

## DESIGN SPECIFICATIONS

- DESIGN CODE:**
- CAN/CSA S6-06 (WITH EXCEPTIONS TO SUIT FORESTRY BRIDGES)
  - MINISTRY OF FORESTS AND RANGE BRIDGE DESIGN & CONSTRUCTION MANUAL AND 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 CONFORMANCE WITH THE 'STRINGER SIZE TABLE'
  - CROSS TIES TO BE D.Fir/L or HEM-FIR or SPF No.1 OR BETTER
  - CROSS TIES TO BE 190x190 FOR BCL 625 LOADING & 190x241 FOR BCFS L100 LOADING
  - DECK & SUB-DECK PLANKS TO BE D.Fir/L, HEM-Fir or SPF No.2 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-M 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 D.Fir/L ONLY MAY BE UNTREATED 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 A MINIMUM OF 50mm IN HEIGHT

**ASSUME NOT TO SCALE**

**ORIGINAL SIGNED AND SEALED**

## INSTALLATION

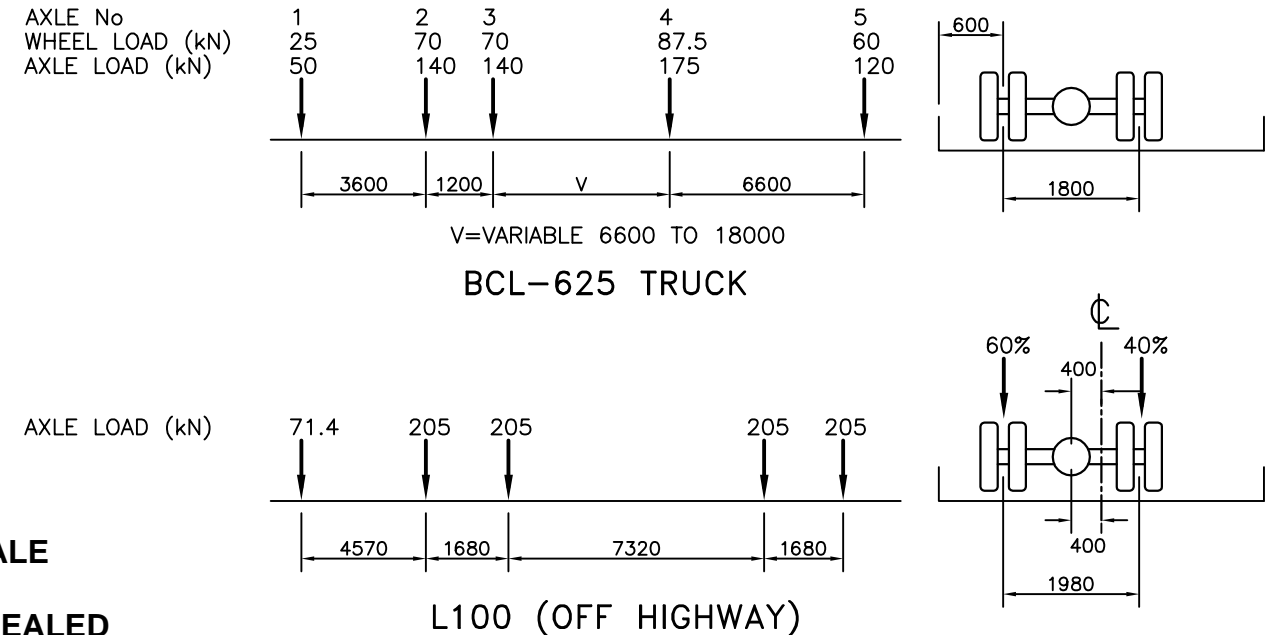
- THE ENTIRE CROSSING TO BE DESIGNED AS PER APEGBC/ABC FP "GUIDELINES FOR PROFESSIONAL SERVICES IN THE FOREST SECTOR-CROSSINGS"
- INSTALLATIONS SHALL BE INSPECTED AND ASSURED BY A QUALIFIED REGISTERED PROFESSIONAL CONSISTENT APEGBC/ABC FP GUIDELINES AND MINISTRY POLICY PRIOR TO BEING PLACED IN SERVICE. INSTALLATION IS TO BE IN CONFORMANCE 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 ABUTMENTS DESIGNED BY OTHERS (EG. FLATTENED SILL LOG OR CONCRETE BLOCKS)
- BRIDGE GRADIENT SHALL NOT EXCEED 4%
- PRIOR TO INSTALLATION ALL HARDWARE IS TO BE CHECKED AND ALL BOLTS TO BE RE-TORQUED AS REQUIRED
- RETAIN BRIDGE PAIRS TOGETHER FOR FUTURE INSTALLATIONS
- RIGGING SHALL BE IN CONFORMANCE WITH WORKSAFEBC 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 RETAINED 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



## Ministry of Forests and Range

ENGINEERING BRANCH, FIELD OPERATIONS DIVISION

SCALE AS SHOWN		Designed ABS Date 2010/03/17	STANDARD BRIDGE DRAWING	
		Checked LY Date 2010/03/17		
		Drawn ABS Date 2010/03/17		
Rev	Date	DESCRIPTION	Init	
1	10/04/06	L100 STRINGER SIZE MODIFICATIONS	ABS	
0	10/03/26	ISSUED FOR FABRICATION	ABS	
A	10/03/17	FOR MINISTRY APPROVAL	ABS	
<b>REVISIONS</b>				
ORIGINAL SIGNED and SEALED BY: A. B. SWAN, P.Eng			MFR ENGINEER: GARY McCLELLAND, P. ENG DREW ALWAY, P. ENG, RPF	
DESIGN ENGINEER: A. B. SWAN P.ENG			APPROVED BY: BRIAN CHOW, P. ENG, CHIEF ENGINEER	
DATE: FEB 12, 2010			DATE	
FILE No.			DRAWING No.	
			STD-E-025-01   1	

CANCEL PRINTS BEARING PREVIOUS LETTER