

Damage Assessment of Buildings in Kour Village - West Bank

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Kour is a small village located in the southwest of Tulkarem city. The whole city is a historical monument and a masterpiece of art consisting of a number of huge historical buildings. This village forms the best model that resembles the Mamlouk-Ottoman village in Palestine

The United States Agency for International Development (USAID) signed an agreement with the United Nations Development Programme/ Programme of Assistance to the Palestinian People (*UNDPIP APP*) to fund a project that has a component of Cultural Heritage Restoration. Due to the historical importance of Kour, it was included in the Project. To accomplish the consolidation work in Kour; ESSEC was assigned by *UNDPIPAPP* to make this study.

Damage resulting from several actions, including the famous 1927 earthquake that hit the area, has generally been highly variable. Moreover, building performance depends on many factors. Combination of structural materials, structural systems, and architectural design creates a variety of buildings as well as a variety of damage observed.

In order to present the estimated damage in Kour village, damage grades for reinforced concrete, masonry and old masonry buildings have been assessed according to the European Macro Seismic scale (EMS-98)- Classification of Damage. In addition to the damage grades for each building in the village, the study produced tables that included information regarding the structural type, utilization, architectural configuration, etc. Also, based on the damage and decaying causes, the field assessment showed that the old masonry buildings have many types of damage and deterioration, such as: Flat Vault's collapse, corner detachments, large permanent deformations, detachment of the facade from the main walls, remarkable split at the base of pillars, slippage between the blocks of the arch, missing stones, and others.

Based on the field damage assessment and taking into consideration the Seismic Vulnerability classes presented in EMS-98, the investigation showed that many old masonry buildings in the village will suffer very heavy. Structural damages in the near future and most of them will have a total collapse under the influence of moderate earthquakes. In the light of structural conditions of the old masonry buildings and their seismic vulnerability classes, the study contains important conclusions and recommendation to ensure stability and required stiffness for each damaged buildings, and due to the lack of the fund needed for conservation and structural restoration, the paper also includes emergency consolidation plan by taking into consideration the consolidation priorities.