Architecture

Introduction

Architecture involves designing and planning buildings that align with regulatory requirements, urban planning and architecture best practices, client needs, and site context.

What does an Architect do?

- Complete site analysis.
- Develop site and building programs with consulting team and property owner.
- Design site and building concepts and plans.
- Ensure compliance with building codes and regulations or determine an alternative solution.
- Collaborate with engineers and other consultants.
- Assist in tendering and oversee construction to ensure design integrity.
- Complete as-built drawings after construction.

Scope of Work

The following is a summary of the more comprehensive professional scopes of services as defined by the Royal Architectural Institute of Canada (RAIC) as outlined in their professional documentation.

1. Project Scoping / Site Programming / Schematic or Concept Design

Description: This phase involves the initial meetings with the client to understand their requirements and expectations. It includes site assessments, creating a base plan, developing the project program, conducting preliminary project calculations and yield studies, creating, testing and refining concept plans, and addressing compliance with zoning bylaws and building codes.

Components:

- Client Meetings: Understand client needs and project vision.
- Site Assessments: Perform site visits to gather data, take measurements, and assess existing conditions.
- Base Plan Creation: Develop a base plan using site survey data.
- Program development: Develop the scope of uses, spaces, experiences, functionality, and other elements needed on the site.
- Preliminary Calculations: Conduct zoning and building code compliance checks and create initial project calculations.
- Yield Study: Conduct basic yield studies to determine the potential of the site.
- Concept Development: Develop initial design concepts and layouts that refine the yield study.

- Regulatory alignment: Address all zoning and design guidelines applicable to the site.
- Regulatory approvals: Support or coordinate the process to achieve changes to government regulations as needed, possibly including OCP amendments, rezonings or subdivisions.

2. Design Development

Description: This phase refines the initial design concepts, in response to a range of inputs (financial, regulatory, political, others) incorporating detailed interior and exterior design elements. This phase involves collaboration with many professionals and local government regulators.

Components:

- Detailed Design: Add specific design elements to the initial concept, including interior layouts, exterior facades, and material selections.
- Collaboration with Consultants: Work with structural, mechanical, and electrical engineers to integrate their input into the design.
- Code review: Coordinate a code review to ensure building is fully code compliant.
- Presentations: Prepare and present the design to planning panels and other stakeholders for feedback and approval.
- Regulatory alignment: Address all zoning and design guidelines applicable to the site.
- Regulatory approvals: Support or coordinate the process to achieve any regulatory approvals that may have arisen during the design process, such as rezonings (due to design implications), Development Permits (DP), DP amendments or Variances.

3. Construction Documentation

Description: This phase involves creating detailed drawings and specifications necessary for construction. It ensures all design elements are precisely documented for accurate implementation.

Components:

- Detailed Drawings: Develop comprehensive construction drawings, including architectural, structural, mechanical, and electrical dimensions.
- Specifications: Create detailed specifications for materials, finishes, and construction methods.
- Coordination: Coordinate with various consultants to ensure all aspects of the design are integrated and compliant with regulations.
- Code review: Coordinate a code review to ensure building is fully code compliant.
- Approvals: Coordinate the work to achieve building permit(s).
- Bidding package: Create the full package of drawings, specifications and other information required to support a costing process.

- Value engineering: Work with the client
- Change Management: Carefully consider and manage any changes to the design to maintain project integrity and avoid delays.

4. Construction Procurement, Bidding, and Negotiation

Description: This phase involves soliciting bids from contractors, evaluating the bids, and negotiating contract terms to select the most suitable contractor for the project.

Components:

- Soliciting Bids: Prepare and issue bid documents to potential contractors.
- Bid Evaluation: Review and evaluate submitted bids based on cost, experience, and compliance with project requirements.
- Contract Negotiation: Negotiate terms and conditions with the selected contractor to finalize the construction contract.

5. Construction Administration

Description: This phase includes overseeing the construction process to ensure it adheres to the design documents. It involves regular site visits, reviewing progress, and managing any changes or issues that arise.

Components:

- Field Reviews: Conduct regular site visits to review construction progress and ensure it aligns with design documents.
- Consultant Coordination: Work with consultants to review and approve any design changes or adjustments during construction.
- Project Changes: Manage and document any changes to the project, ensuring they are approved and incorporated correctly.
- Substantial Performance Reviews: Prepare documents for substantial performance reviews and ensure the project progresses according to schedule.

6. Commissioning and Close-Out

Description: The final phase involves ensuring all project elements are completed and functioning as intended. It includes final checks, preparing as-built drawings, conducting deficiency walkthroughs, and warranty reviews.

Components:

- Final Checks: Conduct thorough inspections to ensure all construction elements meet the design specifications.
- As-Built Drawings: Prepare detailed as-built drawings documenting the completed construction.
- Deficiency Walkthroughs: Identify and address any deficiencies or issues found during final inspections.

- Warranty Reviews: Conduct reviews at the end of the warranty period to ensure any remaining issues are resolved.

What is generally required at each stage in the development process?

Due diligence /securing land	• Preliminary desktop assessments of the contextual services and applicable standards for infrastructure and access. • Basic concept plans and high-level cost estimates to determine the scale of costs a project may have to address. • Risk assessment of a range of factors related to water, sanitary, storm and access. • Highway/public road access issues assessment. • Scoping of engineering work and costs for the project.
Concept Development	• Review zoning, DP or other policies, design guidelines and regulatory requirements for a proposed project. • A site yield study to determine what possibly might fit on the site with the desired new zoning / goals – to establish a total optimistic capacity of development.
Preliminary Inquiry	• Architectural work is undertaken early to create a layout and massing concept regarding how the proposed project might fit conceptually with the city's policies, including preliminary design work (with client) including site analysis and conceptual plans/massing – to only the level of detail needed to get some feedback from the local government.
Pre-Application	• Architectural work is undertaken on site and building design to develop an initial concept and illustration of what is envisioned. This is done to a level of detail to trigger discussions on any policy or regulatory issue that arises (eg: height, form, street interface, tree protection, parking, access, others). Some interactions with municipal staff may occur for guidance on issues/choices as this develops. • Each local government has their own process (in/formal) for the pre-app process and what they may require in the initial design package.

Rezoning	● Conceptual Plan is completed that focuses on land uses, density, general massing of building envelopes (based on height and setbacks), open space, access, parking and preliminary servicing. ● Design package that addresses zoning level of detail, including: o Site and building concept plan (addressing zoning level of detail – setbacks, height, basic building and site layout / functionality) and some illustrative drawings. ● Design package is reviewed with local government staff prior to submitting application. ● Final application requirements are confirmed and submitted. ● Negotiations and refinements undertaken throughout the review process. ● Presentations for public meetings or local government panels or commissions. ● Support for final local government approvals process.
Subdivision	● Site/building design package outlining the subdivision concept o Site layout into lots o Building parcelization / air parcelization if applicable. o Supporting documentation as needed.
Development Permit	● Design package that has detailed site and building concept design ● Materials board ● Renderings of the proposed building(s)
Building Permit	● Coordinating the completion of the full construction drawing package, developed in conjunction with many subconsultants, submitted to local government, with Architect as Prime Consultant.
Tendering	● Tendering / bidding package for building and site construction is coordinated, completed and issued.

Construction	• Architects often administer the construction process, review consultant drawings, and review/confirm the building is built to design – including managing changes to the design. • Prepare documents for substantial performance reviews and ensure project progress aligns with the schedule.
Post-Construction	• Commissioning involves final checks, as-built drawings, deficiency walkthroughs, and one-year warranty review. • As-built drawings are completed. • Warranty reviews.

References:
https://chop.raic.ca/chapter-6.1
https://raic.org/sites/raic.org/files/pub_resources/documents/scopeofservices_e.pdf