



Appendix A

Toronto Green Standard: For **New** Mid to High Rise Residential and Industrial, Commercial and Institutional (ICI) Development

AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Automobile Infrastructure Discourage single-occupancy automobile use and encourage the use of low emission vehicles</p>	<ul style="list-style-type: none"> ▶ Residential: If providing more than the minimum parking required under the Zoning By-law, any additional spaces must provide roughed-in conduits to allow for future electrical outlets for plug-in electric vehicles ▶ Institutional/Commercial: If providing more than the minimum parking required under the Zoning By-law, any additional spaces must be provided <i>only</i> for dedicated priority parking spaces for carpooling and for publicly accessible spaces dedicated to car-sharing. 	
<p>Cycling Infrastructure Encourage cycling as a clean air alternative</p>	<ul style="list-style-type: none"> ▶ Bicycle parking rates: Residential: Downtown, Centres and Central Waterfront provide 0.8 occupant bicycle parking spaces/unit and 0.2 visitor bicycle parking spaces/ unit; For the rest of the City provide at 0.6 occupant bicycle parking spaces/ unit and 0.15 visitor bicycle parking spaces/ unit; Locate at least 5% of occupant bicycle parking at grade Commercial/Institutional: Downtown, Central Waterfront and Centres, provide 0.2 occupant bicycle parking spaces per 100 m2 of GFA and the greater of 0.2 visitor bicycle parking spaces/100 m2 of GFA or 6 spaces; For the rest of the City provide 0.13 occupant bicycle parking spaces/100 m2 of GFA and provide the greater of 0.15 visitor bicycle parking spaces /100 m2 of GFA or 6 spaces Retail: Downtown, Central Waterfront and Centres, provide 0.2 occupant bicycle parking spaces per 100 m2 of GFA and the greater of 0.3 spaces/100 m2 of GFA or 6 spaces; For the rest of the City provide 0.13 occupant bicycle parking spaces/100 m2 of GFA and the greater of 0.25 spaces/100 m2 of GFA or 6 spaces Industrial: Provide occupant bicycle parking spaces equal to 5% of the number of required parking spaces ▶ Locate occupant bicycle parking in a weather protected, secure area with controlled access; or secure individual enclosures ▶ Provide visitor bicycle parking in a highly visible and easily accessible location at grade. ▶ In workplaces, provide 1 male and 1 female shower and change facility for every 30 bicycle parking spaces. 	<ul style="list-style-type: none"> • Residential: Downtown, Centres and Central Waterfront, provide at least <u>1.2</u> bicycle parking space per unit;

*See website for Tier 1 and Tier 2 specification details for all development features: <http://www.toronto.ca/planning/greendevlopment.htm>



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AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Pedestrian Infrastructure Encourage walking as a clean air alternative for all ages and abilities</p>	<ul style="list-style-type: none"> ▶ Connect buildings on the site to off-site pedestrian paths, surface transit stops and parking areas (car and bike) ▶ Design onsite sidewalks, crosswalks and walkways to be continuous, universally accessible, barrier free and clearly designated. ▶ Outdoor waiting areas located on the site must offer protection from the weather ▶ Use pedestrian-specific lighting directed onto sidewalks, pathways, entrances and outdoor waiting areas ▶ Where a transit stop is located within a walking distance of the project site boundary, the building main entrance should have a direct pedestrian linkage to that transit stop 	
<p>Urban Heat Island Reduction: At Grade Reduce ambient surface temperatures, and provide shade for human health and comfort</p>	<ul style="list-style-type: none"> ▶ Use high-albedo surface materials for at least <u>50%</u> of the site's non-roof hardscape. OR Use open grid pavement for at least 50% of the site's non-roof hardscape OR Shade within 5 years at least <u>50%</u> of hardscape, including surface parking areas, walkways and other hard surfaces. OR Use a combination of high-albedo surface materials, open grid pavement and shade for at least 50% of the site's non-roof hardscape ▶ Plant large growing shade trees at the equivalent of 6-8m intervals starting from the property line: <ul style="list-style-type: none"> • along all street frontages, • along all open space frontages and • along all public walkways, excluding driveways and easements ▶ If surface parking is permitted and provided, plant shade trees at a minimum ratio of one tree planted for every five parking spaces supplied 	<ul style="list-style-type: none"> ▶ Use high-albedo surface materials for at least <u>75%</u> of the site's non-roof hardscape. OR Use open grid pavement for at least <u>75%</u> of the site's non-roof hardscape OR Shade at least <u>75%</u> of hardscape, including surface parking areas, walkways and other hard surfaces. OR If surface parking is provided, plant internal shade trees at a minimum ratio of one tree planted for every <u>three</u> parking spaces supplied OR Install a Green wall on an exterior surface that is either free-standing or part of a building to a minimum height of one-storey. OR Use a combination of high-albedo surface materials, open grid pavement and shade for at least 75% of the site's non-roof hardscape



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AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Urban Heat Island Reduction: Roof Reduce ambient surface temperatures on/from rooftops</p>	<ul style="list-style-type: none"> ▶ For buildings included in the City of Toronto Green Roof By-law install a green roof to meet the requirements of the By-law ▶ For buildings not covered by the Green Roof By-law do one of the following for available roof space : <ul style="list-style-type: none"> Install green roof with 50% minimum coverage <li style="text-align: center;">OR Use cool roofing materials for 100% of the roof <li style="text-align: center;">OR Use a combination of both for a minimum of 75% of the roof. ▶ For all City owned buildings and all Agencies, Boards, Commissions, Corporations and Divisions, new buildings will provide a green roof with total area coverage equal to at least 50% of the building footprint. Cover the remaining available roof space with cool roofing materials. 	



Toronto Green Standard – For **New** Mid to High Rise Residential and Industrial, Commercial and Institutional (ICI) Development

GREENHOUSE GAS EMISSIONS/ ENERGY EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Minimum Energy Performance Minimize demand for energy through efficient building design and encourage renewable energy production</p>	<p>► Design and construct building (s) to achieve at least 25% efficiency improvement over the Model National Energy Code for Buildings (MNECB).</p>	<p>► Design and construct building (s) to achieve at least 35% efficiency improvement over the MNECB.</p> <ul style="list-style-type: none"> • Install certified in-suite smart meters in all residential units
<p>Systems Commissioning Ensure building systems function properly</p>		<p>► Commission the project using best practice commissioning</p>



WATER QUALITY, QUANTITY AND EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Construction Activity Ensure protection of water quality during construction and demolition</p>	<ul style="list-style-type: none"> ▶ Follow the <i>Erosion and Sediment Control Guidelines for Urban Construction</i> (Greater Golden Horseshoe Conservation Authorities, December 2006) during construction and demolition activities. 	
<p>Stormwater Retention (Water Balance) Minimize stormwater that leaves the site</p>	<ul style="list-style-type: none"> ▶ Retain stormwater on-site to the same level of annual volume of overland runoff allowable under pre-development conditions¹ ▶ Retain at least the first 5 mm from each rainfall through rainwater reuse, onsite infiltration, and evapo-transpiration <p style="text-align: center;">OR</p> <p>Ensure that the maximum allowable annual runoff volume from the development site is no more than 50% of the total average annual rainfall depth.</p>	<ul style="list-style-type: none"> ● Retain 25mm from a 24 hour rainfall event for rainwater reuse, onsite infiltration and/or evapo-transpiration.
<p>Water Quality - Stormwater Run-Off Manage and clean stormwater that leaves the site</p>	<ul style="list-style-type: none"> ▶ Remove 80% of total suspended solids (TSS) on an annual loading basis from all runoff leaving the site based on the post-development level of imperviousness. ▶ Control amount of E. Coli directly entering Lake Ontario and waterfront areas as identified in the Wet Weather Flow Management Guidelines. 	
<p>Water Efficiency Reduce demand for potable water through greater efficiencies and by the use of non-potable water</p>	<ul style="list-style-type: none"> ▶ Use water efficient plant material for at least 50% of landscaped area (including vegetated roofs and walls). 	<ul style="list-style-type: none"> ▶ Install water fixtures and appliances that achieve at least a 30% reduction in potable water consumption for the building (not including irrigation) over the baseline water fixtures and appliances ▶ Where soft-landscaping exists on site, reduce potable water use for irrigation by 50%



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Urban Forest: Tree Protection Preserve the urban forest</p>	<ul style="list-style-type: none"> ▶ Adhere to the Tree Protection Policy and standards for tree protection barriers during construction according to Specifications for Construction Near Trees ▶ Retain all trees that are 30cm or more DBH (diameter at breast height) in accordance with the City of Toronto Private Tree Protection By-law ▶ Where private property is within a Ravine Protected Area retain trees of all diameters ▶ Where applicable, protect and retain trees of all diameters adjacent to City of Toronto streets and roadways and City-owned Parkland 	
<p>Urban Forest: Encourage Tree Growth Enhance the urban forest</p>	<ul style="list-style-type: none"> ▶ Plant a minimum of one tree on-site for every 30m² of post development site area covered by soft landscaping ▶ Trees in hardscaping: For 2 or more trees planted in primarily hardscaped areas, provide a minimum of volume of <u>15m³</u> of high quality soil per tree. A single tree planted in hardscape requires a minimum volume of <u>30 m³</u> of soil. ▶ Trees in softscaping: Provide trees planted in softscaping with a minimum volume of <u>30 m³</u> of high quality soil.⁴ ▶ Provide a watering program for trees for the first 2 years after planting.⁵ 	
<p>Natural Heritage: Site Protect, restore and enhance the natural heritage system. Protect and increase biodiversity.</p>	<ul style="list-style-type: none"> ▶ Ensure that at least 50% of vegetation species used in landscaping are native. ▶ Do not plant any invasive species on properties along streets abutting ravines and natural areas. ▶ Where a development setback from the top-of-bank of a valley, ravine or bluff or a buffer area is required by the City, all plants must be native species. 	<ul style="list-style-type: none"> • 100% of tree species planted must be native species on properties or streets abutting ravines and natural areas • Where a setback from top-of-bank is required, the setback must be planted and all plants must be native species.
<p>Soil Quality and Planting Conditions: Provide growing conditions to support long-term plant survival and growth</p>	<ul style="list-style-type: none"> ▶ Retain and reuse all uncontaminated on-site soil in areas not covered by the building and parking footprint or hard surfaces; <p style="text-align: center;">OR</p> <p>Adjust or replace with soil of equal or better quality.</p>	



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Glass and other design features for Migratory Birds: Ensure that design features minimize the risk for migratory bird collisions.</p>	<ul style="list-style-type: none"> ▶ Treat glass with a density pattern between 10-28cm apart for a minimum of the first 10-12m of a building above grade <p style="text-align: center;">OR</p> <p>Mute reflections for a minimum of the first 10-12m of a building above grade</p> <ul style="list-style-type: none"> ▶ Ensure ground level ventilation grates have a porosity of less than 2cm X 2cm. ▶ Where a green roof is constructed that is adjacent to glass surfaces; ensure that the glass is treated to a height of at least 12m above the level of the green roof to prevent potentially fatal window collisions. 	<ul style="list-style-type: none"> • Apply glass treatment to supplementary building and glass features on site (e.g. windbreaks, solariums, etc.)
<p>Light Pollution Reduce nighttime glare and light trespass from the building and the site</p>	<ul style="list-style-type: none"> ▶ No up-lighting from exterior light fixtures unless otherwise permitted through a Heritage designation ▶ Install exterior light fixtures that are shielded to prevent Glare and/or Light Trespass onto any neighbouring properties 	<ul style="list-style-type: none"> ▶ Eliminate all spotlighting and rooftop vanity lighting on the building ▶ In Commercial/Institutional buildings, install an automatic device that reduces the outward spillage of internal light by: Reducing the input power to lighting fixtures by at least 50% between the hours of 11 PM and 5 AM. <p style="text-align: center;">OR</p> <p>Shielding all openings in the envelope with a direct line of sight to any non-emergency light fixture between the hours of 11 PM and 5 AM.</p>



SOLID WASTE

Development Feature	Tier 1	Tier 2
<p>Storage and Collection of Recycling and Organic Waste Facilitate waste reduction and efficient processing</p>	<ul style="list-style-type: none"> ▶ Provide a dedicated area or areas within or attached to the building for the collection and storage of recycling and organic waste ▶ If a separate recycling room is required, provide an recycling room with an area of at least 10 m² for the first 40 residential units and 5 m² for each additional 40 residential units in the building 	<ul style="list-style-type: none"> • For residential buildings, provide recycling containers with the capacity of 8 cubic yards per 100 residential units per week
<p>Reuse of Building Materials Reduce demand for new materials and reduce waste going to landfill</p>		<ul style="list-style-type: none"> • Ensure that at least 5% of a project's materials (based on value) comprise salvaged, refurbished or reused materials.
<p>Use of Recycled Materials Reduce demand for new materials and increase market for recycled materials</p>		<ul style="list-style-type: none"> • Ensure that at least 15% of a project's construction materials (based on value) are comprised of recycled content ¹
<p>Construction and Demolition Waste Management Reduce waste going to landfill</p>		<ul style="list-style-type: none"> • Recycle at least 75% of non-hazardous construction and demolition debris.



AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Automobile Infrastructure Discourage single-occupancy automobile use and encourage the use of low emission vehicles.</p>	<p>► Institutional/Commercial: If providing more than the minimum parking required under the Zoning By-law, any additional spaces must be provided <i>only</i> for dedicated priority parking spaces for carpooling and for publicly accessible spaces dedicated to car-sharing.</p>	
<p>Cycling Infrastructure Encourage cycling as a clean air alternative</p>	<p>► Bicycle parking rates:</p> <p><u>Commercial/Institutional:</u> Downtown, Central Waterfront and Centres, provide <u>0.2</u> occupant bicycle parking spaces per 100 m² of GFA and the greater of <u>0.2</u> visitor bicycle parking spaces/100 m² of GFA or 6 spaces; For the rest of the City provide <u>0.13</u> occupant bicycle parking spaces/100 m² of GFA and provide the greater of <u>0.15</u> visitor bicycle parking spaces /100 m² of GFA or 6 spaces</p> <p><u>Retail:</u> Downtown, Central Waterfront and Centres, provide <u>0.2</u> occupant bicycle parking spaces per 100 m² of GFA and the greater of <u>0.3</u> spaces/100 m² of GFA or 6 spaces; For the rest of the City provide <u>0.13</u> occupant bicycle parking spaces/100 m² of GFA and the greater of <u>0.25</u> spaces/100 m² of GFA or 6 spaces</p> <p><u>Industrial:</u> Provide occupant bicycle parking spaces equal to 5% of the number of required parking spaces</p> <p>► Locate occupant bicycle parking in a weather protected, secure area with controlled access; or secure individual enclosures</p> <p>► Provide visitor bicycle parking in a highly visible and easily accessible location at grade.</p> <p>► In workplaces, provide 1 male and 1 female shower and change facility for every 30 bicycle parking spaces.</p>	

*See website for Tier 1 and Tier 2 specification details for all development features:

<http://www.toronto.ca/planning/greendevlopment.htm>



AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Pedestrian Infrastructure Encourage walking as a clean air alternative for all ages and abilities</p>	<ul style="list-style-type: none"> ▶ Connect buildings on the site to off-site pedestrian paths, surface transit stops and parking areas (car and bike) ▶ Design onsite sidewalks, crosswalks and walkways to be continuous, universally accessible, barrier free and clearly designated. ▶ Outdoor waiting areas located on the site must offer protection from the weather ▶ Use only pedestrian-specific lighting directed onto sidewalks, pathways, entrances and outdoor waiting areas ▶ Where a transit stop is located within a walkable distance of the project site boundary, the building main entrance should have a direct pedestrian linkage to that transit stop 	
<p>Urban Heat Island Reduction: At Grade Reduce ambient surface temperatures, and provide shade for human health and comfort</p>	<ul style="list-style-type: none"> ▶ Use high-albedo surface materials¹ for at least <u>50%</u> of the site's non-roof hardscape. <p style="text-align: center;">OR</p> Use open grid pavement for at least <u>50%</u> of the site's non-roof hardscape <p style="text-align: center;">OR</p> Shade within 5 years at least <u>50%</u> of hardscape, including surface parking areas, walkways and other hard surfaces.⁴ <p style="text-align: center;">OR</p> Use a combination of high-albedo surface materials, open grid pavement and shade for at least 50% of the site's non-roof hardscape ▶ Plant large growing shade trees at the equivalent of 6-8m intervals starting from the property line: <ul style="list-style-type: none"> • along all street frontages, • along all open space frontages and • along all public walkways, excluding driveways and easements ▶ If surface parking is permitted and provided, plant shade trees at a minimum ratio of one tree planted for every five parking spaces supplied 	<ul style="list-style-type: none"> ▶ Use high-albedo surface materials for at least <u>75%</u> of the site's non-roof hardscape. <p style="text-align: center;">OR</p> Use open grid pavement for at least <u>75%</u> of the site's non-roof hardscape <p style="text-align: center;">OR</p> Shade at least <u>75%</u> of hardscape, including surface parking areas, walkways and other hard surfaces <p style="text-align: center;">OR</p> If surface parking is provided, plant internal shade trees at a minimum ratio of one tree planted for every <u>three</u> parking spaces supplied <p style="text-align: center;">OR</p> Install a Green wall on an exterior surface that is either free-standing or part of a building to a minimum height of one-storey. <p style="text-align: center;">OR</p> Use a combination of high-albedo surface materials, open grid pavement and shade for at least 75% of the site's non-roof hardscape



AIR QUALITY

Development Feature	Tier 1	Tier 2
<p>Urban Heat Island Reduction: Roof Reduce ambient surface temperatures on/from rooftops</p>	<ul style="list-style-type: none"> ▶ For buildings included in the City of Toronto Green Roof By-law install a green roof to meet the requirements of the By-law ▶ For buildings not covered by the Green Roof By-law do one of the following for available roof space : <ul style="list-style-type: none"> Install green roof with 50% minimum coverage <li style="text-align: center;">OR Use cool roofing materials for 100% of the roof <li style="text-align: center;">OR Use a combination of both for a minimum of 75% of the roof. ▶ For all City owned buildings and all Agencies, Boards, Commissions, Corporations and Divisions, new buildings will provide a green roof with total area coverage equal to at least 50% of the building footprint. Cover the remaining available roof space with cool roofing materials. 	



Toronto Green Standard – **NEW** Low-Rise Non-Residential Development

GREENHOUSE GAS EMISSIONS/ ENERGY EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Minimum Energy Performance Minimize demand for energy through efficient building design and renewable energy</p>	<p>► Design and construct building to achieve at least 25% efficiency improvement over the MNECB.</p>	<p>► Design and construct building (s) to achieve at least 35% efficiency improvement over the MNECB.</p>
<p>Systems Commissioning Ensure building systems function properly</p>		<p>► Commission the project using best practice commissioning</p>



WATER QUALITY, QUANTITY AND EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Construction Activity Ensure protection of water quality during construction and demolition</p>	<ul style="list-style-type: none"> ▶ Follow the <i>Erosion and Sediment Control Guidelines for Urban Construction</i> (Greater Golden Horseshoe Conservation Authorities, December 2006) during construction and demolition activities. 	
<p>Stormwater Retention (Water balance) Minimize stormwater that leaves the site</p>	<ul style="list-style-type: none"> ▶ Retain stormwater on-site to the same level of annual volume of overland runoff allowable under pre-development conditions ▶ Retain at least the first 5 mm from each rainfall through rainwater reuse, onsite infiltration, and evapo-transpiration <p style="text-align: center;">OR</p> <p>Ensure that the maximum allowable annual runoff volume from the development site is no more than 50% of the total average annual rainfall depth.</p>	<ul style="list-style-type: none"> • Retain 25mm from a 24 hour rainfall event for rainwater reuse, onsite infiltration and/or evapo-transpiration.
<p>Water Quality - Stormwater Run-Off Manage and clean stormwater that leaves the site</p>	<ul style="list-style-type: none"> ▶ Remove 80% of total suspended solids (TSS) on an annual loading basis from all runoff leaving the site based on the post-development level of imperviousness. ▶ Control amount of E. Coli directly entering Lake Ontario and waterfront areas. 	
<p>Water Efficiency Reduce demand for potable water through greater efficiencies and by the use of non-potable water.</p>	<ul style="list-style-type: none"> ▶ Use water efficient plant material for at least 50% of landscaped area (including vegetated roofs and walls). 	<ul style="list-style-type: none"> ▶ Install water fixtures and appliances that achieve at least a 30% reduction in potable water consumption for the building (not including irrigation) over the baseline water fixtures and appliances ▶ Where soft-landscaping exists on site, reduce potable water use for irrigation by 50%



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Urban Forest: Tree Protection Preserve the urban forest</p>	<ul style="list-style-type: none"> ▶ Adhere to the Tree Protection Policy and standards for tree protection barriers during construction according to Specifications for Construction Near Trees ▶ Retain all trees that are 30cm or more DBH (diameter at breast height) in accordance with the City of Toronto Private Tree Protection By-law ▶ Where private property is within a Ravine Protected Area retain trees of all diameters ▶ Where applicable, protect and retain trees of all diameters adjacent to City of Toronto streets and roadways and City-owned Parkland 	
<p>Urban Forest: Encourage Tree Growth Enhance the urban forest</p>	<ul style="list-style-type: none"> ▶ Plant a minimum of one tree on-site for every 30m² of post development site area covered by soft landscaping ▶ Trees in hardscaping: For 2 or more trees planted in primarily hardscaped areas, provide a minimum of volume of <u>15m³</u> of high quality soil per tree. A single tree planted in hardscape requires a minimum volume of <u>30 m³</u> of soil. ▶ Trees in softscaping: Provide trees planted in softscaping with a minimum volume of <u>30 m³</u> of high quality soil. ▶ Provide a watering program for trees for the first 2 years after planting. 	
<p>Natural Heritage: Site Protect, restore and enhance the natural heritage system. Protect and increase biodiversity.</p>	<ul style="list-style-type: none"> ▶ Ensure that at least 50% of vegetation species used in landscaping are native ▶ Do not plant any invasive species on properties along streets abutting ravines and natural areas. ▶ Where a development setback from the top-of-bank of a valley, ravine or bluff or a buffer area is required by the City, all plants must be native species. 	<ul style="list-style-type: none"> • 100% of tree species planted must be native species on properties or streets abutting ravines and natural areas • Where a setback from top-of-bank is required, the setback must be planted and all plants must be native species.



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Soil Quality and Planting Conditions: Provide growing conditions to support long-term plant survival and growth</p>	<p>► Retain and reuse all uncontaminated on-site soil in areas not covered by the building and parking footprint or hard surfaces;</p> <p style="text-align: center;">OR</p> <p>Adjust or replace with soil of equal or better quality.</p>	
<p>Glass and other design features for Migratory Birds: Ensure that design features minimize the risk for migratory bird collisions.</p>	<p>► Treat glass with a density pattern between 10-28cm apart for a minimum of the first 10-12m of a building above grade</p> <p style="text-align: center;">OR</p> <p>Mute reflections for a minimum of the first 10-12m of a building above grade</p> <p>► Ensure ground level ventilation grates have a porosity of less than 2cm X 2cm.</p> <p>► Where a green roof is constructed that is adjacent to glass surfaces; ensure that the glass is treated to a height of at least 12m above the level of the green roof to prevent potentially fatal window collisions.</p>	<ul style="list-style-type: none"> Apply glass treatment to supplementary building and glass features on site (e.g. windbreaks, solariums, etc.)
<p>Light Pollution Reduce nighttime light trespass from the building and the site</p>	<p>► No up-lighting from exterior light fixtures unless otherwise permitted through a Heritage designation</p> <p>► Install exterior light fixtures that are shielded to prevent Glare and/or Light Trespass onto any neighbouring properties</p>	<p>► Eliminate all spotlighting and rooftop vanity lighting on the building</p> <p>► In Commercial/Institutional buildings, install an automatic device that reduces the outward spillage of internal light by:</p> <p style="padding-left: 20px;">Reducing the input power to lighting fixtures by at least 50% between the hours of 11 PM and 5 AM.</p> <p style="text-align: center;">OR</p> <p style="padding-left: 20px;">Shielding all openings in the envelope with a direct line of sight to any non-emergency light fixture between the hours of 11 PM and 5 AM.</p>



SOLID WASTE

Development Feature	Tier 1	Tier 2
<p>Reuse of Building Materials Reduce demand for new materials and reduce waste going to landfill</p>		<ul style="list-style-type: none"> • Ensure that at least 5% of a project’s materials (based on value) comprise salvaged, refurbished or reused materials.
<p>Use of Recycled Materials Reduce demand for new materials and increase market for recycled materials</p>		<ul style="list-style-type: none"> • Ensure that at least 15% of a project’s construction materials (based on value) are comprised of recycled content
<p>Construction and Demolition Waste Management Reduce waste going to landfill</p>		<ul style="list-style-type: none"> • Recycle at least 75% of non-hazardous construction and demolition debris.



AIR QUALITY

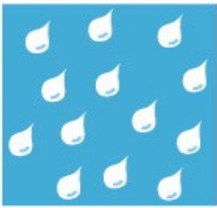
Development Feature	Tier 1	Tier 2
<p>Pedestrian Infrastructure Encourage walking as a clean air alternative</p>	<p>► Provide grading and surface treatment, in accordance with the Toronto Accessibility Design Guidelines</p>	
<p>Urban Heat Island Reduction: At Grade Reduce ambient surface temperatures, and provide shade for human health and comfort.</p>	<p>► Use high-albedo surface materials for at least <u>50%</u> of the site’s non-roof hardscape. OR Use open grid pavement for at least 50% of the site’s non-roof hardscape³ OR Shade within 5 years at least <u>50%</u> of hardscape, including driveways, walkways and other hard surfaces. OR Use a combination of high-albedo surface materials, open grid pavement and shade for at least 50% of the site’s non-roof hardscape</p>	<p>► Use high-albedo surface materials for at least <u>75%</u> of the site’s non-roof hardscape. OR Use open grid pavement for at least <u>75%</u> of the site’s non-roof hardscape OR Shade at least <u>75%</u> of hardscape, including driveways, walkways and other hard surfaces. OR Install a Green wall on an exterior surface that is either free-standing or part of a building to a minimum height of one-storey. OR Use a combination of high-albedo surface materials, open grid pavement and shade for at least 75% of the site’s non-roof hardscape</p>
<p>Urban Heat Island Reduction: Roof Reduce ambient surface temperatures on/from rooftops</p>	<p>► Use cool roofing materials for 100% of the available roof space. OR Use a combination of a green roof and cool roofing materials for 100% of the available roof space.</p>	

*See website for Tier 1 and Tier 2 specification details for all development features:
<http://www.toronto.ca/planning/greendevlopment.htm>



GREENHOUSE GAS EMISSIONS/ ENERGY EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Minimum Energy Performance Minimize demand for energy through efficient building design</p>	<p>► Design and construct building (s) to achieve at least EnerGuide 80 energy efficiency rating</p>	<p>► Design and construct building(s) to achieve at least EnerGuide 85 energy efficiency rating</p> <p>► Where supplied, for each unit provide ENERGY STAR compliant refrigerators and dishwashers</p>
<p>Renewable Energy Reduce demand for energy from the grid and encourage renewable energy production</p>		<p>• Use on-site renewable energy technologies to supply at least 5% of the building’s total energy use from any one source (i.e. natural gas or electricity)</p>
<p>Water Heating Optimize performance of water heating system</p>		<p>► Install an ENERGY STAR compliant water heater</p> <p style="text-align: center;">OR</p> <p>► Tankless water heater.</p>



WATER QUALITY, QUANTITY AND EFFICIENCY

Development Feature	Tier 1	Tier 2
<p>Construction Activity Ensure protection of water quality during construction and demolition</p>	<p>► Follow the <i>Erosion and Sediment Control Guidelines for Urban Construction</i> (Greater Golden Horseshoe Conservation Authorities, December 2006) during construction and demolition activities.</p>	
<p>Stormwater Retention (Water balance) Minimize stormwater that leaves the site</p>	<p>► For sites greater than 0.1 hectares, retain stormwater on-site to the same level of annual volume of overland runoff allowable under pre-development conditions</p> <p>► For sites greater than 0.1 hectares, retain at least the first 5 mm from each rainfall through rainwater reuse, onsite infiltration, and evapotranspiration</p> <p style="text-align: center;">OR</p> <p>Ensure that the maximum allowable annual runoff volume from the development site is no more than 50% of the total average annual rainfall depth.</p>	<ul style="list-style-type: none"> • Retain at least the first 5 mm from each rainfall through rainwater reuse, onsite infiltration, and evapotranspiration
<p>Stormwater Run-Off Manage and clean stormwater that leaves the site</p>	<p>► Remove 80% of total suspended solids on an annual loading basis from all runoff leaving the site based on the post-development level of imperviousness.</p> <p>► Control amount of E. Coli directly entering Lake Ontario and waterfront areas.</p>	
<p>Water Efficiency Reduce demand for potable water through greater efficiencies and by the use of non-potable water.</p>	<p>► Use water efficient plant material for at least 50% of landscaped area (including vegetated roofs and walls).</p>	<p>► Ensure that 75% of water fixtures and appliances installed meet or exceed the following standards:</p> <ul style="list-style-type: none"> • toilets less than 6.0 L or dual flush toilets; • faucets (5.7LPM); • showers (6.6 LPM); • dishwashers (Energy Star models only); • front-loading washing machines. <p>► Where soft-landscaping exists on site, reduce potable water use for irrigation by 50%</p>



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Urban Forest: Tree Protection Preserve the urban forest</p>	<ul style="list-style-type: none"> ▶ Adhere to the Tree Protection Policy and standards for tree protection barriers during construction according to Specifications for Construction Near Trees ▶ Retain all trees that are 30cm or more DBH (diameter at breast height) in accordance with the City of Toronto Private Tree Protection By-law ▶ Where private property is within a Ravine Protected Area retain trees of all diameters ▶ Where applicable, protect and retain trees of all diameters adjacent to City of Toronto streets and roadways and City-owned Parkland 	
<p>Urban Forest: Encourage Tree Growth Enhance the urban forest</p>	<ul style="list-style-type: none"> ▶ Plant at least 1 large growing shade tree per residential lot. ▶ Trees in hardscaping: For 2 or more trees planted in primarily hardscaped areas, provide a minimum of volume of <u>15m³</u> of high quality soil per tree. A single tree planted in hardscape requires a minimum volume of <u>30 m³</u> of soil. ▶ Trees in softscaping: Provide trees planted in soft landscaping with a minimum volume of <u>30 m³</u> of high quality soil. ▶ Provide a watering program for trees for the first 2 years after planting. 	
<p>Natural Heritage: Site Protect and enhance natural habitat. Protect and increase biodiversity.</p>	<ul style="list-style-type: none"> ▶ Ensure that at least 50% of vegetation species used in landscaping are native. ▶ Do not plant any invasive species on properties along streets abutting ravines and natural areas. ▶ Where a development setback from the top-of-bank of a valley, ravine or bluff or a buffer area is required by the City, all plants must be native species. 	<ul style="list-style-type: none"> • 100% of tree species planted must be native species on properties or streets abutting ravines and natural areas • Where a setback from top-of-bank is required, the setback must be planted and all plants must be native species.



ECOLOGY

Development Feature	Tier 1	Tier 2
<p>Soil Quality and Planting Conditions Provide growing conditions to support long-term plant survival and growth</p>	<ul style="list-style-type: none"> ▶ Protect soils from compaction during construction. ▶ Retain and reuse soil on site in all areas not covered by the building footprint or required hard surfaces, or adjust or replace with soil of equal or better quality. 	
<p>Glass and other design features for Migratory Birds: Ensure that design features minimize the risk for migratory bird collisions.</p>	<ul style="list-style-type: none"> ▶ Where abutting ravines or natural areas: Treat glass with a density pattern between 10-28cm apart for a minimum of the first 10-12m of a building above grade or the mature height of adjacent vegetation OR Mute reflections for a minimum of the first 12m of a building above grade. ▶ Ensure ground level ventilation grates have a porosity of less than 2cm X 2cm. 	<ul style="list-style-type: none"> • Apply glass treatment to supplementary building and glass features on site (e.g. windbreaks, solariums, etc.)
<p>Light Pollution Reduce nighttime glare and light trespass from the building and the site</p>	<ul style="list-style-type: none"> ▶ No up-lighting from exterior light fixtures ▶ Install exterior light fixtures that are shielded to prevent Glare and/or Light Trespass onto any neighbouring properties 	



SOLID WASTE

Development Feature	Tier 1	Tier 2
<p>Construction Waste Management Reduce waste going to landfill</p>		<ul style="list-style-type: none"> Recycle at least 75% of non-hazardous construction and demolition debris
<p>Reuse of Building Materials Reduce waste going to landfill and reduce demand for new materials</p>		<ul style="list-style-type: none"> At least 5% of a project’s materials (based on value) shall comprise salvaged, refurbished or reused materials.
<p>Use of Recycled Materials Reduce demand for new materials and increase market for recycling</p>		<ul style="list-style-type: none"> At least 15% of a project’s construction materials (based on value) shall comprise recycled content.