Menara dang merdu bank riau building is built on a high earthquake area in accordance with the construction of this building is in the urban areas of Riau. Building has been modified again by moving the location of the building in the areas of Borneo as a flat slab structure can not be used for areas with high seismic zones according to the latest earthquake regulations. The structure of the building will be planned with a flat slab method using shearwall.

Modifications made include modifying the shape of this building which originally consisted of two buildings. Planning made include plates, columns, beams, shear walls, Sloof, and foundations, as well as stairs and elevators for the secondary structure. Structural analysis using ETABS 9.7.1 software. Rules used include SNI 03-2847-2002 about concrete and SNI 03-1926-2010 about earthquake.

The results of the structural design of menara dang merdu bank riau building is floor columns 1-5 with a size of 110 cm × 110 cm, flexural steel stirrups 3Ø12 16D32-100. Column floors 6-10 with a size of 100 × 100 cm, flexural steel stirrups 4Ø12 16D32-75. Column floors 11-15 with a size of 80 × 80 cm, flexural steel stirrups 4Ø12 16D32-75. Edge beams with size 600 × 900 cm, flexural steel and stirrups Ø12 D25. Shear walls with a
thickness of 60 cm, the shear reinforcement using the D22 - 250. Floor plate with a thickness of 25 cm, Ø16 reinforcement. Drop panel has a thickness of 40 cm with reinforcement Ø10. The foundation piles using a diameter of 60 cm, while the poer distinguished for columns and shear walls with reinforcement for 16D32.

Key words: Flat slab, drop panel, shear wall.