

Facilities – Capital Project Development Stages
Planning and Construction Timelines for new buildings and renovations to existing spaces

Typical project duration is 15 months to 36 months if all tasks identified below are required. In some instances, depending on project scope, some of the stages identified below may not be required. This will be reviewed on a project by project basis. Note that there is a potential for some stages to overlap.

1. Feasibility Study – 1 month to 2 months depending on project complexity:

Feasibility study is a process to determine both space and funding requirements for a specific project. The initial phase addresses a specific request that has been instigated through the budget request process.

The first phase is an order of magnitude project estimate to complete the project including the development of a broad stroke schedule for implementation of the project from inception to occupancy.

Once the project is approved, including necessary funding, a second estimate is prepared based on more detail for the project as well as a more accurate schedule. In some instances the feasibility study phase will include the programming phase if insufficient information exists in order to determine project scope to develop a budget.

2. Programming – 1 month to 2 months depending on project complexity:

Programming is the process of documenting specific qualitative and quantitative requirements. For a project to be successful, the program must be understood and agreed to by the stakeholders committee.

- *Develop questionnaires and checklists for user input.*
- *Investigate existing use patterns and document specific work requirements.*
- *Prepare functional relationship diagrams and proximity diagrams.*
- *Calculate net and gross area requirements.*
- *Develop initial concept plans based on program needs.*
- *Analyze and compile specific user requirements and special needs.*

3. Consultant Selection – 2 months.

4. Site and Environmental Analysis – 1 month to 2 months depending on project complexity:

Site and Environmental Analysis is the review of site requirements including project siting, existing utility services, regulatory restrictions such as zoning, parking, building bylaw, and environmental constraints and overall campus site/master planning.

- *New building or renovation location options to build on Campus Plan.*
- *Review options for building orientation to minimize environmental impact, energy usage.*

- *Liaise with City Planning Departments to determine impact of specific project on neighboring use and to determine public involvement if any in the process.*
- *Feasibility of alternate sites.*
- *To seek input from Consultants as required based on specific project conditions.*

5. Schematic Design – 1 month to 2 months dependent on project complexity:

Schematic design is the process of developing multiple design solutions to address the functional and aesthetic requirements of the program. Schematic design can only commence following approval by the building committee of the program.

- *Develop design schemes for presentation review and approval by the stakeholder committee.*
- *Coordinate the work of various consultants including structural, mechanical, electrical, acoustic, and code consultant.*
- *Develop a stage one (class D) cost estimate for review and approval.*
- *Incorporate code review requirements.*
- *Review existing mechanical and make recommendation on proposed mechanical system(s).*
- *Review existing structural and make recommendation on proposed structural system(s).*
- *Review existing electrical and make recommendation on proposed electrical system(s).*
- *Assess sustainability requirements. The Province requires that all new building to be LEED gold equivalent and major renovations be equivalent to LEED Silver or better.*
- *Prepare estimates for construction.*
- *Majority of wall locations are finalized at this point of the design.*

6. Design Development – 2 month to 3 months depending on project complexity:

Design Development is the process of refining the schematic design once a specific schematic design is approved by the stakeholder committee including associated cost estimate. Design Development can only commence following approval of the stakeholder committee of the schematic design option selected and confirmation that the project meets the budget.

- *Material and component selection including life cycle analysis as required.*
- *Building assembly coordination including structural coordination.*
- *Development of outline specifications.*
- *Energy modeling and refinement of building mechanical and electrical systems.*
- *Develop stage two estimate (class C) for review and approval.*
- *Confirm that project continues to meet intent of building codes.*
- *Confirmation that the project continues to meet budget.*

7. Construction Documents – 2 months to 3 months dependent on project complexity:

Contract Documents is the process of completing a set of working drawings and specifications and assembling a package for the building permit application and for tendering purposes. The

construction document phase can only commence following approval by the Facilities Department of the design development drawings conformity to in-house construction standards are met and confirmation that the project meets the budget.

- *Final building code analysis and submission for development permit/building permit application.*
- *Final Estimate completed to determine if project is within budget.*
- *Completion of tender documentation and determination of construction delivery type.*
- *Final coordination of mechanical, electrical, structural drawing with architectural drawings.*
- *Final estimate and confirmation that the project to meets budget prior to the tender phase.*

8. Building Permit Application and Tender Phase – 1 to 2 month duration depending on the project complexity:

Building Permit Application and Tender phase can only commence following approval by the Facilities Department that the project meets the budget. Building permit application is the process of obtaining approval prior to construction start of the construction work. Most all projects minor or major will require a building permit. Tender phase is the process of soliciting competitive bid prices to complete the construction work.

- *Building Permit Application at 80% construction documents completion.*
- *Stipulated Sum Tender at 100% construction documents completion.*

9. Construction Phase including Substantial completion and Occupancy permit – 4 months to 18 months duration depending on project complexity and construction value:

Construction phase involves all work related to modifications identified in the construction documents and also includes built-in and owner supplied furnishings and equipment.

10. Deficiency Completion Phase – 1 month to 12 months following move in date:

Deficiency completion is the Contractors time to complete all deficient work identified by the consultants. Typically the space can be occupied during this phase unless the deficiency requires that the space be vacated while the work takes place.

Total accumulated time for all of the above not including deficiency completion phase: 15 months to 36 months depending on project complexity.

Minor projects up to \$250,000 requiring a building permit but not involving additional constructed area 15 months duration (includes 2 months feasibility study and programming phase). Major projects over \$250,000 involving additional constructed area up to 36 months (includes 4 months feasibility study and programming phase). Minor and Major project with parameters that do not accurately fit the descriptions above would be reviewed individually to determine schedule projections.

Note: Major projects may include additional approval requirements for the City and Province such as a Development Permit and /or Business case preparation and approval which typically will require additional time.