

CHAPTER 9.08 SINGLE-FAMILY RESIDENTIAL DEVELOPMENT STANDARDS

Section 9.08.020.030, Table 1, City of Garden Grove Land Use Matrix

| Zones Uses | R-1 |
|-----------------------------------|-----|
| Residential | |
| ... | |
| Supportive Housing ¹ | P |
| Transitional Housing ¹ | P |
| ... | |

1. Transitional and supportive housing are permitted in residential zoning districts subject to the same approval requirements, development standards, and restrictions that apply to other residential dwellings of the same type in the same zone, which shall be determined by the City based upon the predominant characteristics of the use.

9.08.040.020 Residential—General Development Standards

A. Specific development standards for R-1 (Single-Family Residential) zone are in the following table:

R-1 Development Standards Table

| Placement | R-1 |
|---|--|
| Setbacks | |
| Front (1, 2) | 20 ft. |
| Side setback (interior)Street side | 5 ft. |
| Rear setback (6) | 10 ft. |
| | 20% of lot depth not to exceed 25 ft. (Main structures—See diagrams for R-1 required rear yards) 5 ft. (detached accessory structures) |
| Building height Main structure | Not to exceed35 ft. |
| Accessory structure | 17 ft. |
| Lot coverage (3) | 50% |
| Maximum front setback coverage (4) | 50% |
| Lot area per dwelling (minimum) | 15,000 sq. ft. 11,000 sq. ft. 9,000 sq. ft. 7,200 sq. ft. 6,000 sq. ft. 5,000 sq. ft. |
| Minimum lot area per lot per zoneR-1 (15,000 sq. ft.) | |
| R-1 (11,000 sq. ft.) | 15,000 sq. ft. |
| R-1 (9,000 sq. ft.) | 11,000 sq. ft. |

R-1 Development Standards Table

| Placement | R-1 |
|--|---------------|
| R-1 (7,200 sq. ft.) | 9,000 sq. ft. |
| R-1 (6,000 sq. ft.) | 7,200 sq. ft. |
| R-1 (5,000 sq. ft.) | 6,000 sq. ft. |
| | 5,000 sq. ft. |
| Lot width interior lots R-1 (15,000 sq. ft.) | |
| R-1 (11,000 sq. ft.) | 100 ft. |
| R-1 (9,000 sq. ft.) | 90 ft. |
| R-1 (7,200 sq. ft.) | 75 ft. |
| | 60 ft. |
| R-1 (6,000 sq. ft.) | 60 ft. |
| R-1 (5,000 sq. ft.) | 55 ft. |
| Corner lots | |
| R-1 (15,000 sq. ft.) | 100 ft. |
| R-1 (11,000 sq. ft.) | 90 ft. |
| R-1 (9,000 sq. ft.) | 75 ft. |
| R-1 (7,200 sq. ft.) | 65 ft. |
| R-1 (6,000 sq. ft.) | 65 ft. |
| R-1 (5,000 sq. ft.) | 55 ft. |

1. In no case shall the setback be less than 10 feet.
 2. Garages opening directly to the street may be permitted to have an 18-foot setback, but only for properties zoned for 5,000 and 6,000 squarefoot lots, and provided that the garage is equipped with a roll-up garage door. Garages may be permitted with 15-foot setbacks on properties zoned for 5,000 and 6,000 square foot lots if the garage door is perpendicular to the front property line.
 3. Lot coverage includes all building and structures (primary and accessory) and required uncovered parking areas, and excludes uncoveredswimming pools and permeable or semi-permeable recreational surface areas.
 4. Hardscape percentage includes driveways (except allowed standard driveway in the front yard).
 5. Applications for density bonuses may be made as provided for by state law.
 6. Also see Section 9.08.040.030.A.1 and 2.a.1.
- A. When two or more buildings are, by definition, considered main buildings, then the front setback requirements shall apply only to the buildings closest to the front lot line.
- B. Any construction occurring on a lot, where said lot abuts a street that has not been fully improved, shall observe all building setbacks from the ultimate right-of-way of the street.
- C. Patios, balconies, landings, porches, stairwells, bay windows and chimneys may not encroach into front or sidestreet setbacks.
- D. Minimum Dwelling Unit Area. Every dwelling unit hereafter constructed shall have a minimum floor area, excluding garages, as specified below:

| Number of bedrooms | 0 | 1 | 2 | 3 or more |
|-------------------------|---|-------------|-------------|---------------|
| Single-family dwellings | — | 750 sq. ft. | 900 sq. ft. | 1,050 sq. ft. |

- E. Exceptions: No efficiency units shall be provided without processing of a planned unit development.
- F. For the purposes of open space provisions, swimming pools, spas, patios, and decks shall be counted as open space, as well as playing courts provided with clear, permanent barriers that preclude their use as parking areas, excluding above grade decking greater than 30 inches above grade or that could be used as both a patio cover and attached deck.

- G. On corner lots, no attached garage shall be located less than 20 feet from the rear property line and shall be provided with a driveway apron that has a depth a minimum of 20 feet from any adjacent property line.
- H. Bathrooms. All bathrooms shall be accessed from the interior of a dwelling unit unless the intended use is for providing facilities to serve an existing or proposed swimming pool and/or spa.
- I. Interior Standards for Single-Family Residential Units.
1. Bedroom Access
 - a. Each bedroom must have its own access to a hallway or communal space, except for junior accessory dwelling units permitted subject to Chapter 9.54 (Accessory Dwelling Units and Junior Accessory Dwelling Units).
 - b. No bedroom shall have sole access from another bedroom.
 2. Sinks and Wet Bars
 - a. Sinks are only permitted in a kitchen, a bathroom(s), a laundry/utility room, and/or as part of a permitted wet bar.
 - b. Sinks in a laundry room shall only be a deep utility sink.
 - c. No more than one (1) wet bar shall be permitted within a dwelling unit. The wet bar shall be located within an open communal area of the dwelling, such as a living room, family room, or recreation room. For purposes of this Section, a wet bar shall mean an area intended for beverage service only, with a sink with running water but no appliances provided for the preparation of food. A wet bar may include a refrigerator with a storage capacity of no more than 2.6 cubic feet.
- J. External Access
1. External staircases shall lead only into communal areas. Bedrooms shall not be accessed via an external staircase, except for junior accessory dwelling units permitted subject to Chapter 9.54 (Accessory Dwelling Units and Junior Accessory Dwelling Units).
 2. Stairwells shall be centrally located within the interior of a dwelling unit.
 3. Except for a master bedroom that leads to a patio or junior accessory dwelling units permitted subject to Chapter 9.54 (Accessory Dwelling Units and Junior Accessory Dwelling Units), no bedroom shall have a door that leads to an exterior area.
- K. Required Parking Area of Enclosed Garages
1. Each enclosed garage shall maintain the following minimum interior parking clearance based on the number of cars it is designed to hold. No storage cabinets or mechanical equipment, including, but not limited to water heaters, utility sinks, or washers and dryers, shall encroach into the required parking area.
 - a. 10 feet by 20 feet for a one car garage.
 - b. 20 feet by 20 feet for a two-car garage.
 - c. 20 feet by 30 feet for a three-car garage.

- d. 20 feet by 40 feet for a four-car garage.
2. Each garage shall be equipped with an automatic garage door.
3. Each garage shall maintain the ability to park the required number of vehicles at all times.

9.08.040.030 Special Requirements- R-1 Zone

- A. All plans for new construction and/or attached or detached additions to properties zoned for, or improved with, single-family residences shall be reviewed for approval by the City Manager or designee. Approval by the City shall be based on the following criteria. Wherein any of these criteria have not been met, the addition shall be denied.
 1. All zoning requirements of the R-1 zone are complied with and no variances or waivers are requested.
 2. The architectural style and building materials are compatible with the existing dwelling unit. The roofing shall be the same style, material and design as the main structure.
 3. The total footprint coverage of the main structure, any accessory structure(s), driveways and uncovered parking does not exceed 50% of the total lot area.
 4. All areas designed and/or intended to be used as living or habitable area are integrated into a single, cohesive dwelling unit.
 5. The nature and character of the new construction or addition are consistent with the nature and character of the neighborhood.
- B. Single Story Attached Additions. In addition to the requirements of Section 9.08.040.030.A, single story additions, including covered and/or enclosed patio structures, may be permitted on the lot in accordance with all development standards, except that structures are permitted in the otherwise required rear yard setback area, provided the following conditions are met:
 1. Required rear yards shall be a minimum of 20% of the depth of the lot, to a depth not to exceed 25 feet;
 2. Single story attached additions may encroach into the required rear yards to a depth not to exceed 10 feet from the rear property line, provided that:
 - a. Only a single story is added at this depth,
 - b. One thousand square feet of usable open space is maintained in the required rear yard.
 - c. Exemptions: Manufactured aluminum and metal patio covers and non-habitable enclosures, including sunrooms, shall be exempt from the architectural requirements of Section 9.08.040.030.A, provided they are located to the rear or interior side of the main building.
- C. New Two-Story Structures and Two-Story Additions to Single-Family Residences. In addition to the requirements of Section 9.08.040.030.A the following development standards shall apply to all new two-story structures and two-story additions in the R-1 zone.
 1. All of the following privacy provisions shall be complied with:
 - a. All new two-story windows shall be situated so that they are not directly opposite those windows of adjacent residential dwelling units;

- b. Window locations shall take into account adjacent property's recreation areas and amenities such as pools, spas, etc.;
 - c. Where conflicts between proposed window locations occur, visual intrusion mitigation measures shall be provided, such as, the use of high windows, wing walls, view obscuring window treatments, window alignments, etc.
- D. Detached Accessory Structures. In addition to the requirements of Section 9.08.040.030.A, all detached accessory structures, constructed on a property used for single-family residential purposes shall comply with all of the following provisions, unless otherwise required by this title:
- 1. Maximum floor area for any detached accessory structure shall not exceed 800 square feet inside dimension;
 - 2. No more than three detached accessory structure may be permitted on a lot;
 - 3. Maximum height of a detached accessory structure shall not exceed one story and 17 feet;
 - 4. The combined floor area of all detached accessory structures on a lot shall not exceed 1,000 square feet;
 - 5. One thousand square feet of usable open space shall be maintained in the required rear yard as defined in Section 9.08.040.030.B.1;
 - 6. The width of any single accessory structure shall not exceed one-half of the width of the lot;
 - 7. No kitchens or other food preparation appliances or fixtures shall be provided;
 - 8. Plumbing may be permitted, but in no case shall more than a one-half bathroom (one water closet and one lavatory) be permitted.

Exemptions:

- a. One-story detached accessory structures used as tool sheds, playhouses and similar uses shall be exempt from the architectural requirements contained in Section 9.08.040.030.A, provided any such structure does not exceed 120 square feet of projected roof area and is located to the rear and interior side of the main building.
 - b. Accessory dwelling units, including porch and/or patio areas and enclosed parking areas dedicated to the accessory dwelling unit that are within the maximum area for an accessory dwelling unit, shall be exempt from the provisions of this subsection.
9. Interior Standards for Detached Accessory Structures
- a. Detached accessory structures such as workshop spaces, detached garages, or other similar spaces shall not have wall insulation or heating/cooling equipment.
 - b. Each wall within a detached accessory structure shall only have one outlet for every ten (10) feet.
 - c. Only non-egress windows are allowed within a detached accessory structure.
10. No detached accessory building walls shall be closer than six (6) feet to any main building walls or other accessory building walls on the same lot or building site, and no detached accessory building eaves shall be closer than four (4) feet to any main building eaves or other accessory building eaves on the same lot or building site. When the distance between either the walls or the eaves of a detached accessory building and a main building or living unit are less than specified

in this section, the buildings are deemed attached for the purpose of determining setbacks and both must meet the setbacks prescribed for a main building.

- E. Placement of Buildings. Placement of buildings on any lot in the R-1 (Single-Family Residential) zone shall conform to the following:
1. For any lot abutting an alley, no building shall be constructed closer than 15 feet to the centerline of the alley, but in no case closer than 10 feet from the property line.
 2. All new single-family residential units developed in the multiple-family residential (R-2 and R-3) zones or additions to existing single-family residential units in any zone shall conform to the residential standards as prescribed in the single-family development districts.
 3. Single-family residential properties, that do not have an existing two-car garage, may build a new two-car garage that encroaches no more than two feet into the required front yard setback and that meets the following criteria:
 - a. The new garage shall meet all zoning and building codes relative to size and configuration;
 - b. The garage shall be equipped with a roll-up type door.
- F. Height of Towers, Spires and Unique Structures in the R-1 (Single-Family Residential) Zone.
1. Usable floor space may be provided above allowable height for religious institutions, and public, private or parochial schools when employed as a unique structure, tower or spire, subject to a conditional use permit.
 2. Fire or parapet walls, skylights, flagpoles, chimneys, wireless masts and similar structures may be erected above the height limits prescribed if done so in conjunction with the filing of a conditional use permit.
- G. Landscaping in the R-1 (Single-Family Residential) Zone. Landscaping in the required front yard shall cover no less than 50% of that yard.
- H. Driveway Width. Minimum paved access-way width of 16 feet is required when off-street parking for open or garage spaces is located at the rear of a unit. When a new, conforming, garage is proposed to be constructed to the rear of an existing residence, and when the location of that residence interferes with providing the required 16-foot driveway width, the minimum accessway may be reduced to 12 feet with the approval of the City Manager or designee. (2882 § 5, 2017)

9.08.040.050 Landscaping—General Provisions

- A. General landscaping requirements as defined herein shall be provided in all zones.
- B. Parcels zoned or used for single-family purposes shall provide landscaping in all areas not covered by buildings, structures, patios or driveways.
- C. For the purpose of this section, the front yard shall be defined as the front yard setback.
- D. The following regulations are for maximum coverage of hardscape in the R-1 (Single-Family Residential) zone:
 1. The maximum permitted percentage of hardscape coverage in the front yard setback, shall be 50%. Private sidewalks and walkways are excluded from this 50% so long as they do not exceed a width of five feet.

2. The measurement for the front yard setback shall be from the back of sidewalk or street dedication line. The public parkway area between the curb and sidewalk must be fully landscaped.
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- E. All developed properties shall be required to be in compliance with the provisions of this subsection when any building additions of one or more square feet are proposed.
 - F. It is not the intent of this section to require identical landscape materials or landscape designs for all developments. Where existing mature landscaping is in good, healthful condition, every effort shall be made to retain and to incorporate said landscaping into the overall landscape theme.
 - G. The hearing body may, through the site plan review procedure, modify the requirements with consideration to the size and species of trees used, and may require landscaping in excess of the minimum area specified for a proposed development in order to achieve a superior project.
 - H. Adjacent uses shall be considered when designing landscaping to mitigate the negative impacts of parking areas, activities, storage, or structures by appropriate screening measures.
 - I. Every effort shall be made to provide landscaping that is compatible with neighboring uses.
 - J. All unpaved areas shall be planted with an effective combination of trees, grass berms, groundcover, lawn, shrubbery and/or approved dry decorative landscape material.

9.08.040.060 Landscaping Requirements

All landscaping shall comply with the landscape water efficiency provisions where applicable. When conflicts between general landscape requirements and the landscape water efficiency requirements found in this section and the *Guidelines* exist, the landscape water efficiency requirements shall have priority.

- A. Minimums. All required landscaped setback areas, including front, side, side street, and landscaped areas within parking lots, shall meet the requirements prescribed herein.
- B. Percentage. Ten percent of all parking areas for nonresidential uses permitted in the R-1 (Single-Family Residential) zone, excluding required setbacks and building footprints, shall be landscaped.
- C. Parking Lot Landscaping.
 - 1. Size. For parking facilities, a variety of tree sizes is required for every 10 parking spaces. Trees must be a minimum of 15-gallons diameter with a one-inch caliper trunk, eight feet in height with a two-and-one-half-foot head or larger. These trees may be grouped or clustered and shall conform to the matrix of plant materials established by the City Manager or designee.
 - 2. Street Frontage. One 24-inch box tree of a two-and-one-quarter-inch caliper trunk diameter, 10 feet in height, and a five-foot head is required for every 20 feet of street frontage. (These trees may be grouped or clustered.) All trees shall be placed within a root barrier per city of Garden Grove street tree planting detail specifications.
 - 3. Area. Minimum landscaped area that may be counted is 24 square feet.
- D. Trees.
 - 1. No trees shall be planted under any eave, overhang or balcony.
 - 2. All trees in landscape planters 10 feet in width or less shall be provided with tree root barricades.
- E. Tree Numbers.
 - 1. Parking area—One per eight spaces
 - 2. Street setbacks—One per 20 linear feet
- F. Tree Size. Forty percent of the trees on a site shall consist of minimum size 24-inch box, and the remaining 60 percent shall be of minimum size 15 gallons.
- G. Tree Staking. All trees shall be double staked in accordance with City standards.
- H. Planter Width. The minimum width of all planters shall be three feet clear, interior dimensions, not inclusive of retaining curb or wall.
- I. Shrubbery. Fifty percent of all required shrubs shall be a minimum size of five gallons at time of planting.
- J. Groundcover.

1. Live groundcover shall be planted and maintained where shrubbery is not sufficient to cover exposed soil. Mulch may be used in place of groundcover where groundcover will not grow or where groundcover will cause harm to other plants, but not more than 30 percent of the groundcover area shall have the mulch substitute.
 2. All areas required to be landscaped shall be covered with turf, non-deciduous groundcover or other types of plantings. Artificial turf may be used as a groundcover within the R-1 (Single-Family Residential) zone, provided the turf allows for penetration of irrigation and stormwater runoff, as described in subsection N (Substitute Landscaping), below.
 3. Groundcover spacing. Groundcover plants shall be planted at a density and spacing necessary for them to become well established and provide surface coverage within 18 months of planting.
- K. Paved Areas. Only those portions that are required by municipal code or by site plan to be used directly for parking spaces, aisles, refuse storage areas, drives or walkways shall be paved. All other areas not needed for the above shall be landscaped. Patios may be paved.
- L. Excess of Minimum Areas—Authority. The hearing body may require landscaping in excess of the minimum area specified for a proposed development, provided that the additional landscaping is necessary to:
1. Screen adjacent objectionable uses, parking areas, activities, storage or structures that could cause a negative impact on new development based on aesthetics, noise, odors, etc.; or
 2. Provide landscaping that is compatible with neighboring uses; or
 3. Screen the use from neighboring negative impacts such as traffic, outside storage, etc.
- M. Landscape Plans.
1. Each landscape plan shall be compatible with the shape and topography of the site and the architectural characteristics of the structure(s) on the site.
 2. Each landscape plan shall be compatible with the character of adjacent landscaping, provided the quality of the adjacent landscaping meets the standard of these guidelines.
 3. Each landscape plan shall illustrate a concern for design elements such as balance, scale, texture, form and unity.
 4. Each landscape plan shall address the functional aspects of landscaping such as drainage, erosion prevention, wind barriers, provisions for shade and reduction of glare.
 5. Each landscape plan shall demonstrate a concern for solar access, including exposure and shading of window areas and solar panels.
 6. Landscaping shall be used to relieve solid, unbroken elevations and to soften continuous wall expanses.

7. The applicant must submit a planting inventory and plan of existing planting materials on a development site that are to be retained. Every effort shall be taken to ensure that mature existing landscaping is utilized as part of the development plan. A landscaping retention program shall be approved by action of the hearing body, at its discretion.

N. Substitute Landscaping.

1. Materials such as crushed rock, decomposed granite, redwood chips, pebbles and stone may be used in lieu of live plant materials for up to 30 percent of the required landscape coverage area. Artificial plants and synthetic groundcovers are prohibited, except where allowed within the R-1 (Single-Family Residential) zone, subject to the following standards:

a. Artificial turf is permitted, provided it complies with the following:

i. Artificial turf shall have a minimum eight-year “No Fade” warranty.

ii. Artificial turf shall be installed by a licensed professional and shall be installed pursuant to manufacturer’s requirements, except if the artificial turf is installed by the homeowner. The homeowner shall be required to follow the manufacturer’s specifications for installation.

iii. Artificial turf shall be installed and maintained to effectively simulate the appearance of a well-maintained lawn. The turf shall be maintained in a green fadeless condition and shall be maintained free of weeds, debris, tears, holes, and impressions.

iv. The use of indoor or outdoor plastic or nylon carpeting as a replacement of artificial turf or natural turf shall be prohibited. No rubber infill is permitted.

v. Artificial shrubs, flowers, trees, and vines in lieu of living plant material shall be prohibited.

vi. Areas of living plant material (i.e., flower beds, tree wells, etc.) shall be included in the overall landscape design when installing artificial turf. Living plant material shall include shrubs, vines, trees, and flowering groundcovers and shall constitute a minimum of 25 percent of the landscape area.

vii. Artificial turf shall be separated from flower beds by a concrete mow strip, bender board, or other barriers acceptable to the City to prevent intrusion of living plant material into the artificial turf.

viii. Artificial turf in front yards shall be limited to 75 percent of required landscape area.

O. Screening.

1. Landscaping shall be required to screen storage areas, trash enclosures, public utilities, freeways, highways and other similar land uses or elements that do not contribute to the enhancement of the surrounding area. Where plants are required for screening, such screening shall consist of the use of evergreen shrubs and/or trees closely spaced. Berming is suggested as an effective screening measure for parking lots and where adjacent site areas are contiguous to street frontages. Such berming with planting shall not exceed 36 inches above the highest adjacent curb.

2. Perimeter landscaping adjacent to the property lines is required in parking areas. Planter area curbs shall be used in place of wheel stops.
- P. Separation.
1. All landscaping shall be separated from parking and vehicular circulation areas by a raised, continuous six-inch Portland cement concrete curb.
 2. Other materials that accomplish the same purpose may be approved by the hearing body through the site plan review process.
- Q. Arterial Site Entries.
1. Unless otherwise delineated, all developments having a contiguous property line to a primary or secondary arterial highway shall observe a 15-foot setback that shall be landscaped. All other non-arterial highways shall observe a 10-foot setback, unless otherwise delineated by the governing zone.
 2. Landscaping at major entry points are considered the focal points for landscaping emphasis, and shall contain a variety of trees, flowers and shrubs with special concern for visibility and safety.
 3. No landscaping material other than trees shall exceed a height of 36 inches above the highest adjacent curb at street entrances and parking lot accessway intersections.
 4. No berming , with or without landscaping materials, at street entrances and parking lot accessway intersections shall exceed a total height of 36 inches above the highest adjacent curb.
 5. All trees whether singularly placed or placed on clusters shall not inhibit standard visibility parameters.
 6. Parking may be designed to overhang landscaped areas. Maximum permitted overhang is two feet where planter areas have a minimum dimension of five feet or more. Otherwise, concrete wheel stops shall be installed. Any broken or damaged wheel stops shall be replaced.
- R. Landscaping and Irrigation Plans Required. Landscape and irrigation plans shall be required for all projects requiring approval by the hearing body and to which the landscape water efficiency provisions apply, except for individual homeowners on single-family or multifamily residential lots that have a total project landscape area, including pools or other water features, but excluding hardscape that is less than 5,000 square feet. Such plans shall be submitted for discretionary approval to the hearing body. Said plans shall be prepared in accordance with requirements and standards established pursuant to this chapter and the *Guidelines* (specifically refer to sections on landscape design plan and irrigation design plan).
- S. In addition to the above, the following are requirements that shall apply to the landscape design plan and are more fully explained in the *Guidelines* (Appendix 1, Title 9):
1. Any plants may be used in the landscape, providing the estimated applied water use recommended does not exceed the maximum applied water allowance, and that the plants meet the specifications set forth in this section.
 2. Plants having similar water use shall be grouped together in distinct hydrozones.
 3. Plants shall be selected appropriately based upon their adaptability to the climatic, geologic and topographical conditions of the site. Protection and preservation of native species and natural areas are encouraged. The planting of trees is encouraged wherever it is

consistent with the other provisions of this section. To encourage the efficient use of water, the following are highly recommended for inclusion in the landscape design plan:

- a. The Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
- b. The horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure (e.g., buildings, sidewalks, and power lines); and
- c. The solar orientation of the site and how plant placement will maximize summer shade and winter solar gain.

T. Irrigation Requirements.

1. All landscaped areas shall be provided with an approved irrigation system that meets the requirements of this section and the *Guidelines*. An irrigation design plan meeting the design criteria in the *Guidelines* shall be submitted as part of the landscape documentation package for those projects subject to the landscape water efficiency provisions in Section 9.08.040.055.A.
2. Irrigation shall be performed in conformance with city ordinances and with water conservation practices.

U. System Design. For the efficient use of water, an irrigation system shall meet all the requirements listed in the *Guidelines* under Section 2.5, Irrigation Design Plan, and the manufacturers recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the design criteria of the *Guidelines* shall be submitted as part of the landscape documentation package.

V. In addition to the above, the following are requirements that shall apply to the landscape design plan.

1. Irrigation Design Criteria.

- a. Runoff and Overspray. Soil types and infiltration rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to avoid runoff, low-head drainage, overspray or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes (walks, etc.), roadways or structures.
- b. Special attention shall be given to avoid runoff on slopes and to avoid overspray on narrow and irregularly shaped areas, including turf, less than eight feet in width in any direction. Such narrow and irregularly shaped areas shall be irrigated with subsurface irrigation or a low volume overhead irrigation system.
- c. Irrigation Efficiency.
 - i. For applicable landscape installations or rehabilitation projects subject to Section 9.08.040.055.A, the estimated applied water use allowed for the landscaped areas shall not exceed the MAWA calculated using an ET adjustment factor of 0.7, except for special landscaped areas where the MAWA is calculated using an ET adjustment factor of 1.0; or the design of the landscaped areas shall

otherwise be shown to be equivalently water-efficient in a manner acceptable to the City; as provided in the *Guidelines*.

ii. Irrigation of all landscaped areas shall be conducted in a manner conforming to the rules and requirements, and shall be subject to penalties and incentives for water conservation and water waste prevention as determined and implemented by the water services division, or as mutually agreed by the water services division and the local agency.

iii. The project applicant shall understand and implement the requirements in the City of Garden Grove Water Conservation Ordinance.

d. Equipment. The *Guidelines* provide design criteria for irrigation equipment in Section 2.5 “Irrigation Design Plan.”

2. Recycled Water.

a. At such time as recycled water is available, the installation of recycled water irrigation systems (dual distribution systems) shall be required to allow for the current and future use of recycled water.

b. Irrigation systems shall make use of recycled water unless a written exemption has been granted by the local water agency, stating that recycled water meeting all health standards is not available and will not be available in the foreseeable future.

c. The recycled water irrigation systems shall be designed and operated in accordance with all local and state codes.

3. Irrigation Design Plan Specifications. Irrigation systems shall be designed to be consistent with hydrozones. Hydrozone areas shall be designated by number, letter, or other designation on both the Irrigation Design Plan and the Landscape Design Plan. The irrigation design plan shall be separate from, but use the same format as, the landscape design plan. The scale shall be the same as that used for the landscape design plan. The irrigation design plan at a minimum, shall contain:

a. Location and size of separate water meters for the landscape;

b. Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers and backflow prevention devices;

c. Static water pressure at the point of connection to the public water supply;

d. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (psi) for each station;

e. Irrigation schedule parameters necessary to program smart timers specified in the landscape design;

f. The following statement: “I have complied with the Landscape Water Efficiency Provisions and the design criteria in the *Guidelines* and applied them accordingly for the efficient use of water in the irrigation design plan”; and

g. The signature of a California-licensed landscape professional.

4. Maximum Applied Water Allowance. A project’s maximum applied water allowance shall be calculated in a manner acceptable to the City, as provided in the *Guidelines*.

5. Irrigation Schedules. For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:
 - a. Irrigation scheduling shall be regulated by automatic irrigation controllers.
 - b. Overhead irrigation shall be scheduled in accordance with the local water purveyors (City of Garden Grove, Water Services Division) Water Conservation Ordinance. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
6. Certificate of Completion.
 - a. Landscape project installation shall not proceed until the landscape documentation package has been approved by the City and any ministerial permits required are issued.
 - b. The project applicant shall notify the City at the beginning of the installation work and at intervals, as necessary, for the duration of the landscape project work to schedule all required inspections.
 - c. Certification of completion of the landscape project shall be obtained through a certificate of use and occupancy or a permit final. The requirements for the final inspection and permit closure include submittal of:
 - i. A landscape installation certificate of completion in the form included as Appendix D in the *Guidelines*, which shall include: (1) certification by a landscape professional that the landscape project has been installed per the approved landscape documentation package; and (2) the following statement: “The landscaping has been installed in substantial conformance with the design plans, and complies with the City of Garden Grove Landscape Water Efficiency Provisions.”
 - ii. Documentation of the irrigation scheduling parameters used to set the controller.
 - iii. An irrigation audit report from a certified irrigation auditor, documentation of enrollment in regional or local water purveyors water conservation programs, and/or documentation that the MAWA and EAWU information for the landscape project has been submitted to the local water purveyor, may be required at the option of the City.