Be inspired

Dutch examples of bicycle bridge design

ipv Delft creative engineers
Ivo Mulders M. Sc.
As one of the Netherlands' main bridge design offices, ipv Delft has focused on designing bicycle and pedestrian bridges for two decades. The company has used their extensive experience in bridge design to write this publication. This design manual focuses on the fundamentals of bridge design, answering practical questions regarding issues such as bridge width and slopes. It also lists the things that should be taken into account before starting on the actual design and it offers insight in the Dutch regulations regarding loads and collision forces. General advice on cost reduction is also included and several of the company's projects are shown to illustrate the theoretical contents. The Brief Dutch Design Manual for Bicycle and Pedestrian Bridges therefore is a vital source of both practical information and bridge design inspiration.

This publication is an English summary of the Dutch Design Manual for Bicycle and Pedestrian Bridges, which was published by CROW in 2014 and written by ipv Delft.

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Dutch Design Guide

BRIEF DUTCH DESIGN MANUAL FOR BICYCLE AND PEDESTRIAN BRIDGES

by ipv Delft
Bridges: an essential part of cycling infrastructure
Bridges are gap closers
bridge length 280 m
ramp length 150 m
width 3.5 m
budget €2.0 million
costs €1.4 million
Bridges shorten travel time
bridge length 795 m
ramp length 690 m
width 4-5 m
budget €8.2 million
Bridges enhance safety
Project location is where one of Haarlem’s main entry roads crosses the Spaarne river. The leveled crosswalk for cyclists resulted in the road being congested during rush hours.
length: 110 m
width: 5 m
slope: < 4%
estimated building costs: €1.8 million
actual building costs: €1.1 million
Bridges can become landmarks
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Rio-Niterói bridge

JK Bridge, Brasília

Octavio Frias Bridge, São Paulo
Bridges bring economical benefits
Bridges can be advertisers of cycling infrastructure
cars 20000 daily
cyclists 5000 daily
pylon height 70 m
stay cables 24, Ø 50
outer diameter 72 m
path width 4.5 m
deck surface 1300 m²
steel structure 1015 tons
budget € 8.5 million
estimated € 6.5 million
building costs € 6.3 million
Hovenring
Eindhoven, The Netherlands
Design strategies for bicycle bridges
start with complex locations

innovative design (save costs)

utilize existing bridges and tunnels

combine bicycle and traffic or railway bridges

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thank you