

论文

中国汶川特大地震损毁城镇恢复重建选址的工程地质评价

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摘要:

在损毁城镇震后恢复重建工作中,场址的合理选择及安全性评估极为重要。选址问题涉及地震断裂、地质灾害、场地稳定及国计民生、经济发展等诸方面的复杂因素,是一个复杂的系统工程问题。考虑问题的基本原则应是,对于震后位于地震断裂带上,且地质环境恶化、存在严重地质灾害隐患的城镇,必须异地迁建;对于虽然损毁较严重,但远离断裂带,且不存在致命的地质灾害隐患的城镇,应按照“科学规划、规范避让、合理调整抗震设防标准”的原则,原址重建。灾后重建过程中,应重视地质灾害的隐蔽性、诱发因素的多重性与长期持续性等,加强地质环境的适宜性评价及地质灾害的风险性评估。本文结合震后的实际调查,对北川、青川两个县城及青川县木鱼镇的重建选址问题进行了探讨,在对场址工程地质和环境地质适宜性评估的基础上,提出了上述典型城镇的重建选址意见。

关键词: 汶川地震,损毁城镇,重建,工程地质评价

ENGINEERING GEOLOGICAL ASSESSMENTS OF RECONSTRUCTION SITES FOR CITIES AND TOWNS DESTROYED BY WENCHUAN EARTHQUAKE

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Abstract:

The post-earthquake reconstruction of damaged cities and towns requires reasonable site selection and safety assessment. Site selection task involves complex factors such as earthquake fault, geologic hazard, site stability, national well-being and the people's livelihood, and economic development and sustainability. It is a task of complicated engineering system. Problem considerations can follow these basic principles: (a) to the towns which located at the earthquake fault zones and deterioration on geological environment and had severe hidden danger of geologic hazard, they must be removed to other places; (b) to the towns which was damaged, but is far away from the earthquake fault zones and does not exist geologic hazard, they should be in-situ reconstructed and the reconstruction should be carried out according to principles of science planning, avoidance norms, reasonable adjustment to the aseismicity standards. On the process of the post-earthquake reconstruction, attentions should be paid to the disguised geologic hazards, multiplicity of induced factors and long-term sustainability and to strengthen suitability evaluation on geological environment and risk assessment on geologic hazard. Based on the post-earthquake actual survey, this paper assesses the problems of site selections on the reconstruction of Beichuan town, Qingchuan town and Muyu town of Qingchuan County. Based on the evaluation of site engineering geology and geological environment, the paper gives some typical suggestions for the site selection on reconstruction of the towns.

Keywords: Wenchuan Earthquake, Site selection, Reconstruction, Engineering geological assessments, Beichuan town, Qingchuan town

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