General Infrastructure Policies
General Transportation Policies
Transportation Demand Management Policies
Pedestrian and Cycling Policies
Transit Initiatives
Roadway Initiatives
Parking Initiatives
Parks Policies
General Utility Policies
Water Servicing Policies
Sanitary Sewer Servicing Policies
Stormwater Management Policies
Solid Waste Policies
City infrastructure – parks, sewers, utilities and transportation routes – will need to expand as the city’s population grows.

To be sustainable, infrastructure must be efficient and durable, while creating minimal impacts on the environment.

To provide sustainable infrastructure, Kelowna will explore infrastructure plans from both a life cycle analysis – the long-term costs and benefits of a project – and from a multiple bottom line approach – considering how infrastructure projects can meet as many sustainability objectives as possible.

The impact of infrastructure in directly or indirectly creating greenhouse gas emissions is also central to the planning process.

- To support sustainability, Kelowna will: Design transportation routes to prioritize investment in transit, pedestrian and bicycle infrastructure in order to increase mobility choices for residents and minimize the use of single occupancy vehicles – one of the largest producers of greenhouse gases;
- Centrally locate urban parks to allow a diversity of users to enjoy recreational opportunities in their own neighbourhoods;
- Include open spaces as part of parks acquisition to secure long term connections and protection of important environments, habitats, and watersheds;
- Design sewers and utilities so as to create the best use of resources and the lowest impact on the environment.

Policies relating to the City’s role in achieving action through the development approval process is covered off in Chapter 5. Additional policies that relate to civic infrastructure are covered in this Chapter.
THE CITY OF KELOWNA WILL:

GENERAL INFRASTRUCTURE POLICIES

Objective 7.1  Apply sustainable decision-making approaches in infrastructure planning and procurement.

Policy .1  Life Cycle Analysis. Complete a life cycle analysis of infrastructure to assess the capital and operating costs of alternative investment options for a given project. Assessment of need, supply and demand strategies should be considered simultaneously.

Policy .2  Integrated Resource Management Strategy. Complete an integrated resource management strategy during the planning and development of public infrastructure to maximize opportunities for waste reduction and/or conserving or generating energy and to minimize the "ecological footprint" of infrastructure design, construction, operation, maintenance and decommissioning.

Policy .3  Greenhouse Gas Reduction Criteria. Incorporate greenhouse gas reduction criteria in infrastructure projects for evaluation/modeling and procurement.

Policy .4  Multiple Bottom Line. Ensure a multiple bottom line approach is applied to all infrastructure planning projects.

Objective 7.2  Design infrastructure to deliver maximum benefit.

Policy .1  Integrated Design Process. Ensure all infrastructure projects are considered for an integrated design process to ensure achievement of multiple objectives.

Policy .2  Resource Recovery. Require resource recovery planning as a driving component of infrastructure projects to maximize opportunities for liquid, material and energy recovery from the co-management of water, solid and liquid waste systems.

Policy .3  Regenerative Design Principles. Incorporate Regenerative Design Principles in City infrastructure projects.

Policy .4  Design Guidelines. In all infrastructure planning, design and construction, seek consistency with the Crime Prevention Through Environmental Design (CPTED) guidelines and Guidelines for Accessibility in Outdoor Areas.

Ensure a multiple bottom line approach is applied to all infrastructure planning projects.
Objective 7.3  
**Invest infrastructure funds to deliver on community goals.**

*Policy 1*  
**Housing Mix.** Deliver services and infrastructure and create financial structures that will support the aim of having 57% of new housing units in the form of townhouses and apartments.

*Policy 2*  
**DCC Framework.** Continue to structure DCCs so as to encourage centrally located, denser forms of housing to be built in areas that are highly livable and well serviced with green infrastructure (parks and trees), sidewalks, bicycle lanes and transit.

Objective 7.4  
**Ensure that densification of existing neighbourhoods happens in a context of directly contributing to enhanced livability.**

*Policy 1*  
**Urban Centres and Densifying Neighbourhoods.** Allocate resources to ensure civic capital (e.g. signage, street furniture, sidewalks, bike lanes, parks, leisure facilities and other infrastructure investments) is, as a priority, invested in Urban Core Areas indicated on Map 5.3 and areas slated for significant multiple unit infill, with the purpose of making these safe, accessible, high-quality living and working environments so that redevelopment consistent with the OCP Future Land Use map will be encouraged.

Objective 7.5  
**Minimize impacts on agricultural land.**

*Policy 1*  
**Service Corridors.** Minimize the impact of penetration of road and utility corridors through agricultural lands, utilizing only those lands necessary and to the maximum capacity prior to seeking new corridors. Provision should be made for farm traffic to cross major roads.

**GENERAL TRANSPORTATION POLICIES**

Objective 7.6  
**Place increased emphasis on sustainable modes of transportation (walking, cycling, transit) while maintaining automobile, commercial goods and emergency vehicle mobility.**

*Policy 1*  
**Transportation Infrastructure Priority.** Transportation infra-structure will be funded, designed, constructed and maintained to meet the needs of users and according to the following priority:

i. Active Transportation (Walking and Cycling)

ii. Transit

Ensure that sidewalks, bike lanes and landscaping are an integral part of transportation corridors.
iii. Movement of Goods & Services
iv. High Occupancy Vehicles (HOVs)
v. Single Occupant Vehicles (SOVs)

Priority will be assigned to active transportation and transit infrastructure that serves and connects Urban Centres, major employers, health care and educational facilities.

Policy 2
Complete Streets. Ensure new roads are built as complete streets that incorporate sidewalks and on street bike lanes on arterial and major collector roads and off-road bike paths as per the Active Transportation Plan and provides for efficient transit service, as well as sufficient space to include landscaping.

Policy 3
Road Safety. Ensure that safety audits are conducted as part of major road design processes.

Policy 4
Rail Corridor. Only support use of the rail corridor as a transportation corridor for trains, buses, cycling, pedestrians and other uses that complement the primary alternative transportation function. Pursue approval for joint use of the corridor for active forms of transportation while the corridor is still being used for rail transportation.

Policy 5
Capacity Increases. Where growth creates the need for additional capacity (driving lanes for transit / emergency vehicles / trucks / cars, sidewalks, bike lanes, multi-use paths, intersection improvements, etc.) on any transportation corridor, the City will remove on street parking as a first priority in order to maximize the use of the existing public right-of-way and to reduce the cost to the public. Only where there are no other options will the City acquire additional land.

TRANSPORTATION DEMAND MANAGEMENT POLICIES

Objective 7.7
Reduce peak hour trips and the percentage of trips undertaken by single occupant vehicles, particularly in Urban Centres, in order to reduce or eliminate the expansion of the transportation network and capacity.

Policy 1
Motorized Trips. Provide infrastructure to the Urban Centres based on the expectation that not more than 45% of total trips in the City Centre and other Town Centres will be by motor vehicle.
Policy 2  
**Ease of Movement.** Ensure that pedestrians, bicyclists and transit users can move about pleasantly and conveniently and that they are not unduly impeded in their movements by provisions for enhanced automobile mobility.

Policy 3  
**Congestion.** Recognize and accept that a greater level of congestion will result from an increase in suburban growth and a reduced road construction program. The construction of active transportation corridors will be one of the methods of providing alternatives to relieve this congestion.

**PEDESTRIAN AND CYCLING POLICIES**

Objective 7.8  
*Provide more active transportation infrastructure to: increase resilience in the face of higher energy prices; improve community health; and reduce greenhouse gas emissions.*

Policy 1  
**Sidewalk Funding.** A key criteria for allocation of city funding for sidewalks shall be the ability of the sidewalk to enhance urban densification.

Policy 2  
**Active Transportation.** Ensure corridors identified on Map 7.1 – Active Transportation Corridors, are designed for bicyclists, pedestrians of all ages and abilities, and people getting on and off transit vehicles.

- Streets within Urban Centres should be:
  - Accessible, with wheelchair ramps, plenty of benches with shade, sidewalks on all streets, etc.
  - Well-connected, with streets forming a connected grid that improves traffic by providing many routes to any destination.
  - Built for an appropriate speed, with narrow lanes or traffic calming in place to control speed.
  - Comfortable, with pedestrian medians at intersections, countdown crosswalk timers, provisions for cyclists, protected bus shelters, and tree lined streets.

Policy 3  
**New Residential Developments.** Ensure that new residential developments and subdivisions have active transportation links to the nearest arterial or major collector roads at developer cost.

Policy 4  
**Mid-Block Linkages.** Promote mid-block pedestrian linkages between buildings in Urban Centres.
Policy .5 **Walkability.** Increase walkability within the City’s Urban Centres. Ensure in all new residential subdivisions (throughout the City) and commercial, industrial and institutional developments that walking distance between origins and destinations do not exceed a ratio of 3:1 between walking distance and “as the crow flies” distance. In all areas of the city, ensure that walkways are provided at the end of all new cul-de-sacs.

Policy .6 **Signal Length/Wait Time.** Time traffic signals in a manner that gives people preference over cars. Signal lengths should be set to permit less mobile pedestrians to cross with ease. Wait times should be set low so as to encourage pedestrians to act within the rules. These provisions should be made even if such result in delays to motorists.

Policy .7 **Pathway Configurations.** Create, within and between Urban Centres, pathways (using, for example, linear parks, parks, plazas or sidewalks) which form an easily walkable continuous loop. The purpose of such pathways would be to provide a venue for casual strolling and social interaction, as well as connections between centres.

Policy .8 **Bicycle Parking.** Provide bicycle parking facilities on public lands within Urban Centres, where provision of such facilities are needed or would likely result in increased bicycle usage.

Policy .9 **Utility and R.O.W. Corridors.** Seek co-operation for the pedestrian/bicyclist use of utility and right-of-way corridors. Should the right-of-way no longer be needed for utility purposes, the City would seek to preserve these corridors for future linear paths as part of the pedestrian and bicycle networks.

**TRANSIT INITIATIVES**

Objective 7.9 **Ensure efficient and effective transit infrastructure and facilities.**

Policy .1 **Transit Priority.** Utilize priority traffic signals and reserved transit/High Occupancy Vehicle Lanes where appropriate to optimize transit travel time on the Primary Transit Network.

Policy .2 **Transit Expansions.** Prioritize future transit expansions in accordance with Map 7.2 – Transit Plan.

Policy .3 **Transit Service.** Implement a Primary Transit Network of high-frequency and convenient (including late night service) transit routes to connect Urban Centres and surrounding urbanized central areas as well as institutional and community services such as the hospital, university, college, and recreation facilities.
Policy 4

**Base Level Transit Service.** Provide a base level of transit service (every 30 minutes) to facilitate convenient access to transit in areas with a sufficient population and employment intensity to achieve acceptable performance standards and return on investment.

**ROADWAY INITIATIVES**

Objective 7.10 **Ensure roadway planning supports sustainability goals.**

Policy 1

**Roadway Modifications.** Implement roadway modifications based on Map 7.3 - 20 Year Major Road Network Plan and a process, which primarily considers TDM objectives, but also addresses factors such as collision reduction, travel time savings, pavement quality, cost/benefits, minimum level-of-service policy criteria, movement of goods and services on designated truck routes, and environmental, land use and development objectives. Except where there are safety issues, refrain from implementing major roadway modifications intended to increase capacity and/or efficiency for automobiles on non-commercial routes (truck routes are considered commercial routes) until the peak hour level-of-service (LOS) is at the threshold of failure, measured at non-tourist season peaks.

Policy 2

**Traffic Calming.** At rezoning, require that all local and minor collector roads be traffic calmed at developer’s cost if they are connected to a new development generating more than 10 trips during the peak hour. Priority should be given to traffic calming measures on roads near elderly and child-oriented spaces and facilities.

**PARKING INITIATIVES**

Objective 7.11 **Implement parking management programs that promote reduced car ownership, reduced car trips and increased use of active modes of transportation.**

Policy 1

**Parking Cost.** Work towards a pricing structure where the cost of parking for an hour at a municipal facility (city owned parkade, off street surface lots and on-street parking) exceeds the price of a single transit trip.

Policy 2

**Cash-in-Lieu Pricing.** Work towards cash-in-lieuparking programs that reflect the full costs of providing land/facilities for parking.
PARKS POLICIES

Parks play a critical role in supporting community sustainability in the broadest sense and enhance community quality of life.

Objective 7.12 **Provide active and passive parks for a diversity of people and a variety of uses.**

**Policy. 1**

Active Park Standard. Using Development Cost Charge revenue provide 2.2 ha of parks per 1000 new population growth. As a guideline the 2.2 ha standard will include provision for 0.6 ha neighbourhood, 0.4 ha community, 0.6 ha recreation and 0.6 city-wide types of parks.

**Policy. 2**

Natural Area Parks and Open Space. Provide a city-wide network of natural area parks which meet the following criteria:

- contains representative Okanagan ecosystems;
- contains areas of outstanding natural beauty (including areas with high visual sensitivity and high visual vulnerability, such as rocky outcrops, ridge lines, hilltops, silt slopes, canyons, and water edges);
- the land area is contiguous and forms part of a larger open space network;
- contains conservation areas;
- protects viewshed corridors; and
- where appropriate, trails which maximize public safety while minimizing human impact on the most sensitive and vulnerable areas.

To achieve the above, the City will need to acquire land. In determining what land to acquire, the City will assess:

- costs/benefits to ensure the City is receiving a public asset, rather than a maintenance liability;
- liability from natural and man-made hazards (falling rocks, debris, hazardous trees, fuel modification etc.) to ensure hazards are mitigated in advance of acquisition;
- maintenance access to ensure it is acceptable; and
- opportunities for linear trails, view points, staging areas etc. to ensure availability of a public recreation component.

**Policy. 3**

Regional Parks. Support the acquisition of regionally significant natural areas under the Regional Parks Legacy Program.
Policy 4

**Parks in Agricultural Areas.** Where parks and linear pathways are proposed adjacent to farm areas they will be designed so as not to negatively affect farming operations. Mitigation techniques may include: deer fencing, signage, and trash bins to ensure trespass and field contamination is minimized. Any parks affecting lands in the ALR will be subject to detailed design based on the Ministry of Agriculture's guidelines.

Policy 5

**Walking Radius.** Strive to provide all residents in the urban core (See Map 5.1 Core Area) of the City with access to centrally located parks within a five minute walking radius.

Policy 6

**Glenmore Recreation Park.** As a key park initiative establish a major Recreation Park in the Glenmore Valley that complements the existing park system. This site is identified on Map 4.1 Generalized Future Land Use. The City recognizes that use of this site for park purposes will require provision of off-setting agricultural benefits on adjacent or nearby ALR land in the Glenmore Valley to the satisfaction of the Agricultural Land Commission.

Policy 7

**Alternative Park Space.** In urban areas of the City where further park acquisition is not financially feasible, consider innovative techniques such as:
- closing excess streets and roads;
- converting surface parking lots;
- developing existing parks with higher intensity uses (e.g. sportfields, lighting, artificial turf fields);
- developing boulevards as people places;
- developing cemetery with public park components;
- sharing school yards;
- developing utility corridors and detention ponds with public park components;
- encouraging rooftop gardens; and
- using the railway as a linear park.

**Objective 7.13** Provide a city-wide linear park and trail network.

Policy 1

**Linear Park Priorities.** The top six linear park priorities for the City, as endorsed by the Linear Park Master Plan are:
- Waterfront Walkway
  - Kinsmen to Strathcona; and
  - Rotary Beach Park to Mission Creek
- Rails with Trails
- Mill Creek
- Bellevue Creek
- Gopher Creek, and
- Mission Creek – Lakeshore to the Lake.
Objective 7.14 Provide waterfront parkland along the Okanagan Lake shoreline.

Policy 1 Waterfront. Waterfront parkland acquisition will concentrate on areas along Okanagan Lake to increase public ownership of the foreshore. A high priority section of waterfront will be from Kinsmen Park to Knox Mountain Park.

Objective 7.15 Develop park partnerships.

Policy 1 Partnerships. The City will create community and enhance quality-of-life through partnerships with developers, residents’ associations, property owners, non-profit organizations, private enterprise, user groups and individuals, on the acquisition and construction of all classes of parks. The City will also pursue joint use agreements and partnerships with School District 23, Regional District of the Central Okanagan, and the University of British Columbia Okanagan.

Objective 7.16 Develop parkland to respond to user needs.

Policy 1 Design to Context. Design park space to reflect neighbourhood context.

Policy 2 Park Accessibility. Design parks to meet the needs of a variety of user groups, including families, youth, and seniors. Where appropriate, parks will be designed to meet universal access standards for outdoor spaces.

Objective 7.17 Minimize environmental impacts of parks.

Policy 1 Manage Public Access. Manage the impacts of public access in natural area parks by defining and developing trails which maximize public safety while minimizing human impact on the most sensitive and vulnerable areas; and reducing the impact of trails for example by reducing width, modifying surfaces, and developing boardwalks.

Policy 2 Water Conservation. Conserve water by improving the efficiency of existing irrigation systems, improving park construction standards, designing for water conservation, using non-potable water and converting park and civic building landscapes to reduce the amount of irrigated turf where appropriate.
Objective 7.18 **Minimize intrusion of utilities in parks.**

*Policy 1: Utilities in Parks.* Public or private utilities will not be located in parks and natural open spaces unless an overall public benefit and no net environmental loss can be demonstrated. Where these criteria can be met, the utility must be located and designed in such a way as to have no visual impact to the surrounding neighbourhood.

**GENERAL UTILITY POLICIES**

Objective 7.19 **Ensure efficient, sustainable and context sensitive implementation of utilities.**

*Policy 1: District Energy System.* Where a district energy system is in place or is planned, implement a Service Area Bylaw to ensure new buildings in the service area are ready for connection to the district energy system.

*Policy 2: Energy Reduction Priorities.* In working to reduce greenhouse gas emissions, place a primary focus on reducing demand, then prioritize further efforts in the following sequence: re-using waste heat, using renewable heat, and then finally on using renewable energy.

*Policy 3: Renewable Energy.* Reduce reliance upon fossil fuels by promoting and supporting renewable energy infrastructure, such as solar power and geothermal, and by purchasing energy supplied from renewable sources. Renewable energy systems should be pursued in collaboration with Provincial, Federal and private sector programs.
Utility Corridors. Allow new arterial right-of-ways to be expanded to provide for utility corridors parallel to the road. Multi-utility line assignments and land economies are encouraged.

WATER SERVICING POLICIES

Objective 7.20 **Ensure an adequate supply of high quality water.**

Policy 1 **Water Availability for Agriculture.** Work with stakeholders to ensure the continued delivery of sufficient quantities of water as per best practices for water conservation to ensure continued agricultural productivity.

Policy 2 **Irrigation District Boundaries and Standards.** Support the necessary amendments to Irrigation District Boundaries as identified on Map 7.4 – Water Supply System to allow expansion to un-serviced areas, in accordance with the Kelowna Water Servicing Plan and overall OCP objectives and development phasing, and encourage new installations to be made to ensure compliance with the Canadian Drinking Water guidelines and Interior Health Authority water quality objectives.

Policy 3 **Groundwater Protection.** Protect the City’s groundwater resource from inappropriate development by using established capture zones to limit or regulate new development within wellhead capture zone areas.

Objective 7.21 **Minimize unnecessary water consumption.**

Policy 1 **Best Practices.** Minimize water consumption by following best practices for water conservation including metering, public education and equitable rate structures, toward increased resilience to drought.

SANITARY SEWER SERVICING POLICIES

Objective 7.22 **Connect urban development to the sanitary sewer system.**

Policy 1 **Expand the Sewer Servicing Area.** Require the extension and expansion of the sanitary sewer system to include urban developments within the generalized sewer limits and according to the priorities identified on Map 7.5 - Sanitary Sewer System.

Policy 2 **Restrict expansion of sewer into agricultural areas.** Restrict community sewer service expansion into agricultural areas except where infrastructure is needed to address public health issues and protection of natural assets as identified by the City of Kelowna or senior government.
STORMWATER MANAGEMENT POLICIES

Objective 7.23 Manage stormwater and run-off to reduce risk of flooding and erosion.

Policy 1 Run-off Volumes. Manage runoff volumes generated by urban development to minimize changes in water flow and impacts to watershed health.

Policy 2 Re-use of Stormwater. Encourage the use of stormwater as a resource not to be wasted but captured and re-used for irrigation and recharging aquifers, where capture and re-use would not negatively impact downslope properties.

Policy 3 Urban Run-off Impacts. Require the mitigation of urban run-off impacts through the effective use of stormwater detention and treatment facilities prior to discharging to receiving waters.

Policy 4 Surface Drainage / Detention Areas as Amenity Space. Where it has been adequately demonstrated that stormwater detention and conveyance systems will provide a positive impact, or at a minimum will not create negative impacts on the natural environment (i.e. no net loss of habitat) and/or the potential for public use on public land, these uses may be allowed. Public use would be limited to those areas where the detention/conveyance systems are on public land. Restricted access (e.g. fencing) on public land to facilitate the detention and conveyance systems will not be permitted and the proponent must demonstrate that the hazard risks associated with the stormwater infrastructure are low.
Map 7.5
Sanitary Sewer
Official Community Plan 2030

Rev. May 30/11

This map is for general information only. The City of Kelowna does not guarantee its accuracy. All information should be verified.
SOLID WASTE POLICIES

Objective 7.24 Divert solid waste from landfills.

Policy .1 Regional Strategies. Ensure Regional Strategies for waste management are followed.

Objective 7.25 Ensure the long term viable use of local landfills.

Policy .1 Resource Recovery. Provide opportunities for resource recovery from reuse and utilization of waste transported for disposal in order to reduce the carbon footprint associated with waste.

Policy .2 Glenmore Landfill. Continue to use the Glenmore Landfill facility for the disposal of waste in accord with the Regional Solid Waste Management Plan and the Comprehensive Site Development Plan (July 2008).

“Provide opportunities for resource recovery from reuse and utilization of waste transported for disposal in order to reduce the carbon footprint associated with waste.”