Report on the Study of the Value of the Profession of Landscape Architecture on Canadian Society
Canadian Society of Landscape Architects

November 6, 2015
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Executive Summary

This study provides an analysis of the social and economic impacts of the Landscape Architecture industry and profession in Canada. It provides an estimate of the extent of the industry and profession’s economic and fiscal contributions. Although this report includes some aspects of the positive social impact of the profession which were identified during the study, an assessment of the profession’s far-reaching social impact, resulting from the work of professionals and companies, was beyond the scope of this project.

Most of the data used in the analysis of the economic impact of the Landscape Architect industry and profession was obtained from Statistics Canada economic, industry, labour force and census data tables. Data from Employment and Social Development Canada’s Canadian Occupations Projection System was also used.

As of June 2015, there were 851 Landscape Architectural firms in Canada, all of which were categorized as small businesses with employment sizes of fewer than 100 employees. The majority of Landscape Architectural services were provided to businesses (56%) followed by sales to governments, not-for-profits organizations and public institutions (28%). Sales to individuals and households accounted for 12% of total sales, and exports were approximately 5% of service activity. In 2013 the operating revenue for the Landscape Architecture industry was $358,700,000, a ten percent increase from 2012.

On a national basis, the estimated GDP contribution from Landscape Architecture in 2014 was over $1B, and has typically grown by over 10% per year. Economic activity in the Landscape Architecture industry has a multiplier effect nationally of 2.1, meaning that every dollar input into Landscape Architecture generates $2.10 of economic activity across the economy.

There were 1,735 Landscape Architects in Canada at the time of the 2011 Census. The majority (75%) worked as employees and 25% were self-employed. In 2012, those that worked directly for the Landscape Architecture service industry aggregated earnings of $158M in salaries, wages & benefits.

Future prospects for the industry are described as balanced, with supply and demand expected to be similar up through 2022. The highest component of demand is from retirements within the industry, with school graduates making up the largest component of supply. The industry is expected to experience total employment growth of approximately 5% from 2012 through 2022.

The identified communications objectives for CSLA include:

- To portray and promote the Landscape Architecture profession as a mature, viable, expanding and influential contributor to the economy;
- To develop communication messages to the public, professionals, government and other agencies and organizations about the benefits of the profession;
- To provide evidence and rationale in support of the creation of new Landscape Architecture Programs across the country; and
- To support existing academic institutions in their pursuit of appropriate funding levels for accredited schools / programs of Landscape Architecture and for research and teaching opportunities.
Summary of Recommendations

This study has identified Landscape Architecture as an established profession that continues to grow, and has expanded opportunities in the future.

The report contains four recommendations:

Although the development of a communications strategy is outside the scope of this project, it is helpful to position the development of key messages within a strategic communications framework as shown in the figure below. This approach is consistent with the CSLA 2015-17 Strategic Plan.

**Recommended Strategic Communications Framework**

The communications framework can guide an evidence-based strategic communications plan to further the objectives of the organization and the profession.

**Recommendation 1:** CSLA adopt the strategic communications framework identified in this report to guide their future advocacy efforts.

By mapping each stakeholder to a desired goal by their interest in the change being sought and their influence in making the desired change, it is possible to better identify the target audiences for dissemination purposes and determine audience needs and drivers. It also informs the development of key messages and selection of tactics or methods of communicating with each target audience. To refine the target audiences for each advocacy goal, the stakeholder mapping tool as shown below can be used.
Recommendation 2: CSLA undertake stakeholder mapping to refine the target audiences for each desired advocacy goal.

There are numerous internal and external factors which impact the potential success of a communications strategy. A key part of advocacy planning is to develop an understanding of this context so as to refine key messages.

Recommendation 3: CSLA undertake a thorough analysis of the internal and external barriers and enablers to better inform the communications strategy.

Initial key messages for the targeted audiences, which can be further clarified and enacted, include:

**Goal: Achieve self-regulation status in all provinces**

**Messages:**
- Alberta, British Columbia and Ontario have self-regulation for the profession, while other provinces do not. Uneven licensure across the country creates regional inequities in opportunity.
- Labour mobility within Canada and internationally can be enhanced by the adoption of a common accreditation.
- Landscape Architecture projects grow the economy. On a national basis, the estimated annual contribution to GDP is over $1Billion, and has typically grown by over 10% per year.

**Goal: Increase uptake of Landscape Architecture services**

**Messages:**
- Landscape Architects are skilled professionals that connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.
- Landscape Architecture can mitigate the impacts of climate change, increase tourism and increases surrounding real estate values.
- Landscape Architecture increases the public’s use of outdoor spaces while ensuring good environmental stewardship.
• Every $1 invested in Landscape Architecture at the national level generates $2.10 of economic activity. Every $1 Million dollars in Landscape Architecture project expenditures creates 12.83 jobs nationally.

Goal: Grow and develop education programs in landscape architecture

Messages:
• Landscape Architecture is a growing field with good job prospects.
• Landscape Architects have a broad range of skills and skills learned in training are applicable in a range of career paths.
• Landscape Architects create solutions that cooperate with natural systems and the natural landscape, mitigate climate change and increase public enjoyment of spaces.
• The expanding green economy requires professionals with the skills and knowledge to create sustainable development.

Other Messages
For the profession:
• Landscape Architecture is a growing segment of the economy, contributing over $1 Billion annually to GDP.
• Landscape Architects are uniquely positioned to become the leaders in connecting people with nature in urban settings.
• Landscape Architects need to celebrate and promote their own achievements by sharing stories with a variety of strategic audiences.
• The national body is well placed to create a communication strategic plan and messaging for use by all practitioners.

For the media:
• Landscape Architecture is a growing segment of the economy, contributing over $1 Billion annually to GDP.
• Landscape Architecture can mitigate the impacts we are having on our natural environment and urban spaces.
• Landscape Architecture is an excellent career choice with graduates having a choice of employment options in a growing field with good job prospects.
• Landscape Architecture increases the public’s use of outdoor spaces while ensuring good environmental stewardship.

For potential clients:
• Landscape Architecture can mitigate the impacts of climate change, increase tourism and increases surrounding real estate values.
• Good Landscape Architecture design will increase space usage while still protecting the environment.
• Landscape architects provide beautiful, functional and engaging spaces using environmental protection, good stewardship and sustainability.
Landscape Architects are skilled professionals that connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.

For allied professions:

1. Because there are specific areas of practice that overlap with allied professions, Landscape Architects are skilled at interacting with and understanding the needs of a variety of professionals as part of a cohesive team.
2. Landscape Architects provide a value added service to allied professions by bringing special expertise in the design, planning, management, and conservation of the built environment.
3. Landscape Architects connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.
4. Landscape Architects can provide a key role in integrating the needs of allied professions while creating beautiful, functional spaces that work with the natural environment.

**Recommendation 4:** CSLA refine these communications key messages as part of a strategic communications plan which includes identifying specific tactics to communicate messages to target audiences, and identifying metrics to determine the impact of the tactics and advocacy strategy.
Study Highlights

- On a national basis, the estimated Gross Domestic Product (GDP) contribution from Landscape Architecture in 2014 is over $1 Billion, and has typically grown by over 10% per year.
- Every $1 invested in Landscape Architecture at the national level generates $2.10 of economic activity.
- Every $1 Million dollars in Landscape Architecture project expenditures creates 12.83 jobs nationally.
- About half of Landscape Architects work in Landscape Architecture firms, the other half work in a variety of different areas including public administration and education.
- As of June 2015, according to Statistics Canada there were 851 Landscape Architectural firms in Canada.
- In 2013, the majority of Landscape Architectural services were provided to businesses (56%) followed by sales to governments, not-for-profits organizations, and public institutions (28%). Sales to individuals and households accounted for 12% of total sales and exports were approximately, 5% of service activity.
- Regionally, close to three-quarters (74%) of the Landscape Architecture firms are located in Ontario (40%), Quebec (23%), and British Columbia (16.7%).
- Female representation in the Landscape Architecture profession is below average (38% in comparison to 48% female representation on average for all other occupations).
- The Statistic Canada’s National Household Survey in 2011 found an employment rate of over 90% for 5-year Landscape Architect graduates.
- Employment in Landscape Architecture is increasing, and the labour force supply is projected to match demand up to 2022.
Introduction

Landscape Architecture was formally recognized as a profession in Canada in 1934 with the formation of the Canadian Society of Landscape Architects and Town Planners in Toronto. The profession grew steadily in size and influence over the next three decades and by the mid-1960’s the University of Guelph began to offer the country’s first program in Landscape Architecture, followed shortly thereafter by the University of Toronto. Independent provincial components were established as the profession expanded. More recently, new programs have been launched at the University of Calgary, and Dalhousie University, and the foundation has been laid to launch new programs at the Northern Alberta Institute of Technology and Fanshawe College.

This study provides an analysis of the social and economic impacts of the Landscape Architecture industry and profession in Canada. The industry and profession provide a wealth of quality of life and health impacts on Canadian society. As well, the profession has a meaningful impact on national and regional economies as a result of expenditures and employment associated with the industry’s operation.

Although this report includes some aspects of the positive social impact of the profession which were identified during the study, quantifying the far-reaching positive social impact of the Landscape Architecture industry and profession is beyond the scope of this report. These impacts are very important to Canadian society and most likely have greater impacts than what has been analyzed in this study, especially when it comes to the benefits that provide improvements in the quality of life and well-being of Canadians. A further study on the far-reaching social impacts could be undertaken in future.

Study Objectives

The Canadian Society of Landscape Architects (CSLA) is the professional association for Landscape Architects.

In April 2015, CSLA engaged Analytic-OR to assist in determining the value of the profession of Landscape Architecture in Canada, and developing key messages in support of the advancement of the profession. The goal of the study is to provide a basis of information on which to develop, promote, and grow the profession in the future.

With this project, CSLA wishes:

- To portray and promote the Landscape Architecture profession as a mature, viable, expanding and influential contributor to the economy;
- To develop communication messages to the public, professionals, government and other agencies and organizations about the benefits of the profession;
- To provide evidence and rationale in support of the creation of new Landscape Architecture Programs across the country; and
- To support existing academic institutions in their pursuit of appropriate funding levels for accredited schools /programs of Landscape Architecture and for research and teaching opportunities.
Project Work Plan and Deliverables

The project spanned approximately six months from April to September 2015. Figure 1 below is a summary of the project phases, deliverables and timing for the project.

![Figure 1: Project Work Plan](image)

**Approach**

The project was carried out in four phases, and covers three principal aspects:

- **Profession Data Collection**: As the Canadian Society of Landscape Architecture does not have a history of economic studies of the profession, a significant amount of data collection was required. This included secondary data collection from published sources as well as primary data collection from key informant interviews to inform the overall project.

- **Modeling**: Once the data collection was completed, a Statistics Canada model was used to quantify the value of the profession.

- **Communications**: Once the quantitative evaluations on the value of the profession were completed, communications messages were crafted. A strategic communications framework is recommended to further the goals of the organization.

**Study Limitations**

The Landscape Architect profession is a relatively small profession. As a result, Statistics Canada and other data sources often include Landscape Architects in a group with other similar occupations, such as more general Architects and City Planners. Assumptions have had to be made concerning the data. In cases where the percentage of Landscape Architects within the group is known, the assumption is made that the overall group is also representative of the subgroup of Landscape Architects. This has been noted throughout the report as applicable.
Also, due to the overall small size of the profession, data is often not available on sub-groups or demographics within the profession.

This is not intended to be a complete communications plan to achieve the objectives of the Association. Although initial key messages have been identified, additional work and refinement in relation to specific advocacy goals would be necessary before finalizing messaging. This would include additional work on context and target audiences.

**Overview of Report**

Section 1 of this report provides a description of the industry and profession outlining the founding principles, evolution and unique contributions of the profession and industry to the built and natural environments.

Section 2 of this report provides an overview of the profession, including industry profiles, economic analysis, occupational workforce review, and projections. Also, the methodology used to collect and analyze data according to the study’s deliverables is reviewed.

The economic impact of the industry and profession includes information on the industry’s market share, including the contribution to the Canadian GDP (gross revenues, operating costs and profitability); industry profile (number of firms, breakdown by firm size, government and not-for profit); growth rates; and future trends.

The occupation profile and analysis of the Landscape Architecture workforce including a demographic analysis that details:

- Profession size, characteristics & growth trends;
- Composition by age and gender;
- Education level;
- Employment Status;
- Labour force participation rate and size (variations across age, gender);
- Unemployment rates;
- Employment by industry;
- Extent of self-employment; and
- Trends over time.

An occupational outlook (2013-2022) of the Landscape Architecture occupational group demand and supply factors is also part of this section.

Section 3 of the report provides a communication framework for using the information compiled in this report to develop a strategic communications plan for growing and advancing the profession in Canada. The section also includes a communications model, identification of key audiences, key messages, and recommendations for next steps.

An annotated bibliography for this project can be found in Appendix A.
1. Description of the Profession

Much of the content in this section is adapted from the book “Landscape Architecture in Canada” by Ron Williams¹ and the article “Landscape Architecture” found in the Canadian Encyclopedia.² Additional material is taken from the Ontario Association of Landscape Architects³ and the American Society of Landscape Architects⁴.

Principles of the Profession

Although Landscape Architecture affects the environment that Canadians live, play and work in, few understand how the Landscape Architecture profession plays a major role in the development of these environments. In fact, “The work of Landscape Architects is all around us in the form and function of the land: the work often touches on urban design, site planning, storm water management, urban planning, restoration, parks and recreation planning, green infrastructure planning and private or residential master planning and design.”⁵

A simple, yet concise definition of the Landscape Architecture profession states:

*Landscape Architecture is the profession concerned with the design, planning, management, and conservation of the built environment ... works of landscape architecture are part of the cultural landscape, a term defined by Parks Canada as "any geographical area modified, influenced, or given special cultural meaning by people."*⁶

Landscape Architecture is simultaneously a technical field and an esthetic field. It draws in skills from a variety of areas. Key activities for Landscape Architects are to

*design outdoor places and systems of open spaces that are useful, imaginative, enjoyable, and environmentally appropriate. They are concerned about the land’s potentials and constraints, the heritage significance of the cultural landscape, the restoration and expansion of ecological communities, the character and function of vegetation, and the efficient and beautiful use of materials.*⁷

Most of the rural and urban environments in Canada have undergone alterations as a result of human interventions. As well, both rural and wilderness areas have been declining significantly as a result of increased development pressures. Many of the restoration (contaminated land, destroyed forests, damaged historical sites, etc.), redesign (strengthening underused urban areas), and development projects (public spaces, residential and commercial buildings,) require the specialized Landscape Architecture skills and expertise.

¹ Landscape Architecture in Canada, Ron Williams, McGill-Queens University Press, 2014.
⁵ Canadian Society of Landscape Architects definition.
⁶ Fife et al.
⁷ Ibid
Of importance to Landscape Architects and the industry, is the fact that the Canadian population, increasingly, is becoming urban dwellers. Landscape Architects are quite concerned about improving the quality of lives of those who live in urban and dispersed centres and how municipalities and land developers create and manage open spaces. This shift from rural to urban population in Canada over time is shown in the following graph.

![Figure 2: Rural and Urban Mixture of Population](image)

**Evolution of the Profession**

**Early Stages of the Landscape Architecture Profession**

Landscape Architecture as a profession evolved naturally from earlier occupations such as landscape gardeners. Although the term was first coined in Scotland in 1828, Landscape Architecture as a separate profession is often traced to the work of Frederick Law Olmsted, and his plans (along with Calvert Vaux) for New York’s Central Park. Olmsted popularized the profession through his design and oversight of a number of other prominent projects in Canada and the United States, including Mount Royal Park in Montreal.

Through the 19th century, the scale and complexity of projects, as well as an increasing desire for originality and quality, helped to differentiate Landscape Architecture as a profession. The American Society of Landscape Architects was founded in 1899. The new profession also brought a social and public-benefit perspective to the work.

During the Victorian era, cities went through a transformation in order to deal with the downside of industrialization. There was a realization of the need for residents to reconnect with the natural world. This led to an expansion of numerous types of spaces such as cemeteries, publically accessed commercial pleasure grounds, private and public building landscapes, urban parks, private leisure gardens, and street and roadside trees. This movement paralleled the development of Landscape Architecture, establishing the breadth of the profession.
In the early 20th century, Frederick Todd, an American-born employee of Olmsted, moved to Canada to work on the Mount Royal project. He stayed on as the first Landscape Architect in Canada, designing such notable sites as Assiniboine Park in Winnipeg, National Battlefield Park in Quebec City, and Bowring Park in St. John’s. He was also responsible for laying much of the groundwork for the National Capital Region.

In 1934 a Canadian professional association, now known as the Canadian Society of Landscape Architects was established.

The Twentieth Century

In the early 1900’s Landscape Architects were interested in “town planning” and produced plans for cities, garden cities and subdivisions. In fact, there was no distinction between the professions of Landscape Architect and Town Planner at the time. Their clientele included municipal, corporate and institutional entities as well as wealthy Canadians consulting on the laying out of large estates and country places. The renowned husband and wife team of Howard and Lorrie Dunnington-Grubb, who had made significant contributions in Toronto and southern Ontario, led the initial incarnation of the CSLA during this time.

After the end of World War II, professional education became more and more important and accessible for Landscape Architects. Those who were able to acquire graduate education in the United States were influenced by the tenants of Modernism and acquired knowledge that improved the definition of methodologies for site analysis.

What ensued next was the expansion of the profession and the diversification of projects. In the 1950’s and early 1960’s there was an influx of designers from both the United States and Europe. This new talent, coupled with large-scale projects, led to better coordination between working groups within the profession, as well as with allied occupations.

Growth in the industry continued through the 1950’s and 1960’s and activities included: the development of new towns and communities adjacent to major population centres; the preservation of unique and culturally significant landscapes; and the development of national and provincial parks. A lot of these project methodologies used ecological, visual, and social analysis leading to a comprehensive decision-making process and stronger working relationship with physical and social scientists. These activities were nationally and internationally recognized, increasing the diversity of Landscape Architectural work and the establishment of university-level programs for the profession.

The 1970’s were a period of the re-evaluation of urban and rural places. Activities included the provision of outdoor recreational spaces in urban centres and addressing issues of land management and restoration utilising land evaluation and management techniques.

Urban reconstruction and high-intensity recreation were hallmarks of professional activity in the 1980s. Activities during this period included: national and international design competitions; the reconstruction of urban areas addressing sustainability and quality of life concerns; waterfront restoration and redevelopment; and the re-establishment of wildlife corridors.

Originating in the early 1990s, there has been a trend towards international contemporary Landscape Architecture, especially with a focus on overlooked, underused, and abandoned public spaces, such as
urban spaces, post-industrial brownfields, and abandoned railway corridors. This recognition that these spaces are vital to the public domain has carried through to today.

In the 21st century, the increasing urbanisation of Canadian society is placing heavier demands on land, and other natural resources that are limited. Landscape Architecture is at the forefront of developing innovative and informed solutions that address these environmental and cultural issues.

Landscape conservation, restoration, and rehabilitation are all issues of climate change that are affecting the work that Landscape Architects do in the 21st century.

**Education in Landscape Architecture**

The first schools in Landscape Architecture in Canada started in 1964 in Guelph, followed by 1965 in Toronto. Before this time, Landscape Architects in Canada were either converted from other, related occupations, trained outside the country (mostly in the US), or transplants from Europe or the US. A number of other programs followed in other universities and colleges.

The CSLA, through the Landscape Architecture Accreditation Council (LAAC), accredits Landscape Architecture programs that have met their standards. The LAAC evaluates the institutions and other important factors such as the faculty, facilities and financial support, leading to program accreditation. These programs are also recognized by the American Society of Landscape Architecture (ASLA) Landscape Architecture Accreditation Board (LAAB) and vice versa. A compilation of the programs is provided in Appendix B.

**The Profession Today**

The profession of Landscape Architecture has greatly matured since the establishment of the first program in 1964. In the 1960’s it was normal for professionals from abroad to design projects across Canada. Graduates from Canadian schools are now established across Canada and are making a huge contribution to the creation of parks, gardens, and public spaces. They are actively participating in educational institutions, local government, private firms, and public agencies. Now, Canadian Landscape Architects are carrying out large-scale international projects in countries such as the United States, France and China.

Landscape Architects are also very involved in conservation, preservation and rehabilitation, increasingly based on scholarship and research. Research findings in sustainable development are being mirrored in professional practice as Landscape Architects work to design sustainable cities and preserve and enhance natural systems.

Today, Landscape Architecture is a regulated profession in three provinces, and initiatives to increase recognition as a regulated and protected profession are being undertaken in others.
### Skills Matrix

A skills matrix was developed for this study using the Landscape Architect Body of Knowledge (LABOK) ranking of knowledge areas and competencies.⁸

Although developed over a decade ago, LABOK provides a good guide regarding the wealth of knowledge areas and competencies that Landscape Architects have.⁹ As a starting point, the LABOK provides a snapshot of the profession’s expectations at the time (2004) for the occupation’s body of knowledge. It represents a collaboration of a majority of organizations¹⁰ representing Landscape Architects in North America and is an initial general analysis that may provide different interpretations and insights to different organisations and groups, depending on specific goals and objectives.¹¹

The skills are organized in terms of knowledge statements and competencies. The full LABOK presents these in detail. A copy of the knowledge statements and skills can be found in Appendix C.

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⁹ Ibid.
¹⁰ The organizations that were on the LABOK study’s taskforce include the: American Society of Landscape Architects, Canadian Society of Landscape Architects, Council of Educators in Landscape Architecture, Council of Landscape Architecture Registration Boards, and Landscape Architectural Accreditation Board.
Contribution of the Profession

Beyond the immediate impact of the creation of visually appealing public spaces and the direct economic benefits, a number of other areas in which the profession contributes to society were noted during key informant interviews for this project:

- Mitigating the impacts on the natural environment including creating solutions that cooperate with natural systems
- Contribution to a number of related fields through the breadth of skills and knowledge
- Ability to bring together professionals from a number of fields
- Design of outdoor spaces to engage and include people
- Representation of a unique public viewpoint, i.e.: representing the needs of the public (health, safety, quality of life) in projects
- Increasing the use of urban space, and the connection to rural space
- Ability of Landscape Architects to act as a link between professions on projects and to be an interpreter of the needs of various professions
- Landscape Architects provide beautiful, functional and engaging spaces using environmental protection, good stewardship and sustainability
- Landscape Architecture is sympathetic to the natural environment, creating solutions that cooperate with natural systems
- Landscape Architects are uniquely positioned to integrate the needs of project professionals while holding public welfare as a priority
- Landscape Architects create space for engagement, with other people, other backgrounds and other cultures, where people might not otherwise interact
- The profession is focused on preservation, conservation and sustainability, which combats the negative impacts of social trends such as obesity, climate change, and urbanization

Forecasting Future Demand

Projections for future demand are contained later in this report. This section reviews comments obtained during the key informant interviews.

A small sample group of Landscape Architects across Canada were interviewed to assist with the study’s data analysis. The key theme that emerged was the growing importance of the occupation and industry. This was the result of pressure from Canadians to improve the built spaces where they reside, play and work, as well as to increase the number of public spaces, especially in urban areas.

The burgeoning green economy was also a key theme that emerged from the interviews, with some interviewees indicating that the profession and its members are well situated to become leaders. In addition to the traditional environmental work that Landscape Architects engage in, the profession is becoming more and more involved in work that addresses climate change. In fact, climate change was the theme of a recent congress and board initiative.

These factors had most of the interviewees projecting an increased demand for landscape professionals and services in the future.

There was some concern about the education system’s ability to produce graduates, regionally, in sufficient amounts to meet the projected demand for Landscape Architecture services. Some
interviewees indicated that more regionally-based programming is required, to keep Landscape Architects in their region. (New graduates tend to qualify for licensure in the region where they obtained their degree.)

2. Economic Overview

This section is presented in four parts. The first is a review of the Landscape Architecture industry in Canada. The second is an analysis of the economic impact of Landscape Architecture. The third is an occupation profile, looking at the individual practitioners of Landscape Architecture. The fourth is a look at occupational supply and demand factors.

Data Sources

Most of the data used in the analysis of the economic impact of the Landscape Architect industry and profession was obtained from Statistics Canada economic, industry, labour force, and census data tables. Data from the Canadian Occupations Projection System from Employment and Social Development Canada was also used.

The following is a summary of that data and an analysis of the industry / profession’s economic impact in Canada.

Methodology

Statistics Canada’s Integrated Business Statistics Program (IBSP) uses a business stratification variable that is a repository of information reflecting the Canadian business population. This variable serves as a data source for the compilation of business demographic information, providing regional data on businesses employment size according to the North American Industry Classification System (NAICS). The study used historical datasets as well as the latest data released in September 2015 to provide an estimate of the operational activities of Landscape Architectural firms in Canada.

Review of annual operating expenses from 2002 through 2013 was one of the data components examined in order to develop an analysis of the Landscape Architect industry’s contribution to regional and national economies. Statistics Canada Annual Survey of Service Industries: Landscape Architectural services provided data on operating expenses, operating revenue, salaries, wages and benefits and operating profit margin.

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12 Other industries that employ landscape architects are other architectural, engineering firms, local, municipal and regional public administration, administrative and support services, waste management and remediation services and arts, entertainment and recreation, and academic.

13 Older versions of these datasets have been archived because there has been an upgrade to the data collection methodology. Therefore, comparisons to historical datasets have been made with caution.

14 Table 552-0002 1, 2, 3: Canadian business counts, locations with employees, by employment size and North American Industry Classification System (NAICS), Canada and provinces, June 2015 semi-annual.
Industry Profile

Landscape Architecture Firm Profile

The private sector Landscape Architecture service industry in Canada employs a minimum of 49%\textsuperscript{15} of the 1,735 Landscape Architects in Canada.\textsuperscript{16} As of June 2015, Statistics Canada business demographic data indicated that there were 851 Landscape Architectural firms in Canada, all of which were categorized as small businesses with employment sizes of fewer than 100 employees. Of the 851 firms, 576 had one to four employees, making-up 68% of the total. The firms with between five and nine employees (169) accounted for 20% of the total. There were few firms with more than 10 employees — sixty-eight firms (8%) had an employment size of between 10-19 employees, 33 firms had between 20-49 employees (4%) and five firms had an employment size of 50-99 employees (1%).\textsuperscript{17} Note that firm size includes all employees, not only those classified as Landscape Architects.

<table>
<thead>
<tr>
<th>Employment Size</th>
<th>Sum</th>
<th>Percentage of Total Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 4</td>
<td>576</td>
<td>67.7%</td>
</tr>
<tr>
<td>5 – 9</td>
<td>169</td>
<td>19.9%</td>
</tr>
<tr>
<td>10 – 19</td>
<td>68</td>
<td>8.0%</td>
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<td>50 – 99</td>
<td>5</td>
<td>0.6%</td>
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<td>100 – 199</td>
<td>0</td>
<td>0.0%</td>
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<tr>
<td>200 – 499</td>
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<td>0.0%</td>
</tr>
<tr>
<td>500+</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total</td>
<td>851</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 2: Landscape Architecture Firm Size (by employees)

Regionally, close to three-quarters (74%) of the Landscape Architecture firms are located in Ontario (40%), Quebec (23%) and British Columbia (16.7%).\textsuperscript{18}

\textsuperscript{15} Source: Statistics Canada. Table -360-0011 - Architectural services, sales by type of client based.
\textsuperscript{17} Statistics Canada, Table 552-0002 1, 2, 3
\textsuperscript{18} Ibid
Table 3: Landscape Architecture Firm Size (Provincial, by employees)

<table>
<thead>
<tr>
<th>Province</th>
<th>Firms with Employees</th>
<th>Percentage of Total Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta</td>
<td>90</td>
<td>10.6%</td>
</tr>
<tr>
<td>British Columbia</td>
<td>142</td>
<td>16.7%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>27</td>
<td>3.2%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>12</td>
<td>1.4%</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>15</td>
<td>1.8%</td>
</tr>
<tr>
<td>Nunavut</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Ontario</td>
<td>343</td>
<td>40.3%</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Quebec</td>
<td>196</td>
<td>23.0%</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>12</td>
<td>1.4%</td>
</tr>
<tr>
<td>Yukon</td>
<td>3</td>
<td>0.4%</td>
</tr>
<tr>
<td>Total</td>
<td>851</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Type of Services

In 2013, the majority of Landscape Architectural services were provided to businesses (56%) followed by sales to governments, not-for-profits organizations, and public institutions (28%). Sales to individuals and households accounted for 12% of total sales and exports were approximately, 5% of service activity.\(^{19}\)

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales to businesses</td>
<td>55.6</td>
</tr>
<tr>
<td>Sales to individuals and households</td>
<td>12.1</td>
</tr>
<tr>
<td>Sales to governments, not-for-profit organizations and public institutions</td>
<td>27.8</td>
</tr>
<tr>
<td>Sales outside Canada (exports)</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 4: Landscape Architectural services, sales by type of client, annual (%)

Historically, from 2007 to 2012, slightly over 55% of the Landscape Architecture industry sales were to business clients, followed by sales to governments, not-for-profit organizations and public institutions (27%), and sales to individuals and households (13%). Industry exports comprised six percent of sales during the six year period.\(^{20}\)

There has been little variance between 2013 service activity and those from 2007-2012, with the most noticeable shift being a small reduction in the percentage of sales outside Canada and to governments.

\(^{19}\) Source: Statistics Canada. Table 360-0033 - Architectural services, sales by type of client, annual (percent).

\(^{20}\) Source: Statistics Canada. Table 360-0011 - Architectural services, sales by type of client based on the North American Industry Classification System (NAICS), annual (percent).
### Table 5: Landscape Architectural Services / Sales by type of client (%)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales to businesses</td>
<td>54.7</td>
<td>53.5</td>
<td>55.5</td>
<td>52.7</td>
<td>54.3</td>
<td>57.7</td>
</tr>
<tr>
<td>Sales to individuals and households</td>
<td>11.9</td>
<td>12.8</td>
<td>10.7</td>
<td>13.4</td>
<td>12.9</td>
<td>14</td>
</tr>
<tr>
<td>Sales to governments, not-for-profit organizations and public institutions</td>
<td>27.2</td>
<td>28.2</td>
<td>27.8</td>
<td>28.2</td>
<td>27.4</td>
<td>23</td>
</tr>
<tr>
<td>Sales outside Canada (exports)</td>
<td>6.2</td>
<td>5.5</td>
<td>5.7</td>
<td>5.7</td>
<td>5.5</td>
<td>5.3</td>
</tr>
</tbody>
</table>

The industry provides a variety of products — according to Statistics Canada, the industry offers the following products related to or for:

- Landscaping projects
- Residential building projects
- Single-family residential building projects
- Multiple-family residential building projects
- Residential subdivision projects
- Non-residential building projects
- Recreational and open-space projects
- City centres and public squares
- Non-building recreational facilities, parks and natural areas
- Non-building sports facilities
- The restoration of natural areas
- Non-building recreational facilities, parks and natural areas
- Transportation corridors
- Resort
- Other recreational and open-space projects
- Specific elements
- Preparing and modifying the terrain
- Facilitating access on a site
- Structures with specialized uses
- Advisory products
- Expert witness services
- Advisory, except expert witness

It is important to note that current data for Landscape Architectural services (2012 – 2015) is compiled by Statistics Canada as part of a larger business group (NAICS 5413) known as architects, engineering and related services. According to Statistics Canada, there are five industries in the NAICS 5413 grouping:

- 541310 Architectural services
- 541320 Landscape Architectural services
- 541330 Engineering services
- 541360 Geophysical Surveying and Mapping services
- 541370 Surveying and Mapping (except Geophysical) services
Table 4 below details the distribution of operating revenue by the type of services provided by the architectural, Landscape Architectural and related service industries from 2010-2012.

Architectural services are the larger component of this industry group (83%), with Landscape Architecture services being approximately 5%. As these industry groups have similar profile and characteristics, where more detailed information is not available this report will estimate the contribution by Landscape Architects as being 5% of the contribution of the larger group.

<table>
<thead>
<tr>
<th>Architectural, engineering and related services, NAICS 5413 (percent)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Architectural Services</td>
<td>82.4</td>
<td>82.7</td>
<td>83.3</td>
</tr>
<tr>
<td>2. Landscape Architectural Services</td>
<td>4.8</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td>3. Urban Planning Services</td>
<td>3.9</td>
<td>4</td>
<td>4.2</td>
</tr>
<tr>
<td>4. Project Site Master Planning Services</td>
<td>1.8</td>
<td>1.4</td>
<td>1.1</td>
</tr>
<tr>
<td>5. Interior Design Services</td>
<td>2.4</td>
<td>2.8</td>
<td>3.2</td>
</tr>
<tr>
<td>6. Engineering Services</td>
<td>1.2</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>7. Other Services</td>
<td>3.5</td>
<td>2.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 6: Distribution of operating revenue by type of service, for the architectural services and the landscape architectural services industries

Historically, both the Landscape Architectural and the Architectural service industries have similar rates of clients inside and outside of Canada (95% and 97%, respectively) as well as, rates of services to business (53% and 51%, respectively). Where they differ is with the rate of service provision to individuals and households and the rate of services provided to government and public institutions. Regarding households, the Landscape Architecture industry’s three year mean was approximately twice as much as that for architectural services (13% and 7%). The three year mean rate of services provided to government was 40% for architectural services and 26% for Landscape Architecture services.

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21 Source: Statistics Canada – Catalogue no. 63-245-X
22 Ibid
Revenues, Operating Expenses and Profitability

Figure 1: Summary Statistics of Landscape Architectural Services, Operating Revenue and Expenses ($M), 2013

In 2013 the operating revenue for the Landscape Architecture industry was $358,700,000, a ten percent increase from 2012. The industry also realised a 12% increase in total expenses in 2013 ($295,370,000 from $279,230,000), of which salaries accounted for $13,306,000 up from $12,553,000 in 2012. Total expenses increased by 12% and salaries by 4%. Operating profit margins decreased slightly in 2013 from 2012 (from 14% to 12.5%).

23 Source: Statistics Canada. Table 360-0031 - Architectural services, summary statistics, annual (dollars unless otherwise noted), 2013.
<table>
<thead>
<tr>
<th>Geographical Area</th>
<th>Operating Revenue ($M)</th>
<th>Operating Expenses ($M)</th>
<th>Salaries, wages, commissions and benefits ($M)</th>
<th>Operating Profit Margin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>358.7</td>
<td>313.8</td>
<td>164.9</td>
<td>12.5</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>2.6</td>
<td>2.3</td>
<td>N/A</td>
<td>11.6</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>N/A</td>
<td>N/A</td>
<td>0.1</td>
<td>N/A</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>3.7</td>
<td>2.7</td>
<td>1.2</td>
<td>26.5</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>1.5</td>
<td>1.5</td>
<td>N/A</td>
<td>-0.2</td>
</tr>
<tr>
<td>Quebec</td>
<td>65.7</td>
<td>62.6</td>
<td>28.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Ontario</td>
<td>183.2</td>
<td>162</td>
<td>93.8</td>
<td>11.6</td>
</tr>
<tr>
<td>Manitoba</td>
<td>10.8</td>
<td>9.4</td>
<td>4.3</td>
<td>13</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>2.1</td>
<td>1.7</td>
<td>0.3</td>
<td>20.8</td>
</tr>
<tr>
<td>Alberta</td>
<td>41.7</td>
<td>33.2</td>
<td>16.5</td>
<td>20.3</td>
</tr>
<tr>
<td>British Columbia</td>
<td>46.4</td>
<td>37.4</td>
<td>18</td>
<td>19.4</td>
</tr>
<tr>
<td>Yukon</td>
<td>0.7</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Nunavut</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 7: Summary Statistics of Landscape Architectural Services, Operating Revenue and Expenses ($M), 2013

From 2007 to 2012, the Landscape Architecture industry in Canada realised an average profit margin of 16%. Furthermore, the annual revenue average for the industry during this period was $311M for approximately 851 establishments and the average operating expense was $280M, of which 45% (on average) was attributed to salaries, wages and benefits. Note that information is not provided for all constituencies due to privacy and small population sizes.

The Landscape Architectural service industry is labour intensive. In 2013, 53% of expenses ($164.9M) were due to salaries, wages and benefits. When adding other labour costs - subcontracts (5%) and professional / business service fees (6%) - total labour costs were 64%.
### Table 8: Landscape Architecture Operating Expenses (2013)

<table>
<thead>
<tr>
<th>Detailed Operating Expenses (2013)</th>
<th>Amount (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total operating expense</td>
<td>100%</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>7.20%</td>
</tr>
<tr>
<td>Salaries, wages, commissions and benefits</td>
<td>52.60%</td>
</tr>
<tr>
<td>Subcontracts</td>
<td>5.10%</td>
</tr>
<tr>
<td>Research and development fees</td>
<td>0</td>
</tr>
<tr>
<td>Professional and business fees</td>
<td>6%</td>
</tr>
<tr>
<td>Utilities</td>
<td>1.10%</td>
</tr>
<tr>
<td>Office and computer related expenses</td>
<td>3.70%</td>
</tr>
<tr>
<td>Telephone, Internet and other telecommunication</td>
<td>0.70%</td>
</tr>
<tr>
<td>Business taxes, licences and permits</td>
<td>0.40%</td>
</tr>
<tr>
<td>Royalties, franchise fees, and memberships</td>
<td>0.40%</td>
</tr>
<tr>
<td>Crown charges</td>
<td>0%</td>
</tr>
<tr>
<td>Rental and leasing</td>
<td>3.90%</td>
</tr>
<tr>
<td>Repair and maintenance</td>
<td>3.90%</td>
</tr>
<tr>
<td>Amortization and depreciation</td>
<td>3.30%</td>
</tr>
<tr>
<td>Insurance</td>
<td>1.60%</td>
</tr>
<tr>
<td>Advertising, marketing, promotions, meals and entertainment</td>
<td>1.80%</td>
</tr>
<tr>
<td>Travel, meetings and conventions</td>
<td>1.70%</td>
</tr>
<tr>
<td>Financial services</td>
<td>0.30%</td>
</tr>
<tr>
<td>Other non-production-related costs and expenses</td>
<td>1%</td>
</tr>
<tr>
<td>All other cost and expenses</td>
<td>5.20%</td>
</tr>
</tbody>
</table>

From 2007-2012, salaries, wages and benefits accounted for 46% of the industry’s expenses ($142.3M), on average. Furthermore, the secondary employment generated from commissions paid to professional / business service fees was 9% of all expenses and subcontract expenses accounted for 17%. Together, these expenses account for 72% of all expenses during 2007-2012.

In comparison, the architecture services industry spent 18% of total expenses on subcontract expenses and 10% on professional and business service fees, for a total of 28% in secondary employment expenditures.

Historically, the Landscape Architectural services industry spent the least amount on advertising, marketing and promotions, utilities and telecommunications expenses, and bad debts.
### Table 9: Annual Survey of Service Industries: Landscape Architectural Services, Operating Expenses (percent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total operating expenses</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Salaries, wages and benefits</td>
<td>46.3</td>
<td>45.4</td>
<td>45.2</td>
<td>45.3</td>
<td>46.4</td>
<td>46.9</td>
<td>45.9</td>
</tr>
<tr>
<td>Commissions paid to non-employees</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Professional and business services fees</td>
<td>11.0</td>
<td>9.2</td>
<td>9.3</td>
<td>8.5</td>
<td>8.6</td>
<td>8.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Subcontract expenses</td>
<td>14.5</td>
<td>16.8</td>
<td>17.0</td>
<td>18.1</td>
<td>17.3</td>
<td>17.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Charges for services provided by head offices</td>
<td>F</td>
<td>1.2</td>
<td>1.4</td>
<td>1.5</td>
<td>1.4</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>5.0</td>
<td>4.9</td>
<td>4.0</td>
<td>4.6</td>
<td>4.2</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Office supplies</td>
<td>2.3</td>
<td>2.3</td>
<td>2.1</td>
<td>2.0</td>
<td>2.1</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Rental and leasing</td>
<td>3.8</td>
<td>3.7</td>
<td>3.9</td>
<td>3.8</td>
<td>4.0</td>
<td>4.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Repair and maintenance</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Insurance</td>
<td>2.1</td>
<td>2.2</td>
<td>2.3</td>
<td>2.1</td>
<td>2.2</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Advertising, marketing and promotions</td>
<td>F</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Travel, meals and entertainment</td>
<td>2.0</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Utilities and telecommunications expenses</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>F</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Property and business taxes, licenses and permits</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Royalties, rights, licensing and franchise fees</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Delivery, warehousing, postage and courier</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Financial services fees</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Amortization and depreciation of tangible and intangible assets</td>
<td>1.7</td>
<td>1.7</td>
<td>1.9</td>
<td>1.7</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Bad debts</td>
<td>F</td>
<td>1.5</td>
<td>1.3</td>
<td>1.0</td>
<td>1.1</td>
<td>1.1</td>
<td>1.2</td>
</tr>
<tr>
<td>All other expenses</td>
<td>4.8</td>
<td>4.1</td>
<td>4.3</td>
<td>4.6</td>
<td>4.2</td>
<td>4.1</td>
<td>4.4</td>
</tr>
</tbody>
</table>

**Economic Impacts**

**Background**

Economic impacts are based on the Statistics Canada input-output accounts, which measure productive economic activity across the national economy. This is a highly detailed model describing the various industries across the country, and their production and consumption of commodities. From this model, various economic measures are derived, such as Gross Domestic Product (GDP), the contribution by
each industry to GDP, and multipliers (which describe the impact on the overall economy of increased activity in one sector).

For Landscape Architecture, the Statistics Canada input-output model includes the industry in Architectural, Engineering, and Related Services (B55413). As the model does not break down the industry in more detail, it is assumed that the overall economic impact of Landscape Architecture is represented by the larger industry grouping.

Figures reported below incorporate three types of impact: direct economic impacts (directly attributable to the economic activity in Landscape Architecture), indirect economic impacts (attributable to increased activity in industries that support landscape architecture), and induced economic impacts (attributable to personal or household expenditures of those people in the Landscape Architecture sector).

**GDP Contribution**

Calculation of GDP is made at the level of Architectural, Engineering, and Related Services (5413), of which Landscape Architecture (54132) is part of. The GDP of the larger 5413 group is provided in Table 10 (figures are $M).24

<table>
<thead>
<tr>
<th>Region</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>17,672.7</td>
<td>19,708.3</td>
<td>21,234.0</td>
<td>21,394.1</td>
<td>21,153.0</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>151.0</td>
<td>165.1</td>
<td>181.5</td>
<td>175.1</td>
<td>170.5</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>16.2</td>
<td>15.1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>335.4</td>
<td>364.2</td>
<td>369.8</td>
<td>370.0</td>
<td>354.5</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>218.8</td>
<td>213.6</td>
<td>223.9</td>
<td>220.6</td>
<td>224.1</td>
</tr>
<tr>
<td>Quebec</td>
<td>3,078.0</td>
<td>3,385.1</td>
<td>3,644.9</td>
<td>3,570.4</td>
<td>3,413.3</td>
</tr>
<tr>
<td>Ontario</td>
<td>5,296.3</td>
<td>5,874.9</td>
<td>6,361.2</td>
<td>6,358.4</td>
<td>6,307.1</td>
</tr>
<tr>
<td>Manitoba</td>
<td>303.9</td>
<td>356.7</td>
<td>356.6</td>
<td>351.8</td>
<td>350.7</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>435.7</td>
<td>494.2</td>
<td>529.5</td>
<td>531.9</td>
<td>491.0</td>
</tr>
<tr>
<td>Alberta</td>
<td>5,108.8</td>
<td>5,864.3</td>
<td>6,385.6</td>
<td>6,542.4</td>
<td>6,574.5</td>
</tr>
<tr>
<td>British Columbia</td>
<td>2,674.2</td>
<td>2,920.8</td>
<td>3,150.8</td>
<td>3,243.9</td>
<td>3,237.2</td>
</tr>
<tr>
<td>Yukon</td>
<td>15.0</td>
<td>17.3</td>
<td>N/A</td>
<td>N/A x</td>
<td>N/A</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>32.4</td>
<td>30.6</td>
<td>30.2</td>
<td>29.6</td>
<td>30.1</td>
</tr>
<tr>
<td>Nunavut</td>
<td>7.0</td>
<td>6.4</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Table 10: GDP Contribution from NAICS 5413 (Architectural, Engineering, and Related Services)**

As Statistics Canada no longer differentiates for solely the Landscape Architecture industry, we have to make an estimate based on the composition in the larger industry. Using the simplifying data that Landscape Architecture (NAICS 54132) is 5% of the larger industry, we get the following estimated GDP contribution from Landscape Architecture.

---

24 Statistics Canada, Table 379-0030
<table>
<thead>
<tr>
<th>Region</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>883.64</td>
<td>985.42</td>
<td>1,061.70</td>
<td>1,069.71</td>
<td>1,057.65</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>7.6</td>
<td>8.3</td>
<td>9.1</td>
<td>8.8</td>
<td>8.5</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>0.8</td>
<td>0.8</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>16.8</td>
<td>18.2</td>
<td>18.5</td>
<td>18.5</td>
<td>17.7</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>10.9</td>
<td>10.7</td>
<td>11.2</td>
<td>11.0</td>
<td>11.2</td>
</tr>
<tr>
<td>Quebec</td>
<td>153.9</td>
<td>169.3</td>
<td>182.2</td>
<td>178.5</td>
<td>170.7</td>
</tr>
<tr>
<td>Ontario</td>
<td>264.8</td>
<td>293.7</td>
<td>318.1</td>
<td>317.9</td>
<td>315.4</td>
</tr>
<tr>
<td>Manitoba</td>
<td>15.2</td>
<td>17.8</td>
<td>17.8</td>
<td>17.6</td>
<td>17.5</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>21.8</td>
<td>24.7</td>
<td>26.5</td>
<td>26.6</td>
<td>24.6</td>
</tr>
<tr>
<td>Alberta</td>
<td>255.4</td>
<td>293.2</td>
<td>319.3</td>
<td>327.1</td>
<td>328.7</td>
</tr>
<tr>
<td>British Columbia</td>
<td>133.7</td>
<td>146.0</td>
<td>157.5</td>
<td>162.2</td>
<td>161.9</td>
</tr>
<tr>
<td>Yukon</td>
<td>0.8</td>
<td>0.9</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>N/A</td>
<td>N/A</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Nunavut</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 11: Estimated GDP Contribution From Landscape Architecture ($M)

On a national basis, the estimated GDP contribution from Landscape Architecture in 2014 is over $1B, and has typically grown by over 10% per year (although there was a year-over-year drop from 2013 to 2014).

![Estimated National GDP Contribution From Landscape Architecture ($)M](image)

**Figure 3: Estimated National GDP Contribution From Landscape Architecture ($M)**

**Economic Multipliers**

Multipliers demonstrate the impact of expenditure in an industry across the national economy. This is available on a provincial level, capturing the different characteristics of the economy of each province. Again, the Statistics Canada model only compiles data to the level of NAICS 5413, so it is assumed that
the profile for Landscape Architecture (NAICS 54132) is similar to the larger group. The table below gives the output multiplier effect nationally and for each province for the year 2010, the latest available.

<table>
<thead>
<tr>
<th>Province</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>2.10</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>2.07</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>1.97</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>2.14</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>2.12</td>
</tr>
<tr>
<td>Quebec</td>
<td>2.07</td>
</tr>
<tr>
<td>Ontario</td>
<td>2.00</td>
</tr>
<tr>
<td>Manitoba</td>
<td>2.00</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>2.05</td>
</tr>
<tr>
<td>Alberta</td>
<td>2.02</td>
</tr>
<tr>
<td>British Columbia</td>
<td>2.14</td>
</tr>
<tr>
<td>Yukon</td>
<td>2.06</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>2.10</td>
</tr>
<tr>
<td>Nunavut</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Table 12: Provincial Output Multipliers

Therefore, every $1 invested in Landscape Architecture at the national level generates $2.10 of economic activity.

Spin-Off Employment

Spin-Off employment from Landscape Architecture projects are expressed as jobs per million dollars of output. The following table gives the jobs multiplier for the year 2010, the latest available.

<table>
<thead>
<tr>
<th>Province</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>12.83</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>12.31</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>14.62</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>15.94</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>14.29</td>
</tr>
<tr>
<td>Quebec</td>
<td>13.56</td>
</tr>
<tr>
<td>Ontario</td>
<td>13.12</td>
</tr>
<tr>
<td>Manitoba</td>
<td>12.4</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>11.09</td>
</tr>
<tr>
<td>Alberta</td>
<td>9.67</td>
</tr>
<tr>
<td>British Columbia</td>
<td>14.93</td>
</tr>
<tr>
<td>Yukon</td>
<td>14.71</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>8.56</td>
</tr>
<tr>
<td>Nunavut</td>
<td>6.86</td>
</tr>
</tbody>
</table>

Table 13: Provincial Jobs Multipliers

Therefore, every $1 Million dollars in Landscape Architecture project expenditures creates 12.83 jobs nationally.
Occupation Profile

Statistics Canada labour force data on Landscape Architects is often presented as part of a larger occupational group known as architects, urban planners and land surveyors, National Occupation Classification 215 (NOC 215). Where possible, this study used specific information on the Landscape Architect profession, NOC 2152. Otherwise, data from the NOC 215 of which Landscape Architectures are, approximately, 5% of the group.

Note that much of the data presented in this section relies on self-identification of participants. Since the use of the description of Landscape Architect is not protected in all provinces, the profiles include those whose qualifications may not meet regulated provincial criteria. Also, those with Landscape Architecture credentials who may not be employed in that role may not be included.

<table>
<thead>
<tr>
<th>Demographic Statistics</th>
<th>Occupations in this group:</th>
<th>Architect (2151), Landscape Architects (2152), Urban and Land Use Planners (2153) and Land Surveyors (2154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment (non-student) in 2012</td>
<td>40,999</td>
<td></td>
</tr>
<tr>
<td>Landscape Architects Estimate</td>
<td>1,968</td>
<td></td>
</tr>
<tr>
<td>Median Age of workers in 2012</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Average Retirement Age in 2012</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

Table 14: Occupation Profile for Canada

Demographics

The following demographic analysis of the Landscape Architect profession considers the following variables:

- Profession size, characteristics & growth trends
- Composition by age and gender
- Education level
- Employment Status
- Labor force participation rate and size (variations across age, gender)
- Unemployment rates
- Employment by industry
- Extent of self-employment
- Trends over time

Data derived from Statistics Canada Annual Labour Force survey indicates that as of December 2011, there were 1,735 Landscape Architects in Canada.

Profession Size and Characteristics

The National Occupational Classifications defines the type of work that Landscape Architects perform as the conceptualization of landscape designs as well as the development and oversight of contract documents. They also provide oversight to the construction of landscape development for a variety of projects including commercial, residential, office complexes, parks and golf courses.
The National Household Survey, which is part of the Canadian Census (2011), indicated that there were 1,735 Landscape Architects in Canada at the time of the 2011 Census. The majority (75%) worked as employees (1,300) and 25% were self-employed (435). In 2012, those that worked directly for the Landscape Architecture service industry aggregated earnings of $158M in salaries, wages & benefits.\(^{25}\)

**Occupation Distribution**

Although the type of work and competency / knowledge areas are multiple and varied, Landscape Architects work in few industries (mainly five major industries). However, the level of skills, education, training and developed contacts allow Landscape Architects to work in other industries such as education, planning, contractors and occupations that are related to land-use and crop management.\(^{26}\)

Landscape Architects are mainly employed by Professional, Scientific & Technical Services (60%), including architectural and engineering firms. They are also employed in public administration including government environmental and development agencies (21%).\(^{27}\)

![Figure 4: Industries Employing Landscape Architects](image)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, scientific and technical services</td>
<td>59.65</td>
</tr>
<tr>
<td>Public administration</td>
<td>20.75</td>
</tr>
<tr>
<td>Administrative and support, waste management and remediation services</td>
<td>13.54</td>
</tr>
<tr>
<td>Arts, entertainment and recreation</td>
<td>2.59</td>
</tr>
</tbody>
</table>

**Table 15: Industries Employing Landscape Architects**

---


\(^{26}\) Source: Landscape Architects Occupation Outlook, Service Canada, Updated January 14, 2014.

\(^{27}\) Source: National Household Survey 2011 - Statistics Canada
Age and Gender Composition

Females make up slightly more than one third of the Landscape Architecture profession (38%), which is ten percent of less than all occupations female percentage (48%), but is ten percent higher than the NOC 215 group (28%).

Figure 5: Gender Distribution Landscape Architects Profession

Workforce Composition by Age

Figure 6: Workforce Composition by Age

The number of Landscape architects within the age groups of 25-34 (29%), 35-44 (24%) and 45-54 (27%) are fairly close.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total Class of Worker</th>
<th>Employed</th>
<th>Self-Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>480</td>
<td>450</td>
<td>25</td>
</tr>
<tr>
<td>35-44</td>
<td>400</td>
<td>310</td>
<td>85</td>
</tr>
<tr>
<td>45-54</td>
<td>455</td>
<td>310</td>
<td>140</td>
</tr>
<tr>
<td>55-64</td>
<td>300</td>
<td>180</td>
<td>125</td>
</tr>
<tr>
<td>65-74</td>
<td>35</td>
<td>0</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 16: Age Distribution of Landscape Architects by Class of Worker

However, there is a difference between those who work as employees and those that are self-employed among the younger and older age groups. Most of the Landscape Architects (94%) between the ages of 24-35 are employed by a company and close to three-quarters of those between the ages of 35-44 (78%) work for a company. In comparison, slightly two-thirds of Landscape Architects between the ages of 45-54, and 42% of those between the ages of 55-64, are self-employed.

![Bar chart showing employed vs self-employed Landscape Architects by age group]

**Figure 7: Employed vs Self-Employed**

**Education**

Landscape Architecture is a regulated profession in parts of Canada, with an educational requirement. This requirement is accredited by CSLA, and supported by all provincial organizations.²⁹

The following tables are taken directly from the National Household Survey published results. It should be noted that this survey has the following confidentiality disclosure caution:

Disclosure control rules have been applied to data tables available from the National Household Survey (NHS). The number of actual records used to derive any number in a table must meet a minimum criterion. For a table cell where this criterion is not met, the number is replaced by a zero. Due to this disclosure control, subtotals will not necessarily aggregate to the total. As well, users should note that random rounding has also been applied to the data.

As a result, the figures in the tables may have been rounded to protect confidentiality.

<table>
<thead>
<tr>
<th>Highest Degree or Certificate</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Certificate, Diploma/Degree</td>
<td>0</td>
</tr>
<tr>
<td>High school diploma/equivalent</td>
<td>35</td>
</tr>
<tr>
<td>Postsecondary certificate, diploma/degree</td>
<td>1,860</td>
</tr>
<tr>
<td>Apprenticeship or trades certificate/diploma</td>
<td>0</td>
</tr>
<tr>
<td>College, CEGEP or other non-university certificate/diploma</td>
<td>125</td>
</tr>
<tr>
<td>University certificate or diploma below bachelor level</td>
<td>90</td>
</tr>
<tr>
<td>University certificate, diploma or degree at bachelor level/above</td>
<td>1,625</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>975</td>
</tr>
<tr>
<td>University certificate, diploma/degree above bachelor level</td>
<td>650</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1915</strong></td>
</tr>
</tbody>
</table>

Table 17: Highest Level of Education

To work as a Landscape Architect, having a Canadian Society of Landscape Architects membership is not mandatory requirement. However, it provides an advantage by validating the graduate’s competency, knowledge areas and experience. The Society requires a bachelor's degree in order to become a member candidate as well as three years of recognized work experience, with six months of direct supervision of a licensed Landscape Architect.

<table>
<thead>
<tr>
<th>Highest Level of Study</th>
<th>College, CEGEP, Other Non-University Certificate/Diploma</th>
<th>Bachelor’s Degree</th>
<th>Master's Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Labour Force</td>
<td>30</td>
<td>105</td>
<td>90</td>
</tr>
<tr>
<td>In the Labour Force</td>
<td>25</td>
<td>95</td>
<td>30</td>
</tr>
<tr>
<td>Employed</td>
<td>30</td>
<td>95</td>
<td>85</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not in the Labour Force</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Employment Rate</td>
<td>100%</td>
<td>90%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Table 18: Employment Status – 5 Years After Graduation

According to the National Household Survey on graduate and labour market outcomes, at the time of the survey, for graduates who had graduated 5 years before, the unemployment rate of these graduates was zero and employment rate was above 90%. (The figure of 0% unemployment is likely inserted for confidentiality reasons.)

Occupation Supply and Demand Projections

In general, the employment prospects for Landscape Architects in Canada are fair. According to Service Canada (January 2014), the number of Landscape Architects has increased significantly in the last few years, mainly due to construction industry trends. These trends as well as a growing green industry have

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30 Two NHS data-sets used in this study provide different occupation totals for landscape architects. This is most likely due to estimates made or the inclusion / exclusion of professionals not in the labour market.

31 Source: 2011 National Household Survey Data on the Labour Market Outcomes of Graduates
affected the demand for Landscape Architecture services in Canada and the increase in demand is projected to continue for the next few years.\textsuperscript{32}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{figure8.png}
\caption{Components of Projected Job Openings}
\end{figure}

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
\textbf{Demand Factors} & \textbf{Openings} & \textbf{\%} \\
\hline
Expansion Demand & 3,622 & 27\% \\
Retirements & 8,179 & 60\% \\
Other Replacement Demand & 1,230 & 9\% \\
Emigration & 596 & 4\% \\
Projected Job Openings & 13,626 & 100\% \\
\hline
\end{tabular}
\caption{Projection of Job Openings\textsuperscript{33}}
\end{table}

\textsuperscript{32} Source: Landscape Architects Occupation Outlook, Service Canada, updated January 14, 2014.

\textsuperscript{33} Source: Canadian Occupational Projection System (COPS)
Figure 9: Components of Projected Job Seekers

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Seekers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Leavers</td>
<td>10,298</td>
<td>64%</td>
</tr>
<tr>
<td>Immigration</td>
<td>2,333</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>3,465</td>
<td>22%</td>
</tr>
<tr>
<td><strong>Projected Job Seekers</strong></td>
<td><strong>16,096</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 20: Job Seekers for Canada

**Occupational Projections**

The data below are derived from the Canadian Occupational Projection System (COPS). Using a variety of models, COPS produces a detailed 10-year labour market projection per broad skill level and per occupation at the national level, which focuses on the trends of labour supply and labour demand over a ten year period.

The data is for the occupational group N2152 that includes 2152 - Landscape Architects; 2153 - Urban and Land Use Planners; and 2154 - Land Surveyors. The reason for grouping is because individually they are considered small occupations, but they are closely related. Groupings are chosen based on specific tasks for each occupation.

Employment projections for N2152 show an increase in employment from an estimated 20,600 in 2012 to 21,800 in 2022, as shown in Figure 10.

---

34 Source: Canadian Occupational Projection System (COPS)
35 The most recent 10 year projection was completed in 2013. Revised projections from 2015 outward are due sometime in 2015.
Figure 10: Employment Projections for NOC 2152 2012 – 2022 (in thousands)

COPS projects balanced labour market conditions for the 2152 occupation grouping, rather than a shortage or surplus, for the period 2013-2022.

Demand

Trends

The demand for Landscape Architects and architectural services, historically, has been linked to trends that have an effect on the construction industry and the demand for Landscape Architecture services. In recent years the greening of the economy and tourism infrastructure have also played a critical role in occupational and service demand. These trends are predicted to hold fast as well as the increase in occupational numbers.  

Figure 11: Demand Components

36 Source: Job Futures, Landscape Architects, Service Canada, 2014
Construction Industry Activity

After a period of decline, the construction industry had a strong recovery starting in 1998 (except during the 2009 recession) culminating with a record setting number of jobs in 2012.

The main factors influencing growth in the construction industry include:

- Low interest rates
- Considerable public and private investment
- Lower taxes
- Good labour market for young people enabling them to have their own dwellings
- A substantial migratory balance, including international, interprovincial and immigrants minus emigrants\(^\text{37}\)

The above factors were influential in industry employment increasing by 80% from 1998-2012. In fact, the number of hours worked had a 125% increase during this period.\(^\text{38}\) The effects of the current economic slowdown remain to be seen.

Green Economy and Tourism Infrastructure Activities

Landscape Architecture employment is becoming less dependent on construction projects as a result of increased public demand for greener and friendlier urban and public spaces. Combined with the increased demand to redevelop contaminated industrial sites, to preserve conservation areas / environments and to develop parks, the substantial advancement of the green economy will bode well for the Landscape Architecture profession and industry. As well, the profession and industry are well positioned to take a lead in the development of national and regional green economies.\(^\text{39}\)

Furthermore, the development of tourism infrastructure, including landscape development, as a means of addressing competitive factors in this industry has and will increase demand for Landscape Architects as well as Landscape Architectural services. The preservation and restoration of cultural and historic sites play a key role in tourism competitiveness. These activities are important components of municipal government’s tourism and economic development plans.\(^\text{40}\)

Competitive factors

Competition from other occupations has an effect on the jobs available to Landscape Architects and Landscape Architecture firms. For example, landscape technicians and contractors offer some similar services (especially in the residential markets) at a lower cost and exclusivity is not guaranteed as a result of licensure.\(^\text{41}\)

\(^{37}\) Ibid
\(^{38}\) Ibid
\(^{39}\) Ibid
\(^{40}\) Ibid
\(^{41}\) Ibid
Thus, a large share of the residential landscaping market, among others, does not go to them. In addition, some engineers and contractors do not feel that Landscape Architecture is important enough to set aside the budgets required to pay the fees of professionals in this field.\textsuperscript{42}

**Supply**

![Figure 12: Workforce Pool Composition](image)

The Landscape Architectural workforce pool is mainly comprised of graduates from university-level Landscape Architecture programs. In fact, from 1991 to 2006 the percentage of Landscape Architects with a Bachelor’s degree quadrupled, from 25% to 94%.\textsuperscript{43} Therefore, close to 100% of new workforce entrants have earned a degree.

This trend is reflected by the fact that the percentage of Landscape Architects with a Bachelor’s degree in architecture, engineering, and related technologies (a field that includes Landscape Architecture) quadrupled, from 25% to 94%.\textsuperscript{44}

The unemployment rate for this occupation is relatively low. Therefore job openings being filled by unemployed Landscape Architects is and will be relatively low. For the NOC 213 occupation group (that Landscape Architects are part of), according to the Labour Force Survey (2014), in Canada, 94% of this occupation group worked full-time, compared to the average of 81% for all occupations.\textsuperscript{45}

Immigrants are another source in the profession’s workforce pool. They are 13% of the workforce 13.7% of all occupations.

According to the Labour Force Survey (2014), in Canada, 24% of NOC 215 occupation group workers were self-employed, while the average for all occupations was 14%.\textsuperscript{46}

\textsuperscript{42} Ibid
\textsuperscript{43} Ibid
\textsuperscript{44} Ibid.
\textsuperscript{45} Source: Labour Force Survey - Statistics Canada
\textsuperscript{46} Ibid
3. Communications Approach

Communications Objectives

As noted above, CSLA would like to determine the value of the profession of Landscape Architecture in Canada to be able to enhance its promotion of the profession. Specifically, the CSLA wishes:

- To portray and promote the Landscape Architecture profession as a mature, viable, expanding and influential contributor to the economy;
- To develop communication messages to the public, professionals, government and other agencies and organizations about the benefits of the profession;
- To provide evidence and rationale in support of the creation of new Landscape Architecture Programs across the country; and
- To support existing academic institutions in their pursuit of appropriate funding levels for accredited schools / programs of Landscape Architecture and for research and teaching opportunities.

Recommended Framework

Although the development of a communications strategy is outside the scope of this project, it is helpful to position the development of key messages within a strategic communications framework as shown in Figure 8 below. This approach is consistent with the CSLA 2015-17 Strategic Plan.
Define Goal
By defining the desired impact (for example: improving uptake of Landscape Architecture services by municipal planners) it focuses the plan on the target audience for that information. This requires an active identification and clear focus on a desired impact, rather than a passive sharing and exchange of information.

Determine Target Audience
After a specific goal has been defined, the next step is to identify the target audience: those who are decision-makers and influencers in achieving the desired impact. Not all audiences have the same level of interest or influence with respect to achieving a specific goal. A stakeholder mapping process can be used to identify the target audience. The audience can be mapped to the goal according to their decision-making ability and direct influence on achieving the goal and their interest in achieving the goal. See section on Stakeholder Mapping below for more information.

Determine Context
Understanding the unique needs and drivers of the target audience is part of determining the context. Determining enablers and barriers, both internal and external, will identify challenges to be planned for, and opportunities to take advantage of, in developing communications strategies and mechanisms / tactics for a given goal.

Develop Strategy
The specific goal, target audiences, and context inform the development of the audience specific key messages and specific tactics to be used within the strategy. This creates a strategic communications strategy better tailored to the needs of those who can best use and adopt the information to achieve the specific desired impact / goal.

Implement and Evaluate Impact
Any plan must include metrics to measure the success of the tactics and messages in meeting the desired goal. This in turn informs the refinement of the communications strategy.

**Recommendation 1:** CSLA adopt the strategic communications framework identified above to guide their future advocacy efforts.

Goals and Audiences
From discussions with CSLA, it is understood that there are three principal advocacy goals. These goals and their related audiences are detailed below:

- **Goal: Achieve self-regulation status in all provinces**
  
  **Audience:** Provincial bodies involved with the regulation of professions
  
  In some provinces, Landscape Architecture is a recognized self-regulating profession, or has a protected “right to title”. This is not the case in all provinces, and a major objective is to achieve this status across the country.
• **Goal: Increase uptake of Landscape Architecture services**
  
  **Audience:** Federal, provincial and municipal planning decision-makers
  
  The role of Landscape Architecture is often minimized in projects, and in some cases it is explicitly excluded from participating in projects where a significant contribution could be made. A raised awareness of the capabilities of the profession and the benefits offered by engaging a landscape professional must be better communicated.

• **Goal: Grow and develop education programs in Landscape Architecture**
  
  **Audience:** Universities and students
  
  There are relatively few universities offering Landscape Architecture programs. These programs are under stress, but are crucial for the continuation of the profession. The profile of these programs has to grow to protect the programs already in place and potentially encourage the development of new programs if the forecasting models demonstrate sufficient demand.

Other interested audiences include:

- Landscape Architects
- Allied professions
- Media

**Stakeholder Mapping**

The purpose of a stakeholder map is to classify current and potential audiences by their interest in a given goal and their power/influence to affect action towards achieving that goal.

![Stakeholder Map](image)

**Figure 14: Stakeholder Map - adapted from Imperial College of London**

It is critical to note stakeholder influence is not an absolute measure. It is defined within a given context. That means there is no single stakeholder map. It changes as the goals and context change.

The specific impact or change being sought will determine the target audience (decision makers, influencers and interested parties). For example, the decision-makers and influencers for increasing program development within universities will be different from the decision-makers and influencers in
municipal planning projects. Although the general group of stakeholders may be the same, each stakeholder will have varying degrees of influence and interest for each change. So a decision maker in terms of a municipal planning project, such as the Mayor or City Councillors, will have no decision-making authority in developing a new university program, although they may be very interested in seeing a new program developed.

Although some stakeholders will have influence across multiple areas of impact, some will be more limited or focused in their influence, and some will not just be influential in seeking a change, but will be actual decision makers who can directly implement the desired change.

By mapping each stakeholder to a desired goal by their interest in the change being sought and their influence in making the desired change, it is possible to better identify the target audiences for dissemination purposes and determine audience needs and drivers. It also informs the development of key messages and selection of tactics or methods of communicating with each target audience.

**Recommendation 2:** CSLA undertake stakeholder mapping to refine the target audiences for each desired advocacy goal.

**Context**

There are numerous internal and external factors which impact the potential success of a communications strategy. A key part of advocacy planning is to develop an understanding of this context so as to refine key messages.

Although it was outside the scope of this project to identify barriers and enablers internal to the organization, some general external barriers and enablers can be identified:

**Enablers**

- Landscape Architecture contributes over $1Billion in GDP annually.
- The substantial advancement of the green economy bodes well for the Landscape Architecture profession and industry.
- The development of tourism infrastructure, including landscape development, as a means of addressing competitive factors in the tourism industry has and will increase demand for Landscape Architects.
- Pressure from Canadians to improve the built spaces where they reside, play and work as well as to increase the number of public spaces, especially in urban areas, and address climate change are all contributing to the growing importance of the profession.

**Barriers**

- Not all provinces have self-regulation.
- Landscape Architecture continues to be minimized and seemingly misunderstood as a standalone profession.
- A strong construction industry accounted for a growth in Landscape Architecture from 1998 to 2012, the effects of the current economic slowdown remain to be seen.
- Landscape Architecture is a steadily growing field, but labour demand is anticipated to remain balanced.
Meeting regional demands for Landscape Architecture service is challenging.

**Recommendation 3:** CSLA undertake a thorough analysis of the internal and external barriers and enablers to better inform the communications strategy.

**Key Messages**

**Goal: Achieve self-regulation status in all provinces**

**Messages:**
- Alberta, British Columbia and Ontario have self-regulation for the profession, while other provinces do not. Uneven licensure across the country creates regional inequities in opportunity.
- Labour mobility within Canada and internationally can be enhanced by the adoption of a common accreditation.
- Landscape Architecture projects grow the economy. On a national basis, the estimated annual contribution to GDP is over $1 Billion, and has typically grown by over 10% per year.

**Goal: Increase uptake of Landscape Architecture services**

**Messages:**
- Landscape Architects are skilled professionals that connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.
- Landscape Architecture can mitigate the impacts of climate change, increase tourism and increases surrounding real estate values.
- Landscape Architecture increases the public’s use of outdoor spaces while ensuring good environmental stewardship.
- Every $1 invested in Landscape Architecture at the national level generates $2.10 of economic activity. Every $1 Million dollars in Landscape Architecture project expenditures creates 12.83 jobs nationally.

**Goal: Grow and develop education programs in Landscape Architecture**

**Messages:**
- Landscape Architecture is a growing field with good job prospects.
- Landscape Architects have a broad range of skills and skills learned in training are applicable in a range of career paths.
- Landscape Architects create solutions that cooperate with natural systems and the natural landscape, mitigate climate change and increase public enjoyment of space.
- The expanding green economy requires professionals with the skills and knowledge to create sustainable development.
Other Messages

For the profession:

- Landscape Architecture is a growing segment of the economy, contributing over $1Billion annually to GDP.
- Landscape Architects are uniquely positioned to become the leaders in connecting people with nature in urban settings.
- Landscape Architects need to celebrate and promote their own achievements by sharing stories with a variety of strategic audiences.
- The national body is well placed to create a communication’s strategic plan and messaging for use by all practitioners.

For the media:

- Landscape Architecture is a growing segment of the economy, contributing over $1Billion annually to GDP.
- Landscape Architecture can mitigate the impacts we are having on our natural environment and urban spaces.
- Landscape Architecture is an excellent career choice with graduates having a choice of employment options in a growing field with good job prospects.
- Landscape Architecture increases the public’s use of outdoor spaces while ensuring good environmental stewardship.

For potential clients:

- Landscape Architecture can mitigate the impacts of climate change, increase tourism and increases surrounding real estate values.
- Good Landscape Architecture design will increase space usage while still protecting the environment.
- Landscape architects provide beautiful, functional and engaging spaces using environmental protection, good stewardship and sustainability.
- Landscape Architects are skilled professionals that connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.

For allied professions:

- Because there are specific areas of practice that overlap with allied professions, Landscape Architects are skilled at interacting with and understanding the needs of a variety of professionals as part of a cohesive team.
- Landscape Architects provide a value added service to allied professions by bringing special expertise in the design, planning, management and conservation of the built environment.
- Landscape Architects connect other professions, meeting the needs of biologists/ecologists with environmental concerns, engineers with infrastructure construction demands, and municipalities with budget limitations.
• Landscape Architects can provide a key role in integrating the needs of allied professions while creating beautiful, functional spaces that work with the natural environment.

**Recommendation 4**: CSLA refine these communications key messages as part of a strategic communications plan which includes identifying specific tactics to communicate messages to target audiences, and identifying metrics to determine the impact of the tactics and advocacy strategy.
Appendix A – Annotated Bibliography

The VALUE Project. (September 2012). Final Report.

VALUE stands for Valuing Attractive Landscapes in the Urban Economy. The purpose of the document is to present the VALUE project research findings to serve as guidance to North West European policymakers, politicians, planners and developers of green infrastructure. The aim of the VALUE project is "to demonstrate the value of prioritizing investments in green infrastructure". Toward this end, they strive for synergy by creating "an interconnected network of natural assets".

VALUE has utilized various economic evaluation techniques to study how urban competitiveness may be enhanced through green architecture projects. The added value to the environment of VALUE investments was determined. According to the Executive Summary, "the most important finding was that economic value is linked with urban greening and associated improvements in environmental quality". According to the research, people are willing to pay higher taxes and rent to live in a greener environment.

VALUE built upon the previous Interreg IIIB project, ‘Creating a Setting for Investment’ (CSI), which found that attractive landscapes significantly drive investment at the city and regional levels. However, "urban green spaces are being built upon because they are seen as less valuable than other land uses" (Beatley, 2000; Werquin et al., 2005). " An increased quality of open spaces is viewed as improving social cohesion and communal well-being" (CABE Space, 2005a, 2005b). Therefore, the value of green infrastructure must be made known so that it is deemed worthy alongside other key land uses.

In all of the case studies, funding was seen as the main obstacle in delivering green infrastructure objectives. Stakeholder involvement in strategic policy-making was seen as critical. The involvement of politicians and local businesses in allocating funds for the development and maintenance of green infrastructure investments was seen as critical.

Urban greenness (determined in the analysis by a GIS-based indicator) has a high amenity effect. "In relation to economic and housing market variables, urban greenness ranks second in terms of importance".

Maintenance is seen as a major issue in green projects. Green investments require an overall concept, which has huge impacts on the success of the project. "Initial capital costs produce wider local multiplier effects, and may be recouped directly through higher tax or rental payments or indirectly via increased property values and urban competitiveness." A more structured economic evaluation process will produce robust data that can be compared across cities and countries. Focus groups should be used to explore questions of maintenance, amenities and functionality.

Green urban spaces have impacts on quality of life on a local and regional level. Future research should aim for a more detailed and structured system of coding urban greenness so that more differentiations would exist.
The Final Report promotes a transnational approach to urban greening. In addition, planners should make projects accessible for local people and avoid top-down decision-making, as local people heavily impact the environment. Private sector involvement must be encouraged.

https://uta-ir.tdl.org/uta-ir/handle/10106/2064

The document is a thesis summarizing the knowledge base and understanding of informed participants in landscape architecture, as it pertains to multi-national licensure, as well as the potential impact of said licensure and the possible forms it could take. Global differences in standards, regulations and core competencies within the profession are explored. Why public health, safety and welfare should influence licensure, and how (possibly serving as a legal driving force towards licensure) are also discussed. Multi-national licensing experiences encountered in architecture are viewed in a somewhat predictive light. Change in education (mainly standardization) is seen as the starting point of a series of events that culminate in multi-national licensure. At the time of its writing, North America was leading the way in licensing the profession.


The paper “provides a platform on which to build the concept of public welfare in Landscape Architecture”. It is intended to help build awareness and understanding of how Landscape Architecture enhances public welfare. In so doing, the components of public welfare are defined. According to Black’s Law definition it includes safety, order, morals, economic interest, non-material interests, and political interests. An exploration of the term public welfare, which includes ‘public realm’ and ‘welfare’ is undertaken, resulting in a holistic definition in the context of landscape architecture: “the stewardship of natural environments and of human communities in order to enhance social, economic, psychological, cultural and physical functioning, now and in the future”. Seven major impacts of Landscape Architecture on public welfare are examined. Planning and design considerations for public welfare, and ways of measuring public welfare are highlighted.

LABOK. (October 28, 2004). Landscape Architecture body of knowledge study report.

This report is a joint initiative by the American Society of Landscape Architects, the Canadian Society of Landscape Architects, the Council of Educators in Landscape Architecture, the Council of Landscape Architecture Registration Boards, and the Landscape Architectural Accreditation Board. The LABOK task force was formed to determine the then-current educational and professional expectations of the field of Landscape Architecture, that is, the “fundamental body of knowledge” expected of graduates of accredited programs and “core competencies shared by the profession in general” that help define it. It is a snapshot of the starting point of the profession going forward. The survey used to gather responses were divided into 4 parts: Knowledge Areas, Competencies, Background and General Information and Comments. The report does not contain recommendations for the future. The survey and its results are merely presented.

This report reviews international best practices with regards to “the development and promotion of the design economy”. Ontario’s design workforce is studied, Landscape Architecture being one of the included professions. Ontario possesses a ‘design dividend’ that has several positive impacts on the economy, including providing revenue and generating employment opportunities. Characteristics of Ontario’s design economy are identified, such as the volatility of its workforce, and the lack of national and regional design policies. Recommendations are made. “There is a strong, positive relationship between overall national competitiveness and the use of design”.


Various measures of labour market activity are used to assess the performance of the Canadian and U.S. labour market since 2009. To this end, a broad range of information is consolidated in the form of a Labour Market Indicator (LMI). The Canadian labour market has proven to be more resilient than that of the U.S. For both countries, post-recession employment gains have been attributed more to a decrease in layoffs rather than a notable increase in hiring. Labour Force Participation Rate has declined in both countries as well. There has been modest wage growth and a recovery in average hours worked.

Office of Research and Analysis, National Endowment for the Arts. (January 2015). ACPSA Issue Brief #8. Value added by architectural and design services.

Architectural and design services industries in the U.S. accounted for 231,000 jobs and a $31.2 billion economic contribution in 2012. During the Great Recession, the architectural services industry was severely affected due to significantly reduced construction. Most architectural and design services function as “intermediate inputs in the production of other goods and services”. The U.S. enjoys a growing trade surplus in architectural services. That 9% of architectural services for historic restorations was exported in 2012 was considered noteworthy.


Public art is embedding itself in the outdoors, as part of the landscape, enriching it. Canadian Landscape Architects’ work reflects this. The trend is towards vitalizing the public realm, bringing the living space outdoors and embracing sustainability. Integrated design is key to the best sustainable solutions. This presents various opportunities for the profession of Landscape Architecture, whose vision is being increasingly sought.


This article draws heavily from lessons learned from dystopian fiction. The author warns that most futurists “seem so focused on technomarvels they omit resilient environments and healthy communities from the stories they proffer”. This bleak, mechanistic world we have come to accept as our future is an impossibility with no capacity to sustain human life. The inaction created by the foregone conclusion of a natureless future is counterproductive. He urges us to resist the “culture of inevitability”, as the future has not happened yet, and its course is still changeable. He suggests that imagination and Homo Regenesis (our next evolutionary state) are the way forward. A Building Revolution, Scale Revolution and Living Community Revolution should follow.

This paper examines the use of landscape for restorative, recreational and therapeutic purposes. Insights are taken from the design of Lakeshore Psychiatric Hospital in Toronto. Landscaping is explored as a cost-effective measure in the treatment of mental health, the practice having originated in the 1400s. River views, cottage-style buildings and “neighbourhood streets” are some of the features incorporated. Restorative landscapes focus on user stimulation and enjoyment from psychological and physical interaction. Therapeutic landscapes support specific forms of treatment and wellness through direct interaction.


This report is intended to assist in real estate investment decision-making by providing alternative financial models and policy frameworks. The goal is to lead investment capital toward the restorative built environment. Methodologies used to evaluate green buildings and infrastructure are further developed, by including social and ecological costs and benefits (fully considering avoided negative externalities as well as positive externalities) that could ultimately incentivize investment in green developments. Benefits of green projects monetized in this way is the essential output of Phase I (of a 3-phase study) that this report presents. Ecosystem services are valued as assets, with the loss of an ecosystem service resulting in the creation of a tax district that attempts to replace the lost service by importing it or other means. “A fully integrated design process with clear sustainability objectives throughout the entire project lifecycle” is the first action that can yield huge cost savings through cross-disciplinary synergy. Financing options are identified.


The vision behind the Land and Water Conservation Fund was to “reinvest a portion of energy revenues from offshore oil and gas that belong to us all in to conservation of the land, water and recreation resources we all need”. Most U.S. counties have at least one park that has benefited from this funding, which serves the “Metropolitan Revolution” well. LWCF parks attract residents and businesses alike. Some success stories are highlighted in the report. For example, Nashville’s Riverfront Park has been credited with increasing the number of 25 to 34 year old college graduates in the urban core by 50% over the last 10 years. The outdoor recreation economy also generates jobs.


The environmental horticulture (green) industry is growing rapidly (at the time of writing of the report) in the U.S., and is considered to have bright prospects. The industry’s economic impact is thus explored.


The ideal scenario for a Landscape Architect, which creates a kind of seamless integration, is to design buildings for the environment, rather than trying to sculpt an environment around existing buildings. In recent history, urban topography, even when planned, has failed to achieve synergy among its components. The design of Toronto’s landscape is seen as a way to “create value, stimulate growth,
form connections and enhance quality of life”. The landscape should be accommodating to the varied activities it might host. The unexpected should be embraced.

**Cameron, G. (2003). Landscape Architects have waterfront toehold: council to approve selection shortly.**

The design for the development of the Harbourfront section of Toronto’s waterfront heralds the renewal of the waterfront. It incorporates a vision of “international tourism, national celebration and local enjoyment”. On recommendation by Toronto’s Economic Development and Parks Committee, Landscape Architects were included in the initial design phase.


This document describes Landscape Architecture and provides a brief history of the profession. With an increasing population of city dwellers, Landscape Architects tend to focus on the quality of urban life and the development and management of open spaces.

**Andrighetti, R. (2011). Facing the land: landscape design in Canada.**

Canadians seem to relate to “survival” rather than “success”. Until the 1960’s, the built environment could not stand on equal grounds with Canada’s formidable landscape. Canadians’ attitudes toward the natural environment have affected the way outdoor spaces have been designed. The symbolic pure environment is at odds with our contemporary experience of it. Canadians avoid rather than accept the land (garrison mentality). The document explores the challenges through the years of defining Canadian identity and creating uniquely Canadian spaces.

**Livesey, G. (2014). A look at landscape urbanism.**

Landscape urbanism includes the disciplines of Landscape Architecture, urban design, landscape ecology, engineering, and so on. It values process over style, and appreciates indeterminacy, open-endedness and the mixing of disciplines. Digital processes are a characteristic. This report discusses these claims of landscape urbanism.

**Landscape Institute. (2012). Landscape Architecture: a guide for clients.**

In offense of the notion that “good design is an expensive luxury”, this guide attempts to promote the union of utility, function and beauty, and presents Landscape Architects as the empowered leaders of this vision. Value-creating projects demonstrative of the skills and abilities of Landscape Architects have been highlighted in order to entice future commissions.


The list contains partners organised by province or territory.

**Williams, Ron (2014) Landscape Architecture in Canada.**

A detailed overview of the projects and people that have defined Landscape Architecture in Canada. It examines the traditions and impacts of Canada’s First Peoples, its early colonists, later immigrant
communities, landscape innovations of 19th century industrial cities, agricultural landscapes, and the protected natural environments of national parks.
Appendix B – Academic Programs

- University of British Columbia MLA (3 years)
- University Of Guelph BLA (4 years)
- University Of Guelph MLA (3 years)
- University of Manitoba MLA (3 years or less)
- University of Toronto MLA (3 years)
- University of Montreal BLA (3 years)
- University of Montreal MLA (2 years)
- University of Calgary MLA (3 years)
- Dalhousie University Bachelor of Technology in Landscape Architecture (4 years)
- Fanshawe College Advanced Standing College Diploma Program (3 years)
Appendix C – Skills Matrix

In 2004, the Landscape Architecture Body of Knowledge\(^\text{47}\) was published. Included in this document was a description of the requirements for Landscape Architects, divided into two main categories: Knowledge Statements and Competencies. Each is further broken down into smaller groupings.

These have not been formally approved in Canada, but they remain a comprehensive list of skills required for the profession of Landscape Architecture. The Body of Knowledge uses these as the basis for a broad survey covering the consensus of the community as to what levels of education and/or practice where these skills should be present. The complete list is reproduced below.

Knowledge Statements

I. LANDSCAPE ARCHITECTURE HISTORY AND CRITICISM

- Relevance of history to current practice and social value of same
- Criticism of historical and contemporary work
- Urban and regional planning environmental planning;
- Critical evaluation of historic periods and events
- Criticism is an essential design skill not necessarily derived from history, although partially informed by history.
- Design evaluation, review, and comprehension
- Visual literacy comprehensive of basic design principles as a basis for criticism
- History of art
- Regional/national Landscape Architecture history
- History of settlement and urbanization
- People, places, and time frames.
- Descriptive theory, analytical versus evaluative aspects of history

II. NATURAL AND CULTURAL SYSTEMS

- Geographic information systems climate
- Fundamental understanding in physical geography and natural and cultural systems
- Ecosystems are statistical relationships between species. Mastery of ecosystems is better left to true ecologists.
- Vegetation and vegetation dynamics of at least one bioregion (e.g., plant communities' botanic and aesthetic characteristics)
- Social and cultural influence should include the ways in which other cultures construct, physically & mentally, their landscapes, e.g. need to go beyond "influences."
- Preservation of existing watersheds; best management practice uses for water conservation.
- Impacts of human use on natural systems

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• Techniques to research, define cultural influence and the "cultural values" of the non-majority, reflecting designs for more than one section of society

III. DESIGN AND PLANNING THEORIES AND METHODOLOGIES
• Theories in and about planning
• Security design
• How to work with budget or monetary constraints
• Design as a continual process
• Planning theories and methods
• Community planning and sustainable practices
• Design should be measured separately from planning - the theories and research or creative methods are completely different between these 2 aspects of the discipline; design as a method of inquiry and qualitative approaches
• Contemporary theory; cultural theory; landscape in a broader cultural/intellectual context
• Decision making methodologies in the design professions
• Landscape structure, function, and change; emerging concepts that will be influential

IV. PUBLIC POLICY AND REGULATION
• Relationship to public health, safety, welfare
• Political processes for preservation, conservation, and human use and enjoyment
• Theories of governance
• Legal and administrating frameworks that regulate practice rather than the policies and laws themselves

V. DESIGN, PLANNING AND MANAGEMENT AT VARIOUS SCALES AND APPLICATIONS
• Horticulture
• Therapeutic design
• Sustainable design
• Relationship between landscape design and landscape planning
• Ecological design principles
• Effect of time on design, e.g. visual and rural in 1960’s and 1970’s; ecology and water in 1980’s and 1990’s; reclamation
• and treatment in the future
• What should get built
• Community design, urban design, site design
• Regional planning and design

VI. SITE DESIGN AND ENGINEERING: MATERIALS, METHODS, TECHNOLOGIES, AND APPLICATIONS
• Architectural amenities e.g. architectural interface; art in the landscape; signage and site graphics; site furnishings; agronomy; soil science; hydrology; hydroponics; geotechnical engineering science; concrete and asphalt
• Planting design and theory
- Plant material and planting design, e.g. identification, cultural requirements and associations
- Photogrammetry in design application
- Conceptualization and design in 3 dimensions
- Basic soil science and soils engineering, e.g. compaction, soils triangle, soils comprehension, materials, application on the senses
- Integrated pest management
- Construction materials and site details e.g. wood, stone, concrete
- Watershed management
- Ecosystem management
- Geology, soils and computer applications
- Aesthetics
- Design needs for safety and security
- Horticulture
- Slope stability related to soils and geotechnical assessments
- Paving materials and systems
- Intrinsic qualities of construction materials and the forces that can compromise them
- Geotechnical and hydrotechnical
- Irrigation measures of environmental factors, e.g. snow deposition, wind, noise
- Building design/construction
- Vegetation, e.g. native plant communities, plant nomendative and horticultural availability
- Planting design principles, e.g. appropriate material for light, soil, moisture and maintenance variables
- Site furnishings
- Types of landscape management, e.g. forest, farm

VII. CONSTRUCTION DOCUMENTATION AND ADMINISTRATION
- Bedding, addenda, change orders value engineering, submittals
- Design contracts, consultants’ contracts (full AIA document exposure)
- Evaluation of costs
- Market factors, material availability, e.g. purchasing options for material; accounting, marketing, collections and billings
- Preparation of construction
- Documents site observation - construction related
- Planting plan construction

VIII. COMMUNICATION
- Proposal development and technical writing including goals, objectives, concepts, and prioritizing issues
- Public speaking, oral presentations, persuasion, and valuing constructive critiques of one’s work by others
- Plan graphics
- Conflict resolution and management
- Presentations to the press, marketing, and other media
• Visual simulation techniques
• Inter-office communication, client, consultant, and contractor communication skills
• Notes at professional/consultant meetings
• Report and summary communication techniques
• Delegation of tasks, follow up on assignments, team relationships
• Publication production and the relationship of text to images
• Internet communications and web site construction
• Preparation of and response to RFPs
• Design programming
• Computer-aided communication tools such as: electronic presentations, multi-media, web-based, and network based communications
• Hand graphic skills that include color, texture, line weights, hand-writing skills
• Methods of research

IX. VALUES AND ETHICS IN PRACTICE
• Emerging value systems such as theories responding to new cultural paradigms e.g. diversity, hyper-patriotism, paranoia of terrorism, surveillance
• Client and staff ethical relationships, fees, meeting contract obligations, and proper compensation for services
• Ethical professional practice within the scope of licensure for Landscape Architecture and understanding the limitations of other professions such as: engineering and architecture
• Management and leadership
• Role, responsibilities, and privileges of licensure
• Soil/plant/water/air ethical issues; individual vs. social, economic, educational, and communication responsibilities
• Economic and family values

Competencies

I. LANDSCAPE ARCHITECTURE HISTORY AND CRITICISM
• Accept criticism while overcoming objections with logical explanations
• Maintain cognizance of recent works as well as historical ones

II. NATURAL AND CULTURAL SYSTEMS
• Work with biologists, archaeologists and other professionals in conducting and analyzing field data and natural/cultural features
• Contextualize Landscape Architecture interventions within larger cultural systems
III. PUBLIC POLICY AND REGULATION
- Engage the basics of the political systems
- Manage multiple, overlapping, or conflicting regulations and resulting impacts
- Distinguish between legal requirements and operational methodology

IV. DESIGN, PIANNING, AND MANAGEMENT AT VARIOUS SCALES AND APPLICATIONS
- Work with community planning, zoning, and private utilities
- Design to scale, recognizing scale and context during design process
- Evaluate consequences of design solution, e.g. user, economics, maintenance, ecological
- Develop evaluative criteria, including programmatic, site and personal design goals to use to evaluate alternative designs
- Use of computers and application of design software, e.g. AutoCAD and land cad in solutions
- Analyze, synthesize, and evaluate critical path

V. SITE DESIGN AND ENGINEERING: MATERIALS, METHODS, TECHNOLOGIES AND APPLICATIONS
- Work with architects and civil engineers
- Design for energy conservation and resource recovery
- Create the most inexpensive design that still meets the client's needs/cost assessment e.g. cost/economics initial construction and maintenance
- Use computer-aided design programs to assist in the development of site plans and construction details and specifications
- View shed planning
- Design for aesthetic enhancement
- Design using living materials in keeping with management goals, climate and microclimatic

VI. CONSTRUCTION DOCUMENTATION AND ADMINISTRATION
- Coordinate between design disciplines
- Prepare cost breakdowns, itemized budgets, sequenced schedules
- Use computer-aided software programs to assist in the documentation process

VII. COMMUNICATION
- Handle ambiguous situations
- Guide public participation in resolving design and program direction are important abilities to possess.
- Develop program visioning techniques
- Communicate the results of work experiences such as; case studies and design research, publication of results of work in professional literature
- Develop excellent language skills, especially being bilingual
- Consider the legal implications of different types of communication
• Possess the competency to use various communication approaches and the media to present professional approaches that are pro and con on projects

VIII. VALUES IN ETHICS IN PRACTICE

• Use skills to train, educate and mentor other professionals at the time of degree.
• Participate in publishing and research efforts of the profession, and participate in educating students and apprentices.
• Apply the principles of social justice and social ethics
• Act responsibly toward the public, profession, environment
• Challenge normative regulations and standards that no longer should be best practices