Portable Timber Bridge for Truck Traffic

Traditional Longitudinal Glued-Laminated Timber Bridge for portable bridge applications

Bridge Design Specifications

Bridge Application: Used by truck traffic in logging operations or other temporary bridge applications

Design Vehicle: AASHTO HS20 truck

Design Deflection Limitation: L/240

Curb / Rail Requirements: structural curb designed for AASHTO loading

Supplemental Wearing Surface: none

Bridge Material: glued-laminated timbers, southern pine Combination 47, creosote preservative treatment

Bridge Length: 30 ft – 0 in.

Bridge Width: 16 ft – 0 in.

Bridge Module Width: 4 ft – 0 in.

Bridge Module Depth: 10.5 in.

Installation Equipment: Excavators, loaders, crawler tractors or similar construction or forestry equipment

Installation Time: Less than six hours

Installation Procedures: Excavators can pick up the modules using eye bolts placed through the modules; the modules can then be carried to the stream crossing and placed side by side on the stream banks. Crawler tractors can also winch the modules into place. The modules are typically placed on spread footings to prevent settling into the soil. A transverse stiffener beam is bolted to the lower side of the bridge to distribute loads among the bridge modules. For most installations, cables should be used to secure the bridge modules to nearby trees or deadmen.


For more information, contact Steve Taylor at Auburn University:
staylor@eng.auburn.edu ◆ 334-844-3534 ◆ www.eng.auburn.edu/users/staylor
Bridge Installation with Crawler Tractor

Bridge Removal with Excavator