

**DATE:** June 7, 2022

**FILE:** 0340-50

**TO:** Chair and Members  
Comox Strathcona Waste Management Board

Supported by Russell Dyson  
Chief Administrative Officer

**FROM:** Russell Dyson  
Chief Administrative Officer

*R. Dyson*

**RE: Referral of Proposed Value Management Review Policy**

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### **Purpose**

To introduce a proposed corporate policy concerning value management reviews for major projects for review and feedback by the Comox Strathcona Waste Management Board.

### **Recommendation from the Chief Administrative Officer:**

None.

### **Executive Summary**

- In 2018, the Comox Valley Regional District (CVRD) developed a report on Utilities Governance for the Comox Valley Water Committee and the Sewage Commission in response to some concerns regarding service governance. While there was not sufficient value or feasibility in advancing a substantive change, several smaller changes and improvements to the existing approaches were directed, including a proposal to increase the level of expertise in the decision-making process by incorporating a review board policy for larger projects.
- At the April 12, 2022 meetings of the Comox Valley Water Committee and Sewage Commission, both bodies endorsed resolutions to refer proposed Policy No. P90 being “Value Management Review of Capital Projects” to the Comox Strathcona Waste Management (CSWM) Board for feedback prior to being considered for adoption as a corporate CVRD policy.
- The proposed Value Management Review of Capital Projects policy (attached as Appendix ‘A’) has been developed in response to the expressed interest of incorporating third-party expertise into the development and approval process for major capital projects. Value management processes can be described as a systematic review using third-party multi-disciplined teams to analyze the functional requirements of a project to improve the value of the project and support informed decision making and corporate accountability and transparency.
- The Utilities Governance report identified the CVRD’s experience with the value planning study conducted as part of the Comox Valley Water Treatment Project as a positive example. In this instance, the value planning process reviewed the scope and implementation strategy of this capital project with the aim of finding cost efficiencies. The study brought together a team of third party experts with no prior involvement in the project to identify viable alternatives to the proposed indicative design for consideration as value improvements. This was then provided to the CVRD’s engineering consultants (that had

prepared the indicative design) to consider the suggestions and alternatives and determine which suggestions to incorporate, and outline the rationale for their decisions. In summary, the review process confirmed the chosen technology for the plant but did bring about improvements to the depth and length of the lake intake as part of the design resulting in cost and design improvements.

- Value management reviews are becoming part of industry best practice for project development as they are recognized as techniques to assist with defining, maximizing and achieving “value for money” as well as enabling:
  - Informed decision-making prior to proceeding with a major project;
  - The assessment and enhancement of functional performance;
  - Identification and evaluation of possible alternatives that add value;
  - Rationale for decisions and investment; and
  - Independent and expert review to find efficiencies, test assumptions and mitigate local bias.
- Based on the success of a value engineering review undertaken for both the Comox Valley Water Treatment Project and the Sewer System Conveyance Project, a value management review policy is proposed to formalize this process for all major projects undertaken by the CVRD.
- The proposed value management review policy would require a minimum of one value management review for all capital projects where the project is identified within the financial plan and the total project costs are at or above \$25.0M and a minimum of two value management reviews where total project costs are at or above \$75.0M as identified in a business case. At this time the CSWM 2022 to 2026 financial plan does not include any projects which exceed the \$25M threshold.
- The duration and number of technical experts for a value management process can be adjusted to suit the scope and complexity of the project. The costs for the value management work completed to date on the Sewer Conveyance Project and Water Treatment Project ranged from \$100,000 to \$200,000.
- Should the CSWM Board have any concerns or objections to the proposed policy a resolution should be endorsed to articulate such feedback to the CVRD Board. If the policy is supported by the CSWM Board no formal resolution is required.

Prepared by:

***J. Martens***

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Jake Martens  
General Manager of Corporate  
Services

Concurrence:

***M. Rutten***

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Marc Rutten, P.Eng  
General Manager of  
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Attachments: Appendix A – P90 - Value Management Review of Capital Projects

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|--|--|---|
| <b>Policy Title:</b> Value Management Review of Capital Projects |  | <b>Policy Number:</b> P90                 |
| <b>Policy Category:</b> Engineering                              |  |   |
| <b>Approval Date:</b> Insert approval date                       |  | <b>Policy Owner:</b> Engineering Services |
| <b>Approved by:</b> Sewage Commission<br>Water Committee         |  | <b>File Reference:</b> 0340-50            |

**PREAMBLE**

1. A value management policy that incorporates third party professional oversight has been developed for the Comox Valley Regional District capital projects as a result of the successful experience in implementing value management practices on the Comox Valley Water Treatment and Sewer System Conveyance Projects, the need identified through the Utilities Governance Report to increase the level of expertise in the decision making process, and to provide additional accountability and transparency through the decision making process for large or complex capital projects.

**PRINCIPLES**

2. Value management reviews are becoming part of best practices for large capital project development as they are widely recognised in enabling:
  - a. The assessment and enhancement of functional performance;
  - b. Identification and evaluation of possible alternatives that add value; and
  - c. Increased confidence for decisions and investment.

**PURPOSE**

3. Value management reviews are a systematic and function-based approach to improve the value of projects by utilizing a multidisciplinary team of subject matter experts to analyze and review the project functions. In addition application of value management principles on large capital projects provides accountability and transparency through the decision making process.

**SCOPE**

4. The value management policy will apply to all capital projects where:
  - a. The project is identified within the financial plan and the total project costs are at or above \$25.0M as identified in a business case, a minimum of one Value Management review shall be conducted; or,
  - b. The project is identified within the financial plan and the total project costs are at or above \$75.0M as identified in a business case, a minimum of two Value Management reviews shall be conducted. Where two management reviews are required, at the discretion of the project manager, the design reviews shall be considered and implemented at logical stages in the project such as after options analysis/concept development and preliminary design of the preferred option; or,
  - c. The project is identified within the financial plan, is below the above noted financial thresholds but is identified by the project manager as potentially having significant impact on the public, increased complexity and associated risk or potential for impacting environmentally sensitive areas.

## DEFINITIONS

**Facilitator:** Qualified Value Management review leader who is not the project manager, a project team member or the project sponsor, that manages and leads the Value Management Workshop and Work Plan.

**Function:** The intent or purpose that must be achieved by the project.

**Total Project Cost:** Costs that include all direct and indirect costs related to a project, including but not limited to consulting, administrative and construction expenditures.

**Value:** Is an expression of the relationship between the reliable performance of functions while using the least amount of resources, be it cost, time, materials required to accomplish the function.

$$Value = \frac{Function\ Performance}{Resources}$$

**Value Management Workshop:** The event during which the facilitator leads the multidisciplinary team through the Value Management work plan.

**Value Management Work Plan:** A structured set of steps or phases, to be followed during the Value Management Review. The work plan typically includes pre-workshop, workshop and post workshop activities.

## POLICY

5. This policy represents the minimum requirements that must be completed as part of the Value Management review for all applicable capital projects that meet the criteria outlined within section 4 of the policy scope.
6. The timing and number of Value Management reviews shall be outlined by the Manager of Capital Projects and/or senior management at the onset of any capital project. Provided as Appendix A is further discussion on the considerations that should be made in regard to timing for the value management review based on the project phase. A plan shall be developed that includes:
  - a. Identification of the function(s) to be reviewed;
  - b. Acquisition of internal and external specialists and other resources that will participate in the review;
  - c. The necessary background documents that will be needed as part of the Value Management review;
  - d. Proposed timing of the Value Management review workshop(s); and
  - e. Schedule and timing for reviewing and presenting Value Management review outcomes.
7. Each Value Management Review work plan shall contain the following mandatory sections and related content.
  - a. **Pre-Work Workshop:** Gathering of all necessary and relevant background documentation and information. Providing to review team ahead of the Value Management workshop.
  - b. **Value Management Workshop:** The event where the value management facilitator leads the value management team through a value management workshop, to identify any alternative solutions to the project. The duration of the workshop can be adjusted to fit the scope and complexity of the project but should follow recommended best practices as outlined by Value Analysis Canada and include:
    - i. **Function Analysis:** Identify the functions of a project including defining, evaluating and classifying functions.

- ii. Creativity Phase: Value management team members brainstorm and generate creative ideas/alternatives to satisfy the project functions.
  - iii. Evaluation Phase: Value management team members review ideas/alternatives and evaluate which ideas have the most potential to improve value of the project and should be considered further in the development phase.
  - iv. Development Phase: Value management team members develop in sufficient detail the ideas/alternatives developed so that they can be compared against the originally proposed solution.
  - v. Presentation Phase: Developed ideas/alternatives and associated recommendations are presented to the project team for review and assessment.
- c. Post Workshop Review: Value alternative recommendations from the Value Management review will be further reviewed by the project team. All alternatives that are accepted or rejected for implementation will be documented.
  - d. Final Report Presentation: The final report will be presented to the respective Committee or Commission for consideration and approval.

### **ROLES AND RESPONSIBILITIES**

- 8. Working in conjunction with the Manager of Capital Projects, senior management for the respective department will be responsible for identifying capital projects wherein this policy will apply. Where this policy is applicable the Manager of Capital Projects will be responsible for coordinating and conducting the necessary value management reviews.

### **REVISION HISTORY**

| <b>Approval Date</b> | <b>Approved By</b> | <b>Description of Change</b> |
|----------------------|--------------------|------------------------------|
|                      |                    |                              |
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|                      |                    |                              |

### **REFERENCES**

- 1. SAVE International Website
- 2. Value Analysis Canada Website
- 3. Corporate Project Management, Value Management Standard V1.1, City of Calgary 2017
- 4. Corporate Project Management, Value Management Guidance V1.2, City of Calgary 2016

### **APPENDIX**

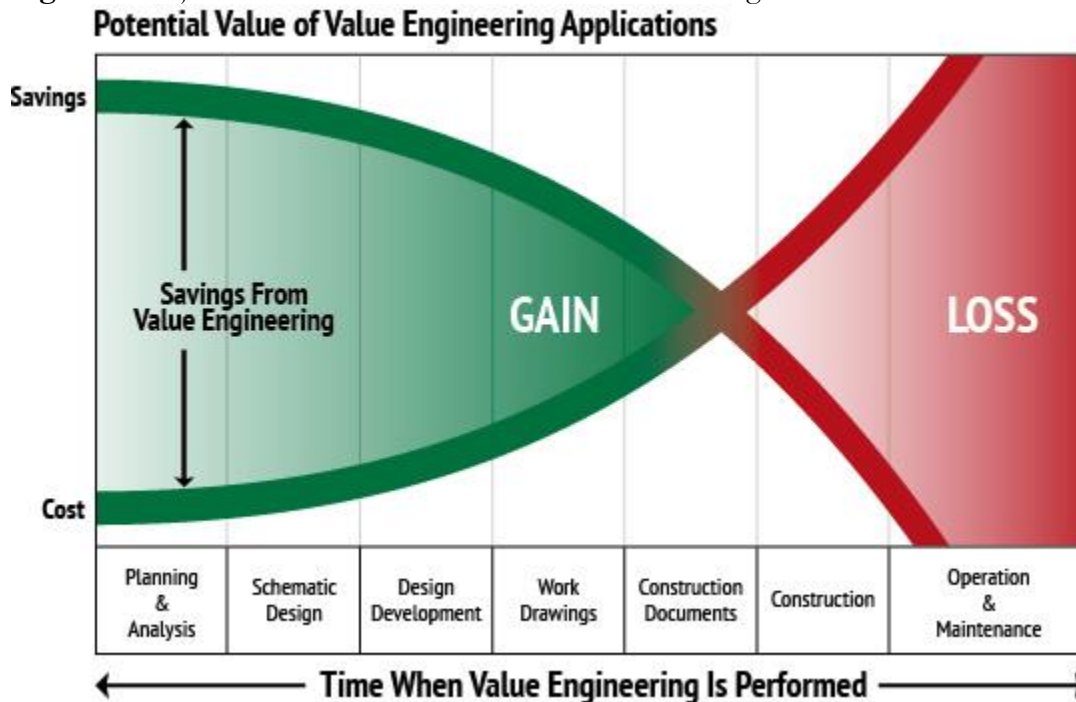
Value Management Review and Project Phase Considerations

## APPENDIX A – Value Management Review and Project Phase Considerations

A Value Management Review can be undertaken at any phase in a project; however, the earlier in the project the review occurs, the lower the cost to implement any resulting changes, and resistance to change is less. It is the responsibility of the Manager of Capital Projects and/or senior management to determine for each specific project when the most logical timing to complete the Value Management Review(s).

For projects where one Value Management review is planned the best application of a Value Management review is no later than completion of the Concept or Schematic Design (15 per cent) phase, as illustrated in the figure below.

Figure 1: Project Phase and Potential Value of Value Management Review<sup>1</sup>



Where two value management reviews are required, as outlined in the British Columbia Ministry of Transportation and Infrastructure’s Value Analysis/Value Engineering Policy and Guidelines, the two reviews are typically completed at the completion of the planning and analysis phase, when a preliminary scope has been developed following review of available options and the second review is carried out during the design development phase. As noted by Value Analysis Canada, studying a project early in its developments provides the greatest opportunity for change; however, the details and costs of the solution may not be well defined, where later in the project evolution, more information may be available supporting review and improvement of the solution being proposed. Again the exact timing of these reviews should be given careful consideration by the Manager of Capital Projects and/or senior management in relation to each specific project.

<sup>1</sup> UA Builders Group, “Value Engineering Overview,” 2020