**All-Timber Portable Bridge (6.1 m out-to-out)**

**Requirements & Specifications**

**BC Ministry of Forests**

**Red Text** is instructional information to assist template users (i.e.: Ministry staff) to complete this template for a specific project. Delete all red text before finalizing the document.

**Yellow highlighting** identifies locations requiring user action or input. Delete all yellow highlighting before finalizing the document.

**Ministry Engineer’s Role**

A Ministry Engineer should be involved with the completion and adaptation of this template for each Ministry project.

**Finalizing the Document**

Save to PDF once the document is finalized. Do not print to PDF. Printing to PDF will prevent hyperlinks from working.

**Ministry Structure Number(s): Specify Structure Number(s)**

**Scope of Work**

Fabricate and supply XX, specify number of structures all-timber portable bridge(s) for state office name and locations and deliver to describe location or “as per attached map”.

**Terms and Conditions**

**Contractor General Qualifications**

The bidder must provide proof of capability of completing the works outlined in this document, if requested by the Ministry of Forests (the Ministry).

\* Proof for the purposes of the foregoing is required to be submitted within 4 business days of a request from the Ministry, and must include, but is not necessarily limited to:

1. a description of the relevant products fabricated, supplied and delivered by the bidder noting configuration and relevant dimensions;
2. evidence that the bidder has successfully carried out and completed works of a similar nature or is otherwise fully capable of fulfilling a contract having the necessary qualifications;
3. a list of relevant fabricating equipment (and its condition) that the bidder intends to use to fulfil the contract; and
4. evidence that the personnel being utilized by the bidder to perform the works for this contract have the necessary technical and trade qualifications, or licenses necessary to fulfil a contract.

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| The Ministry shall be the sole and final judge of the sufficiency of the proof provided. |

* The Ministry may, at any time and from time to time, after closing time of this Invitation to Quote, require any bidder, or successful bidder, to satisfy the Ministry, in its sole discretion, that they have the necessary qualifications, finances, equipment, fabrication site, material, personnel, and resources available to carry out the fulfillment of any contract resulting from this Invitation to Quote in a safe, competent manner, within the time limits, and any other requirements specified in the Invitation to Quote, including by delivering information to the Ministry in writing. Any bidder, or successful bidder, asked to provide this information must comply with the request within 4 business days from the date on which the request was made. The Ministry reserves the right to reject the quote of any bidder, or to terminate the contract with any successful bidder, that does not provide information to the satisfaction of the Ministry, in its sole and absolute discretion, in response to any such request.
* The Ministry, at its sole discretion, may elect to have the bidder’s fabrication facility and equipment reviewed to satisfy itself of a bidder’s likely ability to carry out the terms and conditions of this tender.

**Subcontractor Qualifications**

* Using a sub-contractor is acceptable. This includes a joint submission by two bidders having no formal corporate links. However, in this case, one of these bidders must take overall responsibility for successful performance of the contract and this must be clearly defined in the bid.
* Sub-contractors must meet the “Contractor General Qualifications” and other relevant qualifications described in this ITQ, particularly if they will be fabricating and supplying primary bridge components (steel girders, precast concrete girders and panels, timber stringers and portable timber panel modules).
* All sub-contractors, including the subsidiary member of a joint submission, must be approved prior to award of contract by the Ministry. If a bidder proposes to use sub-contractors, the Bidder must include in its bid the names of all its sub-contractors and a description of the work they are proposed to complete. Additionally, the Ministry reserves the right before award of contract to request from a bidder the (1) certificates of qualification of all sub-contractors and (2) documentation demonstrating that subcontractors meet the performance terms and conditions described under the “Contractor General Qualifications” in this ITQ.
* If in the sole opinion of the Ministry a proposed sub-contractor does not meet the qualifications described in this ITQ, the bid will be rejected and a contract will not be awarded.

**Welding Qualifications**

* Bidders responsible for shop welded construction must be certified, at the time of tender and for the duration of fabrication, for Division 1 or Division 2 of CSA Standard W47.1, *Certification of Companies for Fusion Welding of Steel Structures*, with the following exceptions: fabrication of bridge railings, shear connectors for concrete slab bridges, and miscellaneous steelwork for all-timber portable superstructures may be undertaken by companies certified for Division 3 of CSA W47.1.
* Bidders must provide proof of appropriate Canadian Welding Bureau (CWB) certification within 2 business days of a Ministry request.

**General**

* The successful bidder shall not deliver the fabricated materials beyond the dates shown in the schedule without the prior written consent of the Ministry.
* The successful bidder shall warrant all material fabricated and supplied against defects in materials and workmanship for a period of one year from the completion of manufacture. All defective products must be repaired or replaced to the satisfaction of the Ministry as soon as is practicable, at the successful bidder’s own expense.
* The successful bidder will be responsible to rectify, at its cost, any field fit problems of fabricated bridge components attributed to errors in fabrication.

**Schedule for works**

* Upon request from the Ministry, a bidder, or successful bidder, must supply, within 4 business days of the request, a schedule for works which conforms to the required delivery dates of the tender. The schedule must include, but is not necessarily limited to: material receipt dates, fabrication commencement date, a minimum of 3 critical intermediate fabrication milestone dates, and a fabrication completion date. The schedule shall also include timelines for submissions of designs, for Ministry approval. The schedule shall provide a minimum of 5 business days for Ministry review of designs. Failure to provide a satisfactory schedule may result in rejection of the bid, or termination of the contract, at the Ministry’s sole discretion. The Ministry shall be the sole and final judge of the sufficiency of the schedule provided.

**Ministry Bridge Guidelines, Standards and Specifications (BGSS)**

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| --- |
| All materials, design, fabrication, storage, lifting, handling, delivery and all other aspects of the successful bidder’s work shall be undertaken in conformance with the [Bridge Standards Manual](https://www2.gov.bc.ca/gov/content?id=B1581B390E7E44B384A67D123EF6145D). |

**In-Plant Quality Assurance (QA) Inspection**

* All materials must conform to the current Ministry standards and shall not be acceptable without in-plant inspection by the Ministry’s in-plant quality assurance inspection agency (below):

McElhanney Consulting Services Ltd.  
Suite 500, 3960 Quadra St., Victoria, BC V8X 4A3

Telephone (250) 370-9221

**Important Notes:**

* The Ministry’s in-plant Quality Assurance inspections during fabrication are not substitutes for the successful bidder’s or his subcontractor’s own required Quality Control measures, including their obligation to perform the work in accordance with the various standards and specifications and other requirements of the project.
* The successful bidder must contact the Ministry’s in-plant inspection agency to arrange for an in-plant inspection 72 hours prior to commencement of fabrication. Scheduling of any in-plant inspections requires mutual agreement between the successful bidder and in-plant inspection agency.
* The Ministry in-plant inspector shall be supplied with copies of Ministry accepted Structural Design Drawings signed and sealed by the successful bidder’s design engineer, including copies of Ministry accepted shop fabrication drawings.

*Deficiency resolution process and pre-shipment requirements:*

* Where the Ministry’s in-plant inspector identifies deficiencies with the successful bidder’s work, the deficiencies shall be corrected at the successful bidder’s expense, including the cost of any additional inspection works undertaken by the Ministry’s in-plant inspector. The cost of the additional inspection work, required in order to assure the Ministry that deficiencies are acceptably rectified, shall be deducted by the Ministry from the supplier’s invoice(s) for the works.
* During fabrication, if the Ministry’s in-plant inspector observes any deficiencies with the work, the successful bidder will:
  + for observed deficiencies considered “**significant**” in the opinion of the in-plant inspector, provide documentation to the in-plant inspection agency, Ministry Engineer and Ministry HQ Records ([FLNREng.Branch@gov.bc.ca](mailto:FLNREng.Branch@gov.bc.ca)) describing how the deficiencies are proposed to be remedied prior to making any repairs; in this case and with reasonable advance notice, the successful bidder must contact the in-plant inspection agency to arrange for an additional inspection by the in-plant inspector to witness the repairs.
* Bridge materials shall not be shipped to the Ministry until the Ministry’s in-plant quality assurance inspector has provided written notification to the supplier that a “last” QA inspection of the bridge supply order has occurred. Prior to shipping of bridge materials, the supplier shall be responsible to confirm that all non-conformances, if any, have been rectified or accepted to the satisfaction of the Ministry’s in-plant quality assurance inspector.

**Material Specifications**

* All materials utilized in fabrication shall be new, not previously used in any application.
* Each bridge shall be marked with identification information in accordance with the Ministry [Bridge Identification Standard](https://www2.gov.bc.ca/assets/download/2D3EA7C112FA4BCAA46CBF0DD9AC3105).
* Each component with weight > 5,000 kg shall have its weight identified on the component or on a durable tag attached to the component.

**Fabricated Steel Components**

* Steel components shall be in accordance with CAN3/CSA G40.21-M 300W.
* Welding of fabricated steel components shall be in accordance with CSA W59 by fabricator certified to W47.1 Division 3.

**Hardware**

* All threaded rods, nuts, washers and spikes to be ASTM A307 (Galvanized)

**Concrete**

Concrete components must be fabricated and supplied in accordance with the [Bridge Standards Manual](https://www2.gov.bc.ca/gov/content?id=B1581B390E7E44B384A67D123EF6145D).

**Wood**

* All lumber products (untreated or treated) shall be supplied in accordance with the Ministry [Bridge Timbers & Lumber Material Standard](https://www2.gov.bc.ca/assets/download/6A81FFD75DBE43A59E6FDA78260E80F1).
* If supply of treated bridge components is required, the Ministry may specify a type of wood preservative from among four allowable types (CCA, ACZA, CR, or PCP-A) in accordance with the Ministry [Pressure Treated Wood Standard for Timber Deck Bridge Components](https://www2.gov.bc.ca/assets/download/4E477F61E0E74FEFBEFA3762991D5837).
* Unless otherwise specified by the Ministry, all treated wood shall be Coastal Douglas‑fir, treated using Chromated Copper Arsenate (CCA) treatment, and third party inspected, in accordance with the Ministry specification document called [Interim Process Specification for CCA Treatment of Coastal Douglas‑fir Wood.](https://www2.gov.bc.ca/assets/download/93D3182E030D491986FEDD63FEBF9FEA)

**Documentation Requirements**

* All documentation itemized below shall be supplied in **electronic Adobe (pdf) format**.
* **All documents shall be clearly identified with the bridge structure number pertaining to each applicable structure.**

1. **Required documentation for steel and concrete components:**

* For each fabricated bridge, the successful bidder shall supply documentation for steel and concrete components (as applicable) within established time frames to the (1) Ministry’s in-plant inspection agency, (2) Ministry Engineer responsible for design and fabrication review, and (3) Ministry HQ records ([FLNREng.Branch@gov.bc.ca](mailto:FLNREng.Branch@gov.bc.ca)) in accordance with the tabular requirements below.

**Table of Documentation Requirements for Steel and Concrete Components**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Successful bidder’s documentation for fabricated steel and concrete bridge components** | **Time Frame for Submitting Documentation** | **Successful bidder to supply documentation to the following party or parties if indicated ‘Yes’** | | |
| **In-plant inspection agency (McElhanney)** | **Ministry Engineer responsible for design and fabrication review** | **Ministry HQ Records** |
| **Test Results for Steel:**  - Mill Test Certificates of structural steel plates and sections  - any Radiographic or Ultrasonic test reports  - Mill Test Certificates of steel reinforcement for concrete components | Within 10 business days of the date of written notification by the in-plant inspector that a “last” QA inspection of bridge girder component fabrication has occurred | **Yes** | No | No |
| **Test Results for Concrete:**  - Formwork release concrete compressive strength test reports | Concrete test reports within 5 business days of testing and prior to shipping of fabricated concrete bridge components | **Yes** | No | No |
| - 7 day concrete compressive strength test reports | Concrete test reports within 5 business days of testing | **Yes** | **Yes** | **Yes** |
| - 28 day concrete compressive strength test reports | Concrete test reports within 5 business days of testing | **Yes** | No | No |
| **Deficiency Documentation (if applicable)**  - For observed **significant** deficiencies, submit documentation of **proposed** corrective action for review | Prior to making any repairs | **Yes** | **Yes** | **Yes** |

1. **Required documentation for wood components:**

* Lumber quality verification documentation: **If** lumber products are part of a bridge supply order, for each fabricated structure and within 10 business days of the date of written notification by the Ministry In-Plant Inspector that a “last” QA inspection of the bridge supply order has occurred, the successful bidder shall supply a copy of the (1) lumber shipment bill of materials that was prepared by the shipping saw mill, and (2) Certificate of Inspection (if the Ministry will accept non-grade stamped lumber in a shipment) to the in-plant inspection agency and to the Ministry Engineer responsible for design and fabrication review. This documentation must contain the information described in the Ministry [Bridge Timbers & Lumber Material Standard](https://www2.gov.bc.ca/assets/download/6A81FFD75DBE43A59E6FDA78260E80F1).
* Documentation for CCA treated Coastal Douglas-fir wood: For CCA treated Coastal Douglas-fir, supply the documentation described in the Ministry [***Interim Process Specification for CCA Treatment of Coastal Douglas-fir Wood*.**](https://www2.gov.bc.ca/assets/download/6A81FFD75DBE43A59E6FDA78260E80F1)
* Documentation for Ministry specified combinations of allowable treated wood species and treatment types *other than* CCA-treated Coastal D-Fir (see previous bullet): For other specified allowable wood species and treatment type combinations, supply the documentation described in the Ministry [***Pressure Treated Wood Standard for Timber Deck Bridge Components***](https://www2.gov.bc.ca/assets/download/4E477F61E0E74FEFBEFA3762991D5837).

**Invoicing**

* The successful bidder must rectify any deficiencies with the work, and supply all documentation as described above, before sending an invoice to the Ministry for payment. The Ministry will not pay an invoice until the successful bidder has fulfilled all the requirements of its purchase order or contract including supply of all documentation.

**The remainder of this template needs to be filled out once for each structure ordered as part of this requisition. The Ministry Engineer shall add to these specifications as required for each specific structure.**

**All-Timber Portable Bridges**

**Structure Specific Information for:**

**Ministry Structure #: Enter Structure Number**

**Table 1 – Critical Dates and Time Frames**

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| --- | --- | --- |
|  | **ITEM** | **DATE REQUIRED** |
| 1.1 | **Complete Materials Fabrication**  *(Means: Completed materials fabrication, Ministry In-plant Inspection, and  Ministry acceptance of all materials at the fabrication facility)* | Date |
| 1.2 | **Billing Submission** *(Latest date Billing to be received by the Ministry)* | Date |
| 1.3 | **Estimated Delivery Date** *(Actual date to be specified by the Ministry,  with a minimum one week notice prior to  required product delivery date/time.)* | Consider time of anticipated installation, then specify a date range |
| 1.4 | **Maximum Storage Period** *(Possible storage by fabricator prior to delivery.)* | Date |

**Table 2 – General Structure Information**

|  |  |  |
| --- | --- | --- |
|  | **ITEM** | **DESCRIPTION** |
| 2.1 | **Ministry Engineer responsible for design and fabrication review** | Provide contact info: name, office name, address, phone number, E mail address |
| 2.2 | **Structure Number** | Structure Number |
| 2.3 | **Crossing Name** | Crossing Name |
| 2.4 | **Girder Out-to-Out Length** *(metres)* | 6.1m |
| 2.5 | **Design Vehicle (BCL-625 OR L-100) as per**  [Bridge Standards Manual](https://www2.gov.bc.ca/gov/content?id=B1581B390E7E44B384A67D123EF6145D). | Select one of the following – BCL – 625 OR L – 100 |
| 2.6 | **Width Between Curbs** *(metres)* | 4.3m |

**Table 3 – Superstructure**

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| --- | --- | --- | --- |
|  | **ITEM** | **STD. DWG.** *(title and number)* | **DESCRIPTION** |
| 3.1 | **All-Timber Portable Bridge Dwgs** | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | 6.1 m out-to-out length  All-Timber Portable Bridge |
| 3.2 | **Timber Stringers, Cross Ties and Sub-deck**  All specified No 1 grade members are to be National Lumber Grades Authority (NLGA) stamped | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | Treated OR Untreated  Wood Treatment Type (specify one only): CCA, or ACZA, or CR, or PCP – A  OR  Treatment Type is Supplier’s choice |
| (Sub) Deck Planks | Untreated D Fir-L OR “Untreated Hem-Fir North or SPF West”  OR  Treated Coastal D-Fir OR Treated Hem-Fir North |
| Cross-ties | Untreated DFir - L  ORTreated Coastal D-Fir OR Treated Hem-Fir North |
| Stringers | Untreated DFir-L  OR  Treated Coastal D-Fir OR Treated Hem-Fir North |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **ITEM** | **STD. DWG.** *(title and number)* | **DESCRIPTION** |
| 3.3 | **Timber Sills** | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | Treated Coastal D-Fir |
| 3.4 | **Timber Running Planks** | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | Untreated D Fir-L OR “Untreated Hem-Fir North or SPF West” |
| 3.5 | **Bulkhead Planks** | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | Treated Coastal D-Fir  Supply adequate number of 89x241x3600 planks for coverage from bottom of sill to top of deck |
| 3.6 | **Guardrail Type** | General Notes  [STD-E-025-01](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  Plan & Elevations [STD-E-025-02](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3)  General Arrangement and Details  [STD-E-025-03](https://www2.gov.bc.ca/assets/download/BA436429FD234EEC93124207FA6CA3C3) | Untreated D Fir-L OR “Untreated Hem-Fir North or SPF West”  OR  Treated Coastal D-Fir OR Treated Hem-Fir North  Guardrail Details  Per standard drawings |

**Table 4 – Sub-structure**

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| --- | --- | --- | --- |
|  | **ITEM** | **STD. DWG.** *(title and number)* | **DESCRIPTION** |
| 4.1 | **List applicable abutment components (one component per row, including bearings, base plates, etc)** | Specify particular drawings, where applicable, from the following series:  [STD-EC-050-01 to 21](https://www2.gov.bc.ca/assets/download/A0B98ED5397845C7847D74B9722FC34D) | describe applicable abutment components OR N/A |

**Table 5 – Miscellaneous Materials**

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| --- | --- | --- | --- |
|  | **ITEM** | **STD. DWG.** *(title and number)* | **DESCRIPTION** |
| 5.1 | **Signs** |  | - Bridge Delineators, *(2L & 2R), black and reflectorized yellow; Minimum 300mm x 900 length. c/w mounting hardware.* - Two “Bridge Ahead” signs. *c/w: Posts and Hardware:* *Specify: Treated Wood Posts: 100x100x3000, OR Galvanized Metal Posts (i.e. 2 3m posts c/w 2 1.5m sleeves* |
| 5.2 | **Hardware** | All specified Drawings | All required bolts, nuts, washers, nails, adhesives and any other specified hardware to allow for complete assembly of the bridge |

**Table 6 – Delivery Requirements**

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| --- | --- | --- |
|  | **ITEM** | **DESCRIPTION** |
| 6.1 | **Ministry Field Contact for Delivery & Off-Loading** | Provide contact information: name, office name, address, phone number, E mail address |
| 6.2 | **Location:** | FOBState address, or precise location, or reference attached map as appropriate. If obscure location, provide relative referance. (i.e. Approximately 25 m north east of Quesnel as per attached map). |
| 6.3 | **Assembly Requirements** | Each bridge half to be delivered fully assembled; bulkhead planks to be supplied loose |
| 6.4 | **Offloading** | Offloading equipment shall be the responsibility of the Ministry. Two hours of truck offloading time shall be included free of charge to the Ministry. |
| 6.5 | **Transportation Requirements** | Selection of transport vehicle(s) and preparation of loads shall take into consideration travel on gravel surfaced resource roads. Bridge material suppliers shall ensure that drivers of transport vehicles shall:   * be properly experienced in:  1. driving rough gravel surfaced resource roads with narrow and windy sections of steep grades and switchbacks, other unmarked hazards in variable and inclement weather conditions, and 2. using mobile radios for communicating location and direction;  * ensure that their transport vehicles are suitable, in good mechanical condition, and properly equipped to safely drive on rough gravel surfaced resource roads; * ensure that they know how to use, and that their transport vehicles are properly equipped with, VHF radios with the required standard RR channels and / or appropriate frequencies, for the specific resource roads to be driven, for communicating vehicle location and direction; * follow the posted mobile radio communication protocols for the specific resource roads that they will be driving; * assess likely road conditions at time of transport, and determine if transport vehicles will need to be equipped with a power divider / inter-axle differential lock plus individual drive axle differential locks (full lockers), and recovery tow hooks; * ensure that they have minimum Personal Protective Equipment including hi-visibility clothing and appropriate protective footwear among other necessary standard safety gear; and * be knowledgeable about transport hazards and safe work procedures.   A minimum of 48 hours notice will be provided by the fabricator to the Ministry prior to delivery confirming the date and approximate time.  Any deliveries to a Ministry yard must be coordinated with a local representative and done prior to 2:00 PM. |