This study evaluated the marginal ridge strength of restored teeth with modified class II cavity preparations, tunnel preparations. A total of 40 non carious extracted human molar teeth were used. They were divided into four groups, group I: intact teeth and unprepared, group II: prepared teeth restored with dispersalloy amalgam, group III: prepared teeth restored with posterior composite resin and group IV: prepared teeth but unrestored. The tunnel was prepared through the occlusal mesial fossa in a diagonal direction. The results showed that the composite resin restorative material has the ability to reinforce marginal ridge in tunnel preparation. Composite resin restoration increases the marginal ridge strength in tunnel preparation in comparing to amalgam restoration. When ever tunnel preparation is indicated, composite resin should be considered as the restorative material of choice.