Total Landscaped Area.
  - f. Small residential lots, which have no back yards, which the Total Landscaped Area is less than 250 square feet, and which the front yard dimensions cannot accommodate the minimum 8 feet wide Lawn area requirement of the Landscaping Requirements in section F, are exempt from the 8 feet minimum.
8. In commercial, industrial, institutional, and multi-family development common area landscapes, Lawn areas shall not exceed 20% of the Total Landscaped Area, outside of Active Recreation Areas.

**EC. New Plantings, Outdoor Landscape Materials.** The measurements and specifications for all live plants used to fulfill the requirements of this chapter shall be as set forth in the American Standard for Nursery Stock (ANSI Z60.1-204) as published and periodically amended by the American Nursery and Landscape Association. The following are minimums in relation to those standards. Nothing in this chapter shall be interpreted to prohibit the provision of landscape improvements in excess of these minimums.

1. **Plant Quality.** Required plant materials shall be nursery or field grown, unless otherwise approved, and shall be healthy, well-branched vigorous stock with a growth habit normal to the species and variety, free from defects decay, disfiguring roots, sun-scald, injuries, abrasions of the bark, plant diseases, insect pest eggs, borers and all forms of infestations or objectionable disfigurements of diseases, insects and injuries.
2. ~~Plant Coverage and Growth Rate. The quantity and size of materials planted shall be sufficient to attain a percentage of coverage of seventy-five percent of organically planted areas within three years of initial planting.~~
3. ~~Species Diversity. A variety of plant species shall be utilized in all site landscaping. No one species may make up more than twenty-five percent of the total nonturf plant materials within the landscaped area. In order to prevent uniform insect or disease susceptibility and to stem the untimely degeneration or premature deterioration of trees planted or retained on a development site or in the adjacent area, species diversity is required. The following minimum requirements shall apply.~~

Total Number of Trees on Site	Maximum Percent of Any One Species
<del>10—19</del>	<del>50%</del>
<del>20—39</del>	<del>33%</del>
<del>40—59</del>	<del>25%</del>
<del>60 or more</del>	<del>15%</del>

~~Special consideration shall be given to canyon areas to protect against decimation due to insect or disease infestations.~~

4. ~~Lawn and Turf Areas. Areas proposed for planting in turf or lawn shall be a minimum of ten feet in width. Drought tolerant grass varieties shall be established and maintained.~~
5. ~~Mulch. All landscape areas not planted with shrubs, perennials, turf or other groundcover shall be covered with a minimum three inch layer of mulch (except around the crown of plants) to retain water, inhibit weed growth, and moderate soil temperature. Newly planted trees in areas predominantly improved with turf shall be provided a plant-free mulched area with a minimum radius of four feet around the trunks in order to protect the trunks from turf maintenance operations and expedite tree root establishment. Nonporous materials (e.g., plastic) shall not be placed under the mulch. Bare soil is not permitted.~~

- 62. Tree Placement. Trees shall be located to provide summer shade and limit winter shade on walks, parking lots, and streets.
- 73. Root Accommodation. Prior to the installation of trees, a determination shall be made as to whether root barriers are necessary to prevent roots from uplifting or cracking sidewalks or other hard surface improvements in the vicinity of the tree. Root barrier collars and root path trenches shall be installed as needed to provide such protection and to ensure healthy tree root growth.
- 84. Tree Size Requirements at Planting. All new and replacement trees shall meet the following minimum size requirements at planting:

a. Deciduous	two-inch caliper
b. Ornamental and flowering	one and one-half inch caliper
c. Evergreen	six feet tall

Where the above plant materials are secured on the basis of container size, equivalency shall be in accordance with the American Standard for Nursery Stock (ANSI Z60.1-204) as published and periodically amended by the American Nursery and Landscape Association.

- 95. Shrub Size at Planting. All shrubs shall be a minimum of twelve inches in height or spread (typically five gallon in size at planting, except when used solely for screening purposes, in which case twenty-four inch in height or spread is required.

~~10. Area Requirements for Landscape Improvements. No less than twenty percent of the gross area of a property subject to the requirements of this chapter shall be improved and maintained as landscape area. Land area encumbered by buildings, structures, paving and other impervious surfaces not related to on-site landscape improvements shall not be considered in the calculation of landscape area.~~

6. Plant Quantity – Residential: All front setbacks (exclusive of accessways and other permitted intrusions) must be landscaped or have landscaping guaranteed before an occupancy permit will be issued or final building permit approved. In all residential districts, the minimum landscaping required for every 50 lineal feet of street frontage (or portion thereof, deducting the width of the driveway) is:

- (a) One tree for every 50 lineal feet of street frontage.
- (b) Four shrubs or accent plants for every 50 lineal feet of street frontage; and
- (c) The remaining area treated with suitable living ground cover or decorative treatment of bark, rock, or other attractive ground cover.

7. Plant Quantity – Non-Residential. All required front and interior setbacks (exclusive of accessways and other permitted intrusions) must be landscaped or have landscaping guaranteed before an occupancy permit will be issued. The minimum landscaping materials required within all required setbacks in all commercial and industrial districts are as follows:

- a. One tree for every 30 feet of street frontage.
- b. Six shrubs, trees, or accent plants for every 1,000 square feet of required setbacks.
- c. The remaining area treated with suitable living ground cover or decorative treatment of bark, rock, or other attractive ground cover.

D. Buffer Areas Between Nonresidential and Residential Land Uses. A landscaped buffer area not less than 15 feet wide shall be required for non-residential uses when abutting a residential use.

- 1. The minimum landscaping materials required within landscape buffer areas are as follows:
  - a. One tree for every 25 lineal feet of landscape buffer is required. Trees shall be planted either in a linear or cluster arrangement of trees so long as the spacing of provided trees adequately screens the nonresidential use from the adjacent residential area. If a linear arrangement of trees is provided, tree spacing shall not exceed 25 feet on center.

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- [b. Eight shrubs, trees, or accent plants for every 1,000 square feet of required landscape buffer.](#)
    - [c. The remaining area treated with suitable living ground cover or decorative treatment of bark, rock, or other attractive ground cover.](#)
  - [2. Encroachments to Within 10 Feet. Landscape buffer area may be reduced to no less than 10 feet if the following standards are applied in addition to standards specified in subsection \(1\) above:](#)
    - [a. A fence or masonry wall at least five feet tall constructed to provide a uniform sight-obscuring screen; or](#)
    - [b. An earth berm combined with evergreen plantings or a fence that forms a sight and noise buffer at least six feet tall within two years of installation.](#)

### **19.77.050 Landscape Design Guidelines**

**FA.** Design Guidelines. The intent of design guidelines is to acknowledge the expertise and integrity of licensed design professionals and to afford them a commensurate level of flexibility in achieving the purposes and intent of this chapter. Guidelines are included in this chapter so as to clarify or expand upon the principles associated with specified standards. They are further provided for guidance in the preparation and submittal of complying landscape plans. Design guidelines may be used either in conjunction with or in lieu of other required on-site landscape improvements. When employed in lieu of strict compliance with chapter provisions, substantiation of compliance with the purposes and intent of this chapter is required.

1. Separation and Screening with Plant Material. The intent of this guideline is to soften long expanses of building walls, fences and other hard-surface barriers and to effectively screen such surfaces from undisturbed on- or off-site view. Its further intent is to separate and screen new buildings and ancillary site improvements and activities from off-premise view.
2. Integration with Plantings. The intent of this guideline is twofold; (1) to provide better integration of newly constructed or remodeled site building improvements and outdoor spaces with other site improvements in the vicinity, or (2) to significantly enhance area characteristics through the coordinated introduction of new architectural themes, outdoor areas, and landscape improvements into areas in need of rehabilitation. In either event the incorporation of a diversity of plant materials, colors, textures, heights and aesthetic considerations of a similar nature may be employed.
3. Establishing Privacy. Privacy is particularly important where larger buildings are proposed next to the side or rear yards of smaller buildings. In such instances a higher-than-normal incidence of vertical landscape elements may be employed to address privacy concerns.
4. Land Form Shaping. Retention of existing land form is encouraged where site topography beneficially serves aesthetic and aquifer recharge purposes. Where reconfiguration of existing topographic conditions on a site is required to achieve these purposes, such grade changes should be either reminiscent of or complementary to natural land forms in the vicinity. The resulting land form modifications should, in either event, incorporate a high degree of both horizontal and vertical land form articulation, creating both berms and swales for aesthetic variety and groundwater collection purposes.
5. Visual Integration of Fences or Walls. Security fences and solid visual barriers commonly detract from the aesthetics of the area in which they're established. Similarly, though not so severely, garden walls, privacy fences, screen panels, arbors, and structures of a like nature may adversely affect area aesthetics. In such instances creative landscape enhancements may be employed to change the sense of proximity to such structures and to improve area aesthetics.

In applying these or similar strategies to achieve the purposes and intent of this chapter, the objectives with regards to aesthetic enhancement of on-site improvements are to:

- a. Add visual interest adjacent to large expanses of building walls;
- b. Enhance the architectural features of new building construction;

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- c. Provide better site integration of structural improvements;
  - d. Soften hard edges;
  - e. Enhance the compatibility of land uses of different character, intensity, and density;
  - f. Reduce the potentially adverse impacts of site-generated noise;
  - g. Screen views into or between windows and defined outdoor spaces;

In applying these or similar strategies with regards to the integration of on-site improvements with surrounding areas, the objectives are to:

- i. Mitigate potential conflicts between divergent land uses, development densities or intensities, and building design or scale;
- ii. Maintain privacy for existing area residences;
- iii. Provide appropriate transitions between developed, managed landscape areas and those comprised of more natural vegetation;
- iv. Introduce high quality site improvements into areas in need of redevelopment.

### **~~19.77.050 Landscape yards or setbacks and buffer areas.~~**

#### ~~A. Landscaping Required:~~

~~1. Improvement Requirements in Relation to Yard Depth. In all zones where a front yard is required the entire frontage and depth of that yard area and any side yard area abutting a street shall be landscaped. Visibility at intersecting streets shall be maintained as set forth in Section 19.76.160 of this title. Parking areas shall not encroach on these minimum required setbacks except as herein authorized. The perimeter boundaries of all off-street parking areas that abut streets accessible to the public shall be landscaped and screened from public view. Specified yard area depth measurements are from the public right-of-way or private street easement boundary.~~

~~a. Front and street side areas where a yard or setback depth of no less than twenty feet is maintained.~~

~~i. An area of land graded and re-contoured at a maximum slope ratio of 3:1 (three feet horizontal to one foot vertical) so as to provide a meandering earthen berm traversing the entire width of the area and having a maximum height of three feet and an average height of thirty-two inches, as measured from the grade of the closest abutting sidewalk or top of curb.~~

~~ii. Landscaping within yards located between a street and a parking area shall include street trees as specified in this chapter. In addition, not less than fifty percent of these landscaped yards shall include a mix of evergreen and deciduous shrubs, herbaceous perennials, and nonturf groundcover. The balance of this area may be planted in turf and utilized for the placement of large boulders or similar visual accents so long as the combination of berms, plantings and visual accents effectively screen from public view any parked vehicles in contiguous off-street parking areas on the property.~~

~~b. Provisions for Yard Reductions to No Less Than Fifteen Feet. Front and street side yards or setback areas with no abutting off-street parking may be reduced to a depth of not less than fifteen feet with provision of the following:~~

~~i. An open decorative fence (picket, split rail, etc.) on the interior side of the landscaped area. Alternatively, a continuous hedge no less than three feet in height at planting, as measured from the grade of the abutting sidewalk or street, may be provided.~~

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- ii. ~~An area of land graded and re-contoured at a maximum slope ratio of 3:1 (three feet horizontal to one foot vertical) so as to provide a meandering earthen berm traversing the entire width of the area and having a maximum height of thirty-two inches and an average height of two feet, as measured from the grade of the closest abutting sidewalk or top of curb.~~
  - iii. ~~No less than seventy-five percent coverage of the landscaped area with street trees (includes canopy at maturity) as specified in this chapter together with a mix of sub-canopy evergreen and deciduous shrubs, herbaceous perennials, and nonturf groundcover. The balance of this area may be planted in turf and utilized for the placement of large boulders or similar visual accents.~~
- c. ~~Provisions for encroachment of off-street parking areas into required front and street side yards or setback areas:~~
- i. ~~Encroachments to Within Twelve Feet. Off-street parking areas may encroach into required front and street side yard or setback areas such that a minimum depth of not less than twelve feet is maintained subject to provision of the following:~~
    - (A) ~~An area of land graded and re-contoured at a maximum slope ratio of 3:1 (three feet horizontal to one foot vertical) so as to provide an earthen berm traversing the entire width of the area with a height of no less than thirty inches above the grade of the abutting sidewalk or street and supported on its interior side by a masonry retaining wall no less than four feet in height above the grade of the abutting off-street parking area surface. The use of this alternative is restricted to properties where it is feasible to provide a parking area with a finished grade at least two feet below the grade of the adjacent street.~~
    - (B) ~~No less than seventy-five percent coverage of the landscaped area with street trees (includes canopy at maturity) as specified in this chapter, together with a mix of sub-canopy evergreen and deciduous shrubs, herbaceous perennials, and nonturf groundcover. The balance of this area may be planted in turf and utilized for the placement of large boulders or similar visual accents.~~
  - ii. ~~Encroachments to Within Eight Feet. Off-street parking areas may encroach into required front and street side yard or setback areas such that a minimum depth of not less than eight feet is maintained subject to provision of the following:~~
    - (A) ~~A horizontally and vertically articulated decorative wall along the interior edge of the yard or setback area. Said wall shall have a minimum height of thirty-six inches, a maximum height of forty-eight inches and an average overall height of forty-two inches as measured from the adjacent paved parking area, if provided, or from the adjacent sidewalk or street surface level, if not. In plan view the decorative screen wall shall vary by eight to sixteen-inch offsets at linear intervals along the wall of every eight to ten feet.~~
    - (B) ~~No less than ninety percent coverage of the landscaped area with street trees (includes canopy at maturity) as specified in this chapter, together with a mix of sub-canopy evergreen and deciduous shrubs, herbaceous perennials, and nonturf groundcover. The balance of this area must be surfaced with mulch in accordance with the standards of this chapter and may be utilized for the placement of large boulders or similar visual accents.~~

~~NOTE: Site improvements in conjunction with permitted and conditionally permitted uses in the M-1 and M-2 manufacturing zones are exempt from the above landscape area requirements.~~

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- ~~2. Plant Quantities. Regardless of depth, all landscape areas adjacent to a street (including required park strips) shall be planted and maintained with the following:~~
- ~~a. One and one-fourth trees per one thousand sq. ft. of the ground or main floor level of nonresidential buildings in commercial zones.~~
  - ~~b. Two trees per one thousand sq. ft. of the ground or main floor level of buildings in manufacturing zones.~~
  - ~~c. One tree per twenty five lineal feet of street frontage (not applicable to manufacturing and warehouse uses).~~
  - ~~d. One shrub per four lineal feet of building foundation (may be grouped).~~
  - ~~e. Any combination of other live plant materials and decorative features consistent with the requirements of this chapter.~~
- ~~B. Interior Side and Rear Yards. The side and rear yard areas required by this title shall be landscaped and maintained as set forth in this chapter. Overhanging or cantilevered structures may not encroach upon such areas.~~
- ~~C. Buffer Areas Between Nonresidential and Residential Land Uses. A landscaped buffer area not less than twenty feet wide shall be required between nonresidential and residential uses. A minimum of one tree for every twenty five lineal feet of landscape buffer is required. Either a linear or cluster arrangement of trees is allowed so long as the spacing of provided trees adequately screens the nonresidential use from the adjacent residential area. If a linear arrangement of trees is provided, tree spacing shall not exceed twenty five feet on center.~~

~~(Ord. 1609 § 2 (part), 2007)~~

### **19.77.060 Parking lot landscaping.**

- A. Interior Parking Planters. Landscaped planters, which may incorporate depressions for the collection of stormwater run-off, shall be provided in any parking lot containing twenty or more parking spaces. These planters shall be constructed to the following standards.
1. Landscape Planter Types.
    - a. Islands. Islands are planter areas parallel to and situated at the end of a row of individual parking stalls.
    - b. Peninsulas. Peninsulas are planter areas parallel to and situated at specified intervals within a row of parking stalls.
    - c. Medians. Medians are planter areas perpendicular to and separating opposing rows of head-in parking stalls.
  2. Landscape Planter Construction.
    - a. Landscape planters shall be constructed of continuous concrete curb in accordance with applicable county standards and of no less than six inches in height unless a depression area for collection of stormwater runoff is provided.
    - b. A minimum four-foot radius curbing shall be provided along drive aisles.
  3. Location, Spacing and Minimum Number of Landscape Planters Required. Landscape planters shall be provided in accordance with the following:
    - a. One island at each end of a row of parking stalls, together with either:
      - i. One peninsula for every six contiguous parking spaces or portion thereof per row where uninterrupted vehicular traffic flow is allowed between abutting parking spaces; or

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- ii. One continuous median per row of head-in parking stalls.
      - b. Flexibility is allowed in the configuration of landscape planters for rows with angled parking.
    - 4. Landscape Planter Length. The length of each landscape planter, measured from face of curb to face of curb, shall be as follows:
      - a. As an island at the end of a row of individual parking stalls, fifteen feet; for opposing rows of head-in parking stalls, thirty feet.
      - b. As a peninsula parallel to a row of parking spaces, fifteen feet.
      - c. As a median abutting a single row of parking stalls or as a divider median separating opposing rows of head-in parking stalls, equal to the length of each row.
    - 5. Landscape Planter Width. The width of each landscape planter, measured from face of curb to face of curb, shall be no less than:
      - a. Eight feet for each island at the end of a row of parking stalls.
      - b. Nine feet for each peninsula within a row of parking stalls.
      - c. Eight feet, with consideration for vehicle overhang, where divider medians occur adjacent to head-in, and ten feet, with the same considerations, for divider medians separating opposing rows of head-in parking stalls. Where divider medians are improved with pedestrian walkways, the specified width is exclusive of the width of those walkways.
    - 6. Vehicular Ingress/Egress Accommodation. That portion (eighteen inches minimum) of each landscape planter peninsula or island adjacent to a vehicular parking space shall be finished with a pervious surface suitable for temporary pedestrian use when exiting a vehicle. Alternatively, each such parking space may be provided at an additional eighteen-inch width and striped for pedestrian use. Stepping stones and graveled pathways shall be dispersed across and along median islands to minimize soil compaction and protect plant root zones.
    - 7. Distribution of Landscaped Planters. Interior planting areas shall be located to most effectively accommodate stormwater runoff, provide positive drainage away from buildings, and provide maximum shade for large expanses of paving.
  - B. Plant Quantity, Size, and Diversity in Parking Lot Landscaped Planters.
    - 1. Minimum Number of Plants Required.
      - a. Within landscape planter islands and peninsulas.
        - i. One shade tree and four shrubs for each fifteen-foot planter,
        - ii. Two shade trees and eight shrubs per thirty-foot planter,
        - iii. Three additional shrubs where lighting standards are located in the planter.
      - b. Within landscape planter medians.
        - i. Two shade trees and eight shrubs for every thirty linear feet, together with three additional shrubs for each lighting standard.
    - 2. Minimum Size Requirements at Planting.
      - a. Trees. Trees required for installation within interior parking areas shall be no less than two-inch caliper in size at planting.
      - b. Shrubs. No less what is customarily accommodated within a five gallon size container, in accordance with industry standards.
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- c. Groundcovers. No less than what is customarily accommodated within a one gallon size container in accordance with industry standards.
- 3. Tree and Shrub Distribution.
    - a. Within landscape planter islands and peninsulas.
      - i. In order to minimize damage by vehicles, trees shall not be planted closer than three feet to top back of curb or exterior edge of depressed parking lot landscaped planters.
      - ii. Shrubs shall be situated such that they remain within the confines of the planter at maturity.
    - b. Within landscape planter medians.
      - i. Trees shall be planted such that they are dispersed from end to end of the planter at twenty-five to thirty-foot intervals (flexibility in actual placement is permitted).
      - ii. Shrubs shall be planted such that they assume as natural appearance as possible (flexibility in actual placement is permitted) yet remain within the confines of the planter at maturity.
  - 4. Diversity of Plants. A mix of coniferous and deciduous trees and shrubs shall be provided in parking lot landscapes. Not less than forty percent of all trees and shrubs shall be coniferous except as warranted by site conditions.
- C. Mulch Required. Organic mulch shall be spread to a minimum depth of three inches and rock to at least two and one-half inches in depth in all parking lot landscaped planters. Appropriate measures shall be taken to retain the mulch within the planter and to renew it as necessary. Bare dirt is prohibited.
  - D. Irrigation. Landscape planters within parking areas shall be irrigated with drip emitter or bubbler type irrigation systems only.
  - E. Wheel Stops. Where vehicular parking stalls abut interior parking area landscaping that is not situated within and protected by a landscape planter, wheel stops shall be installed at a minimum of two feet from the edge of that landscape area.

(Ord. 1609 § 2 (part), 2007)

### **19.77.070 Screening of service and mechanical equipment.**

- A. Screening Required. Service areas and on-grade mechanical equipment shall be screened from public view by plants, solid opaque fencing, berms, or a combination thereof. These elements shall also be sited to minimize their visibility and impact or enclosed so as to appear to be an integral part of the architectural design of the building. Site elements that are subject to this provision include but are not limited to the following:
  - 1. Air conditioning units;
  - 2. Electrical transformers;
  - 3. Loading areas and docks;
  - 4. Mechanical equipment;
  - 5. Outdoor storage areas;
  - 6. Public utility transformers;
  - 7. Service yards;
  - 8. Telephone transformers;
  - 9. Trash collection areas;
  - 10. Trash dumpsters.

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(Ord. 1609 § 2 (part), 2007)

**19.77.080 Functional and aesthetic enhancements.**

- A. Pedestrian and Vehicular Pathways. The design of pedestrian and vehicular travel ways for multiple-family, residential, retail commercial, office, public and quasi-public, and mixed use developments shall incorporate plantings and related landscape improvements for separation of pedestrian and vehicular traffic movements, improved pedestrian convenience and safety, and better-defined vehicular circulation and parking.
- B. Building Entrances, Drop-off and Pick-up, and Outdoor Dining Areas. Plantings and related landscape improvements shall be incorporated into the design of building entrances, drop-off and pick-up, and outdoor dining areas in order to: separate these areas from on-site vehicular circulation and parking facilities and from off-site traffic; enhance pedestrian comfort, convenience and safety; and facilitate outdoor dining with maximum insulation from vehicular traffic impacts.
- C. Drive-Through Service Facilities and Automatic Car Washes. Plantings and related landscape improvements shall be provided in conjunction with drive-through service facilities and automatic car washes in order to: introduce a more aesthetically pleasing approach to these types of vehicular activities on newly developed or redeveloped sites; better integrate these types of land uses into the established character of surrounding area improvements; and screen queued vehicles from the view of passing motorists on adjacent roadways.

(Ord. 1609 § 2 (part), 2007)

**19.77.090 Landscaping of detention/retention basins and ponds.**

A planting area and related landscape improvements shall be incorporated into the design of all lands to be used as detention/retention basins and ponds. Such landscaping may include shade and ornamental trees, evergreens, shrubbery, hedges, turf, groundcover and other plant materials and related landscape improvements.

(Ord. 1609 § 2 (part), 2007)

**19.77.100 Landscape plan submittal requirements.**

- A. General Provisions.
  - 1. All applications for site development plan approval for land uses subject to this chapter shall be accompanied by a landscape plan package and water allowance worksheet prepared in accordance with the requirements of this chapter.
  - 2. Submitted landscape plan packages shall be prepared and certified for compliance with all requirements of this chapter by a landscape architect licensed to practice in the state of Utah under Title 58 of Utah Code. A landscape designer certified by the Utah Nursery and Landscape Association may submit a landscape plan package if the certified designer is employed by the contractor installing plantings of the specific project submitted.
  - 3. All submitted irrigation plans shall be prepared by a qualified professional who is licensed under Utah Code Title 58 or by a person who is exempt from professional licensure requirements for the scope of work performed.
- B. Landscape Plan Package Contents. The information to be provided with the landscape plan package shall be presented in the following format:
  - 1. Conceptual Planting Plan. The intent of the conceptual planting plan is to illustrate the overall design concept for landscaping and depict how it relates to the proposed development of the site. The conceptual planting plan shall describe the general landscape design intent and the water conservation

concept statement of the proposed landscape improvements. At a minimum, the conceptual planting plan shall include the information as set forth in the following tables codified in this chapter.

2. Preliminary Plan. The intent of the preliminary plan is to illustrate the master landscape plan for the development. The landscape preliminary plan shall state how the proposal is consistent with the purposes and intent of these regulations as set forth at the beginning of this chapter. At a minimum, the preliminary landscape plan shall include the information set forth in the following tables codified in this chapter.
3. Final Plan. The intent of the final plan is to ensure each phase of the final landscape plan is consistent with the master landscape plan for the development and to illustrate the specific landscaping details for each phase. The final landscape plan shall describe the design intention and shall state how the proposal is consistent with this section, and/or with the preliminary landscape plan, if one was required. The final landscape plan shall be on a separate page from the final site development plan. The scale shall not be greater than one inch equals to fifty feet. At a minimum, the final landscape shall include the information set forth in the following tables.
4. Project Data.

**PROJECT DATA SHEET**

Information Required	Sketch	Preliminary	Final
The project title and county site development plan application number (the file number assigned to the development proposal that the landscape plan is associated with)	X	X	X
Preparation date and issue/revision/date table	X	X	X
The name, address, telephone number, fax, and e-mail of the applicant or authorized agent	X	X	X
The name, address, telephone number, fax, and e-mail of the landscape architect, landscape designer, or other qualified professional who prepared the landscape plan, together with their professional registration stamp (as required)	X	X	X
The landscape contractor to be used on the project, if known at the time of application	X	X	X
Site vicinity and location map, including the street address and tax identification number of the property	X	X	X
Sheet index	X	X	X
General landscape design intent statement including the general character and location of proposed landscaping and open area and how it meets the intent of these regulations	X	X	X
Annual water budget worksheet	X	X	X
Soils analysis and proposed soils amendments		X	X
Signature block for landscape package approval			X

5. Grading and Drainage Plan.

**GRADING AND DRAINAGE PLAN SHEET**

Information Required	Sketch	Preliminary	Final
Scale, north arrow, site boundary including adjacent property lines and street names	X	X	X
Existing and proposed adjacent uses	X	X	X
Existing and proposed private driveways, off-street parking areas, patios, walkways, service areas and other paved surfaces	X	X	X

Existing and proposed buildings and structures (general locations)	X	X	X
Existing and proposed utilities and easements		X	X
Limits of proposed site disturbance		X	X
Existing and proposed building and structure finish floor elevations			X
Spot elevations and contour lines at no more than one foot intervals to determine high points and low points, positive drainage of paved surfaces, wall heights and other vertical control		X	X
Existing landscaping, including location, type and size	X	X	X
Any existing landscaping proposed to be removed	X	X	X

6. Landscape Planting Plan.

**LANDSCAPE PLANTING PLAN SHEET**

Information Required	Sketch	Preliminary	Final
Base plan consisting in information included on the grading and drainage plan	X	X	X
Limits of proposed site disturbance	X	X	X
General landscape improvements with planting symbols clearly drawn to indicate location and general plant category (deciduous tree, evergreen tree, deciduous shrub, evergreen shrub, groundcover, etc.)	X	X	X
Legend of plant category symbols keyed to general plant material schedule indicating quantities of each plant category and listing of plant species (include Latin name) included in each category		X	X
Typical detail drawings at one inch equals to twenty feet to illustrate perimeter treatment, buffering, typical front yard, and any special treatment areas on the site		X	X
All hydrozone boundaries and total area within each hydrozone with each hydrozone clearly labeled		X	X

high, moderate, low or very low			
Detailed landscape improvements with planting symbols clearly drawn to indicate each plant (deciduous tree, evergreen tree, deciduous shrub, evergreen shrub, groundcover, etc.)		X	X
Detailed plant material schedule with abbreviation identification key, quantity of each plant, botanical name, common name, hydrozone rating (high, moderate, low or very low), plant/container size, spacing and notes		X	X
Define areas to be considered open areas and if they will be public or private. Indicate how open areas will be maintained including; erosion control, re-vegetation, and weed management both during and after construction		X	X
Plant installation, mulching, tree staking, and any other applicable planting and installation details		X	X
Soil preparation details including instructions to scarify planting pit bottom and sides and surface ground planes to promote root penetration in compacted soils		X	X
Protection of existing plant and other site features to remain. Clearly identify the locations, species, size and condition of all significant trees, each labeled as to its intended retention, relocation or removal	X	X	X

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7. Soils Report. A soils report is required in all cases. Special procedures or requirements shall be incorporated in the preparation and recommendations of the soils report where the past use of a site has resulted in soil contamination or where difficult soil or landscaping conditions are known to exist. The soils report shall describe:
    - a. The depth, composition, fertility, bulk density, and landscaping suitability of the top soil and subsoil at the site;
    - b. Soil class;
    - c. An approximate soil infiltration rate for site soils, either measured or derived from soil texture/infiltration rate tables. A range of infiltration rates shall be noted where appropriate;
    - d. A measure of pH, electroconductivity (ERC), salt absorption ratio (SAR) and organic matter;
    - e. Recommendations for retention and re-use of viable top soil on the site together with such soil amendments as are necessary to ensure the health and sustainability of the landscaping to be planted.

The final recommendations of the soils report shall be incorporated into the landscape planting plan and implemented with site planting operations.
  8. Irrigation Plan. A detailed irrigation plan shall be drawn at the same scale as the landscape planting plan and shall reflect the requirements set forth in Section 19.77.030(E)(2) of this chapter.
  9. Irrigation Schedule. The irrigation schedule required in Section 19.74.030(E)(2)(k) of this chapter shall be provided in tabular form and shall specify:
    - a. Plant type (e.g., turf, trees, low water use plants);
    - b. Irrigation type (e.g., sprinklers, drip, bubblers);
    - c. Flow rate in gallons per minute;
    - d. Precipitation rate in inches per hour (sprinklers only);
    - e. Run times in minutes per day;
    - f. Number of water days per week;
    - g. Cycle time to avoid runoff.

(Ord. 1609 § 2 (part), 2007)

### **19.77.110 Landscape plan package acceptance.**

- A. Standard Compliance Procedures. Submitted landscape plan documentation packages, water allowance worksheets, irrigation plans and irrigation schedules prepared in strict compliance with the requirements of this chapter shall be accepted upon certification of compliance with those requirements by the qualified professionals who prepared and submitted those plans. Final approval shall be as granted by the director upon completion of an internal or external review to assure ordinance compliance.
- B. Alternative Compliance Procedures. As authorized by this chapter, an alternative landscape and tree protection plan may be substituted in whole or in part for a landscape plan prepared in strict compliance with the chapters requirements.
  1. Alternative Plan Preparation and Submittal. Alternative landscape plans shall be prepared and submitted in accordance with submittal requirements for a landscape plan package. The submittal shall clearly identify and discuss the modifications and alternatives proposed and the ways in which the plan will

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- better accomplish the purposes and intent of this chapter than would a plan which strictly complies with the chapter's specified standards.
2. Alternative Plan Review Criteria. Certification of alternative plans for compliance with the purposes and intent of this chapter requires that the qualified professional who prepared the plans substantiate in writing how the alternative proposal meets or exceeds the degree of compliance that would be achieved through the strict application of specified standards. In making such assertions the qualified professional who prepared the plans shall clearly demonstrate how the alternative plans will:
    - a. Provide exceptional preservation and incorporation of existing site vegetation;
    - b. Provide significant protection of natural areas and features;
    - c. Provide for maximum retention of existing tree canopy cover;
    - d. Create exceptional enhancement of neighborhood continuity and connectivity;
    - e. Provide for extensive accommodation of nonvehicular access and use;
    - f. Represent greater innovation in site design and plant use.
  3. Alternative Plan Approval. Final approval shall be as granted by the director upon completion of an internal or external review to assure satisfaction of the above criteria.
- C. Plan Approval and Distribution. Copies of the professionally certified landscape plan package shall be provided for distribution to the following:
- a. One copy to the property owner or site manager;
  - b. Two copies to the chief building official for attachment to approved building plans and use in completion of site inspections;
  - c. One copy to the director for retention in the site development application file.
- D. Plan Revisions. Any revisions to the landscape plan package shall be reviewed and approved in writing by the director prior to commencement of construction. Re-certification of compliance with the requirements of this chapter shall be provided by the qualified professionals who prepared and submitted the plan revisions. Site development plans that are substantially revised may require commensurate revisions to associated landscape plans.
- E. Phasing. Landscape plans for projects proposed for development in multiple phases shall clearly specify the landscape improvements required in conjunction with each phase.
- (Ord. 1609 § 2 (part), 2007)

### **19.77.120 Installation of landscape improvements.**

- A. Irrigation System Installation.
1. Installer Qualifications. Irrigation Association (IA) certification shall be required for all contractor-installed landscape irrigation systems except where construction observation services are provided by a licensed landscape architect or other qualified professional under Title 58 of Utah Code.
  2. License, Insurance and Bonding Requirements. All installers, designers, and auditors shall meet state and local license, insurance, and bonding requirements and be able to show proof of such.
- B. Plant Delivery and Installation.
1. Plants shall be protected during delivery to prevent leaf desiccation.

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2. Upon delivery, unplanted trees, shrubs and other live plants shall be kept in shade, well protected with soil, mulch or other acceptable material and appropriately watered. Plants that have died or show signs of serious deterioration prior to planting shall be replaced.
  3. All trees and shrubs shall be planted in such a manner as to ensure their survival. This shall include the planting of intact balls, planting at proper depth, properly backfilling, mulching and watering, and construction of a planting saucer. Newly planted trees shall be provided a plant-free mulched area with a minimum radius of four feet around the trunks in order to expedite tree root establishment.
  4. Any rope or wire binding the ball shall be cut prior to the conclusion of backfilling operations to prevent girdling of the tree trunk.
  5. If a nonbiodegradable material is used around the ball, it shall be completely removed prior to backfilling.
  6. In order to protect plantings from traffic, de-icing salts, and snow plowing operations, landscaped areas with tree or shrub plantings within six feet of a paved vehicle parking area or access way shall be raised above such areas by use of curbing or edging or, where depressed for stormwater collection and aquifer recharge, clearly posted for protection during periods of inclement weather.
- C. Excavation. Site excavation shall be accomplished in accordance with industry standards and applicable ordinance requirements.

(Ord. 1609 § 2 (part), 2007)

#### **19.77.130 Construction inspection and compliance requirements.**

- A. Construction Observation and Certification of Compliance. Construction observation and monitoring of all required landscape improvements shall be provided by a licensed landscape architect so as to ensure compliance with the approved landscape plans for the site.
- B. Right to Inspect. The director reserves the right to perform site inspections at any time and to require corrective measures regarding the installation of site landscaping and irrigation system improvements found not to comply with the requirements of this chapter.
- C. The director shall field-verify landscaping improvements prior to final project approval.

(Ord. 1609 § 2 (part), 2007)

#### **19.77.140 Post-construction verification of compliance.**

- A. Single-Phase Projects. Following construction and prior to issuing an approval for occupancy a landscape architect or other qualified professional shall complete a site inspection of all installed site landscaping improvements and provide written certification of compliance with approved plans. The director shall field-verify landscaping improvements prior to final project approval. Certification of compliance with approved irrigation plans shall be provided by the licensed professional under whose construction observation the irrigation system was installed.
- B. Multi-Phase Projects. Projects approved for development in multiple phases shall be inspected and certified to be in compliance with the approved plans for each respective phase prior to the occupancy or use of the development associated with that phase. Permits shall not be issued for subsequent phases without prior director approval until this requirement has been satisfied.

(Ord. 1609 § 2 (part), 2007)



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### **19.77.150 Certificate of substantial completion.**

Upon completion of all required landscaping improvements the property owner shall complete a certificate of substantial completion for submittal to the director. A disclosure document shall be filed with the county recorder's office clearly indicating that the property is subject to the requirements of this chapter and that any re-landscaping by the present or future property owners shall be in accordance with the certified landscape plan for the property. Proof of recordation shall be provided prior to final land use approval.

(Ord. 1609 § 2 (part), 2007)

### **19.77.160 Long-term viability of established landscapes.**

- A. Plant Maintenance. The owner, tenant and any agent shall be jointly and severally responsible for the maintenance of all landscaping in good condition and free from refuse and debris so as to present a healthy, neat and orderly appearance. Where applicable an adequately funded Homeowner's or Property Owner's Association shall assume and be held liable for such responsibilities. In the latter instance, provisions for long-term maintenance of required landscaping in the event of dissolution of the Homeowner's or Property Owner's Association shall be provided prior to landscape plan acceptance.
- B. Plant Survival. All plant materials shall be regularly maintained in a healthy condition and shall be guaranteed for survival for two years from planting. During this period, each plant shall show at least seventy-five percent healthy growth and shall have the natural characteristic of the plant of its species. Any plant found dead or unsatisfactory by the director during the guarantee period shall be replaced until it has lived through the required two-year survival period.

(Ord. 1609 § 2 (part), 2007)

### ~~19.77.170 Completion of and submittal of water performance audit.~~

~~Following construction and prior to issuing an approval for occupancy, a water audit shall be conducted by an IA certified landscape irrigation auditor. Irrigation system improvements required to achieve compliance with the requirements of this chapter shall be provided by the property owner as necessary. The water performance audit will verify that the irrigation system complies with the minimum standards of this chapter. The minimum efficiency required for the irrigation system is sixty percent for the distribution efficiency for all fixed spray systems and seventy percent distribution efficiency for all rotor systems. Copies of the auditor's certification of compliance shall be provided to the director for retention in the project file as well as to the irrigation system designer, installer, and owner/developer of the property. Compliance with this provision is required before the county will issue a letter of final acceptance.~~

(Ord. 1609 § 2 (part), 2007)

### **19.77.180 Definitions.**

For the purposes of this chapter, the following terms shall have the meanings herein prescribed:

~~"Annual water budget" means the target maximum amount of irrigation water applied to a landscaped area measured in gallons per square foot per year.~~

~~"Activity Zones" means portions of the landscape designed for recreation or function, such as storage areas, fire pits, vegetable gardens, and playgrounds.~~

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[“Active Recreation Areas” means areas of the landscape dedicated to active play where Lawn may be used as the playing surface \(ex. sports fields and play areas\).](#)

"Automatic controller" means a timer, capable of operating valve stations to set the days and length of time of a water application.

"Backflow" means any unwanted flow of used or nonpotable water or substance from any domestic, industrial or institutional piping system into the pure, potable water distribution system. The direction of flow under these conditions is in the reverse direction from that intended by the system and normally assumed by the owner of the system.

"Backflow prevention device" means a safety device that prevents the flow of water from the water distribution system back to the water source. Compliance with applicable health and water quality regulations is required.

"Bubbler" means an irrigation head that delivers water to the root zone by "flooding" the planted area, usually measured in gallons per minute. Bubblers exhibit a trickle, umbrella or short stream pattern.

[“Central Open Shape” means an unobstructed area that functions as the focal point of Localscapes and is designed in a shape that is geometric in nature.](#)

"Drip emitter" means a drip irrigation fitting that delivers water slowly at the root zone of the plant, measured in gallons per hour.

"Drought-tolerant plant" means a plant that can survive without irrigation throughout the year once established, although supplemental water may be desirable during drought periods for improved appearance and disease resistance.

"Establishment period" means the first three hundred sixty-five days of growing season after installing the plant in the landscape.

"Evaporation [E]" means water movement from a wet soil or plant surface that does not pass through the plant. Evaporation is the physical process by which a liquid is transformed to the gaseous state, which in irrigation generally is restricted to the change of water from liquid to vapor. Occurs from plant leaf surface, ground surface, water surface and sprinkler spray.

"Evapotranspiration [ET]" means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time, expressed in inches per day, month or year.

"FPS" means feet per second.

"Flow rate" means the rate at which water flows through pipes and valves (gallons per minute or cubic feet per second).

[“Gathering Areas” means portions of the landscape that are dedicated to congregating, such as patios, gazebos, decks, and other seating areas.](#)

"Grading plan" means a plan that shows all finish grades, spot elevations as necessary and existing and new contours with the developed landscaped area.

"Groundcover" means material planted in such a way as to form a continuous cover over the ground that can be maintained at a height not more than twelve inches.

"Hardscape" means ~~elements of the durable~~ landscape ~~such as sidewalks, pathways, benches, patios, decks, seating areas, drives, and areas for vehicular parking typically constructed from nonliving materials like, such as concrete, boulders, brick, blacktop and lumber~~ wood, pavers, stone, or compacted inorganic mulch.

"Hydrozone" means the grouping of plants with similar water requirements so that they can be irrigated with a common zone.

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"Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour).

"Irrigated landscaped area" means all portions of a development site to be improved with planting and irrigation. Natural open space areas shall not be included in the irrigated landscaped area.

"Irrigation contractor" means a person who has been certified by the Irrigation Association (IA) to install irrigation systems.

"Irrigation designer" means a person who has been certified by the Irrigation Association (IA) to prepare irrigation system designs, and/or a landscape architect.

"Irrigation plan" means a plan that shows the components of the irrigation system with water meter size, backflow prevention, precipitation rates, flow rate and operating pressure for each irrigation circuit, together with identification of all irrigation equipment.

"Landscape architect" means a person who is licensed to practice landscape architecture by the state of Utah.

"Landscape designer" means a person who has been certified by the Utah Nursery and Landscape Association (UNLA) and who prepares landscape plans as authorized by Utah Code.

"Landscape irrigation auditor" means a person who has been certified by the Irrigation Association to conduct a landscape irrigation audit.

"Landscape plan documentation package" means an assemblage of graphics and written materials including criteria, specifications, and detailed plans to arrange and modify the effects of natural features such as plantings, ground and water forms, circulation, walks and other features to comply with the provisions of this chapter. The landscape plan documentation package shall include a project data sheet, a planting plan, an irrigation plan, a grading plan, a soils report, a landscape water allowance, and an irrigation schedule.

~~"Landscape water allowance" means, for design purposes, the upper limit of annual applied water for the established landscaped area. It is based upon the local reference evapotranspiration rate, the ETO adjustment factor and the size of the landscaped area.~~

"Landscape zone" means a portion of the landscaped area having plants with similar water needs, areas with similar microclimate (i.e., slope, exposure, wind, etc.) and soil conditions, and areas that will be similarly irrigated. A landscape zone can be served by one irrigation valve, or a set of valves with the same schedule.

"Landscaped area" means an entire parcel of real property minus that area encompassed by building footprints, driveways, and the nonirrigated portions of parking lots. Water features and areas improved with walkways, benches, seating areas and similar improvements are included in the calculation of the landscaped area.

"Landscaping" means any combination of living plants, such as trees, shrubs, vines, ground covers, flowers, or grass; natural features such as rock, stone, or bark chips; and structural features, including but not limited to, walks, drives, benches, seating areas, fountains, reflecting pools, outdoor art work, screen walls and fences.

~~"Lawn" means ground that is covered with grass or turf that is regularly mowed.~~

~~"Locascapes®" means a landscaping approach designed to create locally adapted and sustainable landscapes through a basic 5-step approach (central open shape, gathering areas, activity zones, connecting pathways, and planting beds).~~

"Maximum extent feasible" means no prudent, practical, and feasible alternative exists, and all possible planning to minimize potential harm has been undertaken. Economic considerations may be taken into account but shall not be the overriding factor in determining maximum extent feasible.

"Mulch" means any organic material such as leaves, bark, wood chips, straw, or inorganic material such as crushed stone or gravel, [rock](#) or other materials left loose and applied to the soil surface for the beneficial purpose of weed suppression and the conservation of soil moisture.

~~"Park Strip" means a typically narrow landscaped area located between the back-of-curb and sidewalk.~~

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"Paths" means designed routes between landscape areas and features.

"Pervious surface" means a layer through which water and air may freely migrate.

"Planting Bed" means areas of the landscape that consist of plants, such as trees, ornamental grasses, shrubs, perennials, and other regionally appropriate plants.

"Planting plan" means a plan that clearly and accurately identifies the location and species of new and existing trees, shrubs, groundcovers, and other plants on a site.

"Precipitation rate" means the depth of water applied to a given area, usually measured in inches per hour.

"Rain shut-off device" means a device wired to the automatic controller that shuts off the irrigation system when it rains.

"Reference evapotranspiration rate or ET0" means the rate of evapotranspiration from an extensive surface cooling season green grass cover of uniform height of twelve cm., actively growing, completely shading the ground, and not short of water.

"Runoff" means irrigation water that is not absorbed by the soil or landscape area to which it is applied and which flows onto other areas.

"Soils report" means a report by a soils laboratory indicating soil type(s), composition, bulk density, infiltration rates, pH, electroconductivity (ERC), salt absorption ratio (SAR) and organic matter for the top soil and subsoil of a given site. The soils report also includes recommendations for soil amendments.

"Spray sprinkler" means an irrigation head that sprays water through a nozzle.

"Station" means an area served by one valve.

"Stream sprinkler" means an irrigation head that projects water through a gear rotor in single or multiple streams.

"Street tree" means a shade or ornamental tree planted along public or private streets and drives to provide shade to reduce heating of pavements, provide spatial definition and visual enhancement.

"Supervision (of an employee)" means that a qualified licensed professional is responsible for and personally reviews, corrects when necessary, and approves work performed by any employee under the direction of the licensed professional.

"Total Landscaped Area" means improved areas of the property that incorporate all of the completed features of the landscape. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, and other non-irrigated areas intentionally left undeveloped.

"Turf" means a surface layer of earth containing mowed grass with its roots.

"Valve" means a device used to control the flow of water in an irrigation system.

"Water audit" means an on-site survey and measurement of irrigation equipment and management efficiency, and the generation of recommendations to improve efficiency.

"Water-conserving plant" means a plant that can generally survive with available rainfall once established although supplemental irrigation may be needed or desirable during spring and summer months.

"Zone" means a landscape zone.

(Ord. 1609 § 2 (part), 2007)