Intended Use

The Contract Variance Request (CVR) process is initiated by the Contractor and is used to review and evaluate Contractor proposed changes to contract requirements that do not require substantial engineering and design evaluation by the Consultant and the Department. If the proposed contract variance request requires substantial engineering and design review and evaluation by the Consultant and the Department, then the Contract Design Change Proposal process shall be utilized in accordance with Subsection 1.2.7, Contract Design Change Proposals, of the General Specifications and Specification Amendments for Highway and Bridge Construction. For example, if a Contractor proposes to supply precast concrete girders instead of steel girders this would be considered a Contract Design Change Proposal.

The use of the construction change management process and its associated form templates requires collaboration, communication and judgement within the project team to determine the process most suitable for each circumstance, which can vary between projects.

Examples of where a CVR would typically be used include:

- Deck pour sequence modifications.
- Glass fibre reinforced polymer reinforcing for mechanically stabilized earth wall precast concrete panels.
- Gas tungsten arc welding (GTAW) process for stainless steel plate welding for expansion bearings.
- Modification to the stressing strand pattern layout of a precast concrete girder.
- Steel girder transportation protection is omitted in lieu of washing on site.

Instructions for Use

A process workflow map is provided to illustrate the typical sequence of steps in the CVR process, including identification of the party responsible for each step, and should be referenced as necessary throughout the process.

The CVR form shall be completed comprehensively to support timely and accurate communication, evaluation and documentation of the variance request. Contract document references, photographs, sketches, technical data sheets, inspection reports, and other supporting information shall be included, as applicable. If additional space for responses or supporting information is required than can be accommodated by the form, they can be included as attachments.

The 'Description of Contract Variance' section of the CVR form completed by the Contractor includes mandatory fields detailing the benefits of the proposed change to both the Contractor and the Department. Leaving either of these fields blank is cause for rejection of a CVR.

If revisions are required during completion of the CVR process, a new version of the form should be issued along with sequential revision numbering to track its development.

Signature fields not required are to be crossed out or marked N/A.

The Consultant shall complete a risk assessment, using the risk assessment form, as part of the CVR process to support the engineering evaluation of the proposed variance and clear identification of the engineering professional responsible for the assessment of risks. If the contract variance request contains no modification to a professional engineered work product (e.g. schedule, lane closure, traffic accommodation, environmental restriction periods, permits, etc.) a risk assessment may not be required, as determined by the Department. The Department's Technical Standards Branch is responsible for engineered standards including standard drawings, standard specifications, and

specification amendments. If contract variances are requested to standards, the transfer of engineering responsibility shall be identified within the risk assessment/contract variance process.

Department staff participating in the CVR process share responsibility for the acceptance of contract variances. The Department's Project Administrator or Project Sponsor may engage the applicable Technical Standards Branch area of expertise to review and provide comment on the CVR process to support the development of the Department's disposition and/or acceptance of the variance request, including review of the assignment of engineering responsibility for the variance. For variances classified as low/medium risk, the project administration team will typically not engage the Technical Standards Branch. For variances classified as high risk, the Technical Standards Branch shall be engaged to contribute to the evaluation and risk assessment of the proposed variance. The 'Department Technical Standards Branch' signature line is only required when they have been engaged in process evaluation.

The risk assessment uses a 5x5 matrix to evaluate the likelihood and consequence of each identified risk resulting from the proposed variance. The individual risks are calculated by multiplying their assigned likelihood and consequence factors. Risk categories (quality & durability, safety, operations, aesthetics) may contain multiple identified risks, with each one evaluated separately and then compared to determine the maximum calculated risk for the associated category. The maximum calculated risk for each category is the single highest calculated risk value, not the total or average. The category risks are then weighted to determine an overall risk assessment for the variance, classified as low, medium, or high.

The risk assessment shall also include the identification of all risk mitigation measures which were considered part of evaluating the risk likelihoods and consequences. Risk mitigation measures are often necessary for a CVR to be determined acceptable, as the risk profile of the CVR should be similar to that required by the Contract. Risk mitigation measures shall be included in the conditions for acceptance of the proposed variance within the CVR form. Rating determinations in the risk assessment shall be inclusive of the condition/risk mitigation measures (i.e. 'post-mitigation' risk ratings). For example, a Class HPC concrete pour is scheduled to occur in late October and a variance request is received to place concrete between the hours of 10 am and 6 pm, contrary to the requirements of the Standard Specifications for Bridge Construction. Mitigation measures that form part of the risk evaluation and potential acceptance of this variance request could include, but not be limited to, the presence of overcast conditions (no direct sunlight) and wind speeds which are forecast to be less than 10 km/hr for the duration of concrete placement/finishing operations.

The Consultant shall attach the risk assessment form to the CVR form and provide a summary of the risks, evaluations, mitigation measures, and conditions for consideration as part of determining the Consultant and Department's dispositions.

The Consultant's risk assessment focuses on the engineering evaluation of the proposed variance and does not consider project cost and schedule impacts/risks. In addition to considering the results of the risk assessment, the Consultant's disposition shall consider all project impacts/benefits associated with the proposed variance, including to cost and time to complete, and provide a recommendation to the Department.

Payment adjustment amounts included as part of proposed variances are to be determined based on an engineering assessment of aesthetic, durability, safety and operational impacts over the design service life of the structure, expressed as net present value. Payment adjustments may also include consideration of risks transferred to the Department associated with the non-conforming work. They may also include any additional engineering consulting fees, as determined by the Department, required to evaluate, assess and make recommendations related to the proposed variance. Any additional engineering consulting fees or payment adjustments required by the CVR are approved using the Order for Extra Work (OEW) process (typically a negative value OEW).

Once the Department's disposition is completed, the form is returned to the Contractor for their review. When the CVR is marked accepted as-is or accepted with modifications and the Contractor agrees with both the Consultant

and Department's dispositions, including any conditions of acceptance, the Contractor proceeds as noted in the CVR. If the Contractor is not in agreement with the Consultant and Department's dispositions, they proceed in accordance with the Contract. When the CVR is marked declined, the Contractor proceeds in accordance with the Contract.

Acceptance of a CVR is determined at the sole discretion of the Department.

Process Timelines

CVR process timelines can vary significantly based on the complexity, level of engineering review required, and risks identified.

Early, comprehensive, and complete submissions by the Contractor are beneficial to all parties in reviewing variance requests, particularly when engineering design or evaluation is required. Timelines for review and acceptance of proposed variances should attempt to align with the Contractor's work schedule to minimize project impacts whenever possible. In all cases, completion of the CVR process shall be a priority for all parties, with each step completed within reasonable timelines in order to prioritize the evaluation and determination of acceptability of the CVR within reasonable timeframes.

Lines of communication and expectations for the submission, review and processing of Construction Change Management forms should be discussed during the preconstruction meeting. If items are identified during the project which require expedited resolution to avoid safety, cost, schedule, or other time sensitive impacts, they shall be brought to the attention of all parties as soon as possible. The project team shall then work collaboratively to determine a path forward, establishing expedited timelines to minimize the associated impact(s).

Result of Use

The use of the CVR process will result in one of the following outcomes:

- The CVR is accepted as-is or with conditions/modifications outlined by the Consultant and/or Department.
  - If the Contractor accepts the conditions/modifications outlined by the Consultant and/or Department, the Contractor proceeds in accordance with the CVR.
  - If the Contractor does not accept the conditions/modifications outlined by the Consultant and/or Department, the Contractor proceeds in accordance with the Contract.
  - If there are payment and/or other adjustments required, the Order for Extra Work process is initiated prior to proceeding.
- The CVR is declined, and the Contractor proceeds in accordance with the Contract.

Contact

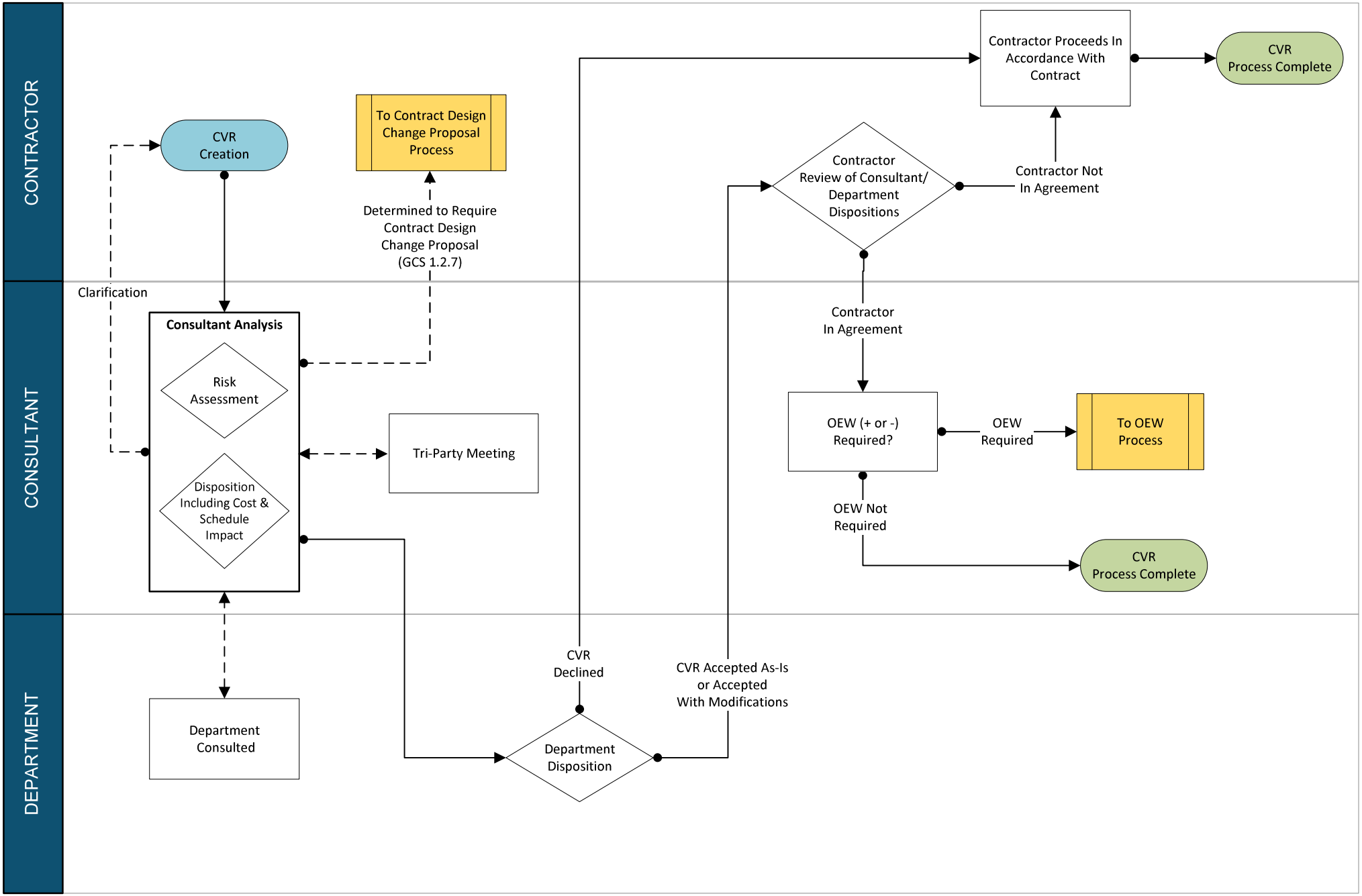
For more information or feedback on bridge construction administration change management processes please contact the project management office at:

tec.cm-pmo@gov.ab.ca

The change management process reference material provided above is not required to be included with the following process form as part of project transmittals/submissions.

Contract Variance Request (CVR) Process Workflow

Alberta Transportation & Economic Corridors – Bridge Construction Administration Change Management



Contract Variance Request (CVR)

Alberta Transportation & Economic Corridors Bridge Construction Administration Change Management

Project Details

Contract Number	Bridge File	Bridge Name/Project Description
CON0000000	BF00000-0	Highway ## over ABCDE River, ## km NW of Town FGH

Contractor

Consultant

CVR Information

Subject

CVR Number	Revision Number	Creation Date	High Priority	Requested Response Date
CVR000	0	YYYY-MM-DD	☐ Yes	YYYY-MM-DD

Contract Reference Documents (if applicable)

Standard Specification Section Number(s)

Drawing Number(s)

Special Provision Section Number(s)

Description of Contract Variance Request (attach supporting documents as required)

Attached Document(s):
(Document Name/File Name - Document Description – Page Count)

Benefit to Contractor of Proposed Change

Benefit to Department of Proposed Change

Proposed Payment Adjustment?

☐ Yes ☐ No +/- $

Proposed Site Occupancy Adjustment?

☐ Yes ☐ No +/- # Days

Proposed Lane Closure Adjustment?

☐ Yes ☐ No +/- # Days

Proposed Completion Date Adjustment?

☐ Yes ☐ No +/- # Days

Proposed Interim Completion Date Adjustment?

☐ Yes ☐ No +/- # Days

Contractor Representative (Print Name)

Signature & Date

Consultant Risk Assessment Summary
(attach completed risk assessment form, and supporting documents as required)

☐ RISK ASSESSMENT COMPLETED ☐ RISK ASSESSMENT NOT REQUIRED

Attached Document(s):
(Document Name - Description)

Consultant Representative (Print Name)

Signature & Date

Consultant Disposition (attach supporting documents as required)

☐ RECOMMEND ACCEPT AS-IS ☐ RECOMMEND ACCEPT WITH MODIFICATIONS ☐ RECOMMEND DECLINE

Attached Document(s):
(Document Name - Description)

Proposed Payment Adjustment?
☐ Yes ☐ No +/- $

Proposed Site Occupancy Adjustment?
☐ Yes ☐ No +/- # Days

Proposed Lane Closure Adjustment?
☐ Yes ☐ No +/- # Days

Associated OEW
OEW000

Proposed Completion Date Adjustment?
☐ Yes ☐ No +/- # Days

Proposed Interim Completion Date Adjustment?
☐ Yes ☐ No +/- # Days

Consultant Representative (Print Name)

Signature & Date

Department Disposition (attach supporting documents as required)

☐ ACCEPT AS-IS ☐ ACCEPT WITH MODIFICATIONS ☐ DECLINE

Attached Document(s):
(Document Name - Description)

Proposed Payment Adjustment?
☐ Yes ☐ No +/- $

Proposed Site Occupancy Adjustment?
☐ Yes ☐ No +/- # Days

Proposed Lane Closure Adjustment?
☐ Yes ☐ No +/- # Days

Associated OEW
OEW000

Proposed Completion Date Adjustment?
☐ Yes ☐ No +/- # Days

Proposed Interim Completion Date Adjustment?
☐ Yes ☐ No +/- # Days

Department Technical Standards Branch (Print Name)

Signature & Date

Department Project Administrator (Print Name)

Signature & Date

Department Sponsor (Print Name)

Signature & Date