Landspan Deck Slab Bridge

Technical Guide R4.7

Hynds precast concrete slab bridge is designed to span smaller channels and is suitable for use as a stock or farm vehicle access.

Applications	Product Attributes	Quality
Stock crossing	Proven history	ISO 9001:2008 Quality Management Standard
Farm vehicle access	Strength and durability	
Truck crossing	Quick installation, low costs	
Residential vehicle access	Multiple applications	

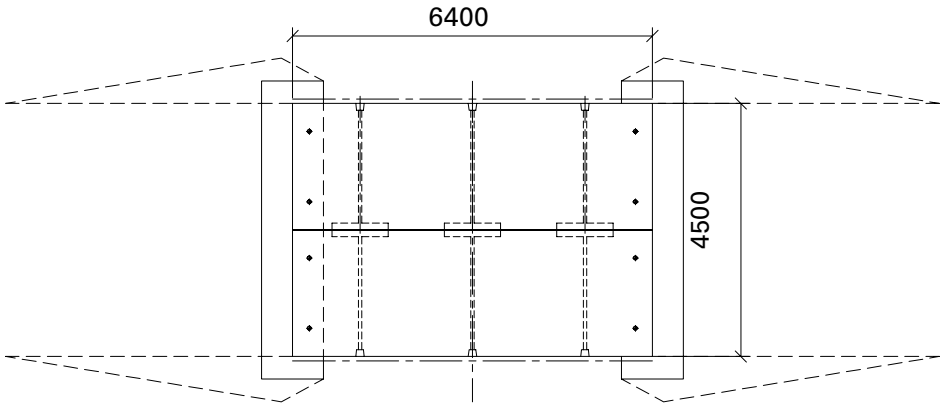
Hynds precast concrete slab bridge is designed to span smaller channels and is suitable for use as a stock or farm vehicle access.

Design Specifications

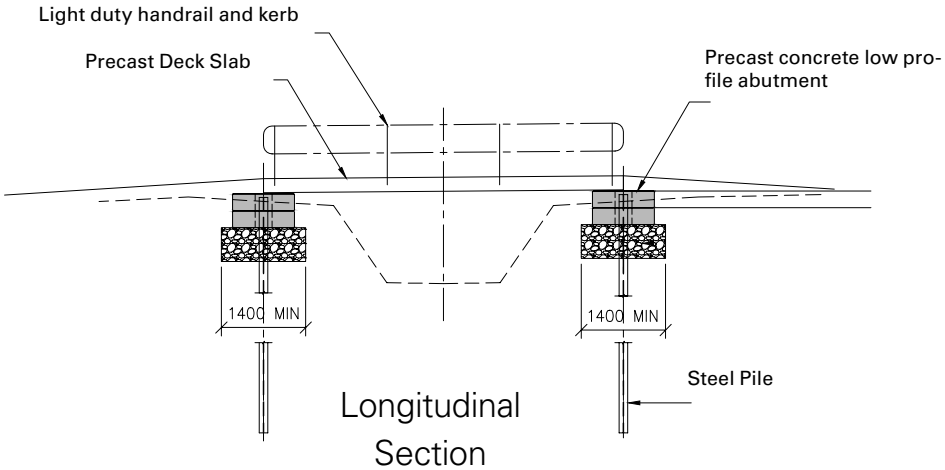
- 50 years design life.
- Manufactured from durable precast concrete.
- The standard width is 4.5 m wide using 2 x 2.25 m linked slabs.
- The standard 4.5 meter wide (Double slabs as shown on the diagram) is designed for 0.85 HN (Class 1) loading and single lane traffic.
- Total deck length is 6.4 m to suit a typical 5 m clear span.
- A 2.25 m wide (single slab) deck option is available.
- The 2.25 m single slab deck is only suitable for pedestrian traffic, motorcycles and light weight applications.
- Handrail and kerb options are available to suit the application.
- All decks have a broomed non- slip finish to their surface.

Installation Guidelines

- Hynds provide PS1 Producer Statement for the design of the precast concrete deck slab bridge components.
- The asset owner/contractor is responsible for engaging a consulting engineer, familiar with local conditions at the proposed bridge site, to provide the PS1 Design and PS4 – Construction Producer Statements for the site selection and installation design, and construction supervision respectively.
- Site selection and installation includes determining the suitability of the deck slab span, bridge height to suit hydraulic requirements, foundation investigation and specification of erosion protection requirements.
- The asset owner/contractor is responsible for obtaining all the necessary resource and building consents as determined by the local authorities.



PLAN



Longitudinal Section

Lifting and Handling

All Landspan Deck Slab Bridges incorporate Swiftlift lifting anchors for safe lifting and must be used with the correct lifting clutch.

Hynds Pipe Systems has designed and manufactured Landspan Deck Slab Bridges with a minimum dynamic factor of 1.2. This dynamic factor requires that all the following conditions are observed when lifting, moving or placing the bridges:

1. Lifting with mobile plant *(such as an excavator or similar)* where equipment is specifically exempt from the requirements of the PECPR Regulations 1999, subject to the conditions outlined in the New Zealand Gazette, No. 104, September 2015 and
2. Lifting, travelling and placing over rough or uneven ground where anchor failure is not anticipated to cause harm or injury, by adopting procedures such as:
   a. Transporting the element as close as practical to ground level (300mm recommended)
   b. Establishing and maintaining exclusion zones
   c. Transporting only precast concrete elements that are unlikely to topple if they were to hit the ground
   d. Inspecting lifting anchors both after transportation and before final lifting into place

Refer to "Safe work with precast concrete - Handling, transportation and erection of precast concrete elements" published by Worksafe New Zealand (October 2018)

Shock loads resulting from travelling with suspended Landspan Deck Slab Bridges over rough terrain and uneven ground may exceed design, dynamic and safety factors of the lifting systems. It is essential that care is taken during lifting and transporting as additional stresses could result in anchor failure.

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