



# Existing Structures – Structure Removal – Bridge Removal – General – Submittals and Quality Assurance

## Revision and Approval

Revision	Date	Nature of Changes	Approved By
0	12-31-2021	Original Issue	Richard Foley

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Contact [SC Technical Team A](#) for questions

## Background

This process establishes Structure Construction (SC) responsibilities for review and authorization of bridge removal submittals and quality assurance for full or partial removal of structures.

Prior to reviewing this BCM, it is essential to review [Contract Specifications](#), Section 60-2.02A(3), *Existing Structures – Structure Removal – Bridge Removal – General – Submittals*, and Section 60-2.02A(4), *Existing Structures – Structure Removal – Bridge Removal – General – Quality Assurance*, that this BCM is based on as identified in the title block above. The information in the *Contract Specifications* typically will not be repeated in the text of this BCM.

## Process Inputs

1. Bridge removal work plan
2. Calculations (if required)

## Procedure

1. All work associated with the process is charged as [Project Direct Construction](#).
2. Inspection of field work for this process is:

- a. [Intermittent](#) during daily site visits to verify existing facilities remain in service.
3. Before construction begins:
    - a. Review existing conditions, as-built project plans, and the RE Pending File.
    - b. Determine if the bridge removal work plan requires an engineer's stamp and substantiating calculations demonstrating stability of the structure during each stage of removal.
    - c. Address the following bridge removal topics at the preconstruction conference:
      - i. Recommend that the Contractor investigate existing conditions and review as-built project plans.
      - ii. Contract requirements and specifications.
      - iii. Railroad requirements and specifications.
      - iv. Permitting and Environmental needs/restrictions.
      - v. Cal/OSHA [Construction Safety Orders](#) requirements. Note that these are found in California Code of Regulations (CCR), Title 8, Division 1, Chapter 4, Subchapter 4.
      - vi. Discuss traffic control requirements.
      - vii. Discuss engineer signing plans be present during bridge removal activities.
    - d. Assess complexity of review and with the assistance of the Bridge Construction Engineer determine if additional resources/assistance will be required:
      - i. If additional assistance is required, contact the Structure Designer and the SC Falsework Engineer.
    - e. Begin communication with the Contractor and the bridge removal subcontractor before the bridge removal work plan is submitted. Schedule a pre-submittal meeting or make a phone call to review items that must be addressed in the bridge removal work plan. Refer to [Attachment 1, Bridge Removal Work Plan Review](#), for suggested topics to review.
    - f. Perform an initial review of the bridge removal work plan submittal and calculations for completeness and conformance with all environmental regulatory agency requirements, per *Construction Manual, Chapter 7, Environmental Stewardship*, and Cal OSHA requirements found in the *Construction Manual, Chapter 2, Safety and Traffic*.
    - g. Perform an engineering review of the submittal in accordance with the *Contract Specifications, Section 60-2.02A(3), Existing Structures – Bridge Removal – Submittals*, as outlined in Attachment 1, *Bridge Removal Work*

- Plan Review, or [Attachment 2, Bridge Removal Over and/or Adjacent to Railroad Tracks](#), if railroad is involved.*
- h. Determine whether daily inspection reports will be required.
  - i. Resolve non-compliant issues with the bridge removal work plan by rejecting the submittal in accordance with [BCM C-11, Shop Drawing Review of Temporary Structures](#).
  - j. When the bridge removal work plan submittal is ready for authorization:
    - i. When there is no railroad involvement, proceed to Step 3.k.
    - ii. When there is railroad involvement:
      - 1. Review the Railroad Submittal Checklists (located on the [SC Technical Team A webpage](#) or is available by request from the SC Falsework Engineer) and verify that all pertinent information required by the railroad is listed on the shop drawings, before sending the submittal package to the SC Falsework Engineer.
      - 2. Send the bridge removal work plan submittal and your calculations to the SC Falsework Engineer per BCM C-11, *Shop Drawing Review of Temporary Structures*. The SC Falsework Engineer will work with the railroad company to obtain their approval of the bridge removal work plan submittal per [Falsework Manual](#), Chapter 2, *Review of Shop Drawings*.
      - 3. Review Attachment 2, *Bridge Removal Over and/or Adjacent to Railroad Tracks*.
  - k. Authorize the bridge removal work plan by sending the authorized bridge removal work plan along with the engineering analysis report to the Contractor, using the procedure outlined in BCM C-11. Format for the engineering analysis report is similar to the temporary structure analysis report used for temporary structures.
  - l. Send the authorized bridge removal work plan, contractor and Structure Representative calculations, and the engineering analysis report to the SC Falsework Engineer per BCM C-11.
  - m. Discuss the extensive list of items detailed in the *Contract Specifications* at the preconstruction meeting.
4. During construction:
- a. Refer to [BCM 60-2.02C, Existing Structures – Structure Removal – Bridge Removal – Construction](#).
5. Following construction:

- a. File all correspondence and daily reports in the appropriate category in the project records as specified in the *Construction Manual*, [Section 5-102](#), *Contract Administration – Project Records and Reports – Organization of Project Documents*.

## **Process Outputs**

1. Authorized bridge removal work plan
2. Engineering analysis report
3. Daily inspection report for bridge removal activities from engineer signing the plans, when bridge removal work plan requires signature of registered engineer

## **Attachments**

1. [Attachment 1](#), *Bridge Removal Work Plan Review*
2. [Attachment 2](#), *Bridge Removal Over and/or Adjacent to Railroad Tracks*