**DESIGN SPECIFICATIONS**

**DESIGN CODE:**
- CAN/CSA S6-05 (WITH EXCEPTIONS TO SUIT FORESTRY BRIDGES)
- MINISTRY OF FORESTS AND RANGE BRIDGE DESIGN & CONSTRUCTION MANUAL
- OTHER MINISTRY BRIDGE DESIGN GUIDELINES
- DESIGN VEHICLES: BCL-625 & BCFS L100 TRUCK LOADING

**MATERIALS:**
- ALL MATERIALS SHALL BE NEW

**TIMBER:**
- STRINGER SPECIES & GRADES TO BE IN CONFORMITY WITH THE STRINGER SIZE TABLE
- CROSS TIES TO BE 0.5″L or 0.408″L or SPF No. 1 or BETTER
- STRINGER CROSS TIES TO BE 0"W X 0.5″L or 0.408″L or SPF No. 1 or BETTER
- DECK & SUB-DECK PLANKS TO BE 0.5″L or 0.408″L or SPF No. 1 or BETTER
- CURBS TO BE NO. 2 OR BETTER ANY SPECIES
- TIMBER SILLS TO BE NO.2 OR BETTER ANY SPECIES

**STRUCTURAL STEEL:**
- TO COMPLY WITH CAN3/CSA G40.21-1-W 300W
- WELDING TO BE IN ACCORDANCE WITH CSA W59 BY FABRICATOR CERTIFIED TO W47.1 DIV 1 OR 2.1

**HARDWARE:**
- ALL THREADED RODS, NUTS, WASHERS AND SPIKES TO BE ASTM A307 (GALVANIZED)
- 2-32mm GRADE 5 BOLTS TO BOLT BRIDGE HALVES TOGETHER AFTER INSTALLATION

**DECK PLANKING:**
- SUB-DECK TO BE LAID @ 45° TO TRAVEL, RUNNING DECK PARALLEL TO TRAVEL
- DECK JOINTS SHALL BE CENTERED OVER TIES
- DECK JOINTS ON ADJACENT PLANKS SHALL BE STAGGERED MINIMUM OF 2 TIE SPACES
- DECK NAILING PATTERN TO BE AS SHOWN ON DRAWINGS

**TIMBER TREATMENT:**
- PRESERVATIVE TREATMENT TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF MINISTRY OF FORESTS AND RANGE
- STRINGERS, CROSS TIES AND SUB-DECK TO BE PRESERVATIVE TREATED FOR AN EXPECTED SERVICE LIFE OF GREATER THAN 10 YEARS
- STRINGERS AND CROSS TIES OF 0.5″L OR SPF No. 1 OR BETTER MAY BE TREATED FOR AN EXPECTED SERVICE LIFE (SUBJECT TO USE) OF LESS THAN 10 YEARS
- TIMBER SILLS TO BE TREATED

**LABELLING:**
- EACH BRIDGE HALF SHALL HAVE A METAL LABEL ATTACHED TO THE EXTERIOR STRINGER NOTING THE FOLLOWING:
  - BRIDGE NUMBER AND "PART A" OR "PART B"
  - DATE OF FABRICATION
  - DESIGN VEHICLE LOAD
- LETTERING SHALL BE IN A MINIMUM OF 50mm IN HEIGHT

**INSTALLATION:**
- THE ENTIRE CROSSING TO BE DESIGNED AS PER APEGBC/ABCFF "GUIDELINES FOR PROFESSIONAL SERVICES IN THE FOREST SECTOR—CROSSINGS"
- INSTALLATIONS SHALL BE INSPECTED AND ASSURED BY A QUALIFIED REGISTERED PROFESSIONAL CONSENTING APEGBC/ABCFF GUIDELINES AND MINISTRY POLICY PRIOR TO BEING PLACED IN SERVICE.
- INSTALLATION IS TO BE IN CONFORMITY WITH THE MINISTRY OF FORESTS AND RANGE "FOREST SERVICE BRIDGE DESIGN AND CONSTRUCTION MANUAL".
- THE SUBSTRUCTURE SHALL BE DESIGNED SUCH THAT IT IS CONTINUOUS OVER THE WIDTH OF THE TWO SUPERSTRUCTURE HALVES
- BRIDGE IS TO BE INSTALLED ON SUITABLE LEVEL SURFACES DESIGNED BY OTHERS (EG. FLATTENED SILL LOG OR CONCRETE BLOCKS)
- BRIDGE GRADE SHALL NOT EXCEED 4%
- PRIOR TO INSTALLATION ALL HARDWARE IS TO BE CHECKED AND ALL BOLTS TO BE RE-TORQUED AS REQUIRED
- RETAIN BRIDGE PARTS TOGETHER FOR FUTURE INSTALLATIONS
- RIDING SHALL BE IN CONFORMITY WITH WORKSAFE BC REGULATIONS, MAXIMUM ANGLE OF SLINGS FROM VERTICAL SHALL BE 30 DEGREES

**INSPECTION**
- INSPECTIONS SHALL BE CARRIED OUT BY INDIVIDUALS QUALIFIED AND EXPERIENCED IN ASSESSING TIMBER BRIDGE CONDITION
- A MINIMUM OF EVERY TWO YEARS FOR ROUTINE CONDITION INSPECTIONS WHILE THE BRIDGE IS IN SERVICE
- INSPECTED FOR STRUCTURAL DAMAGE
- PRIOR TO PLACING IN STORAGE
- PRIOR TO PLACING IN SERVICE
- INSPECTION RECORDS SHALL BE RETAIRED OVER THE LIFE OF THE BRIDGE

**STORAGE:**
- ALL TIMBER PORTABLE BRIDGE COMPONENTS SHALL BE SWEEP CLEAN OF DEBRIS PRIOR TO STORAGE
- BRIDGE COMPONENTS SHALL BE PLACED ON TIMBERS TO BE ABOVE AND NOT IN DIRECT CONTACT WITH THE GROUND OR DEBRIS AND SLOPED TO PROVIDE DRAINAGE OF WATER

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**MINISTRY OF FORESTS AND RANGE**
ENGINEERING BRANCH, FIELD OPERATIONS DIVISION

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**Scale:**
6.1M SPAN TIMBER PORTABLE BRIDGE

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**Standard Bridge Drawing**

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**General Notes**

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**Revisions**

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**L100 (OFF HIGHWAY)**

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**BCL-625 TRUCK**

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**Assume not to scale**
### Stringer Size Tables

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>GRADE</th>
<th>STRINGER SIZE</th>
<th>WEIGHT (PER BRIDGE HALF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.Fr/LARCH</td>
<td>No.1</td>
<td>305mm x 460mm (12&quot;x18&quot;)</td>
<td>6892 kg (15200 lbs)</td>
</tr>
<tr>
<td>HEM-FR</td>
<td>No.1</td>
<td>330mm x 510mm (13&quot;x20&quot;)</td>
<td>6981 kg (15400 lbs)</td>
</tr>
<tr>
<td>SPIF</td>
<td>No.1</td>
<td>355mm x 510mm (14&quot;x20&quot;)</td>
<td>6756 kg (14600 lbs)</td>
</tr>
</tbody>
</table>

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<tr>
<th>SPECIES</th>
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<th>STRINGER SIZE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>D.Fr/LARCH</td>
<td>No.1</td>
<td>355mm x 508mm (14&quot;x20&quot;)</td>
<td>7794 kg (17200 lbs)</td>
</tr>
<tr>
<td>HEM-FR</td>
<td>No.1</td>
<td>380mm x 508mm (15&quot;x20&quot;)</td>
<td>7835 kg (17300 lbs)</td>
</tr>
<tr>
<td>SPIF</td>
<td>No.1</td>
<td>400mm x 508mm (16&quot;x20&quot;)</td>
<td>7555 kg (16700 lbs)</td>
</tr>
</tbody>
</table>

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**Assume not to scale**

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### Ministry of Forests and Range

**Engineering Branch, Field Operations Division**

**Steadfast Bridge Drawing**

1. **6.1 M Span Timber Portable Bridge Plan & Elevations**
2. **Standard Bridge Drawing**

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**S. Hallam**

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**Revisions**

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**Identification Tag: Exterior Stringer**

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**Counter Sink Nuts and Drainage Notches**

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**2440**

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**254x254x3050 Curb**

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**254x254x4000 Riser**

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**16mm Threaded Rod**

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**75x254 Running Planks (Random Lengths)**

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**100x254x3050 Subdeck @ 45°**

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**190x254x440 Cross Ties - BCL #5 Truck**

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**HEM-FR #6 Truck**

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**Stringers (4)**

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**305x305x3000 Timber sill**

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**16 mm threaded rods thru each stringer to sill & end tie, counter sink nuts & washers into sill & tie**

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**20mm Dia Threaded Rods & Plate Washers**

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**Lifting Bracket (4 Places)**

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**Panel (58) 200x300 Deck Pocket**

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**THRU BOLTS TO SILL SEE END VIEW**

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**Not to Scale**