The Avengers just made a surprise visit to San Francisco. How many Legos would it take to rebuild the Golden Gate Bridge?

Well, let’s start with finding out the Golden Gate Bridge’s volume. After a quick Google search, I found that the bridge originally used about 75,293,000 Kg of structural steel and 297,475 cubic meters of concrete to create anchorages, paving, and piers. If we were to use a standard classic brick which measured 2x4 knobs, the height not including the knobs themselves would be 9.6mm by 31.8mm. To make a cube, say 1x1m in size, it would take roughly 32 bricks lengthwise, and 104 bricks in height, or 3,328 bricks. To just meet the concrete volume requirements, we would need 3,238x297,475 bricks or 989,996,800 bricks to create the approaches, anchorages, pylons, and paving.

Next, to handle the main towers, suspended structures, rivets, and other portions made of steel, which we know weigh a total of 75,293,000 Kg. Structural steel can weigh about 490 lb per cubic foot, which would translate to about 7,850 kg per cubic meter. Dividing this with the total weight of the steel gives us approximately 9,592 cubic meters of steel. This in turn would translate to about 31,058,896 more Lego bricks. Thus, the total number of bricks would amount to about 1.02 Billion Lego bricks to completely reconstruct the Golden Gate Bridge.

Sources:

http://goldengatebridge.org/research/factsGGBDesign.php