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City of Leduc
Professional Practice Management Plan

1 INTRODUCTION

1.1 Foreword
Section 48(1)(c) of the General Regulations under the Engineering, Geosciences Professions Act requires all Association of Professional Engineers and Geoscientists of Alberta (APEGA) permit holders to develop and maintain a Professional Practice Management Plan (PPMP) that is appropriate to its professional practice.

This PPMP describes City of Leduc policy as it pertains to our practice of engineering. The programs and policies outlined in this plan and the referenced procedures are intended to ensure the public interest is considered and kept paramount in the City of Leduc’s engineering activities. This document specifies responsibility and authority of personnel as they relate to the professional practice. All City of Leduc professional staff, professional contractors or professional consulting companies of the City of Leduc will be mandated to be knowledgeable of the City of Leduc PPMP or have one of their own.

The City of Leduc’s objective is to establish and maintain an effective and efficient PPMP and to regularly review its effectiveness. The PPMP is intended as a living document that requires regular review and updating.

1.2 Statement on Ethics
We will strive to uphold the professional nature of the engineering profession and to practice in accordance with the Code of Ethics, the Engineering, Geosciences Professions Act, APEGAs Guideline for Ethical Practice as well as the City of Leduc's Code of Ethics (document #120605).

2 MANAGEMENT, ORGANIZATION AND RESPONSIBILITIES

2.1 Policy on Professional Practice Management

The objectives of the City of Leduc’s PPMP program are:
2.1.1. to protect health, safety and ensure welfare of the public and have regard for the natural environment;
2.1.2. to maintain appropriate standards of technical competence and professionalism;
2.1.3. to ensure consistency of performance;
2.1.4. to acquire additional skills and knowledge as required;
2.1.5. to ensure compliance with all applicable standards and
guidelines as well as with all legal and contractual obligations.

2.2 Scope of Practice
The scope of the City of Leduc’s Engineering Department’s practice is
municipal engineering, within the fields of transportation, signage,
water, wastewater and stormwater utilities, planning/design,
construction, maintenance, snow management and hazard controls,
waste management, environmental initiatives, the development of
offsite levy’s and development reviews and approvals.

Alberta Environment has requirements for operations and maintenance
of Water and Wastewater Systems in terms of operator certification
which must be met.

The Engineering department is supported by:
A. Information Technology Services
B. Legislative & Legal Services
C. Public Works
D. Finance
E. Planning
F. Community Development
G. Fire Services
H. Enforcement Services
I. Community Protection
J. Transit, and
K. Facilities

The process by which to determine if City of Leduc activities fall within
the City’s scope of practice or that it may be unclear whether they do
or do not fall within the intent of the PPMP will normally include:
• periodic orientation sessions to acquaint affected parties with
  the background and philosophy of the PPMP
• an expectation that “if in doubt – ask” will be used as an
  approach to clarification
• an assembly of Key Players to address unresolved matters when
  needed
• consultation with APEGA as necessary

The practice of engineering can be described as: reporting on,
advising on, evaluating, designing, preparing plans and specifications
for or directing the construction, technical inspection, maintenance or
operation of any structure, work or process that is aimed at the
discovery, development or utilization of matter, materials or energy or
in any way designed for the use and convenience of humans and that
requires the professional application of the principles of mathematics,
chemistry, physics or any related applied subject.
2.3 **Chief Operating Officer (COO)**

The City of Leduc’s COO is the General Manager of Infrastructure and Planning.

The City of Leduc’s COO is defined on the latest version of the APEGA Permit Renewal Form. Any changes of the General Manager of Infrastructure and Planning or authorized delegate will be forwarded to APEGA as part of the annual permit renewal.

The General Manager of Infrastructure and Planning is responsible for the issue and control of the PPMP and that the responsible members are aware of the requirements. The General Manager of Infrastructure and Planning will also ensure responsible members are trained on the PPMP.

2.4 **Responsible Members**

The Responsible Members (RMs) are professional members of APEGA with the Professional Engineer (P. Eng.) or Professional Licencee Engineering P.L. (Eng) designation, holding a position of Manager or higher in the organization and are identified annually during the APEGA Permit Renewal and are listed on the Permit.

Responsible Members will provide, directly or arrange via an appropriate alternative resource such as a qualified consulting engineer, the General Manager of Infrastructure and Planning with responsible direction and supervision of the City of Leduc’s professional practice. Responsible Members are responsible to supervise, direct or delegate engineering projects so far as they are permitted within their department’s organizational chart, and ensure the project’s quality control. As typically the project manager will not be an RM, an RM will be assigned who will have ultimate responsibility.

The City of Leduc’s RMs are those individuals currently in the following positions:

- General Manager, Infrastructure and Planning
- Director, Engineering
- Manager, Capital Projects and Development

Responsible Members have the responsibility and authority to cease any engineering work that is not in accordance with the PPMP.

Only APEGA members who are Professional Engineers, Professional Licence Engineers or Engineers in Training may use the word Engineer in a position title.
2.5 Employees and Contractors
Employees conducting engineering activities will be made aware of the PPMP and are expected to follow the plan. City project managers (PM) are directed by the City’s engineering professionals (RM’s are required to follow the PPMP). Professional contractors will be mandated to be knowledgeable of the PPMP and/or have one of their own.

2.6 Consulting Companies
Consulting Companies that the City of Leduc works with or hires shall fully meet the APEGAs requirements regarding PPMPs.

2.7 Organizational Structure
Directions and communications on the PPMP shall generally flow downwards, from the General Manager of Infrastructure and Planning to the Responsible Members to professional employees, contractors and consulting companies, or upwards as the situation requires.

The City of Leduc Organizational Chart best illustrates the structure of the organization. Department organizational charts are available by contacting the Department Director. More details surrounding where to find the organizational charts can be found in the appendix.

3 ETHICAL STANDARDS

3.1 Ethics Policy
The City of Leduc shall follow the most current version of APEGAs Guideline for Ethical Practice in the practice of engineering. The City of Leduc shall also endeavor to conduct its professional practice in a manner that reinforces the fundamental virtues of ethical conduct respecting public safety, competency, integrity, rule of law, and the dignity of the profession. Courtesy and politeness shall be the rule.

4 PROFESSIONAL AND TECHNICAL RESOURCES
The City of Leduc shall have the professional and technical staff suitable for the professional work being performed. In addition, staff shall have access to the necessary reference materials and tools within budget constraints, to complete the work in accordance with recognized codes and standards.
4.1 Personnel Resources

4.1.1. Hiring
The City of Leduc shall assess the skill levels required for staff, contract positions and consultants and hire or engage only qualified personnel as may be verified (i.e. current résumé, past experience with the individual or reliable reference, verification of good standing with APEGA). Skill levels shall be determined on the basis of responsibility, education and/or training requirements, including, where applicable, professional status. The required skill levels shall be included in the job descriptions.

Professional staff or professional contractors must be qualified and competent to perform professional related work with the City of Leduc. Appropriate technical and other support staff will be provided.

The City of Leduc shall observe fair hiring practices and shall not discriminate on the basis of race, gender, age, religion, or disability.

4.1.2. Performance Reviews
Performance evaluations shall be performed annually, but not longer than every second year. This system will address technical skills, professional development and requirements for continuing education. Employee evaluations shall be treated as confidential.

The City of Leduc shall encourage, within reasonable limits, participation in professional development activities.

4.1.3. Review of Work by Others
Where required, City of Leduc staff will review and approve work completed by others (i.e. consulting companies) and will follow these PPMP guidelines (and any other applicable APEGA guidelines) to ensure that all safety, regulatory, and due diligence issues are addressed. Where necessary, presentations will be made to the project team, Executive Team and Council.

4.2 Technical Facilities and Resources
The City of Leduc shall endeavor to maintain appropriate resources for use by professional and technical staff in performing their duties.

4.2.1. Reference Materials
Each of the departments listed in section 2.2 maintain their own library. When notified of availability of new references, they will, subject to budget constraints, be ordered.
The City of Leduc shall have at least one copy / subscription of each of:
- Relevant current codes and standards
- Current APEGA guidelines appropriate to the scope of practice

The City of Leduc shall, within budget constraints, maintain memberships to the following organizations:
- Association of Science and Engineering Technology Professionals of Alberta (ASET)
- APEGA
- American Water Works Association (AWWA)
- Transportation Association of Canada (TAC)

4.2.2. Information Technology Services
The computer systems and software used for professional related work shall be suitable for the activities being performed, and shall be maintained as up-to-date as is necessary, within budget constraints. Only duly licensed software shall be used.
Software programs used in the practice of engineering include but are not limited to:
- ESRI Products
- Microsoft Office
- Road Matrix
- WaterCad
- Geographic Information Systems (GIS)
- PCSWMM

4.2.3. Equipment
All equipment will be maintained in a good state of repair.

5  QUALITY CONTROL

The City of Leduc shall endeavor to provide conditions conducive to professional practice and maintaining appropriate quality standards. This aim is monitored in the annual operational budgeting process, the business plans, as well as ten year capital plans.
5.1 Professional Business Practices

5.1.1 Confidentiality
The City of Leduc complies with the Freedom of Information and Protection of Privacy Act (FOIP). The City of Leduc and its employees shall respect confidential materials. The most current versions of the City of Leduc’s Corporate Privacy Policy (document #120403) and Confidentially Agreement (document #120523) shall be followed.

5.1.2 Intellectual Property
Anything invented / designed or any information and data compiled in the course of employment is the property of the City of Leduc. All work product and all other information and data compiled by a contractor, while performing services for the City of Leduc, constitutes a part of City property.

5.1.3 Conflict of Interest and Dispute Resolution
The City of Leduc recognizes the potential for disputes or conflicts of interest and supports a proactive approach to identify and resolve contentious issues at the earliest stages. Resolution of disputes or conflicts between professionals or contractors shall be handled in the most appropriate and professional ways. Resorting to courts of law will occur only when all other avenues of conflict resolution have been exhausted.

Conflict of interest situations shall be avoided by all professional employees and contractors in the City of Leduc, as per the City of Leduc’s Code of Ethics (document #120605).

5.1.4 Multi-disciplinary Teams
A project manager / team leader is assigned to head every multi-discipline team, and they are responsible for quality control of the work and its outcome. If the project manager / team leader is not an RM, one will be assigned to assume overall responsibility. RM’s may be those listed in section 2.4 or an alternative resource such as a qualified consulting engineer. There may be situations where a process and/or procedure is used to undertake an activity and that process and/or procedure has had previous review, perhaps by a professional engineer. This may remove the need for an RM to have direct involvement in the specific project activity.

5.1.5 Loss Control and Risk Management Program
The City of Leduc will use APEGA’s Management of Risk in Professional Practice document as a guide in risk management.

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The City of Leduc has insurance and ensures that any contractors do as well.

5.2 Technical Work

The City of Leduc shall maintain a system of quality control that uses best efforts to ensure all work being performed is properly defined, is undertaken by competent personnel, meets applicable codes and standards, provides for adequate supervision and checking, and specified requirements for documentation.

A project or professional service in the context of this PPMP is applicable if the "practice of engineering" is involved. The practice of engineering is defined in section 2.2.

For each project or professional service undertaken by the City of Leduc, the quality control process shall include:

- Compliance with City of Leduc Minimum Engineering Design Standards
- After construction is completed, a Construction Completion Certificate is filled out
- Completion of As-Built drawings; submission of all operational procedures and manuals
- After the warranty period has expired, a Final Acceptance Certificate is completed
- Finally, the Finance Department closes the project

Internal and external Occupational Health & Safety audits are also completed in order to ensure that all technical work complies with the Occupational Health and Safety Act.

5.2.1 Relying on the Work of Others

Due diligence requirements for relying on the work of others will be followed to ensure that the technical work is done competently, and in accordance with applicable codes, standards, and specified design requirements. Reference will be made to the most current version of APEGGA’s Guideline for Professionals Relying on Work of Others.

5.2.2. Training & Use of Applicable Codes / Standards

Employees involved in the practice of engineering will be expected to have some knowledge of applicable codes and standards when hired. (On-going) Internal and external training will be completed in order to meet legislative requirements. Please see APEGGA’s Continuing Professional Development: A Guideline for Professional Members.
A record of individual employees' training will be kept by their respective department's administrative assistant.

5.2.3. Methods of Documenting Assumptions
Assumptions made to complete the work should be listed on the documentation / report or otherwise noted in the project file.

5.2.4. Independent Checks
Where required, review is conducted and completed on engineering work done by engineering consultants.

5.3 Project Management

5.3.1. Preparing and Tracking Expenditures
The Project Manager is responsible for preparing and tracking project costs, schedules, and completion using suitable methods. The Finance department shall assist the Project Manager in this regard.

5.3.2. Project Management Systems
The organizational structure on projects is the same as those found in the organizational charts for the respective departments.

Where it is felt that outside expertise is needed, appropriate professional expertise will be sought.

For information on project close-out, please see 5.2.

5.3.3. Change Requests / Orders
Procedures for handling change requests and orders and other communication will be the responsibility of the Project Manager who will make recommendations to an RM. If the change does not fit into the project’s budget, Council approval would be necessary as per the Municipal Government Act.

5.3.4. Field Reviews of Projects
Field reviews of projects during construction shall be made by qualified personnel, usually the project manager.

The purpose of the review is typically to observe compliance of field “as-builts” with previously approved ENGINEERING drawings. If/when significant deviations are observed and/or contemplated, an RM needs to become involved.

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6 Professional Documents and Records

The City of Leduc shall ensure all professional documents are handled with the appropriate controls to maintain accuracy and completeness, as per the City of Leduc’s policy on Records and Electronic Information Management (document #120402) and the City of Leduc’s Bylaw 417-98 (“Records Destruction Bylaw”). Professional and support staff are responsible to prepare the documents in accordance with the procedures identified for the project.

Copies of the project records will be maintained for the period of time stated in the most current version of the City of Leduc’s Records Destruction Bylaw.

Communications with regard to professional work shall be recorded and filed in the project files. Verbal communications should be noted and a record of the conversation placed in the project file.

Michael Pieters  
General Manager, Infrastructure and Planning  
City of Leduc

7 Acknowledgement

By signing this page, I acknowledge that the Professional Practice Management Plan is a guideline to the used, by the Engineering Department, in conducting ‘engineering-related business’.

Director, Engineering  

Shawn Olson
APPENDIX – References and Documents

City of Leduc Documents

The documents listed below can be found on the Policies and Procedures page under Corporate Resources on the employee interchange website. These policies and procedures can be provided to any external party upon request to the City of Leduc Engineering Department:

- Advertising and Notification of Planning Bylaws and Development Permits - 610018
- Code Of Ethics - 120605
- Debt Management - 120205
- Downtown Seasonal Outdoor Patios - 110028
- Driveway Letdowns During Construction - 310202
- Infrastructure Investment Strategy - 120209
- Level of Service, Leduc Fire Services - 110024
- Maintenance of Local Improvements - 610014
- Occupational Health and Safety - 120617
- Permanent Disconnection of Water and Sewer Services - 410002
- Procedures for Obtaining Lot Grading Approvals - 610004
- Procurement Policy and Manual - 110020
- Professional Development - 120548
- Protective Footwear and Eyewear - 120541
- Records and Electronic Information Management - 120402
- Recruitment and Selection - 120511
- Risk Management - 110021
- Sewer Service Connection Blockages - 420002
- Sidewalk Curb and Gutter Management - 320001
- Site Drainage - 610003
- Tangible Capital Assets Financial Reporting - 120211
- Voluntary Program of Lawn Watering - 310002

The Engineering Design Standards Guide is a document used to help the department ensure all infrastructure and capital projects follow the same guidelines and engineering specifications. They are maintained by the City of Leduc Engineering Department and can be found here: https://www.leduc.ca/engineering/engineering-design-standards

City of Leduc Org. Charts

All City of Leduc departments’ organizational charts are located on the employee interchange. Please refer to the employee interchange for the most current version.

City of Leduc Bylaws

The Bylaws are located on the City of Leduc website at the following location: https://www.leduc.ca/government/city-leduc-bylaws. While bylaws may change

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from year to year the current City of Leduc bylaws at the time of this PPMP update include:

>> Addressing Bylaw
>> Animal Licencing & Control Bylaw
>> Annexation Negotiation Committee Bylaw
>> Assessment Review Board Bylaw
>> Business Licence Bylaw
>> Bylaw Enforcement Officer Bylaw
>> Cemetery Bylaw
>> City Administration Bylaw
>> Community Standards Bylaw
>> Council Procedures Bylaw
>> Dangerous Goods Transportation Bylaw
>> Emergency Management Bylaw
>> False Alarm Bylaw
>> FCSS Advisory Board Bylaw
>> Fees & Charges Bylaw
>> Fire Services Bylaw
>> Health Bylaw
>> Land Use Bylaw

>> Leduc Environmental Advisory Board Bylaw
>> Library Board Bylaw
>> Line of Credit Bylaw
>> Off-site Levy Bylaw
>> Parkland Bylaw
>> Parks, Recreation & Culture Board Bylaw
>> 2017 Property Tax Rate Bylaw
>> Sewers Bylaw
>> Smoke-free Vehicles for Minors Bylaw
>> Speed Bylaw
>> Strategic Planning Committee Bylaw
>> Subdivision & Development Appeal Board Bylaw
>> Supplementary Assessment for 2017
>> Safety Codes Permit Bylaw
>> Taxi Bylaw
>> Traffic Advisory Committee Bylaw
>> Traffic Bylaw
>> Waste Bylaw
>> Water Bylaw
EXTERNAL DOCUMENTS

Environment Canada
The acts listed below are maintained by the Government Canada. Please refer to Government of Canada Justice Laws website for the most current version, a pdf file can be downloaded at no cost:

- Fisheries Act
- Navigable Waters Protection Act
- Railway Safety Act

Provincial Acts
Copies of the following Acts are portions of the Revised Statutes of Alberta, 2000. Paper copies of the following acts can be purchased through the Queen's Printer or a pdf file can be downloaded at no cost:

- Builders’ Lien Act (Revised Statutes of Alberta, Chapter B-7)
- The Engineering and Geoscience Professions Act (2012)
- Environmental Protection and Enhancement Act (Revised Statutes of Alberta, Chapter E-11)
- Freedom of Information and Protection of Privacy Act (Revised Statutes of Alberta, Chapter F-25)
- Municipal Government Act (Revised Statutes of Alberta, Chapter M-26)
- Navigable Waters Protection Act
- Occupational Health and Safety Act, Regulation and Code
- Public Lands Act (Revised Statutes of Alberta, Chapter P-40)
- Safety Codes Act (Revised Statutes of Alberta, Chapter S-1)
- Traffic Safety Act (Revised Statutes of Alberta, Chapter T-6)
- Water Act (Revised Statutes of Alberta, Chapter W-3)
  - Water Diversion Licensing
  - Temporary Water Diversions
- Workers’ Compensation Act (Revised Statutes of Alberta, Chapter W-15)

Copies of the following documents are kept in the Environmental and Open Space Planning department; additional copies may be downloaded as a pdf file at no cost from Alberta Water:

- Water: Codes of Practice
- Code of Practice for Outfall Structures on Water Bodies
- Code of Practice for a Waterworks System Consisting Solely of a Water Distribution System
- Code of Practice for Wastewater System Consisting Solely of a Wastewater Collection System
- Code of Practice for Wastewater Systems using a Wastewater Lagoon

Alberta Transportation
The documents listed below are maintained by Alberta Transportation. Please refer to Alberta Transportation for the most current version:

- Bridges and Structures
- FTP Shared Data
- Geotechnical Erosion Control
- Highway Design and Construction

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• Highway Maintenance
• Manuals and Specifications
• Pavement Publications and Roadway Data
• Product List and Materials Testing
• Service Road Agreement and Caveat
• Traffic Control & Signs

APEGA Documents
The following documents are maintained by the Association of Professional Engineers and Geoscientists of Alberta (APEGA) see the APEGA website for the most current version:
• The Engineering and Geoscience Professions Act
• Alberta Regulation 150/99, Engineering and Geosciences Professions Act, Engineering and Geoscience Professions
• Code of Ethics
• APEGA Bylaws
• ASET Regulations
• Alberta Regulation 283/2009, Engineering and Geosciences Professions Act, Professional Technologist Regulation

Various – Supporting Documents and Materials
The following list of websites and documents are maintained by various external organizations. Please refer to the listed organization to obtain the most current version of the named document or supporting materials.

American Society for Testing and Materials International Standards Worldwide (ASTM)

American Water Works Association (AWWA):
• AWWA Standards

Asphalt Institute:
• The Asphalt Handbook

Canadian Standards Association

Edmonton Area Pipeline & Utility Operators’ Committee (EAPUOC):
• Guidelines For Working Near Buried Facilities
• EAPUOC manual

Transportation Association of Canada:
• Roundabouts in Canada

Institute of Transportation Engineers (ITE):
• Canadian Capacity Guide for Signalized Intersections
• Highway Capacity Manual

Illuminating Engineering Society (IES):
• Roadway Lighting

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Transportation Association of Canada (TAC):

- Canadian Capacity Guide to Neighborhood Traffic Calming
- Geometric Design Guide for Canadian Roads
- Guide for the Design of Roadway Lighting
- Salt Management Guideline
- Uniform Traffic Control Devices for Canada