

1. Record Nr.	UNINA9910823234803321
Autore	Guochao Qian
Titolo	The environment and landscape in highway design // Qian Guochao, [and three others]
Pubbl/distr/stampa	West Sussex, England : , : Wiley Blackwell : , : China Communications Press, , 2014 ©2014
ISBN	1-118-33295-4 1-118-33296-2 1-118-33294-6
Descrizione fisica	1 online resource (382 p.)
Disciplina	713
Soggetti	Roadside improvement Roads - Environmental aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title; Copyright Page; Contents; About the Authors; Introduction; Chapter 1 Impact of Motorway Construction on the Environmental Landscape and Protection Countermeasures; 1.1 Impact on the natural environment; Topography; Soil erosion; Climate; Hydrology; Vegetation; Wildlife; 1.2 Impact on history, culture and scenery; 1.3 Pollution of the surrounding environment; Noise pollution; Water pollution; Atmospheric pollution; Dust and waste; 1.4 Impact on public activities and production; 1.5 Landscape protection countermeasures and measures Select a rational route and minimize damage to the environmentAttach importance to environmental protection projects during construction, alleviate pollution and prevent water and soil loss; Strengthen environmental quality management during the operation period; Restore and create natural landscapes by planting vegetation, enabling the motorway to integrate with the surrounding environment and promote the development of tourism; Chapter 2 Environmental Landscape Design of Filled and Excavated Sections; 2.1 Concept; 2.2 Classification of the side slope

2.3 Functions of planting vegetation on the slope Conserve water and soil and stabilize the side slope; Improve the appearance of the motorway and restore the surrounding ecological landscape to its original state; Lower slope protection costs; 2.4 Habitat conditions on the slope; 2.5 Slope landscape design; 2.6 Landscape design types; Grass and ground cover plants for slope protection landscaping; Shrubs for protecting the slope landscape; Mixed planting of grass and shrubs for protecting the landscape of the slope; Combination of trees and shrubs for protecting the landscape of the slope
Landscape of softening and green retaining walls
2.7 Selection of green plants for the slope; 2.8 Remaking of the rocky cut slope; 2.9 Slope greening and construction technologies; Soil replacement and spreading; Reinforcing the soil replacement and spread with continuous fibre; Technology of soil replacement combined with straw sticks; Three-dimensional vegetation net technology; Planting pit technology; Vegetation bag technology; Tyre slope protection; Chapter 3 Interchange Environmental Landscape Design; 3.1 Concept; 3.2 Landscape design objectives; Guide drivers' sight
Protect the slope and consolidate the soil
Plant vegetation and improve the motorway environment; 3.3 Creative landscape design; 3.4 Main types of landscapes; Rural category; Suburb category; Atypical category; 3.5 Design features of interchanges on the Nanjing-Hangzhou motorway; Lowering of the gradient of all slopes within the interchange; Distinct themed design of each interchange; Various natural landscapes created to integrate the interchange into the surrounding environment; A wetland draining system is used to replace the conventional draining ditch
Attach importance to the reshaping of the topography

Sommario/riassunto

The construction and operation of highways has a significant impact on the environment. While such impact is impossible to avoid, modern highways are constructed and landscaped to minimise these impacts as far as possible. Good landscaping minimises the impact on those living or working close to the highway, while at the same time regenerating the natural landscape disturbed during construction. Using as its background the successful landscape design of the Nanjing-Hangzhou Expressway in Jiangsu Province, China, which opened to traffic in 2007, Highway Landscape Design includes ref
