

Article 15. Sustainable Development Practices

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Sec. 1501. Purpose: Sustainable development is often defined as “meeting the needs of the present while ensuring that future generations have the same or better opportunities.” (Bruntland Commission 1987) Sustainable community development is about preserving choices – environmental, economic, and social. The standards in this Section are established to encourage conservation of natural resources, increase energy efficiency, and promote the use of sustainable practices in the development process. The standards in this Section are also intended to support the implementation of state laws regarding sustainable growth and reductions in greenhouse gas emissions, water conservation, and other resource conservation directives, including the *Global Warming Solutions Act of 2006* (AB 32). Ultimately, these Low-Impact Design practices serve to preserve and strengthen our communities by reducing waste and raising efficiencies, while protecting resources for our future.

Sec. 1502. Applicability: These practices are highly recommended to property owners and developers, and in particular to all new or new major remodel projects in Kings County, as a means to create better environmental sustainability and to incorporate “green practices” into all aspects of development in the County. Except as otherwise specified herein, compliance with the practices described in this article is intended to be voluntary.

Sec. 1503. Community Gardens: Community gardens are permitted in several zoning districts in Kings County and are intended to provide an opportunity for residents to have increased access to fresh and healthy food choices, particularly in communities that are under served or are lacking markets and grocery stores which can provide an alternative to “junk” or fast foods. Local community gardens may also help reduce greenhouse gas emissions resulting from vehicle miles traveled for residents in rural areas who must travel by automobile to grocery stores and by trucks that import produce to rural communities. Increased vegetative cover is also a simple and effective way of reducing heat islands and enhancing carbon sequestration.

- A. Multifamily residential developments are encouraged to incorporate a space for community gardening within the common open space area. The reserved space should be maintained by residents in conjunction with the development’s management company.
- B. Community gardens are also encouraged where space is available and residents are willing to share and collaborate in their efforts to maintain the garden.
- C. Community gardens should be maintained as follows:
 - 1. Gardens should be kept free of weeds, trash and debris.



2. Gardens should be harvested on a regular basis.
3. Gardens should be designed and maintained so that water and fertilizer will not drain onto adjacent property or the public right-of-way.
4. The use of herbicides and weed killers is discouraged.

Sec. 1504. Landscaping Regulations: In addition to the standards contained in this Development Code, all development in Kings County shall comply with the State of California Model Water Efficient Landscape Ordinance prepared by the Department of Water Resources (DWR), when required by the California Water Conservation in Landscaping Act (Government Code Section 65591 et seq.). If conflicts occur between the Model Water Efficient Landscape Ordinance and this Development Code, the more restrictive shall prevail.

- A. The specific purpose and objectives of these landscaping regulations are to:
1. Enhance the appearance of all development by requiring the design, installation, and proper maintenance of landscaping on all new and newly renovated public and private sites where applicable.
 2. Aid in energy conservation by providing shade from the sun and shelter from the wind.
 3. Minimize or eliminate conflicts between potentially incompatible but otherwise permitted land uses on adjoining lots through visual screening.
 4. Encourage conservation and efficient use of water resources through the use of native and drought-tolerant plants, and water conserving irrigation practices.
 5. Ensure compliance with the State of California Model Water Efficient Landscape Ordinance for all new and newly renovated landscaping projects where required.
- B. Exemptions to Landscaping regulations:
1. Registered local, state or federal historical sites;
 2. Ecological restoration projects that do not require a permanent irrigation system;
 3. Mined-land reclamation projects that do not require a permanent irrigation system; or
 4. Plant collections as part of botanical gardens and arboretums open to the public.
- C. All landscaping plans required by the Model Water Efficient Landscape Ordinance shall be submitted to the Kings County Building Official.
- D. The State of California Model Water Efficient Landscape Ordinance and associated forms are available on the Kings County Website: www.countyofkings.com/departments/community-development-agency which provides a link to the State of California web site.
- E. **General Landscaping Requirements and Recommendations:** All new and rehabilitated landscaping projects shall provide and maintain landscaping with water conservation and sustainable usage in mind.
1. Refer to the Land Use Regulations in each applicable zoning district article in this Development Code to determine the requirement(s) for landscaping.
 2. New development projects in all unincorporated areas of the county shall incorporate Low-Impact Development (LID) principles to minimize long-term stormwater runoff. Such principles include:
 - a. The use of permeable paving, such as pavers, porous concrete, or pathway comprised of decomposed granite that



is effective in stormwater infiltration to prevent excess runoff (See Section 1506.A).

- b. The use of bioswales to redirect storm water into planter strips rather than capturing runoff in pipes and diverting it to a remote location.
 - c. The use of low water conserving drought tolerant and native landscaping as well as water efficient irrigation such as drip irrigation systems to water trees, shrub beds, and areas of ground cover to minimize evaporation losses and runoff.
 - d. The predominant use (75 percent of landscaped area) of native plants and drought tolerant landscaping wherever possible including Xeriscaping.
 - e. The use of gray water for landscaping, agriculture, recreation and open space areas is highly encouraged.
3. Landscaped areas should be pre-planned and installed as an integral part of the overall project and not simply located in “left over” areas of the site without regard for water usage and plant choices.
 4. Landscaping should be used to help define outdoor spaces, soften a structure’s appearance, and to screen parking, loading, storage, and equipment areas.
 5. The use of on-site pedestrian amenities (e.g., benches, shelters, drinking fountains, lighting, and trash receptacles) is encouraged. These elements should be provided in conjunction with on-site open spaces and be integrated into the site plan as primary features.
 6. New urban development should provide and maintain shade trees and other landscaping along streets and within parking areas to reduce radiant heating and increase carbon emission sequestration.
 7. New trees should be planted so as to avoid blocking solar access to existing solar panels as the trees mature. See Section 1112.B for additional guidance concerning protection of solar access.
 8. In the unincorporated areas of the county during the months of April and October, all daily landscape watering should take place between the hours of 6 p.m. and 10 a.m. to reduce water evaporation and the allowable length of watering times for each watering zone should not exceed 12 minutes, or 8 between the months of November and March.
 9. In County areas within the primary sphere of a city or an area served by a Community Service District, watering restrictions shall be as set by the City or Community Service District.
 10. In an effort to reduce water consumption throughout the county, synthetic lawns may be substituted for grass at the property owner’s discretion.
 11. All new residential and commercial development in the communities of Armona, Home Garden and Stratford shall integrate drought tolerant landscaping and conservation fixtures with the structures to reduce the average per capita water use within the community.
- F. **Maintenance of Landscaped Areas:** A landscaped area provided in compliance with the regulations prescribed in this Development Code or as a condition or requirement of a use permit or variance shall be planted with materials suitable for screening or ornamenting the site, whichever is appropriate, and plant materials shall be replaced as needed to screen or ornament the site.
1. Landscaped areas should be watered with an automatic irrigation system, weeded, pruned, fertilized, sprayed, or otherwise maintained to assure compliance with regulations requiring landscaped areas.
 2. Xeriscaping is an acceptable form of landscaping provided that bare dirt within the landscaped area is covered with some sort of material that limits or prevents blowing dust and remains free of weeds and debris.
 3. Water waste in existing developments resulting from inefficient landscape irrigation leading to excessive runoff, low



head drainage, overspray, and other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures is prohibited.

(Ord. No. 668-1-17, §59, 3/28/17)

Sec. 1505. Water Conservation: Water conservation practices are intended to promote the sustainable use of water and help ensure future water needs can be met. Reducing water consumption protects natural eco-systems and water aquifers from critical damage. Reduced water usage also provides financial benefits for system users, and reduces the energy costs and usage associated with moving and treating water. All applicable projects permitted under this Development Code shall comply with the California Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance and the landscape regulations found in Sec. 1504, above. Other areas of importance when considering water conservation include:

- A. **Car Washing:** Washing of vehicles is permitted at any time on the immediate premises of a commercial car wash facility or private residential property where a hand-held hose equipped with a positive shut-off nozzle for quick rinses is used.
- B. **Gray-water Use:** The use of gray water is allowable as an alternative water source in any zoning district for non-potable water applications under the provisions of Chapter 16 of the California Plumbing Code. Anyone desiring to install a gray water system in their project or on their property should contact the Building Official to obtain additional information and to determine the need for a building permit.
- C. **Water Features/ Pools:**
 - 1. Recirculating water systems should be used for water features to prevent wasting water and to reduce costs.
 - 2. When available, recycled water should be used as a source for decorative water features.
 - 3. Swimming pools should only be drained and refilled a maximum of one (1) time in a calendar year.
 - 4. Pool and spa covers are highly recommended to prevent evaporation and heat loss.

Sec. 1506. Water Runoff and Drainage: New development and rehabilitated landscapes and hardscapes can reduce storm water and excess water runoff by implementing the following recommended practices as part of landscape and hardscape design. Reducing runoff and enhancing onsite water capture increases percolation into the groundwater table, reduces water contamination, and reduces the overall amount of energy required to treat water. The following standards shall apply within the unincorporated areas of the County and within the primary sphere of influence of cities within the County.

- A. The use of permeable paving materials in-lieu of or incorporated into hardscapes on a grade with a maximum 2 percent slope, as applicable, reduces the amount of water runoff and increases onsite water percolation into the ground. Permeable paving types and materials include but are not limited to:
 - 1. Pervious concrete/asphalt
 - 2. Turf-block grids
 - 3. Gravel-block grids
 - 4. Permeable interlocking concrete pavers
- B. Water collection and reuse is highly recommended and encouraged, particularly in light of the many years of drought experienced the central San Joaquin Valley over the past years.
 - 1. Rainwater collected from roofs and other impermeable surfaces can be used beneficially as an onsite resource for residential, commercial, and public properties, and as a source of water for gardens and other non-potable needs, free of most sediment and dissolves salts. Water collection devices include:
 - a. Roof gutters and downspouts



- b. Rain barrels
 - c. Cisterns (usually buried, partially buried, or enclosed within an insulated building)
2. The installation and maintenance of landscaping with designed water capture areas is encouraged to promote the capture and beneficial use of stormwater as a low cost onsite resource for residential, commercial, and public properties. The use of native plants within designed water capture areas helps to reduce maintenance, pollution, and erosion, and provides an alternative to typical high water consumption types of landscaping. Landscaping with designed water capture areas increases onsite water percolation into the groundwater table, reduces water contamination, and reduces the overall amount of energy required to move and treat water runoff. Landscape and designed water capture areas include:
 - a. Biofiltration landscaping
 - b. Green strips
 - c. Vegetated swales/bioswales
 - d. Detention basins
 - e. Rain gardens
 - f. Retention basins
 3. Rain gutters should be utilized and roofs should be oriented to direct stormwater runoff to collection devices (e.g. cisterns and rain barrels), planter areas, permeable surfaces, drywells, French drains, or other structural best management practices, rather than directly onto driveways or streets, or non-permeable surfaces, with the objective of allowing runoff to penetrate into the ground instead of flowing off site.
 4. Site grading should be designed and improvements constructed to maximize the amount of stormwater runoff directed to permeable areas and to maximize stormwater storage for reuse or infiltration. Measure includes:
 - a. Utilizing collection devices (e.g. cisterns and rain barrels), planter areas, permeable surfaces, drywells, French drains, or retention structures, or other mechanisms to store precipitation or runoff from impervious pavement for reuse, as feasible.
 - b. Removing or designing curbs, berms, and the like to avoid isolation of permeable or landscaped areas from impervious collection areas, as feasible.
 5. Driveways and drive approaches in the R, RM, and RR zoning districts should not exceed 1,000 continuous square feet of impervious surface without a minimum 12-inch wide permeable surface (e.g. brick, permeable pavers, etc.) separating driveways of this size into sections less than 1,000 square feet.
 6. Permeable paving, approved by the Public Works Director, is highly encouraged in the installation of commercial off-street parking areas as a means of slowing runoff, absorption of rain, and reducing stress on stormwater management systems.
 7. Installation of green roofs promotes onsite water retention and reduces runoff. see Section 1507 below.
- C. All water storage or containment upon a property shall comply with the requirements established by the Kings Mosquito Abatement District.

Sec. 1507. Green Roof Regulations: Conventional roofs absorb and retain heat and increase stormwater runoff. Therefore, green roofs (or living roofs) are encouraged in all projects where their construction is practical and desired, provided that the roof is engineered and constructed to accommodate the increased structural load. Green roofs provide better quality insulation, reducing the cost and consumption of energy, and provide additional vegetation for carbon sequestration.



- A. **Green Roof Benefits:** A green roof provides numerous benefits to building owners and the broader community when compared to a conventional roof, including the following:
1. Lower energy costs and consumption required for heating and cooling.
 2. Reduced urban heat island effect.
 3. Increased longevity of roofing materials.
 4. Lower rate and quantity of stormwater runoff.
 5. Habitat for birds, insects, and wildlife.
 6. Accessible garden space.
- B. **Green Roof Requirements:** If a green roof is proposed to be installed on a structure, it will be necessary to comply with the following requirements.
1. Green roofs may be installed on any new or existing commercial, industrial, institutional, or residential structure provided that the roof is structurally engineered to accommodate the increased loading and use of a green roof.
 2. The proposed roof structure for any green roof shall be evaluated and inspected by the Building Division prior to conversion or installation of the green roof. Building plans with the appropriate engineering shall be submitted to the Building Division as a means of evaluating the capacity of the roof for the use.

Sec. 1508. Energy Efficiency and Conservation: Proper building orientation, building and structure locations, and energy-efficient equipment can help increase efficiency and reduce energy usage.

- A. Structures should be oriented in such a way as to take advantage of natural light and wind patterns for natural, passive heating and cooling.
- B. Building orientation and layout should be designed wherever possible to facilitate future alternative energy production and usage on site.
- C. Housing subdivisions should be designed with as many roof structures as possible oriented in such a way as to facilitate and encourage the installation of solar photovoltaic energy systems and maximize sun exposure to those systems.
- D. Development proposals should provide a roof layout plan within or in addition to the site plan and construction plans that illustrates how future installation of a photovoltaic system(s) will or could be accommodated if desired. Plans should identify installation of conduit from the roof to the electrical room, or to electrical panels if no electrical room is provided, to accommodate future photovoltaic system or other collector/power generation installation.
- E. Projects should incorporate energy-efficient appliances, such as tankless or solar water heaters and energy-efficient heating and cooling systems. Residential projects should be constructed to meet federal Energy Star ratings to reduce energy use and utility bills.
- F. Window shading/solar shading devices should be incorporated into the project design wherever practical.
- G. Projects that provide overnight security and safety lighting should utilize outdoor lighting on timers or motion detection sensors, or otherwise have the capacity to switch to a dimmer, less-energy intensive mode during hours of reduced activity.
- H. Projects should incorporate energy efficient lighting systems including the use of energy efficient compact fluorescent bulbs and LED-type lighting.
- I. Green roofs are encouraged in all projects where practical and desired as a means to lower energy costs for heating and cooling and to reduce the urban heat island effect.



- J. All projects shall comply with all applicable provisions of the California Building Standards Code, California Code of Regulations (CCR), Title 24.

Sec. 1509. Alternative Energy Sources: Alternative energy sources reduce the reliance of County residents on fossil fuels and reduce long-term energy consumption costs.

- A. Solar and wind energy systems may be installed for either personal non-commercial use designed and appropriately sized to serve the needs of the use on the site and reduce onsite consumption of utility power or as commercial energy generating facilities designed for production of energy on a commercial basis.
- B. Solar and wind energy systems standards are provided in Section 1112 of this Development Code to safeguard energy systems and to facilitate their safe operation. These standards may be modified by the Community Development Agency Director in the event that compliance would demonstrably reduce the operating efficiency or performance of the alternative energy system and modification would not adversely impact public health and safety.

Sec. 1510. Recycling: Responsible waste management is encouraged within the unincorporated communities and throughout the entire county as a means of saving money and reducing greenhouse gas emissions by decreasing the consumption of raw materials and energy used during manufacture, transportation and disposal. Recycling helps conserve resources and extends the life of California's landfills. Recycling also helps create a healthy environment for our communities and future generations.

- A. Construction and demolition waste: All projects carried out under this Development Code shall comply with all applicable provisions of state law regarding disposal of solid waste, hazardous waste, and electronic waste. Additional information concerning the requirements and proper methods of waste disposal can be found at www.kwrecycles.net/ or by calling the Kings Waste and Recycling Authority at the phone number shown on their website.
- B. Collection of Recyclable Materials: State law requires that all businesses that generate four or more cubic yards of waste weekly to recycle. Other smaller businesses are strongly encouraged to recycle as much as practical. Additional information on setting up a recycling program for businesses can be found at www.kwrecycles.net/ or by calling the Kings Waste and Recycling Authority at the phone number shown on their website.
- C. All commercial establishments are encouraged to provide recycling receptacles in addition to trash receptacles for use by customers and employees.

Sec. 1511. Mobility and Transportation: Just as mobility refers to the movement of people and goods, accessibility refers to the ability to reach desired goods, services, activities, and destinations. Transportation deals with the way people move to their destinations and access goods and services. It is essential that these elements be considered and implemented into the design of all development projects. Better connectivity can help reduce vehicle miles traveled and carbon emissions from autos by encouraging walking and providing more direct paths to commercial districts, schools, and other public spaces. The following elements should be incorporated into development projects wherever possible:

- A. **Complete Streets:** All development projects should incorporate elements which promote and allow safe pedestrian walkability, bicycle usage, and accessibility by wheel chairs and other mobility devices. Those elements include:
1. Sidewalks which encourage pedestrian usage
 2. Curb Cuts with accessibility ramps
 3. Bicycle lanes and signage
 4. Planting strips with shade trees
 5. Raised medians
- B. **Street Connectivity:** Efficient street connectivity provides a safe and practical means of allowing a person to make some or all of the trips in their daily routine on foot rather than by car as well as making vehicle travel more direct and efficient.



Local street connectivity provides for both intra- and inter-neighborhood connections to knit developments together, rather than forming barriers between them.

1. Housing subdivisions or planned developments should be designed with efficient “street connectivity”, which is a system of complete streets and multiple routes and connections serving the same origins and destinations.
2. The street configuration within each newly developed parcel should contribute to the street system of the greater neighborhood. Streets proposed as part of new housing subdivisions should connect with streets of existing subdivisions.
3. When possible, cul-de-sacs should incorporate public walkways that connect to another cul-de-sac or street. Minimizing cul-de-sacs and providing walkways enhances neighborhood walkability by reducing distances required to travel.

C. **Preferential Parking** for alternative fuel vehicles is encouraged, and each space should be provided with a sign/marketing that identifies the parking space as designated for use by alternative fuel vehicles.

1. Preferential parking spaces should be located as close as possible to the primary entrance without conflicting with parking provided to meet the Americans with Disability Act requirements or preferential parking provided for carpools/vanpools.
2. For those sites already containing parking spaces for vehicle recharging stations, those spaces may be dually designated as vehicle recharging stations and as preferential parking for electric vehicles.

Sec. 1512. Livability: Livability is broadly defined as, “the sum of the factors that add up to a community’s quality of life, including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities”. (Partners for Livable Communities). The following concepts should be incorporated into all development projects within Kings County:

A. **Subdivision Design and General Residential Project Principles:** The following guidelines apply to new residential subdivisions, and address how new residential subdivisions should relate to their surroundings.

1. **Develop “neighborhoods.”** Each new residential project should be designed to integrate with the surrounding neighborhood to ensure that it maintains the established character. Subdivisions should be designed so that individual, separately developed projects work together to create distinct neighborhoods, instead of disjointed or isolated enclaves.
2. **Integrate Open Space.** Providing open space and integrating natural features into a residential project can significantly increase the appreciation of residents in their neighborhoods, provide safe places for children and families to play, and maintain a strong sense of connection with the surrounding natural environment in the county as a whole. New subdivisions adjacent to planned or existing parks or other public open spaces (such as views, mature trees, and similar features), or the landscaped grounds of schools or other public facilities should maximize visibility and pedestrian access to these areas. Where these facilities are not already planned, the subdivision should be designed to provide usable public open spaces in the form of parks, linear bicycle and pedestrian trails, squares, and greens, as appropriate.
3. **Scale.** New residential subdivisions and groups of subdivisions that, in effect, collectively create a new neighborhood, should be designed to provide a "walkable" scale that places all homes within one-quarter mile of neighborhood shopping opportunities, a neighborhood park, or a public facility that can serve as a "center" for the neighborhood. Ideally, each neighborhood should have a center that includes all three facilities or is within one-quarter mile of all three types of facilities.

B. **Visual Elements:** Visual elements of a project should be considered and included during the development process to add to the theme or character of a neighborhood or community. Developers of projects within the communities of Armona, Kettleman City, or Stratford, in particular, are directed to the applicable design guidelines for each of the unique



community areas they represent. Development guidelines are available online and from the Community Development Agency.

1. Commercial development should be designed to a “human scale” for aesthetic appeal, pedestrian comfort, and compatibility with other land uses. Without human scale, the pedestrian will feel unwelcome and go elsewhere.
 2. Everything seen and experienced from the sidewalk—building fronts, signs lighting, open space - should be designed for human interaction at a pedestrian’s perspective. The pedestrian wants interesting things to look at close at hand, such as windows, display cases, sidewalk cafes, and most of all, other people.
- C. **CPTED:** “Crime Prevention Through Environmental Design” has been identified as playing a key role in the prevention and deterrence of crime related activities in all development projects, and particularly in residential neighborhoods.
1. All new development projects are encouraged to integrate CPTED strategies in order to prevent crime through designing a physical environment that criminals perceive as a higher risk for committing a crime. The strategies of CPTED include:
 - a. **Natural Surveillance** - A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas and building entrances; doors and windows that look out onto streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; adequate nighttime lighting.
 - b. **Territorial Reinforcement** - Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. Territorial Reinforcement is promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and "CPTED" fences.
 - c. **Natural Access Control** - A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. Natural Access Control is gained by designing streets, sidewalks, building entrances, and neighborhood gateways to clearly indicate public routes and by discouraging access to private areas with structural elements.
 - d. **Target Hardening** - Accomplished by features that prohibit entry or access: window locks, dead bolts for doors, interior door hinges, etc.
 2. Developers of projects within the communities of Armona, Kettleman or Stratford in particular are directed to the applicable design guidelines for each of the unique community areas they represent. Development guidelines are available on-line and from the Community Development Agency.
- D. Project developers should incorporate as many of the sustainability concepts presented above in this article as possible as a means of contributing to the highest degree of livability standards for their projects.
1. Developers should consider and incorporate LEED (Leadership in Energy and Environmental Design) system design standards developed by the U.S. Green Building Council that apply to both building and site design.
 2. Site planning and design for a project should begin with consideration of surrounding uses and access to maximize connectivity with key public uses, services and employment.
 3. Once site planning is established, developers should consider and incorporate LID (Low-Impact Design) principles wherever feasible.

Sec. 1513. Adaptive Reuse of Existing Structures: Project proponents are encouraged to examine the concepts of adaptive reuse in fostering the development of a sustainable built environment through the re-purposing of existing structures to new uses. Adaptive reuse enables an existing building to suit new conditions while supporting global climate protection and emissions reduction. Adaptive reuse may be a viable alternative to demolition and replacement as it entails less energy and waste, and lengthens the useful life of the existing building.



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