UNIVERSITY OF TORONTO A PRACTICAL GUIDE TO ADDRESSING CONSTRUCTION & RENOVATION IN THE CFI IF 2025 COMPETITION

This document sets out the process for obtaining a cost estimate for a construction or renovation project at the University of Toronto that is to be included in an application for funding from the Canada Foundation for Innovation (CFI), with particular focus on the CFI Innovation Fund 2025 competition. It also addresses the timing of requests for estimates, what baseline information is required and what the resulting estimate will include.

The goals of this process document are a) to create a strong, compelling application including a case for any construction; and b) to minimize negative impacts associated with under-estimating construction / renovation costs leading to an unanticipated drain on divisional resources.

CFI Context

The <u>CFI Policy & Program Guide</u>, states that "An eligible infrastructure project involves the acquisition or development of research infrastructure to increase research capacity, allowing the pursuit of world-class research. The infrastructure will serve researchers and promote productive networks and collaboration."

<u>Section 4.6 "Eligible Costs for Infrastructure Projects"</u> includes "Construction or renovation of space essential to house and use the infrastructure or to conduct the research activities described in the proposal."

Section 4.6.2, "Construction and renovation" provides additional detail on CFI eligible costs in this category as well as "**Requirements at the application stage**" which states:

When a proposal is submitted, an infrastructure project that includes construction or renovation must be developed well beyond the conceptual stage. The CFI expects institutions to have:

- Defined the needs for the building
- Explored and decided upon the most feasible option, and
- Determined reliable estimates of the construction or renovation costs (e.g., estimates by a quantity surveyor or contractor, use of industry standards, recent experience with a similar construction or renovation).

The CFI expects institutions to start the construction or renovation component of a funded project within 18 months of the funding decision. Within this time frame, institutions must have finalized contracts for construction or renovation and must have begun the construction or renovation work. When a project involves multiple sites, the construction or renovation on every site should start within 18 months of the funding decision. While the CFI recognizes that some projects may involve large and complex construction or renovation components, institutions are expected to have completed planning and development work for such projects at the application stage.

For all construction or renovation projects, institutions must provide:

- A complete description of the entire new space, including common elements (e.g., corridors, washrooms) (The description should include the location(s), size and nature (e.g., wet lab, dry lab, office, greenhouse) of the new space.)
- A timeline identifying key dates for the various stages of the proposed construction or renovation

- Floor plans of the proposed new area(s), showing the location of the infrastructure and the scale of the plans (when construction or renovation involves multiple rooms)
- A detailed breakdown of the overall cost of the construction or renovation project, categorized by cost component (i.e., direct costs, soft costs and contingency costs), when these costs are expected to be more than \$500,000.

CFI also provides two detailed documents providing a <u>framework</u> for allocating costs when a CFI construction project is part of a larger undertaking, and a worked <u>example</u>.

Importantly, the Guide notes "Expected price fluctuations from the time of the application to the start of construction should be included in direct and soft costs (i.e., not part of the contingency costs)". This is significant because more than 2 years can elapse between a CFI application and confirmation of funding from CFI and Ontario, followed by award finalization. Adding on the time leading up to construction start and completion, there is ample opportunity for prices to escalate.

U of **T** Context

The Division of the Vice-President Research & Innovation (VPRI) is responsible for coordinating the process through which CFI IF applications are selected, developed, submitted and, once awarded, administered centrally. We work very closely with academic divisions to do this fairly, transparently and efficiently. VPRI is <u>not</u> involved in/party to the <u>costing</u> of items comprising application budgets, including construction/renovation.

The Academic Division that is the administrative home to the CFI application and/or construction / renovation project is ultimately responsible for obtaining the necessary estimate and supporting documentation for the CFI application. Divisions often rely on the designated CFI Project Leader, in consultation with other project participants, to support leadership of the academic division and the relevant divisional / central construction planning experts by providing essential project details.

Project proponents must discuss their plans with departmental and divisional leaders and planning staff as early as possible. Formal divisional approval is required to create/alter space, and a change in space can significantly impact the cost of construction (e.g., moving to a room that requires more extensive construction than contemplated). In addition, almost all renovation / construction projects will require a cash contribution from the academic division, typically around 20% of the total project cost (noting the traditional funding structure for CFI awards: 40% CFI; 40% Ontario; 20% Other — and there is little capacity for 'in-kind' contributions from vendors/contractors on capital projects).

The Project Development & Controls (PD&C) department within University Planning, Design & Construction (UPDC) will provide estimates for projects once a division has approved the project to further develop a concept for consideration through the U of T's CFI IF internal selection process. Project Leaders should only contact PD&C with the prior approval of their division. PD&C support is dependent on meeting specified timelines and information requirements. While there is no charge for PD&C staff time, should external advice be required, those costs will be borne by the academic division (or other source, as determined by the academic unit). Such costs are eligible within a CFI project budget but, obviously, can only be recovered by the academic division if the project is selected by UofT for the national level competition, and successful at that level.

For further information, please refer to the attached PD&C Guide to CFI Competition Support Services.

Non-CFI Innovation Fund (e.g. JELF projects) should be undertaken in consultation with divisional facility planners according to the process found here: <u>Project Intake Request</u>.



CFI-IF 2025: Guide to PD&C CFI Competition Support Services

Version 3, May 1, 2024

What is PD&C?

Project Development & Controls (PD&C) is a department within University Planning, Design, & Construction (UPDC) that provides costing, schedule, scoping, and professional design consultant procurement services for Divisionally funded capital projects at all University campuses (projects >\$10M for UTSC & UTM). For the CFI-IF 2025 competition, PD&C's services include preparing high-level construction cost estimates and project schedules for proposed capital improvements (i.e. new construction and/or renovations). A sample deliverable from the CFI-IF 2023 competition is attached.

For complex projects, or where costs are anticipated to exceed \$10M, Divisional representatives should reach out to PD&C as early as possible as the approach outlined in this guide may not necessarily apply.

Competition Support Services Offered:

PD&C will produce a maximum of two estimates per eligible project during the competition. Applicants may request one of the following estimate types for the University's internal "Pre-Proposal" deadline (10 July 2024) and, if required, for the University's internal deadline for Full Proposals (11 November 2024):

Estimate Type 1 - Order of Magnitude:

An Order of Magnitude Estimate (OME) is typically produced in-house using generalized \$/sf unit rates for a given archetype (e.g., office renovation, wet lab conversion, etc.) based on recent projects. An OME is appropriate when project requirements are loosely defined, and very little information is known. An OME may have a variance from actual costs in excess of +/-50%. In some cases, PD&C may provide a range of probable cost as opposed to a single figure.

Estimate Type 2 - Elemental Estimate:

Elemental estimates are typically produced by third-party cost consultants retained and coordinated by PD&C and are prepared by quantifying and pricing individual construction elements based on market data. Elemental estimates range in accuracy from Class 'D' (least accurate) to Class 'A' (most accurate) based on the level of advancement of a project. Most elemental estimates prepared for a CFI-IF competition will be Class 'D'. A comprehensive statement of requirements, test fits, and solid understanding of building system requirements (e.g., mechanical, electrical, etc.) is needed to produce a Class 'D' estimate of meaningful value. A Class 'D' estimate may have a variance from actual costs of +/- 20-30% depending on project complexity.

For construction projects that are expected to be less than \$500,000, CFI does not require a detailed breakdown of costs. For these projects, PD&C may provide an OME or simplified estimate only regardless of the level of detail provided.

PD&C does not provide the following services to applicants:

- Development of project scope
- Development of test fit plans or other drawings
- Feasibility studies
- Building/system condition assessments

- Code reviews
- Cost estimates for projects receiving costing support elsewhere
- Asbestos / Hazardous materials assessments

Cost of PD&C Services:

While PD&C does not charge for in-house services, the cost of any external consultants (e.g., third-party cost consultants) must be borne by the Division. Depending on market conditions, a Class D estimate may cost between \$2,000 - \$5,000 for a small project (e.g., a single lab reno) and over \$10,000 for large and/or complex projects (e.g., a building addition). PD&C will develop a procurement strategy for cost consulting services once the number of proposals requiring costing support is known.



Single Point of Contact:

Given the potentially large number of applicants in any given competition, Divisions shall assign one individual as the single point of contact for all CFI-IF 2025 competition-related PD&C communications. This will in most cases be a Divisional facility planner or someone who possesses a similar expertise in design and construction. All communication with PD&C will be via this individual. For Divisions who do not possess such expertise in-house, PD&C will review processes on a case-by-case basis.

Requesting an Estimate:

Estimate requests are made through the single point of contact noted above and are made at the discretion of the Division. There is no requirement to obtain an estimate from PD&C and Divisions may elect to provide their own costing support. To maximize resource allocation and avoid duplication of work, PD&C will not prepare or coordinate estimates for projects receiving costing support elsewhere (e.g., by Divisional resources, by Divisionally retained third-party cost consultants, etc.), but will provide commentary on the estimates for Divisional consideration and, where appropriate, use such estimates to inform material produced by PD&C.

A completed Project Information Form (attached) must accompany <u>each</u> estimate request. For subsequent requests, all changes must be clearly identified. Project Information Forms should be reviewed/completed with the assistance of Divisional facility planners or similar support. In all instances, PD&C will review the information submitted and determine the level of estimate that is most appropriate. PD&C recommends Academic Divisions start work on this form early and use it as a guide to help define project scope. PD&C will use the information on this form to help identify any risks/gaps that must be accounted for in estimates.

Consider the following scenarios*:

Scenario 1 (single estimate, Pre-Proposal Stage only):

The Academic Division submits a Project Information Form for the Pre-Proposal stage, requesting an elemental estimate. PD&C reviews the submitted material and determines there is insufficient information to prepare a Class 'D' estimate; an OME is provided instead. For the Final Proposal stage, the Division decides that no further costing is required and does not request a second estimate.

Scenario 2 (single estimate, Final Proposal Stage only):

The Academic Division has cost information from a recent project and does not request an estimate for the Pre-Proposal stage. For the Final Proposal stage, the Division submits a Project Information Form; PD&C reviews the submitted material and prepares the appropriate estimate.

Scenario 3 (two estimates, progressive):

The Academic Division has limited project information at the Pre-Proposal stage and submits a Project Information Form requesting an OME. PD&C prepares an OME estimate. Over the following months, the Division works with the CFI Project Leaders to refine the construction scope. In advance of submitting their full CFI application, the Division requests an elemental estimate by re-submitting the Project Information Form well in advance of the University's internal Full Proposal deadline with the new information highlighted. PD&C reviews the material and prepares the appropriate estimate.

Scenario 4 (two estimates, updated)

At the Pre-Proposal stage, the Academic Division submits a very detailed Project Information Form and receives a Class D estimate. As the project develops, it becomes evident that an additional room must be renovated. The Division re-submits the Project Information Form well in advance of the University's internal Full Proposal deadline with the additional information highlighted. The Class D estimate prepared at the Pre-Proposal stage is updated with the new information.



*NB: UofT decisions regarding CFI allocations to projects are made based on budgets included in Pre-Proposals submitted for the internal deadline of July 12. For projects approved by UofT to move forward to the national level competition, any increase to construction/renovation costs for the Full Proposal will need to be addressed through reconfiguration of the approved budget.

Schedule:

| Milestone | Task / Deliverable | Duration / Deadline | | | |
|-------------------------------------|---|--|--|--|--|
| Competition Launch | | | | | |
| Upon Competition Launch | RSO + PD&C meet & review competition-specific rules, schedule, deliverables, etc. PD&C finalize this guide and RSO circulates. | Complete | | | |
| | Divisions identify single point of contact for purposes of PD&C support | ASAP | | | |
| | PD&C and Divisional representatives meet & review process, schedule, & deliverables. | ASAP | | | |
| | Pre-Proposal and Final Proposal Stages | | | | |
| Notify PD&C of Anticipated Requests | As early as possible, Divisions advise PD&C of: 1. the anticipated number of proposals requiring costing support at each stage, including name of proposal and type of support required (e.g., new costing, updated costing, etc.) 2. any large, complex, or sensitive projects | Minimum 8 weeks prior to requiring an estimate. (RSO to reconcile records with PD&C following June 10 Eol deadline.) | | | |
| Preparation of Estimates | Divisional representatives submit fully completed (and reviewed) Project Information Forms. PD&C reviews submission and provides comments / questions (if applicable) PD&C issues estimates to Divisional representatives | Divisional submission to PD&C minimum 4 weeks prior to requiring an estimate. | | | |

Schedule Notes:

- Above durations may change based on competition details and quantity of estimate requests. PD&C will endeavor to establish fixed-date deadlines with individual Divisions once the volume of work is known.
- Divisions are encouraged to prepare / submit requests early: incomplete submissions will be returned for more detail.
- Project Information Forms not received by the stated deadlines will not receive PD&C estimates.

General Disclaimers

- 1. The accuracy of an estimate is directly commensurate to the thoroughness and quality of information provided. High-level allowances are made where scope is missing/unknown.
- 2. Estimates do <u>not</u> guarantee actual costs at the time of construction. Construction is subject to a wide range of market forces and actual costs <u>will</u> be different than the estimate provided. Similarly, an estimate provided at the Pre-Proposal stage <u>will</u> be different from one provided at the Final Proposal stage.

Attachments:

- 1. Sample Project Information Form
- 2. Sample Final Deliverable (High-Level Cost Estimate and Schedule)



CFI-IF 2025: Project Information Form

Version 3, May 1, 2024

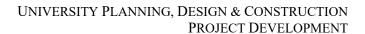
Instructions:

- 1. Use this form only for projects where a cost estimate is required for a capital improvement (i.e., new construction and/or renovation) of a University-owned site/building. (Contact RSO / PD&C for direction if a leased space.)
- 2. Review and begin filling out this form early it is designed to help Divisions define the scope of their projects.
- 3. Projects must have Divisional approval to utilize the project site(s) and will have conducted a site visit (with Divisional facility planners or equivalent) prior to submitting this form.
- 4. Complete <u>all</u> sections of this form with as much detail as possible. Do not leave fields blank. Where a specific item does not apply enter "N/A"; if something is unknown or requires further investigation, state as much.
- 5. Sections in grey shall be filled out by the Divisional contact providing competition support.
- 6. Refer to the sample cost/schedule deliverable for a list of items typically excluded in estimates.
- 7. If completing this form as part of a resubmission, clearly identify revised and/or new information.

| Α | Administrative |
|----|---|
| .1 | Is this a resubmission (Y/N)? |
| .2 | Does the Division intend to have this project costed elsewhere (e.g., by Divisional resources and/or a separately retained cost consultant)? (PD&C resources are limited; PD&C will not duplicate costing efforts being provided elsewhere) |
| .3 | Has this Project previously (in part or in whole) been included in a prior competition and/or any costing work? If a previous estimate has been prepared, provide date of estimate and brief description of any scope changes since: |
| .4 | Date (select): select date |
| .5 | Submitted in support of (select one): Choose an item. |

| В | Project Information (General) | | |
|----|--|--|--|
| .1 | Proposed Project Leader Name: | | |
| .2 | Department: | | |
| .3 | Project Name: | | |
| .4 | Project Location (building name & number, floor(s), and room number(s)): | | |
| .5 | General Project Description: (If project requires a change of use of space, including a change in lab containment level, indicate existing and new uses) | | |

| С | Project Information (Construction Scope) | | | | |
|----|---|--|--|--|--|
| | A completed Project Planning Report (PPR) or similar scope document may be submitted in lieu of this section provided it, at a num, addresses the below items. | | | | |
| .1 | For each of the following categories, describe the scope of construction work in as much detail as possible. <u>Identify</u> any known "gaps" in scope including building system deficiencies, complexities, and/or concerns. | | | | |
| | Architectural (incl. demolition, interiors, building envelope, millwork, lab benching, finishes, accessibility, etc.): | | | | |
| | Structural (also note if heavy equipment will be installed): | | | | |
| | Mechanical (incl. HVAC upgrades, dust and/or humidity control, etc.): | | | | |
| | Electrical (incl. service upgrades, lighting, A/V, security, IT/Data, etc.): | | | | |
| | Heritage (will renovations impact the exterior of a heritage building? E.g., new/replacement windows, new openings incl. exhausts, new mechanical equipment, etc.): | | | | |
| | Hazardous Materials: | | | | |
| | Bio-safety containment (indicate level if applicable): | | | | |
| | Specialty equipment (incl. fume hoods): | | | | |
| | Other: | | | | |
| .2 | Area of work (m ²): (Provide areas for each affected room, or attach a space program for larger projects) | | | | |
| .3 | Will there be an increase in occupant load?: | | | | |
| .4 | Will construction impact any other spaces (i.e., adjacent rooms, floors above/below)? If yes, please list spaces and describe: | | | | |
| .5 | List and briefly describe any recently completed capital projects that are similar or in the vicinity of this one: | | | | |





| D | Schedule |
|----|--|
| .1 | Is any portion of this project anticipated to commence before the competition is awarded? If yes, describe in detail: |
| .2 | When do you want to be using the space?: |
| .3 | Does this project have any schedule constraints (e.g., phased construction, long equipment lead times, dependent on completion of other capital improvements, limited construction hours, etc.)? If yes, describe in detail: |

| E | Other |
|----|---|
| .1 | List other departments / individuals (external or internal) who have been consulted on this project (e.g., building managers / operators, engineers, architects, etc.): |
| .2 | Please provide any other relevant information not included elsewhere: |

| F | Submission Checklist | | | | |
|----|--|--|--|--|--|
| I | Note: Project Development lacks the capacity to visit project sites. The documents below should "paint a picture" of the existing facility conditions. | | | | |
| | Document / Requirement (Y/N) | | | | |
| .1 | Project Information Form completed in <u>full</u> | | | | |
| .2 | Existing floor plans that: | | | | |
| .2 | Test fit plans showing the proposed scope of work | | | | |
| .3 | Photographs of the existing space | | | | |
| .4 | Photographs of adjacent spaces (corridors, adjoining rooms w/ shared walls, etc.) | | | | |



| .5 | Previous costing data/reports, including drawings and information that informed the basis of the estimate (if applicable) | |
|----|---|--|
| .6 | Previous studies/reports (if applicable) | |
| .7 | List other documents provided with this request: | |

| G | To be filled out by Divisional Contact |
|----|--|
| .1 | Divisional Contact Name: |
| .2 | Divisional approval has been granted to use the space (Y/N): |
| .3 | Estimated construction cost range (e.g., <\$1M, ~\$2M, >\$5M, etc.): |
| .4 | A Divisional facilities planner (or similar individual) has visited the site with the applicant (Y/N): |
| .5 | I have reviewed the information contained herein (Y/N): |



SAMPLE FINAL DELIVERABLE (based on CFI-IF 2023 competition) Competition Name & Stage: High-Level Cost Estimate and Schedule

Date: May 1, 2023

General Disclaimers (applicable to all estimate requests):

This is an estimate of probable cost only and <u>does not guarantee actual costs</u> at the time of construction. It is based solely on the information submitted by the applicant and its accuracy is commensurate to the level of detail provided.

This estimate is limited exclusively to renovation/construction costs; no consideration has been given to overall project feasibility, constructability, code compliance, etc. No inferences have been made regarding specialized equipment requirements (e.g., power, gas, heating, cooling, etc.) unless explicitly stated in the estimate request. At Project Development & Control's discretion, material/labour allowances have been included to cover undefined or unknown scopes of work.

To cover the above as best as possible at this time, a conservative design allowance has been applied to all estimation work.

Adjust narrative below based on market conditions.

Applicants are cautioned that the construction market is presently going through a period of extreme volatility, supply chain pressures, and unprecedented escalation. Given the timeframe between this costing exercise and the estimated construction start date for CFI projects, a conservative approach based on historical trends has been taken. It is impossible, however, to predict the state of the construction market in the coming months/years.

| Α | Project Information |
|----|---------------------------|
| .1 | Applicant: |
| .2 | Department: |
| .3 | Building Name and Number: |
| .4 | Proposed Project Name: |

| В | Total Project Cost Estimate | | | | |
|----|-----------------------------|---|--|--|--|
| | • | | | | |
| .1 | Overview / Terminology | Adjust per competition specifics Per the CFI IF Program & Policy Guide, cost estimates have been broken down into the following categories: - Direct / Hard Costs: costs directly related to the construction work and would typically be included in a construction contract. E.g.: materials, labour, contractor overhead, etc. Also includes an allowance for Facilities & Services work required by the construction. - Soft Costs: costs not directly related to the construction work but required to facilitate the work. E.g.: permits, consultant fees, project management fees, insurance, testing & inspection, commissioning, etc. - Contingency: an amount to cover unforeseen costs during construction. CFI caps this amount at 10% of construction costs. This is separate from the design allowance and escalation contingency which are already included in the Direct / Hard Costs. | | | |
| .2 | Basis of Estimate | Select text below as appropriate | | | |

| | | A third-party cost consultant was retained to prepare a "Class D" const priced in QX 202X dollars and escalated to QX 202X. A "Class D" estivariance of +/- 20-30% depending on project complexity. PD&C has at variance risk by including a 20% design allowance. OR Due to the level of detail provided, an Order of Magnitude Estimate (Of on generalized \$/sf unit rates only. OMEs may have a variance greate attempted to mitigate this variance risk by including a XX% design allowance. OR No further estimation work was completed during this stage. OR Insufficient material was provided to produce a cost estimate. | mate may have a tempted to mitiga ME) was produce r than +/- 50%. P | te this |
|----|--------------------|--|--|--|
| .3 | Inclusions | HST (3.41%), built-in equipment such as fume hoods and lab benching items | g. <mark>Add any projec</mark> i | t specific |
| .4 | Exclusions | Loose furniture, computers, and equipment; research equipment; A/V of moving/staging costs; legal fees; interest / financing charges, asbestos in the project scope). Add any project specific items | | ess noted |
| .5 | Total Project Cost | Select estimate format based on competition requirer | ments and type of | f estimate |
| | | Direct / Hard Costs Soft Costs Contingency Total (incl. HST) | \$ \$ | 000,000 300,000 90,000 390,000 |
| | | | | <u>OR</u> |
| | | Base Construction Cost TPC Multiplier* Total Project Cost (TPC) *A multiplier is applied to the base construction cost to determinaccounts for post-contract construction contingencies, perminanagement fees, Facilities & Services charges, overall project contract construction continued to the base construction continued to the base construction continued to the base construction cost to determinate the base construction continued to the base continued to the base construction continued to the base continued to the base continued to the base continued to the base continued to | \$ 1,000 to the the Total Projects, consultant fee | s, project |

| С | Schedule Adjust co | djust content of this table per competition specifics or delete if not required | |
|----|--------------------|--|--|
| .1 | Overview | From the CFI IF Program & Policy Guide: "CFI expects the institution to start the construction or renovation component of a funded project within 18 months of the funding decision. Within that time frame, the institution must have finalized contracts for construction or renovation and must have begun the construction or renovation work. When a project involves multiple sites, the construction or renovation on every site should start within 18 months of the funding decision. While the CFI recognizes that some projects may involve a large and complex construction or renovation components, the institution is expected to have completed planning and development work for such projects at the application stage." | |
| .2 | Basis of Schedule | Schedules assume projects can start in March 2023 (anticipated CFI-IF award announcement) and are not waiting for additional funding or other approvals. | |
| .3 | Schedule | CFI Award Announcement: Internal Planning and Approvals: Consultant Procurement: Design & Permits: Tender, Negotiation, & Award: Construction: Occupancy: | March 2023 April – Mid-May 2023 (2.5 months) Mid-May – July 2023 (1.5 months) August – December 2023 (5 months) January – February 2024 (2 months) March – August 2024 (6 months) September 2024 |

| | D | Attachments | |
|---|----|--|---|
| • | .1 | 3 rd Party Cost Estimate | Third-party, "Class D" construction cost estimate prepared by XXXX, dated XXXXX |
| Ī | .2 | Other | Other supplementary information |