

ABSTRACT

Title: Design Diaphragm, Chords & Collectors due to the Impact of Earthquakes According to SNI Earthquake 1726: 2012, Name: Dodi Mardotillah, Nim: 41115110027, Supervisor: Suci Putri Elza ST, MT, 2019

Construction projects in Indonesia are currently being intensively carried out in each region, which can be in the form of structural and infrastructure construction. In this construction is necessary to pay attention to the occurrence of an earthquake, because the location of the Indonesian geography is located on the Australian, Eurasian and Pacific plate which are disaster to earthquakes.

Changes to the rules of SNI 1726: 2012 require that diaphragm elements be calculated for the needs in designing earthquake resistant buildings.

The diaphragm is a floor plate that stabilizes and channels the forces generated by the earthquake between the floor system and the earthquake-resisting vertical elemental system, such as columns and shear walls.

The diaphragm component consists of chords and collectors, the diaphragm that experiences force at the ends of the span is called a chord while the collector is a distributor of compress, tension and shear forces that channel to the ends of the shear wall.

From the results of the planning, the diaphragm design style, chord reinforcement requirements and collector reinforcement requirements in the building were obtained.

Keywords: Diaphragm, Chords, Collector, Shear Wall

ABSTRAK

Judul : Perencanaan Diafragma, Kord & Kolektor Akibat Pengaruh Gempa Sesuai SNI Gempa 1726 : 2012 , Nama : Dodi Mardotillah ,Nim : 41115110027, Dosen Pembimbing : Suci Putri Elza ST,MT, 2019

Proyek pembangunan di Indonesia saat ini sedang gencar dilakukan di setiap daerah, bisa berupa pembangunan struktur dan pembangunan infrastruktur. Dalam pembangunan ini perlu di perhatikan akan terjadinya bencana gempa bumi, karena letak geografis Indonesia terletak pada lempeng Australia, lempeng Eurasia dan lempeng Pasifik yang mana rawan terkena bencana gempa bumi.

Perubahan peraturan SNI 1726:2012 mengharuskan elemen diafragma dihitung untuk kebutuhan dalam mendesain bangunan tahan gempa.

Diafragma merupakan pelat lantai yang menstabilkan dan menyalurkan gaya-gaya yang ditimbulkan oleh gempa antara sistem lantai dan sistem elemen vertikal penahan gaya gempa , seperti kolom dan dinding geser.

Komponen diafragma terdiri dari kord dan kolektor, diafragma yang mengalami gaya pada ujung-ujung bentang disebut kord sedangkan kolektor adalah pengumpul gaya tekan, tarik dan geser yang menyalurkan ke ujung-ujung dinding geser.

Dari hasil perencanaan didapatkan gaya desain diafragma, kebutuhan tulangan kord dan kebutuhan tulangan kolektor pada bangunan.

Kata kunci : *Diafragma, Kord, Kolektor, Dinding Geser*