Jay Lazzarin
Landscape Architect

LANDSCAPES NORTH

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Residential Night Lighting

By Jay Lazzarin

Exterior lighting provides a unique and dramatic perspective for any residential landscape. In addition to providing safety and security, it enhances your home's architectural features, structures and vegetation. Night lighting sets a "mood" or "character" for your outdoor spaces in the same way that interior lighting assists to create the mood inside your home.

With our long winter nights, lighting extends the seasonal use of our gardens by developing dramatic, visual effects. I cannot think of a better tool or feature to add interest to winter landscapes. A harsh, cold snow-covered landscape can be transformed into an attractive, 'soothing' character with the clever use of varying lighting techniques such as moonlighting, uplighting, accent lighting, and shadow lighting. With the addition of exterior lighting, you may find yourself actually looking forward to those dark winter nights.

A breathtaking, lit-up winter landscape.

Properties with a well-designed lighting scheme give the impression of a luxurious estate which often results in an increased resale value, enhanced street appeal, and a lasting impression.

The design and installation of night lighting requires careful planning, (similar to the design of other elements in your garden), to ensure the desired mood is developed. In many instances, some preliminary experimenting is necessary, and can be accomplished with a GFI (ground fault circuit interrupt) outlet, appropriate extension cords, and one or more lighting techniques.

A trial installation can help you determine what techniques work best, how you should space out your outdoor fixtures and which focal points you truly want to enhance. For larger projects it may be to your advantage to retain a consultant to help you achieve the desired effect.

In many projects, we work together with a lighting consultant to assist us in developing energy efficient, dramatic lighting solutions.

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Message from Jay Lazzarin

The importance of water to human life, plants and wildlife can simply not be overestimated. As we are heading into the hot, dry summer months (hopefully!), remember to utilize water within your landscapes and buildings with prudence. Although in British Columbia we are blessed with an abundance of clean, fresh water, many communities within British Columbia are currently projecting water shortages or will be within ten years.

The impact of water use goes beyond how much water is consumed, to the energy and economic costs it takes to treat and deliver potable water to a site, and then the treatment of the water after it leaves a site.

This may be the opportune time for you to re-examine and plan more efficient water use, either through reduced consumption, reduced waste, and/or alternate sources to municipal, potable water. Many water conservation strategies can be achieved with no additional cost and may even provide rapid paybacks.

Residential Night Lighting (continued from pg. 1)

The following are various issues to consider when designing and/or installing a landscape lighting system:

Uplighting is used here to highlight background trees, used in combination with moonlighting of a waterfall.

It is better to lean towards a more simplistic rather than complicated lighting design. Too much light, colour and lighting that is not sensitively positioned can be confusing and distracting.

1. Keep in mind vegetation and trees grow, therefore with a newly installed garden, the height and form of plants will increase and the lighting scheme should be flexible to adapt to the changing landscape and/or the 'mood' you wish to create.
2. In the north, various areas receive large amounts of snow. This should be considered not only from a technical perspective, such as positioning of waterproof lighting fixtures and receptacles but also developing a particular 'mood' that dramatizes winter.
3. Lighting effects should be seen– not the fixtures or light source (driveway and walkway security lighting is an exception). Look for ways to conceal the light source, whether through the use of hoods, vegetation, or architectural features.

Moonlighting creates a beautiful, even wash of light.

4. When selecting a lamp/ light source and fixture type, consider the following attributes of each:

(i) Line Voltage (120 VAC) vs. low voltage (12v)

- The 12v systems are increasingly popular with home owners who want to self-install. Note 12v systems require transformers.
- 12v systems can also be installed with minimum disruption to existing features.
- Licensed electricians, permits, inspections, etc. are required for 120v including some 12v transformer connections to 120v supply.
- 120v systems have specific requirements such as GFI, minimum burial depth for cables and conduits, and wire size / type considerations.

Create dramatic effects with shadow lighting.

(ii) Light colour varies significantly from one lamp type to another—warm to cool. Too many coloured lamps can be confusing in developing a particular mood; it is safer to stay with 'neutral' coloured light.

(iii) Energy consumption and lamp life vary widely among lamp types.

- LEDs (light emitting diodes), for instance, provide more intensity per watt than incandescent lamps with a life approximately four times that of fluorescent lamps (10,000 vs. 40,000 hrs.)

(iv) Installation and maintenance costs are frequently inversely proportional.

- Incandescent and quartz-tungsten / halogen lamps have low installation costs but high maintenance costs.
- Florescent are moderately expensive to install; but have low maintenance costs and now offer a variety of color temperature choices.
- LEDs are higher installation costs but extremely low in maintenance requirements.

(v) Consider whether the lamp source can be dimmed. Florescent and many HID (high intensity discharge) lamps cannot be dimmed. The ability to dim light effects allows the intensity to be adapted easily from family evenings to more public parties and festivities.

(vi) The types of fixtures to consider for various site conditions are:

- Path lights, bollards and post lights—visible and typically decorative (to match architectural style).
- Bullets—visible (surface mounted) and typically used for downlighting, uplighting, wall washing and architectural illumination.
- Direct burial and well type fixtures—used for up lighting, wall washing and architectural applications where the entire fixture is flush with the adjacent grade and does not require shrubs to conceal the source. Some units may be mounted in pavement and will withstand foot and vehicle loads on the lens without damage.
- Niche lights—used to illuminate steps, walks and pools—niche lights are typically flush mounted in a masonry wall with a lenses or protective louvered grill.
- Underwater lights—illumination of ponds, a waterfall, or pools add yet another dimension to night lighting.

6. To balance the lighting effect, consider the use of more than one lighting technique, (i.e. downlighting in combination with uplighting on large tree canopies create texture and depth).
7. Install timers and set them on a regular schedule, to reflect the change in light / darkness throughout the year.

FEATURED PROJECT

Alouette Correction Centre for Women

Client: BC Corrections
Prime Contractor: Giffles Partnership Solutions Inc.
Landscape Architect: Jay Lazzarin Landscape Architect
Landscape Contractor: Blue Pine Enterprises
Completed: May 2011 **Project Value:** $50 million

For the past two and a half years we have been working as a landscape sub-consultant in the design and construction review of this $50 million facility comprised of four living units each with 26 cells. (Our earlier work on the Prince George Correction Centre Women's Unit provided valuable insight to planning and design of safe, secure outdoor spaces for female inmates.) One of the primary objectives of this project was to develop a sustainable design that reduces consumption of resources (such as water), minimizes waste and creates a healthier environment.

As per the RFP (request for proposal) requirements, the landscaping inside the security fence, as well as within close proximity of the fence, is simple and relatively low maintenance to achieve the goal of clear sight-lines, and establishing a safe and secure exterior amenity space. Where feasible, as many of the existing trees as possible were retained. Where it was necessary to remove trees, for each tree felled, two new indigenous trees were planted to assist in restoring the site's natural habitat. Another landscape component of this project included strategically locating planting beds at the facility entrance and within the parking lot islands, helping to enhance the character of the site. The majority of the disturbed areas were graded, rehabilitated with growing medium, and hydroseeded with a 'low-growing', rough grass mixture that requires less frequent mowing than most traditional lawns.

A unique geological feature of the site is the abundance of huge granite boulders. During building excavation several e larger boulders were uncovered and utilized as a landscape element within the planting beds and for the development of small retaining walls.

To assist in achieving LEED Gold certification for the project, drought tolerant plant species were selected, no irrigation system was installed, and existing onsite materials such as topsoil and boulders were reused within the landscaping.

Recently Hydroseeded Grass Area

Landscape Architects Must Fight for Public Health

An excerpt from an essay by Thomas Fisher, Dean of the College of Design, University of Minnesota

From the ASLA Publication 'The Dirt', Dec. 12/2010

Central Park, New York City

[the essay]
'In Places' argues that Frederick Law Olmstead's early work as general secretary of the U.S. Sanitary Commission serves as an important model for today's landscape architects. Fisher believes landscape architects must once again deeply engage in improving public health by creating parks and walkable, bikeable communities. Furthermore, these designers of the urban world must also get political, take on "prevailing power structures," and make a "powerful case for long range social and good, and challenge those that skew the rules in favour of short-term gain for an increasingly remote elite"…..

Olmstead and Calvert Vaux famously won the Central Park commission, but years later, Olmstead resigned the position of chief architect for the park after being caught up in political tensions with the Park's comptroller and board of commissioners. A new position opened up for him: general secretary and chief executive officer of the new U.S. sanitary commission, a tough job during the Civil War. With the famed landscape architect at the helm, the commission fought the federal government to improve the health conditions of soldiers…..

To restore the connection between landscape architecture and public health, new links must be formed, rooted in current health issues. While the public health community has had success in treating diseases, new health problems require the intervention of landscape architects: "Today millions of people on the planet, especially in the rapidly growing cities of the developing world, endure living conditions much worse than what Olmstead witnessed in Lower Manhattan, and almost a billion lack easy access to clean water. We confront as well – perhaps for the first time in history – the public health challenges of prosperity. We now identify diseases such as cancer, heart failure, diabetes, emphysema and even obesity as "lifestyle diseases" resulting from individual and social behaviours, from personal choices and cultural patterns; indeed the Centres for Disease Control have been studying "urban sprawl and public health" for several years now. Landscape Architects understand the problem: the increasingly sedentary, high-calorie lifestyle that's become common in wealthier countries has made obesity an epidemic, with all of the attendant malignancies and infraction that come with it. Here, the causes lie even closer, no farther than the car-dominated cities we build, and the corn-syrup-laced beverages and high-fat foods we produce and market so aggressively.

Moving forward, Fisher says landscape architects must follow Olmstead's example and write and speak out on these issues. "In an era of great change, such as ours, we need to adapt the methods Olmstead used in another turbulent time: defining the discourse, identifying the problems, and proposing the strategies and policies needed to resolve them. Some of that can happen through design, but nothing can replace the power of persuasive writing and speaking. We need more often to put aside the mouse, and take the keyboard."

Secondly, like Olmstead, today's landscape architects must partner with a wider range of design disciplines. "The causes of home-grown lifestyle diseases and of global pandemics are complex and interwoven; it will take many diseases, working together, to devise solutions. And of course, Olmstead's example suggests that the landscape architect can function not only as an expert in how we inhabit and steward the land, but also as a manager of diverse teams of people. Olmstead knew something about sanitation – but just as important, he knew how to organize and operate a complex commission and oversee the work of a large multidisciplinary staff. This may in fact be among the more important skills landscape architects can offer today, as the field studies how settlement patterns, transportation models, water quality, etc., relate to the ramifying problems of public health in an urbanizing world."

"...new health problems require the intervention of landscape architects..."

Lastly, these designers of the built environment must fight for those facing disease. "It will take professionalism and political will, but the price of ignoring our contemporary public health crises – pandemics that will endanger billions, chronic diseases that damage lives and by extension the whole society – will be steep, and we will all pay it."

FEATURED PLANT

Soft Pines

These varieties of pines are grafted onto Pinus Strobus to increase vigor and hardiness. All are very hardy and adaptable. No pruning required. Their soft needles, attractive colour and strong habit make these trees a fabulous addition to any garden. A great formal conifer for the landscape.

Pinus strobus 'Contorta' (Contorted Eastern White Pine) Zone 3 - Narrow, pyramidal form. Upright and twisting branches are unique to this tree. Each individual blue green needle is contorted and makes for an exceptional show. 20M/60' tall by 12M/40' wide. **Pictured at right.**

Pinus strobus 'Pendula' (Weeping Easter White Pine) Zone 3 - Weeping form, usually staked upright for a tall slender display or trained as a low, broad form. Graceful habit, with long, soft, bluish-green twisted needles and smooth grey bark. Final size depends on training.

Pictured at left.

Pinus strobus 'Nana' (Dwarf Eastern White Pine) Zone 3 - Dwarf multi-stemmed variety, with bluish-green needles. Dense, rounded habit when young, ages into a large irregular mound with time. Can be sheared to maintain a round habit. 1.25M/4' tall by 2.25M/7' wide.

Pictured at right.

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Specimen Trees Wholesale Nurseries Ltd
18598 Advent Road
Pitt Meadows, BC V3Y 2G8

Phone: 604-465-7122
Toll Free: 1-800-471-4448
Fax: 604-465-8100

Understanding Bioswales

By Suzanne Samkow

Bisoswales are becoming increasingly popular in today's site designs and landscapes because of their ability to assist with achieving sustainable landscapes and LEED efficient designs. Bioswales are essentially ditches or channels designed to manage and treat storm water runoff from impervious surfaces such as parking lots, driveways and roads. Some bioswales are gently sloped to reduce runoff velocity and promote filtration before being absorbed into the soil, while more complex bioswales use drains and filtering medium (such as rocks or compost) to manage larger amounts of stormwater.

When larger bioswales are planted with native grasses, reeds, shrubs and/or perennials, they can be very attractive landscape features that provide food and shelter for birds and butterflies.

Generally bioswales fit into one of these three types:

Grassed Channels

Similar to a standard drainage ditch, these swales have gentle sloped sides but also have longitudinal slope to allow stormwater to flow through the channel. The grass acts to slow down the flow of water, preventing erosion and allowing contaminates to be filtered from the water be reaching a catchbasin or recharge chamber. Grass channels are meant to handle small storm events, are the least expensive to construct, but also provide the least reliable at pollutant removal.

Wet swales

These function like a small, linear wetland, holding stormwater in a shallow, temporary pool, and wetland vegetation helps provide filtration of the water and allow for gravitational settling of solids. Wet swales accomplish moderate pollutant removal if designed properly, and are best suited for areas with a high water table, and for flat terrains.

Vegetated bioswale

Dry Swales

Dry swales consist of an open channel bottom (water is not permanently held there) with a filtering medium (soil or rock) and an underdrain. These are designed to drain down between storm events within one day, for this reason they are a preferred option in residential settings to reduces standing water, discouraging the breeding of pesky mosquitoes.

Questions & Answers

What makes a quality topsoil and what should a person be looking for when selecting a topsoil?

In the landscape industry "topsoil" is more commonly referred to as "growing medium." This is because a growing medium consists of mixing various amendments with topsoil such as sand, organic matter (peat, manure and compost being several forms of organic matter), silt, clay, fertilizer and limestone, in a prescribed portion to develop soil properties for the particular geographical area, and plant species being grown. For example, in a wet climate such as the coastal regions, a growing medium should offer better drainage than in the drier interior. Accordingly, growing medium in coastal climates should contain a higher percentage of sand than interior soils. In addition, a higher percentage of organic matter is desirable for growing shrubs, trees and perennials than for growing grasses.

There are many growing medium "properties" that are important to consider when selecting and/or mixing a growing medium for a particular application. These properties include: (i) soil texture—i.e. its ability to drain or hold moisture, (ii) organic matter content, (iii) pH or soil acidity, (iv) nutrient content including both macro and micro nutrients, (v) c/n-carbon/nitrogen ratio, and (vi) salt content. It is very difficult or impossible to visually diagnose most of these properties, therefore it is recommended that a growing medium sample be forwarded to a soil laboratory for analysis and recommendation for improvement.

For consumers who require small quantities of growing medium, an alternative process would be to request a soil analysis from the supplier, prior to your purchase. Take the time to check the validity of the laboratory analysis to make sure the soil analysis originated from the source you may be purchasing. If possible, ask to visit the supplier's site to view the growing medium.

Having stated the importance of soil analysis, it is a common fallacy that the darker in colour a growing medium is, the better it must be. Usually the dark colour represents a high organic matter content, but as previously mentioned, organic matter content is only one of several important growing medium properties.

Jay Lazzarin
Landscape Architect
#202 - 1300 1st. Avenue, Prince George, BC V2L 2Y3
(tel.) 1-888-563-6158 www.jl-landarch.com