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Design Brochure



Open Generic Station Footbridge

Introduction

This footbridge design responds to Network Rail's Principles of Good Design and provides an equal route across the tracks for both lift and stair users. A 30-degree rotation of the lift shaft unlocks new benefits of improved visibility and wayfinding for all users.

This design brochure provides an overview of the scheme. Variations in the design, configuration and materials allow for a flexible solution which can be adapted to suit diverse contexts across the entire rail network. For more details on the design and its variability, the Drawings & Design Guidelines document (Appendix A of the Form 004 submission) can provide more information.







Design Principles

Comfort

All users, regardless of whether they use the stairs or lifts, will have a high quality, equal and comfortable experience. The location of the lift on the platform and the seating area creates a comfortable and inviting space for passengers waiting on the platform. Clear signage and

wayfinding legible over a long distance

Legibility

Footbridge components are clean, coherent and promote clear wayfinding. The entire route across the tracks is visible and large signage identifies each platform. The use of a highlight colour identifies key wayfinding elements and leads the users over the tracks.

Permanence

The footbridge is a quality element which will be enjoyed by communities for the next 120 years. Maintenance, durability and timeless design ensures a lasting heritage. Speed of construction has not been compromised in order to meet these aspirations.

Identity

The footbridge establishes a new identity within the rail environment while offering variations to respond to a wide variety of contexts, communities and heritage. This opportunity for community engagement will strengthen the local identity within the station environment.

All users, regardless of ability, will have a high quality experience acr

Network Rail



design principles

Platform Arrangements

The footbridge is able to accommodate a variety of station layouts including single span options in both a typical and 'z-configuration' as well as larger multi-span arrangements.

Variations for station capacity have been included in the design with a choice of stair width, deck width and lift capacity. These options have been explained more in depth in the Drawings & Design Guidelines.

Stair Width: 1.6m or 2.4m Deck widths: 3.2 or 4m Lift Capacity: 16 or 25 person Span: max 20m





Lift & Staircase arrangements







Variability

Constancy of design across the whole footbridge allows for the scheme to be seamlessly implemented in a variety of contexts; this includes various station arrangements and requirements for a covered or open design.

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Staircase Structure

The stairs are supported by an elegant U-frame steel structure which also forms part of the stair parapet. The clean lines of the structure eliminate visual clutter and bring coherence to the overall design. Glass parapets extend above the structure and allow open views across the entire route. This strengthens the legibility and wayfinding of the scheme.

The space beneath the staircase, which is often a negative space on the platform, has been enclosed and will contain the lift motor room. A concealed door will provide maintenance access.





Deck Structure & Materials

The main span consists of a U-frame through girder steel deck with inclined webs. The stiffeners are exposed on the underside of the deck and on the internal parapet walls. The inclined webs break up the deep appearance of the beam over the tracks and also have the added effect of reducing footholds for climbing. Beneath the deck, the angle reduces ledges for bird roosting. On the deck, transparent glazing panels above 1m allow all users to enjoy views and be seen at deck level; this includes wheelchair users and children whose views would usually be obstructed. By angling the glass outward, the deck space will feel more generous and open. These glazing panels have been designed to be durable and easily maintained from the deck.

Finishes & Cladding

The roof will be clad in a standing seam zinc panel. This is a durable solution. A low level mansafe system will be in place for maintenance access.

The cladding on the underside of the canopy has be designed for a clean soffit appearance. This adds to the legibility of the structure and promotes clear wayfinding.

Variability in the cladding materials has been accommodated in the design.



Cladding Materials

An open soffit or cladding can be used on the bridge canopy.



Wood Panel

Finishes & Cladding

In order to enhance local identity, the scheme allows for a variety of cladding options to be used on the lift shaft and beneath the stairs. See below for options which could be used in these locations. Local engagement with the community can strengthen the choice of cladding material and aid in choosing the best solution for each specific context taking into account the local character and heritage.

It is important that the variability of the scheme is considered carefully to ensure that each bridge reads as a unified design; the pallet of colours and cladding materials must be considered as a whole composition.







Rustic Buff



Smoke Silver



Silver Grey

Lighting

Lighting will be integrated into the canopy and used to light the platform, stairs and deck. Lighting these spaces from above is preferred to low level lighting for visibility.

Lighting will also be provided above the seating area and lift entrance.

Low level lighting can be considered in addition to canopy lighting or in situations without a canopy. In these cases, lighting can be integrated into the handrails on the stairs and the cladding panels on the deck.







Canopy Lighting





Handrail Lighting

Deck Parapet Lighting

lighting

lighting



Legibility & Wayfinding

The route over the footbridge promotes clear wayfinding from the station entry, to the platform, to the bridge. By visually connecting the entire passenger route this legibility – and ultimately the user experience – is strengthened.

In addition to the open visual connection across platforms, a bright green highlight colour will be used across the scheme to connect to the user to the route. Handrails, large signage and wayfinding accents across the deck will all use this highlight colour. At the lift shaft, the green highlight colour can be used minimally to indicate the lift doors. A channel glass panel which runs the full height of the lift shaft allows for a visual indication of the location of the lift car from across the platforms.

An optional canopy extension along the platform can accommodate station specific signage and information.

A color palette including bright green (Pantone 387) has been chosen to allow legible navigation across the platform. The typeface used for signage throughout the design is "Rail Alphabet". Green highlighting aids wayfinding.

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The entire route for both lift and stair users is clear and visible across the platform







Clearly visible lift doors across the deck enhance wayfinding

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