

2020-03-31

Standards Council of Canada 55 Metcalfe Street, Suite 600 Ottawa ON K1P 6L5 Canada

Subject: Request for Proposal (RFP) # 2020-13

This document represents an invitation to Bidders to submit their proposals to the Standards Council of Canada (SCC) to assess the economic impacts of implementing standards developed under the Standards to Support Resilience in Infrastructure Program.

In accordance with the Statement of Work attached hereto as Appendix "B", SCC will issue a contract to the successful Bidder, establishing the pricing and terms / conditions under which the development of the above-mentioned initiative will be undertaken.

Proposals must be received by SCC no later than **16:00 hours**, **(4 p.m.) EDT on Tuesday**, **April 21**, **2020**. It is the Bidder's responsibility to deliver their proposal prior to **the time/date of bid closing**. Proposals received after 16:00 hours will not be accepted; they will be returned to the sender unopened.

PROPOSALS ARE TO BE SUBMITTED ELECTRONICALLY TO <u>contracts@scc.ca</u> by the time/date of bid closing (including the financial proposal).

1. ATTACHMENT 1 – Technical Proposal

NOTE: No financial information is to be included in ATTACHMENT 1

2. ATTACHMENT 2 - Financial Proposal

Proposals that do not contain the requested documentation or deviate from the required financial format (as per Appendix D of SCC RFP #2020-13) may be considered incomplete and disqualified.

SCC is not obliged to accept the lowest bid and/or any proposal.

Questions with respect to the meaning or intent of this process, or requests for correction to any apparent ambiguity, inconsistency or error in the document must be submitted in writing to contracts@scc.ca and must be received by 12:00 hours (noon) EDT on **Friday, April 10 2020.** All answers will be communicated to all potential bidders via email.

Request for Proposal # 2020-13

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APPENDIX A: REQUEST FOR PROPOSAL - ACCEPTANCE FORM

(Name of Company) (Complete Address) GST/HST Number ______BIN Number _____ Telephone Number: Fax Number: Contact Person: Contact Email Address:

- 1. The Undersigned (hereinafter referred to as "the Bidder") hereby proposes to the Standards Council of Canada (SCC) to furnish all necessary expertise, supervision, materials, equipment and other incidentals necessary to complete to the entire satisfaction of SCC or their authorized representative, the work described in the Terms of Reference / Statement of Work attached hereto as Appendix "B".
- **2.** The Bidder hereby proposes to perform and complete the work in accordance with the terms and conditions (at the place and in the manner) specified in:
 - (i) Appendix A attached and entitled "Request for Proposal Acceptance Form;
 - (ii) Appendix B attached and entitled "Statement of Work";
 - (iii) Appendix C attached and entitled "Technical Evaluation Criteria";
 - (iv) Appendix D attached and entitled "Financial Proposal".

3. Period of Services

Proposal Submitted by

- (i) The contract award date is the date that the contract is signed by the Bidder and SCC.
- (ii) The service start date is the date that the Bidder and SCC agree to commence the work.
- (iii) The Bidder hereby proposes to perform the work commencing on the service start date and have work completed in accordance with the timeline in Appendix B.

4. Financial Proposal

The Bidder hereby proposes to perform and complete the work as per the financials outlined using Appendix D: Financial Proposal of SCC RFP #2020-13, which represents the total financial proposal.

5. Optional Modifications

In the event that SCC requests the successful Bidder to proceed with any optional modifications or additional changes to the process, payment for this additional work will be based on the per diem rates quoted (see Appendix D of SCC RFP #2020-13).

Authorization to proceed with additional work will be provided by way of a contract amendment as per the established proposal.

6. Optional Years

SCC may decide, at its discretion, to exercise an option by means of formal contract amendment, to extend the term.

7. Federal Goods and Services Tax (GST) and Harmonized Sales Tax (HST)

The prices and rates quoted as part of the Bidder's proposal are NOT to include any provision for taxes.

8. Payment Schedule

As a result of acceptance of the Bidder's proposal, SCC reserves the right to negotiate an acceptable payment schedule prior to the awarding of a contract and/or any amendments.

9. Appropriate Law

Any contract awarded by SCC as a result of SCC RFP #2020-13 shall be governed by and construed in accordance with the laws in force in the Province of Ontario, Canada.

10. Tender Validity

The Bidder agree(s) that their proposal will remain firm for a period of 90 calendar days after the **the time/date of bid closing**.

Signatures

The Bidder herewith submits this bid in accordance with the requirements specified in the Request for Proposal documents.

SIGNED th	isday of, 2020	
Per		
	NAME OF COMPANY	
Per		
	(Signing Officer and Position)	
Per		
1 01	(Signing Officer and Position)	

APPENDIX B – STATEMENT OF WORK

APPENDIX A: STATEMENT OF WORK		
Project	The Standards Council of Canada (SCC) will issue one (1) contract to a Supplier to assess the economic impacts of implementing standards developed under the <i>Standards to Support Resilience in Infrastructure Program</i> .	
SCC SUBMITTAL DATE	March 31, 2020	
VENDOR RETURN DATE	April 15, 2020	
Background	All regions of Canada are experiencing environmental, social, and economic impacts that can be attributed to climate change. Canada's buildings, bridges, roads, water, and wastewater systems are at risk due to the effects of climate change and extreme weather. The country's core public infrastructure will need to be adapted to these conditions to ensure ongoing use, and to reduce the chances of failure.	
	Adapting standards to ensure infrastructure is climate resilient is critical for Canada and its citizens. Standards can specify performance and material requirements that can be used as the integration point for climate-related risks into infrastructure planning and development processes.	
	Through funding announced in Budget 2016, SCC is working with Canada's national standardization network to develop and implement standardization solutions that boost infrastructure resilience and create stronger communities for Canadians. SCC's <i>Standards to Support Resilience in Infrastructure Program</i> aims to ensure the effectiveness of standards to address climate risks in the design, planning and management of Canadian infrastructure. To accomplish this, the Program is facilitating the development of a new toolbox of resources and standardized guidance related to climate change and climate resilience to support both standards users and developers. In parallel, the Program is updating existing standards and developing new ones to enhance climate resilience for Canada.	
	As of March 31, 2019, the Program has delivered 31 out of 36 planned projects. For further information, SCC has published a detailed report – Standards to Support Climate Resilience in Infrastructure: Taking stock and mapping the future - on the Program's progress to date. The Program sunsets in March 2021.	
Scope	The goal of this study is to assess the present and future potential impacts, up to 2035, of utilizing standards that support the adaptation of infrastructure to climate change. The assessment should be made on the basis of quantitative analysis using such methods as economic modeling (e.g., econometrics, computable general equilibrium), and be complemented by qualitative analysis obtained through such methods as literature reviews.	

The chosen Supplier will conduct an assessment based on two separate standards as follows:

Flood prevention and mitigation

SCC has supported the development of several standards and related tools focused on flood water mitigation. The following standard presents a number of recommendations to reduce risks and help adapt communities to a changing climate:

 CAN/CSA W204 Flood Resilient Design for New Residential Communities (to be published in December 2019)

Building in permafrost

Since 2011, SCC has been supporting the development of standards and related tools to help adapt infrastructure in northern Canada to changing climatic conditions. Several standards have focused on managing changing permafrost conditions, including:

 CAN/BNQ 2501-500 Geotechnical Site Investigations for Building Foundations in Permafrost

Using these two standards, the chosen Supplier will:

- Estimate the current and medium-term costs of flooding and permafrost-related challenges if operating under a business-asusual case: and
- Estimate the impacts (quantitative and qualitative) of implementing measures described under the above works under two different usage scenarios. For example:
 - a high usage scenario where the standards are incorporated in regulations in every affected Canadian jurisdiction starting in the base year and require 100% compliance by relevant new builds; and
 - a medium usage scenario where the standards remain voluntary but are adopted by 50% of relevant new builds in affected Canadian jurisdictions starting in the base year.

In the quantification of the impacts, there will be reliance on existing data both nationally and internationally. It is expected that the proponent will conduct a thorough search of available data and try to utilize such validated information to the greatest extent possible. After a thorough review, where relevant data cannot be found, or cost and/or benefits have to be extrapolated, assumptions will need to be developed. All assumptions will need to be explained and qualitatively validated.

SCC understands that the methodological approaches taken between Bidders may vary. However, the overarching project should roughly follow the activities identified below. In the case that a Bidder wishes to deviate significantly from the proposed approach, they should clearly identify the benefits of their approach compared to the one outlined.

Please note that some activities may best be completed in tandem.

The chosen Supplier will focus on the following major activities:

Activity 0: Project Initiation

During Project Initiation, the Supplier shall:

- Meet with SCC to review project goals
- Develop a detailed project workplan for review by SCC
- Develop a detailed project budget, including milestone dates for invoicing for review by SCC.

Deliverable(s)

The expected outputs of Activity 0 will be a detailed workplan and project budget.

Activity 1: Estimate the Costs of the Business-As-Usual Case

Under Activity 1, the Supplier will estimate the direct costs of increased flooding and permafrost degradation on Canadian infrastructure over a 15-year period (2020-2035).

- Develop a step-by-step approach to estimate the direct costs associated with increased flooding and permafrost degradation in Canada according to the most likely model of climate change (to be determined in consultation with SCC)
- Review the approach with SCC for feedback
- Estimate direct damage costs (including, but not limited to loss of assets and reinstatement/replacement of properties and facilities) given a "business-as-usual" case where new infrastructure has not been equipped with the additional supports identified
- Disaggregate, where possible, the costs by region (i.e., provinces and territories)

Deliverable(s)

The expected outcomes of Activity 1 will be a methodology for estimating the costs of increased flooding and permafrost degradation, as well as the estimated costs by Canadian region (provinces and territories).

Activity 2: Estimate the Potential Direct Impacts of the Identified Tools

Under Activity 2, the Supplier will estimate the direct costs and benefits of implementing the standards produced under the Program over a 15-year period (2020-2035). These impacts are expected to focus on the cost-savings that will arise from reduced repair, maintenance, and rebuilding costs.

- Review applicable documents and materials provided by the Program team to become familiar with the subject of analysis
- Identify and obtain any additional materials or information that will facilitate the successful completion of work
- Determine two "usage/uptake scenarios" in consultation with SCC; these scenarios will be used to estimate the potential impact of the Program based on different levels of uptake of the developed standards

- Develop a step-by-step cost-benefits approach to estimate the potential savings and/or costs that would result from using the identified standards (e.g., lower maintenance costs, lower rebuilding costs)
- Identify any data gaps that exist, and the assumptions that will need to be made to fill these gaps
- Review the approach, data gaps, and assumptions with SCC for feedback
- Complete the cost-benefit analysis of select works completed under the Program under the agreed-upon scenarios
- Disaggregate, where possible, the cost-benefit analysis by region (i.e., province and territories)

Activity 3: Identify Non-financial (Qualitative) Benefits of the Identified Tools

 Conduct a literature review to better understand the qualitative benefits of implementing measures described under the identified tools. The literature review could consider, but is not limited to, grey and policy literature, academic literature, and relevant reports completed by Standards Development Organizations that are developing climate-related standards

Deliverable(s)

The expected outcome of Activity 3 will be a list of qualitative benefits of implementing measures described under the identified tools.

Activity 4: Develop the Final Report

Following completion of all previous activities, the Supplier shall prepare a professional laid-out report outlining the methodology and findings of the analysis (both quantitative and qualitative). The report should identify any limitation(s) associated with the scope of the study.

All final deliverables are expected to be of high and professional quality and shall be provided electronically to SCC in English (SCC will complete a professional translation which can be reviewed by the Supplier to ensure accuracy). The final report should be written with a general public audience in mind, with an emphasis on non-technical, easy-to-read, language. Formulas, statistical results, and any relevant technical notes should be included in an appendix.

- Draft a report describing the methodology, analysis, findings, and limitations of the study
- Provide the draft report to SCC for review and feedback
- Incorporate comments from SCC, finalize the writing, and provide to SCC for translation
- Professionally lay-out the report in both English and French (using the translated copy provided by SCC)

The expected outcomes of Activity 4 will be a final, plain-language report outlining the impacts of identified tools developed under the Program. All final deliverables should be provided in English (SCC will provide the

translation services, but it will be expected that the Supplier will complete the lay-out of all final products in both official languages).

The Supplier will provide SCC with all files related to the study, including the data and programming files. It is anticipated that the findings will be used to support the renewal of the Program. The assessment itself may be made publicly available.

All work under this contract will be expected to be completed by: **2020-08-01**

Proposal Requirements

Proposal Requirements

Bidders should prepare a proposal that addresses the requirements of the RFP in two parts, as follows:

- Technical Proposal and
- Financial Proposal.

Technical Proposal

The Technical Proposal must not exceed 20 pages, excluding appendices. The following information is to be included in the proposal and will be assessed through the bid evaluation process.

Organization and Project Team Experience: This section should demonstrate the bidder's knowledge and qualifications to undertake the study. The bidder must provide a description of the project team and the reporting structure. Curriculum vitae should be appended and will not constitute part of the 20-page limit set for the proposal.

Methodology and Work Plan: This section should identify a comprehensive methodological approach, and the appropriate assignment of resources, to achieve all aspects of the project as laid out in the statement of work. The section should also identify principal tasks, milestones, and the timeframe for their completion. The Bidder should cite specified events in the timeline where support and/or validation by the project authority will take place. Based on a review of the needs and objectives and the overall proposed approach, provide a description of any major anticipated risks and difficulties, and discuss solutions and strategies for addressing these.

Financial Proposal

The Financial Proposal must include a breakdown of the project's costs, including labour costs, travel and related expenses, costs associated with use of sub-contractors and other charges anticipated. In addition, the payment schedule is to follow the deliverables timelines.

APPENDIX C - EVALUATION CRITERIA

APPENDIX C: EVALUATION CRITERIA

General

A Technical Evaluation Committee, consisting of at least three (3) SCC or SCC-appointed representatives, will be formed to assess all bids received in response to SCC RFP # 2020-13. The committee will be dissolved subsequent to the successful completion of their duties in selecting the Bidder with whom SCC will contract for the delivery of the Risk Prioritization Framework.

Proposals will be evaluated in accordance with the evaluation criteria identified and in conjunction with the Statement of Work (SOW). Bidders are encouraged to address these criteria in sufficient depth in their proposals to permit a full evaluation of their proposals. The onus is on the Bidder to demonstrate that it meets the requirements specified in the solicitation.

Bidders are advised that only listing experience without providing any supporting information to describe where and how such experience was obtained will not be considered to be demonstrated for the purpose of the evaluation. The Bidder should not assume that the evaluation team is necessarily cognizant of, or knowledgeable about, the experience and capabilities of the Bidder or any of the proposed resource(s); as such, any relevant experience must be demonstrated in the Bidders' written proposal. The Technical Proposal must not exceed 20 pages, excluding appendices.

Steps in the Evaluation Process

Step 1 – Evaluation against Mandatory Criteria

All bids will be evaluated to determine if the mandatory requirements detailed in *Appendix C:* Part A Mandatory Criteria have been met. Only those bids meeting ALL mandatory requirements will be considered.

Step 2 – Evaluation against Point-Rated Criteria

All bids meeting the criteria from Step 1 will be evaluated and scored, in accordance with the point-rated criteria detailed in *Appendix C: Part B Point-Rated Criteria*, to determine the Bidder's Total Technical Merit Score. All bids meeting the minimum thresholds in Step 2 will proceed to Step 3.

Step 3 – Evaluation of Financial Proposals

Only technically compliant bids meeting all of the requirements detailed in Steps 1 and 2 will be considered at this point.

Bidders must provide a price for each item identified in the format specified in *Appendix D Financial Proposal*. Ranges (e.g., \$10-\$13) are not acceptable.

Step 4 – Basis of Selection

The selection will be based on the highest combined rating of technical merit and price. The ratio will be 80% for the technical merit and 20% for the price.

To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 80%. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 20%. In the event of a tie, the proposal receiving the highest score for the technical evaluation will be selected.

TECHNICAL EVALUATION CRITERIA

Part A: Mandatory Criteria

Proposals will be assessed to determine whether they meet mandatory requirements pertaining to the Project Team.

Item	Mandatory Requirement	Compliant (Yes/No)
M1	The Bidder must include a resume including the following information for each Team Member (resource) proposed:	□ Yes □ No
	 A list of qualifications directly related to the requirements of the statement of work 	1110
	b) Chronological work experiencec) A detailed list of relevant academic and professional attainments	
M2	At least one team member MUST have as a minimum a master's degree in environmental sciences or a related discipline	□Yes
	· · · · · · · · · · · · · · · · · · ·	□No
M4	The Bidder's financial proposal must not exceed the maximum allotted total	☐ Yes
	budget of \$80,000 CAD	□ No
M5	The Technical Proposal must not exceed 20 pages, excluding appendices.	□ Yes
		□No

Part B: Point-Rated Criteria

The proposal must include a detailed description of the approach, methodology and the work plan describing how the Bidder would carry out the project to achieve the described objectives. Each proposal will be evaluated against point-rated criteria in the below three (3) categories. A response must be provided for each criterion.

Category	Max. Points
R1: Organization and Project Team Experience	30
R2: Methodology and Work Plan	25
R3: Quality of Proposal	5
Total Possible Points	60

42 of the possible 70 points must be achieved (70%) in order for the financial elements of the bid to be evaluated.

R1 Organization and Project Team Experience

The Technical Evaluation Committee will assess the experience and competence of the Bidding Organization ("the Bidder") and Project Team with respect to RFP# 2020-13 in completing relevant and related projects.

The Bidder must provide examples that demonstrate the extent to which they meet each criterion. The <u>same example</u> may be used <u>to meet various criteria</u> but must be revised accordingly to highlight the context within which it applies. The basis for scoring each criterion is provided in the table below. "Recent" means within the last three years.

Item	Rated Criteria	Max points
R1A The Bidder should provide two recent examples of projects that demonstrate the Project Team's	The Bidder should demonstrate the experience of the Project Team by providing project descriptions that include the following information: project title, project overview, scope of project, similarity to the work outlined in this statement of work, and project start and end dates. For each example, points will be awarded as follows:	10
experience in conducting economic impact	Up to 3 points per project if the experience somewhat demonstrates the development of an economic impact analysis that is related to infrastructure assets	
studies (e.g., cost- benefit analysis) in relation to infrastructure assets.	 Up to 5 points per project if the experience clearly demonstrates the development of an economic impact assessment that is related to infrastructure assets (e.g., homes, bridges), and is similar in scope and complexity as what is described in this statement of work 	
R1B The Bidder should provide two recent examples of projects that demonstrate the Project Team's experience assessing the diverse impacts of climate change on infrastructure	The Bidder should demonstrate the experience of the Project Team by providing project descriptions that include the following information: project title, project overview, scope of project, and project start and end dates.	10
	 For each example, points will be awarded as follows: Up to 3 points per project if the experience somewhat demonstrates the Project Team's experience assessing the diverse impacts of climate change (e.g., increased storms, higher temperatures, increased coastal erosion) on infrastructure 	
	- Up to 5 points per project if the experience clearly demonstrates the Project Team's experience assessing the diverse impacts of climate change on infrastructure over the life-cycle of the infrastructure	
R1C The Bidder should outline their knowledge and experience in the field of life-cycle cost of infrastructure assets	The Bidder should demonstrate the experience of the Project Team by providing project descriptions that include the following information: project title, project overview, scope of project, and project start and end dates.	5
	 Points will be awarded as follows: Up to 3 points if the response somewhat demonstrates the Project Team has limited experience assessing the life-cycle cost of infrastructure assets. Up to 5 points if the response clearly demonstrates the Project Team has extensive experience assessing the life-cycle cost of infrastructure assets 	

Item	Rated Criteria	Max points
R1D The Bidder should provide one recent example that demonstrates their	The Bidder should demonstrate the experience of the Project Team by providing project descriptions that include the following information: project title, project overview, scope of project, project start and end dates, and how the non-technical report was to be used.	5
ability to write a report on technical issues (e.g., engineering concepts, economic	Points will be awarded as follows: Up to 3 points if the example somewhat demonstrates the Project Team's experience writing a report on technical issues (e.g., engineering concepts, economic impact assessments) for a non-technical audience	
impact assessments) for a non-technical audience.	- Up to 5 points if the example clearly demonstrates the Project Team's experience writing a report similar in scope to that outlined in the statement of work on technical issues (e.g., engineering concepts, economic impact assessments) for a non-technical audience	

R2: Methodology and Work Plan

The Bidder must provide a thorough description of the proposed approach and methodology. The basis for scoring with respect to each criterion is also provided in the table below.

Item	Rated Criteria	Max points
R2A	Points will be awarded as follows:	10
The Bidder should demonstrate a comprehensive methodological approach to complete all aspects of the project	- Up to 5 points if the description of the methodological approach is detailed enough to include a description of the steps that will be undertaken to meet each deliverable outlined in the SOW but is missing some details or does not fully communicate how the approach is realistic or technically feasible	
	 Up to 10 points if the description of the methodological approach is detailed enough to include a description of the steps that will be undertaken to meet each deliverable outlined in the SOW, and convincingly communicates how the approach and method are realistic and technically feasible 	
The Bidder should outline a clear work plan to ensure the	The work plan should identify, at a minimum, the Bidder's understanding of the goals and objectives of the project, resources that will be employed, constraints, and a project schedule (a diagram such as a Gantt chart may be provided, but must be clearly readable)	10
objectives of the Project are met.	Points will be awarded as follows:	
,	 Up to 5 point if the work plan addresses some objectives of the project and some elements of the critical path, with 	

Item	Rated Criteria	Max points
	some explanation of how the timelines were determined, and an overview of what resources will be utilized.	
	 Up to 10 points if the work plan addresses all objectives of the project and all elements of the critical path, with a thorough explanation of how the timelines were determined, the resources to be utilized, and any key underlying assumptions. 	
R2C	Points will be awarded as follows:	5
The Bidder should demonstrate a clear risk mitigation strategy	 Up to 3 points if problems and challenges that could arise that would impact the quality and/or delivery of the project are only partially addressed, e.g. overlook likely risks and/or do not demonstrate a realistic understanding of the project 	
	 Up to 5 points if problems and challenges that could arise that would impact the quality and/or delivery of the project are clearly described and demonstrate a realistic approach and understanding of the project; and if proposed mitigation solutions are realistic 	

R3: Quality of the Proposal

The Technical Evaluation Committee will assess the quality of the proposal to determine whether the information organized within the proposal is presented in a clear and comprehensive fashion.

The Bidder is asked to assure that material within the proposal is formatted, organized and written in such a way as to make clear to the reviewer where responses to mandatory and point-rated requirements are located.

Item	Rated Criteria	Max Points
R3A The bid should be written in a clear, concise, and professional manner	Points will be awarded as follows: - Up to 3 points if the proposal is generally well-organized but is somewhat difficult to read and contains some typos - Up to 5 points if the proposal is highly organized, concise, clearly written, and contains very few to no typos	5

APPENDIX D - FINANCIAL PROPOSAL

APPENDIX D: FINANCIAL PROPOSAL

Please complete the below financial template and submit as **ATTACHMENT 2 – Financial Proposal.**

All figures should be referenced in Canadian currency, pre-tax.

Deliverable as Outlined in the Statement of Work	Level of Effort (Days)	Cost
Activity 0: Project Initiation		
Activity 1: Estimate the Costs of the Business as Usual Case		
Activity 2: Estimate the Potential Direct Impacts of the Identified Tools		
Activity 3: Identify Non-Financial (Qualitative) Benefits of the Identified Tools		
Activity 4: Develop the Final Report		
Total:		