

**SECTION 2:
PARK DESIGN AND DEVELOPMENT**



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SECTION 2

2.0 PARK DESIGN AND DEVELOPMENT

2.1 General Requirements

The following section describes the general requirements of development interests in the condition, pre-servicing and physical development of lands to be conveyed for public use as parkland. These requirements are further to any conditions and requirements outlined in the subdivision agreement and its schedules, site plan agreements, Zoning By-laws, along with those required as a component part of the Development Charges By-law and its related supporting documentation. In the case where requirements overlap or vary, the Town shall be the sole arbiter of what requirements will be required for development on a case by case basis.

2.2 Pre-development Condition of Parkland

Municipal property preserved as open space or intended for parkland development will not be used for the purposes of temporary stockpiling or storage of earth, construction supplies, debris or any other materials without express permission of the Town. Lands set aside for parkland are presumed to have been subject to the equivalent of a Stage 1 Environmental Audit by the developer for his own purposes of acquisition and development; and as such possessing of suitable soil conditions for development purposes and free from contamination and buried debris or garbage. Upon the initiation of development activity, designated parks and open spaces will be routinely monitored by Town inspectors for activities of dumping or burying of any sort of garbage or waste and should such materials be discovered in the construction of the future park, the developer will be required to remove such materials at no cost to the Town.

Designated parkland and open space will not be used for the erection of advertising signage or for the storage construction trailers or construction equipment. The developer will maintain pre-serviced parkland in a clean condition at all times until the park is accepted by the municipality for the purposes of park construction. Once designated lands have been pre-graded and pre-serviced they shall be defined and protected at their boundary with post and wire fencing to the satisfaction of the Town.

The lands shall not be utilized for the stockpiling of topsoil stripped from the subdivision except in such quantities as may be required for the finishing of the park. Upon completion of pre-grading, the developer is to provide a survey plan, prepared by a registered Ontario Land Surveyor, describing the as-built topographic condition of the park. The survey is intended to demonstrate that the park pre-grades reflect as closely as possible the intent and designed geodetic elevations of the subdivision engineer's grading and drainage plans.

It is the intent of the Town, with the cooperation of the developer to reduce disturbances to the park and those who reside in the vicinity and to take advantage of available economies of scale and cost efficiency by limiting the need for temporary restoration by the developer. In this way it is hoped that the park development process can be sequential and streamlined to allow construction by the Town or the developer immediately upon completion of pre-grading. If the park construction cannot be feasibly started within one year of completion of pre-grading, the developer will be required to provide temporary restoration of the park in the form of seeding with a seed mix suitable for the soil conditions and approved by the Town in accordance with the subdivision agreement.



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2.2.1 Topsoil Stripping and Grading

Prior to grading of the park by the developer, the full depth of existing topsoil will be stripped. Topsoil stripping is to occur in logical sequence with the balance of the subdivision or phase. Topsoil, in quantities necessary for the park development shall be conserved and made available for the final grading of the park block with depths of not less than 150 mm and up to 300mm. Topsoil conserved for the park is to be tested by the developer to ensure the fertility and composition is suitable for use in park construction. Such test results are to be submitted to the Town for approval prior to the development of the park block. The developer will be responsible to ensure that sufficient quantities of approved topsoil are available for the construction of the park.

Utilizing the approved Park Concept Plan or subsequent Grading Plan, the developer is to provide suitable structural fill below all hard-surface areas including pathways, paved recreation facilities and parking areas within the park.

Areas of structural fill are to be tested by a Geotechnical Consultant and the results of such testing submitted to the Town for information. The Developer will be required to establish sub-grade elevations as described by the Grading Plans for the park. Where park blocks are stripped and pre-graded in accordance with subdivision engineering plans at the early stages of the subdivision development, the developer shall be responsible to execute additional grading to the park to bring the lands into conformance with the specific plans developed for the park by his landscape architectural consultant.

2.2.2 Co-ordination of Services

The developer shall at a minimum provide inlet drop structures at each frontage of the park block. These structures shall be in conformance to Provincial standards (O.P.S.D.) for the construction of manholes or manhole/catchbasins. Connections from these structures to the surrounding storm sewer system shall be of an invert elevation set low enough to efficiently drain the entire block of land below frost penetration levels. The park block shall be effectively drained in its interim pre-grade condition with inlet structures as needed for each sub-drainage/catchment area within the park block. Should the structures provided be shown to be insufficient to outlet the future internal drainage system of the park as designed, additional drop structures and road crossing connections shall be the responsibility and cost of the developer.

In addition to storm sewer servicing and as a part of the servicing requirements for sanitary, electrical and water supply throughout the subdivision, the developer will be responsible to construct services 1.5 metres into the park property as follows:

- Community Park: a sanitary sewer manhole chamber and stub; a 150mm diameter water supply line with curb-stop and 3-phase electrical power. Where the Community Park has two or more street frontages, all or some of these services are to be provided at each frontage to the park as confirmed with the Town.
- Neighbourhood Park: a 50mm diameter water supply line with curb stop and a single-phase electrical supply line from a local transformer. These services will be stubbed and clearly marked with a permanent monument at ground level.

The above requirements for drainage and servicing are considered as a component part of the general development of the subdivision but in detail are to be separate from the developer's responsibility for any storm water management mechanisms that may be permitted within or be associated with the park. Costs for such subdivision storm water engineering works are to be entirely



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attributable to the developer in the development of the lands. Drainage requirements for the ultimate development of the park block will be determined in the detail design processes described herein.

The Town encourages the exploration of potential cost efficiencies for the municipal services related to final park construction. Once the storm sewer design for the entire park is determined through detail design and construction drawings prepared for the park, the developer will be requested to co-ordinate construction of the entire sewer system and construct the park-related drainage works in conjunction with general subdivision servicing if deemed cost-effective for the town. The costs for such Town works are to be submitted to the Town for agreement prior to the specific construction activity. The Town will reimburse the developer for that portion of servicing costs that are the Town's responsibility pending the inspection and acceptance of those services by the Town. Reimbursement for such works may also be contingent upon the timing of approvals of the Town's capital budget as it relates to the park block.

2.2.3 Park Fencing

Notwithstanding the installation of temporary protective fencing of park and open space blocks, the developer is to provide a 1.8 metre (6 ft) high black vinyl coated chain-link fence, to the town's standard detail, around the perimeter of the park along shared property lines with adjoining residential or commercial developments. The mesh fabric of the fence shall have 38mm diamond-shaped openings made from 9 gauge wire before vinyl coating. Terminal posts shall be a minimum of 88.9 mm (3 1/2") OD pipe, line posts of 60 mm (2 3/8") OD pipe and rails of 43mm (1 7/8") OD pipe. All piping shall be schedule 40, galvanized steel, treated with etching primer and factory painted black. Concrete footings are to create a minimum of 150mm of cover to the edges of posts and shall be generally poured against smooth native ground and formed at the top of foundation. Where ground conditions prevent the creation of smooth sided augured post holes, footings shall be poured into sono-tube for the full depth of footing to 1.2 metres below grade with voids around the outside of the form filled with compacted limestone screening.

2.2.4 Securities and Acceptance

Performance of the above-referenced requirements shall be guaranteed through the provisions of the subdivision agreement and the value of the works described for the preparation of the applicable schedule/section of that agreement. The Town shall secure from the developer a letter-of-credit for the value of all work described above in this section and for any additional requirements as may be stipulated in the subdivision agreement at the discretion of the Town. The letter-of-credit will be based on a cost estimate prepared by the developer's consultants and reviewed and approved by the Town. The Town will assume responsibility for the park only at such time as the property is ready to be constructed by the Town under the Development Charges Policy. In the case when temporary restoration through grading and seeding has been required to convey property prior to park development, acceptance will occur when turf cover is satisfactorily established and the lands are considered by the Town to be stable, free from erosion and efficiently drained.

2.2.5 Park Construction by Developer

Development and/or Subdivision Agreements may require the developer to construct parks in response to timing or permissions with regard to construction of phases within a development. The developer on its own initiative and interests may wish to enter into front-ending agreements with the



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Town for the early delivery of parkland. In cases where such requirements are not registered as a condition on a plan, the developer has the option to develop the park on behalf of the Town in advance of the Town's capital budget schedule. Such option may be negotiated with the Town if it is deemed advantageous for the subdivision developer, and does not impose undue additional administrative or operating costs on the municipality.

In such instances, performance of park construction will be treated as any other municipally approved subdivision construction. The developer should expect to develop a park to the approval of the Town, completing the construction to a set of Town-approved technical drawings, specifications and standards. The construction tender and contract process shall be open and the Town reserves the right to review and approve the award of the park construction tender. An agreement will be executed and a letter-of-credit will be secured from the developer to ensure timely completion to a level of quality and workmanship acceptable to the Town. Joint Town/Developer tenders may also be approved to take advantage of cost and time efficiency. The Town will reimburse to the developer the portion of costs the Town is responsible for under the Development Charges By-law within a time frame and re-payment structure agreeable to both parties in the construction agreement.

2.2.6 Park Construction Timing

Notwithstanding the discussion of park construction in section 2.2.5, parks will generally be constructed by the municipality upon 50% occupancy of a residential subdivision. Where the developer's phasing of a subdivision, as a result of servicing availability or other factor may delay the achievement of 50% occupancy within the entire subdivision, the Town at its option may construct the park on an accelerated schedule to ensure service to the local community area. The Town will maintain capital construction forecasts for parks to the best of its ability based upon growth forecast information provided by developers and the five year trend evidenced by building permit issuance activity.

2.2.7 Park Construction Budgets

The Town will maintain capital budget forecasts for parks construction based upon conceptual designs and projected costs for new parks to be created. Such forecasts will be updated and modified from time to time in step with the Town's budget approval process. Individual parks will be assigned capital budgets for construction based upon the predicted program for the park and the affordability of such a program in light of anticipated Development Charge revenues. Should a developer, for purposes of marketing or community design theme wish to expand on an agreed park program with additional features within a design, the costs associated with the additional features shall be the sole responsibility of the developer and not candidate for re-imburement under the Development Charges By-law.



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2.3 Requirements for Park Design Plans

2.3.1 Park Design and Facility Development

Park facilities and amenities constructed by or on behalf of the Town may include, but will not necessarily be limited to or include all of, the following features:

A. Town-Wide Parks

Any facilities described under the following sub-sections for Local and Community Parks may also apply to a Town park depending upon the nature of the park and its purpose in the overall parks and open space system. Town wide parks can be a variety of sizes and have a variety of purpose depending upon context and municipal setting. Regardless of this the intent is that such facilities are to be memorable places within the community whether it be for outstanding sporting and recreation facilities or for architecture, art, historical reference or cultural significance. Facility requirements and design standards will be determined on a site specific basis at the time of Park Concept Plan preparation.

B. Community Parks

Community Parks may also contain some, or all of the following park features:

- Designs shall include sustainable features including recycled products, water and energy conservation features and locally manufactured products wherever possible
- Sports fields for Senior and Junior Play - including soccer pitches, softball or slow-pitch diamonds complete with park features and furnishings such as backstops and boundary fences, goal posts, players benches and spectator bleachers.
- Any combination of 2 or more major athletic facilities including: baseball, softball/slow pitch, soccer pitches, rugby grounds, field or box lacrosse, tennis courts, bowling greens or other structured sport facility
- Public art or historical display features
- Park identification signs and signs for information and regulations
- Shaped landforms, berms and drainage swales
- Areas of tree preservation or rehabilitation planting
- Planting designs of trees and shrubs to provide shade, interest and emphasis within the park
- Playground apparatus including junior and senior play elements with a clear emphasis on barrier-free design
- Water splash pad or other water play feature to serve a broader community area
- Basketball and hard surface multi-purpose courts
- Gazebos, picnic shelters or other seasonal structures
- Field houses/washroom buildings
- Indoor Recreation Facilities and supporting parking facilities.
- Parking on site and/or in combination with an adjoining school site
- Three-Phase Electrical Supply and walkway lighting systems with isolation circuit
- Walkway lighting and lighting for security at park structures
- Floodlighting of major athletic facilities
- 150mm water supply line, utility building for irrigation and water play infrastructure
- Sanitary sewer service to park buildings
- Landmark features of park architecture or public art
- Large areas of unstructured parkland or naturalistic landscapes linked to the surrounding community and open space system
- Trail heads and trail connections to the interconnected trail network



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C. Neighbourhood Parks

- Designs shall include sustainable features including recycled products, water and energy conservation features and locally manufactured products wherever possible
- Sports fields for Senior and Junior Play - including soccer pitches, softball or slow-pitch diamonds complete with park features and furnishings such as backstops and boundary fences, goal posts, players benches and spectator bleachers.
- Play Courts for junior play, full or half courts for basketball or other sports
- Playground apparatus including junior and senior play elements
- Pathways, sitting areas and park furnishings
- Passive open grassed areas for unstructured activities
- Shade structures and park architecture
- Public art or historical display features
- Park identification signs and signs for information and regulations
- Shaped landforms, berms and drainage swales
- Areas of tree preservation or rehabilitation planting
- Planting designs of trees and shrubs to provide shade, interest and emphasis within the park
- Sub-surface storm and sanitary sewer systems
- 50 mm diameter water service and utility building for irrigation and water play infrastructure
- Single-Phase Electrical Supply and walkway lighting systems with isolation circuit
- Parking on street or on adjacent school facilities

2.3.2 Park Concept Plan and Facility Fit

Working with the recommendations of the Master Plan, staff consultation and the relevant planning documents, the developer shall engage the professional services of a qualified, O.A.L.A. registered Landscape Architect to prepare a Park Concept/ Facility Fit Plan during the preliminary stages of engineering design and master servicing for the subdivision and the preparation of the Draft Plan of Subdivision.

The Concept Plan shall demonstrate, at a minimum, that:

- Park configuration and size is suitable to accommodate the park design program identified by the Master Plan as modified by the Town from time to time,
- Sufficient setbacks as depicted and described in the Town's Standard Details (Section 3.0 of this manual) are possible to buffer residents from active recreational uses.
- Setbacks for active facilities shall generally be a minimum of 20 metres from residential property to the edge of the recreational use and 15 metres from the street line of neighbouring roads. Setbacks for specific facilities are described in section 2.4.4 herein and may be listed on standard drawings.
- General setbacks shall not limit the flexibility of town in determining larger or smaller setbacks as may be deemed reasonable for the design of individual park programs and circumstances.
- Orientation of facilities and layout meets with Town standards
- Tree preservation requirements will be addressed in accordance with the approved Tree Preservation Plans and related documents as submitted for the subdivision
- The general relationship of park grading and drainage to the surrounding subdivision conforms to Town requirements and general approval.
- Display any encumbrance made necessary by the development engineering of the subdivision



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- Required services for the future construction of the park are verified and generally located on the Concept Plan
- Surface and sub-surface storm-water and sanitary drainage systems are available and can accommodate the predicted needs of the park development.
- The Developer is responsible to secure any relevant approvals from all agencies (Hydro, Pipelines etc.) that may be affected by the plan.

The developer/builder shall be required to display the approved Park Concept Plan in project sales offices. Any misrepresentation of the park design, or misleading portrayal of park amenities displayed in sales pavilions or advertising media shall be the sole responsibility of the developer/builder. Prospective purchasers are to be encouraged to approach the Town directly for information on the timing and program of the park development.

2.3.3 Construction Drawings

At the municipality's option, the developer shall engage the professional services of an O.A.L.A. registered Landscape Architect to prepare Detail Design/ Technical Drawings to fully describe the construction of all park features. The costs of such professional services when requested are attributable to the legitimate park development costs assigned to the park project through Development Charges. The developer shall file a copy of a proposal for professional services with the Town for reference in the accounting of the project. These fees shall be distinct from those fees which may have been incurred as a developer cost in the processing of the subdivision and the production of the Park Concept/ Facility Fit Plan and subdivision engineering and servicing designs for park blocks. Proposals for professional park design fees shall anticipate up to three detail reviews by municipal staff of complete drawing packages submitted for a park development. Proposals are to receive Town agreement prior to detail design works being submitted for review.

The following drawings shall be included at a minimum for all parks to be constructed, whether by the municipality or by the developer on behalf of the municipality:

- a. Existing Conditions Plan: Plans and construction drawings are to be prepared utilizing current engineering base information completed for the subdivision design along with current OLS survey information for existing legal boundaries and survey monuments and topographic features, spot elevations and contours. Such information shall include all features unique to the block of land including existing vegetation and geodetic elevations at the base of individual specimen trees.
- b. Layout Plan: the plan shall present an accurate representation of all works to be constructed for the park complete with dimensions and offsets tied to known legal lines for the block. Park facilities are to be shown in conformance with the minimum standards developed by the town for facility layout. All materials and finishes for the park development are to be labelled and construction details cross referenced to Town of East Gwillimbury standards or other technical details as may be suitable and required.
- c. Grading Plan: the plan shall show current geodetic information of the existing grades and conditions. Grading plans shall show the ultimate finished grades for all facilities and components of the proposed park. Grades shall be shown for all sports-fields and shall illustrate current standards for field grading and drainage in accordance with Town Standards. Grading design shall be done in recognition of the pre-grade conditions and structural fill preparation established for the park. The grading plan shall show all areas requiring additional engineered fill for construction of the park facilities. Spot elevations



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shall be shown to adequately describe all pathway construction, curbs, walls and edges and drainage swales through soft landscape areas. The grades to be achieved at drainage inlets are to be clearly shown on the plans.

- d. Service Plan: the plan shall show all necessary underground servicing to allow for the function of park facilities in accordance with current codes and best industry practices. The Servicing plan shall show all services, connections and crossings within the park block in context to each other and the development of the park and its features. Sewer systems shall be illustrated complete with descriptions of pipe materials and dimensions as well as all pipe crossing and inlet invert elevations. Local sub-drains required for park facilities are to be illustrated as to their location and connection to the main system of drainage. Water supply systems shall be illustrated with all necessary pipe dimensions, backflow prevention devices, chambers, meters, pipe reducers and appurtenances. All cross references for details and OPSD are to be clearly understood from the plans.
- e. Planting Plan: Plans will be prepared illustrating all tree, shrub and groundcover plantings proposed for the park. Plantings shall be accurately represented as to the extent of planting beds and the location of specimen trees relative to park features, servicing and paving. The planting plan shall include the contour grades of the proposed park development to ensure accuracy of context for planting.

Particular care is to be taken in the selection of plant species to conform to the details and standards of the Town and the intent for landscape development in context to the surrounding environment as expressed in Section 1 herein. Emphasis is to be placed upon the inclusion of native and indigenous species in park designs and to limit the extent of maintenance required to manage the park effectively. All areas of seeding and sodding shall be illustrated clearly by the plan.

- f. Irrigation Plans and Details: Irrigation Plans are to be produced by a Certified Irrigation Designer in general conformance to the standards of the Town. The irrigation plan is to be specifically reviewed with Town operations staff to ensure the proposed equipment and controllers are complementary to existing systems currently maintained by the Town and that systems represent current technology for water conservation. The Town encourages the design of irrigation systems supported or entirely operated through the conservation of rainwater or water generated by other park facilities.
- g. Electrical Plan: Plans are to be prepared by an independent electrical consultant with established municipal experience in the design of lighting systems for parks. The plan shall be prepared detailing the location and type of all walkway, parking area and sport lighting poles and fixtures. Plans and details shall be in conformance with the standards of the Town and shall reflect current rules and regulations with respect to electrical design. Electrical designs are to promote energy efficient and increased sustainability systems such as solar powered systems or LED lighting systems.
- h. Construction Details: Detail drawings are to be provided to fully explain the methods of construction for all elements of the park. The details shall, at a minimum, comply with the performance standards established in the Town's construction detail standards as shown in Section 3. Other details as may be necessary to explain the full extent and implications of the park construction shall be included for the review of the municipality and its departments. Any overhead structures and load-bearing foundations are to be reviewed and certified by a Structural Engineer.



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Drawings shall be prepared at a maximum metric scale of 1:400 in Autocad format and shall be submitted on disk to the Town in a format compatible to the town's GIS mapping systems wherever possible. Such drawings are to be submitted at the time of issuance for tender and at the completion of construction as "As-Built" records, to be retained as a permanent record for the project.

Where deemed necessary by the Town in the design of Community and Town-wide parks, the developer will retain the services of a professional engineer to perform storm sewer design for the park including sizing of pipe, catch basin elevations and inverts, to be co-ordinated with the grading plans of the subdivision. Professional fees associated with the engineering component of the detail design of the internal park services will be the responsibility of the Town.

2.4 Design & Construction Standards

The Town of East Gwillimbury has established minimum standards for park design and construction. These form Section 3 of this manual and are subject to update from time to time. Applicants and consultants are to assure themselves that they are working from the most current versions of these documents in the preparation of park plans and construction documents for submission to the municipality.

These details are not intended to be prescriptive in all cases but rather are intended to assure a baseline of quality which may be improved upon at the suggestion of the applicant and with the agreement of the Town on a case by case basis. The general intent of the standards is to assure the appropriate configuration and construction of recreational facilities, the design of attractive and environmentally responsible parks and open spaces and to promote cost effectiveness and the reduction of long-term maintenance and life cycle costs. The following is a discussion of park development guidelines for which these standards can apply.

2.4.1 Sustainable Design

The Town of East Gwillimbury encourages the inclusion of sustainable and "green" design strategies wherever possible. Park designs are to have regard for contemporary approaches to sustainable design wherever possible. Designs shall promote the use of native plant materials; the reduction of maintenance loads and machine use; the conservation of storm water and its quality treatment in on site devices such as bio-swales and infiltration galleries; the re-use of potable water through grey-water and other water re-use systems; the use of durable recycled products for site furniture and park features; and the use of locally produced products for energy conservation and support of the local economy.

2.4.2 Public Safety by Design

Design of park features and recreational facilities shall conform to local, provincial and national regulations and recommendations for the health and safety of park users and those who maintain park systems. Contemporary standards for playground safety as well as current accepted standards for setbacks and run-out areas for active sports facilities are to be applied to the design of parks. Park design shall have regard for the inclusion of the recognized approaches and principles of Crime Prevention Through Environmental Design (CPTED).



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2.4.3 Design for Accessibility

It is the policy of the Town to provide barrier free access to all municipal facilities wherever it is practicable and wherever possible to design parks for the universal use and appreciation of all constituents. Park design will address barrier free access by eliminating or providing alternatives to stairs, curbs and other obstructions. Such alternatives shall be in conjunction with the primary circulation route wherever possible rather than separated by significant distances. The experience of the park is to be similar for all users regardless. Park design will also consider the inclusion of features, activities and facilities to engage the full range of users. Considerations of sensory gardens and other similar integrated design elements are encouraged to provide a complete and inclusive park experience for all potential visitors.

- All park facilities including athletic fields will be accessible wherever possible.
- Playground structures for Neighbourhood Parks are not typically to be fully wheelchair accessible but should present opportunities for universal play in their ground accessible elements. Full accessibility is encouraged for these facilities if it can be accomplished within the budgetary constraints of the individual project.
- True universality of play areas is intended for the higher classifications of Community and Town Wide Parks. These parks may offer associations with a Community Centre or other public building offering support for special needs requirements and may be sites for organized, inclusive, programming.
- Pavements within parks are to be barrier free. Trails are to utilize barrier free pavement surfaces to the extent possible for the type/class of trail being constructed.
- Maximum slope for ramps and walkways will conform to the Ontario Building Code and the Town Accessibility Standards.

2.4.4 Site Grading and Drainage

Responsibility for site grading and subsurface drainage design is shared between the developer and Town. Grading and drainage is to be undertaken in accordance with construction drawings and specifications as prepared by a qualified Landscape Architect. Standards to which earthworks are undertaken shall respond to the structural integrity requirements of facilities and the future maintenance requirements of the Town.

- Subsurface drainage and sewer works will be installed complete with the required catch basins, manholes and connection to subdivision storm sewer system.
- Grading design is to be developed to afford sheet drainage of water wherever feasible in order to facilitate infiltration for surrounding soils. Sheet drainage shall be designed in a reasonable and sensible fashion within sub-drainage areas of the park block. It is not the intent to avoid a sewer system but to achieve balance between the use of overland flow and piped systems. Grading shall ensure that drainage is contained within the park block and is not shed onto neighbouring private properties.
- Drainage requirements of the park will be determined early in the engineering design process of the subdivision to eliminate the use of culverts. Catch-basins/ inlet structures are to be placed at sufficient intervals and in sufficient quantity to ensure that there are no areas of trapped drainage within the site and to avoid deep swales with steep side slopes.
- Engineered fill, free of Topsoil organics is required underneath all paved surfaces, playgrounds and ball diamond infields. Fill is to be placed and compacted to 95% S.P.M.D.D. in 200mm lifts. Completed filling works are to be tested and the results submitted to the town.
- Turf-grass swales will be graded to a 2% slope along their length whenever possible. 1.5% slopes may be accepted over short distances to avoid overly steep side slopes for swales.



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- Slopes and berms will be graded to a maximum 4:1 slope for ease of maintenance. Level turf-grass areas (except purpose-designed athletic fields) will have a minimum slope of 2% for drainage purposes.
- Natural turf sport fields will be graded to 1.5% slopes and crowns as described by technical drawings.
- Minimum 150mm topsoil layer is required under all grassed areas. Topsoil may be thicker in uniform compacted layers. A balanced grading program of topsoil stripping and sub-grade cutting and filling is to be undertaken for a park development. Trapped pockets of organic material are not to be created. Deeply excavated, isolated areas and areas of significant grade change are not to be filled using topsoil.
- All park areas are to be finished with fine grade and sod with the exception of preserved natural areas and areas of environmental rehabilitation.

2.4.5 Setbacks to Facilities

All recreation sport field facilities including run-out areas, playgrounds and play courts will be sited so as to ensure a minimum setback from the facility perimeter to adjacent residential property lines of 30 metres for ball diamonds and 20 metres for other facilities. This space may contain grading, drainage and buffer planting as required to ensure the performance of the facility and the protection of adjoining facilities or properties. Athletic facilities shall be designed in consideration of the impacts of the activity of the game-play and will generally not be sited directly adjacent to roads where this setback must be increased to 40 metres or 2.4 metre high fencing provided to prevent conflict with traffic.

2.4.6 Athletic Field Facilities

Sports fields will be sited in their most favourable orientation and with symmetrical grading design. Design is to consider configurations that will minimize noise disturbance to adjacent residents. Field dimensions may vary with classification and use, but must always include the required clearance from neighbouring properties and adjacent park uses.

The relationship and foul ball risks associated with the placement of backstops will be carefully considered to avoid risk impacts on other park facilities. Lighted sports fields may be provided only in Community or Town-Wide parks and shielded, dark sky compliant lighting will be provided to prevent spillage onto adjacent residential properties. Lights will be controlled by activation circuits and timers for automatic shut-off at park closing hours.

Ball Diamonds

- Field measurements are to be in accordance with the appropriate Town standard detail for the level of play provided.
- Run-out area shall be 6 metres around perimeter containing no grade changes or obstacles. The perimeter of the outfield is to be assumed as extending from the line of the backstop and line fence.
- Home run fence in outfield allows run-off distance to be reduced to perimeter line.
- Home run fence to be 1.5m minimum in height.
- Optimum orientation should place home plate facing to the north-east.
- Grading to be crowned at centre-line or sheet draining from infield to outfield.
- Infield should be centre crowned from the pitching location at 2%.
- Outfield is to be centre crowned at minimum 1.5% consistently from infield to outfield fence to avoid grade separation of outfield positions.



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- Engineered fill is required under entire infield to sub-grade level to accept infield mixture depths, and for backstop and bleacher sitting areas.
- Topsoil depth in outfield may exceed 200mm in uniform consistent depth with no isolated topsoil pockets.
- Backstop and line fence footings are to be founded in suitable soils. Size and dimension of footings for structure bearing posts and supports are to be reviewed by a Structural Engineer based upon soils testing for the site.

Soccer Fields

- Field measurements are to be in accordance with the appropriate Town standard detail for the level of play provided with 5 metre run-out areas for field perimeters.
- Orientation of north-south direction between goals is considered optimal for sun orientation.
- Grading – centre-crowned and sloping to sides at maximum and minimum 1.5 % slope for natural turf fields.
- Non-crowned fields are not acceptable for senior play.
- Senior competitive fields are to be irrigated and sub-drained. Fields may be constructed of specialty sand/soil mixes where recommended and directed by the Town.
- Perimeter line markings are to be provided using powdered chalk or other environmentally safe compound.

2.4.7 Playgrounds

Playgrounds are to be set back 20 metres at their perimeter from any residential property lines. Junior play-spaces may be set back at 10 metres were approved by the Town. Play areas are to be set back from street lines of local roads by a minimum of 15 metres and 20 metres from the street line of a collector road where the boulevard will also act as a buffer. Grading around playground areas is to be designed to allow visual surveillance into the play area from the road and surroundings. No dense evergreens will be planted near playground areas where views may be obstructed and safety of users be affected.

- Playground equipment design will suit the age group intended to be served.
- Playgrounds shall include safety signage indicating the appropriate age range for the use of the equipment and contact information for the Town with regard to maintenance and security.
- Equipment to be manufactured from steel treated with a durable powder paint finish.
- Equipment design and clearances are to conform to CSA standards, latest edition.
- Play equipment and resilient surfacing is to be enclosed within a concrete curbed area, set to level to prevent the drifting of materials.
- Resilient surfacing is to conform to C.S.A. Standards for the drop-heights included in the equipment provided.
- Resilient surfacing (Engineered Wood Fibre) shall be to a minimum depth of 300mm (with areas of greater depth as may be required so as to assure CSA conformance in response to designed fall heights) and to be at finished grade below equipment and 150mm below top-of-curb.
- Sub-surface drainage of flexible perforated PVC pipe in clear 10mm diameter stone drainage bed near perimeter of curb so as not to conflict with play structure posts. From perimeter of enclosure the drainage pipe is to be solid PVC connected to a nearby catch basin or storm sewer at minimum 1% slope.
- Sitting areas are to be provided within hard surface area to allow for ease of supervision for the entire play area.



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- Shade is to be provided through a structure or shade-trees within easy reach of the play areas.

2.4.8 Hard Surface Play Courts

Tennis courts, basketball courts and other multi-purpose hard surface play areas will be provided in Community Parks where sufficient space separation is available to minimize noise impacts from bouncing balls on adjacent residential neighbourhoods and where a reasonable space separation is possible from children's playground equipment. Lighted tennis courts may be provided in Community Parks only with a timer for light shut off at park closing hours.

- Tennis, Basketball and Multi-purpose Courts - Asphalt surfaces to be of fine grade HL3A draining at maximum 1.5% slope. Sub-base materials to be as required by details and soil conditions. Where budget allows concrete underlay to court surfaces or flush concrete curbs are recommended.
- Tennis court fencing to be 3 metre high, black chain link with terminal posts and gates measuring 88.9 mm (3 1/2") OD, line posts and rails measuring 60 mm (2 3/8") OD.
- Posts to be set in concrete footings poured the full depth of 1.2 metres below finished grade with tops of footings trowel finished.
- Tennis nets will be installed for seasonal use only. Net posts shall utilize a sleeve and cap system for removal and storage of the nets seasonally or for multi-use court play on the surface.
- Line painting provided by 50mm wide white or yellow durable traffic paint.
- Colour coatings are an optional feature where deemed appropriate for competitive tournament play or where design suggests.

2.4.9 Water Spray Features

Spray pads or similar water play features may be provided in Community Parks or those Neighbourhood Parks intended for intensified use. Water supply, plumbing and drainage will conform to requirements of the Region of York and the Town of East Gwillimbury's Plumbing Permit requirements and will be housed in an above-grade utility building.

- Water supply to be potable water only. Custom designed water recycling plants may be included with review and instruction from the Town for major Town-wide facilities.
- Water Meter, backflow prevention device and all appropriate valves as required are to be housed in an above grade utility building whenever feasible. As an alternative the Town may accept an above grade Valve Chamber inside the park property.
- Drainage to be connected to storm sewer system or grey-water recycling system where applicable to the individual design.
- Standing water is not to be a feature of the water play facility. The facility shall drain freely to an inlet structure.
- Activated by timer with manual activation and shut-off capabilities.
- Non slip pavement of concrete or rubberized surface.

2.4.10 Seating Areas

Benches, waste receptacles, bicycle racks and picnic tables will be provided in park shelters along pathways and at activity locations in support of uses within the park. Park furniture will be selected and approved on a site by site basis and in response to specific urban design and community design policies for the area. Furnishings for general use are to be cost-effective, durable and vandal



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resistant using recycled materials wherever possible. Site furniture for high profile sites and historical areas shall be selected in response to the specific design theme and historical reference of the area they are installed. No site furnishings will be provided in secluded or remote locations where social gathering is deemed undesirable.

- Seating areas will be provided in association with active and intensive park uses.
- Trees will be planted near seating areas to provide shade for comfort of users.
- Benches selected will be comfortable, durable, low maintenance and vandal resistant.
- Waste receptacles and recycling stations will be sufficiently large to minimize the need for excessive pickup requirements.
- Site furniture will be permanently mounted onto a concrete slab or concrete footing.
- Picnic tables will provide for barrier free access.

2.4.11 Parking Areas

Typically parking lots will be paved in asphalt with a cast-in-place concrete barrier curb or defined by precast/recycled concrete bumper curbs. The use of permeable pavings and designs promoting storm water infiltration for parking area construction is encouraged by the Town. Granular parking lots may be provided in less formal parklands and open spaces and where it is deemed that the characteristic of free-draining granular is more desirable. Parking stalls shall generally be 3 metre x 6 metre with a 6.5 metre wide circulation lane.

- Parking lots within parks are not maintained in winter except if associated with a specific trail head area or a school for year round use.
- Subsurface drainage and connection to storm sewer is typically required for all parking lots enclosed by a poured concrete curb, with surface draining toward the inlet structures at 2% minimum slope.
- Poured barrier curbs shall be a minimum of 150mm above finished surface of asphalt parking lot.
- Dropped/depressed curbs are to be a minimum of 2.5 metres width and will be provided in direct association with handicapped parking stalls, with appropriate connection to walkways.
- Handicapped parking spaces will measure 4m x 6m with appropriate pavement markings and will be signed accordingly.
- Handicapped parking spaces will be provided at a rate of 2 spaces for each Community Park and at Neighbourhood Parks as requested on a site by site basis or as required under site plan for adjoining school sites.
- Line painting (100mm wide) will be provided on asphalt surfaces to identify each parking stall using white O.P.S. standard traffic paint.
- Granular Parking Lots shall have pre-cast concrete or recycled plastic bumper curbs, each to identify one parking space.
- Curb units are to be pinned in place 300mm inside of perimeter of the parking area to afford ease of edge maintenance and grass cutting.
- Granular parking lots will be graded to sheet drain at minimum 2% slope to drainage swales or directly to the surrounding landscape.
- Granular base shall be a minimum compacted depth of 250mm depth of approved coarse aggregate compacted to 98% Standard Proctor Density.
- Paving surface will be two courses of asphalt (30mm HL3A and 50mm HL8).
- Compaction and materials testing is to be carried out and all base material and paving certified by an accredited testing agency.
- Gravel parking lots will have a minimum 250mm depth of approved coarse aggregate finished with a 50mm layer of 19mm crushed stone compacted to 98% Standard Proctor Density.



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2.4.12 Pedestrian Walkways

Walkways will be provided within parks to connect recreation facilities or to provide amenity and accessibility to passive areas in a convenient, safe and barrier-free manner. Parks should have a defined entrance visible within the streetscape. The park entrance should be visible and convenient with regard to access to the site and the likely desire lines expected from park users.

Park users should have a clear view of approaching pedestrian and vehicular traffic on adjacent roadways. Proper connections will be made to municipal sidewalks, roadways, and open space linkages where appropriate. Seating areas and other pedestrian pavement surfaces may be of asphalt, concrete, unit paving or combination thereof, as dictated by site conditions and design intent.

- Typically park walkways shall be paved and are to be 2.4 metres in width for pedestrian use and 3.0 metres wide for a primary route areas where they also serve to provide access for park maintenance service vehicles
- Walkways will be paved with two courses of asphalt (30mm HL3A and 50mm HL8), over a 250mm thick compacted base of 19mm diameter Crusher Run Limestone.
- Pedestrian walkways that also serve as primary maintenance routes shall be heavy-duty pavement with a thickened sub-base of compacted granular (250mm of 50 mm dia. and 150mm of 19mm dia. crusher run limestone) and two lifts of asphalt paving – (60mm HL8 base course and 40mm HL3A wearing course).
- Compaction and materials testing is to be carried out and all base material and paving certified by an accredited testing agency.
- Walkways will be crowned or cross sloped at 1% minimum drainage. Maximum slopes of pedestrian surfaces will conform to Ontario Building Code
- Asphalt edges will be tamped to a 45 degree angle, and adjacent sod will be installed 25mm below finished surface of walkway so as not to trap water on the pathway surface.
- Walkways will meet flush with sidewalks and other pavement surfaces with no tripping hazards and to provide barrier-free access for strollers, bicycles and wheelchairs.
- P-gates will be installed to restrict vehicular access onto pedestrian pathways, yet permit accessibility for strollers, bicycles and wheelchairs.
- Site drainage across pedestrian walkways will be permitted but designs are to ensure that no areas of trapped drainage are created on the site, causing water to pond and icing of the walkways.
- Site grading and sub-surface drainage systems will be utilized to minimize the use of culverts underneath walkways.
- Park pathways will typically not be maintained in the winter, except within a defined school route or neighbourhood destination. Municipal roads and sidewalks are to be the primary winter season access for the surrounding neighbourhood area.
- Walkway lighting will be provided when required by the town and shall be installed in accordance with an approved lighting design plan.



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2.4.13 Tree Planting

In addition to protecting the existing vegetation that is designated for preservation within parkland, new tree planting will be provided to support existing natural landscapes, remediate and recover existing landscapes, enhance community aesthetics and design objectives for the park, provide shade and shelter for park users, define space and to generally support environmental quality. A mixture of deciduous and coniferous trees will be provided, in consideration of the facilities being accommodated and the intent of the park design.

- Emphasis is to be given to the planting of native trees and those indigenous to the area.
- Tree planting will be designed to allow visibility and surveillance into the park from the street and surrounding neighbourhood. Public safety will be considered through the principles of Crime Prevention Through Environmental Design (CPTED).
- Shade trees will be provided adjacent to sitting areas, parking lots and in other locations where comfort zones are desirable.
- Parkland will focus on accommodating a diversity of native trees, flowering species and specialty specimens which may not be typically used for street tree planting.
- Trees shall generally be a minimum 60mm caliper for deciduous shade trees, 40-50mm caliper for ornamental trees and multi-stem varieties, and 1.8 metres height for coniferous trees.
- At the completion of construction warranty periods, the Town shall replace dead trees in accordance with available budgets approved for such activity.
- Extensive shrub planting and floral displays requiring high levels of maintenance are to generally be avoided: except where approved as appropriate as features in Community or Town-wide Parks; or as gateway features approved in accordance with the municipality's ability to maintain them.