DOWNLOAD PDF ONE WAY SLAB DESIGN PROCEDURE

Chapter 1 : One Way and Two Way Slab | Basic Info and Design Aspect - Engineering Feed

Design Procedure for One Way Slab. Here are the steps for the Design Procedure for One Way Slab in calendrierdelascience.com those who do not know what are the des ign requirements of a calendrierdelascience.com going to this topic, Please read it.

Structural 0 One way and Two way Slab Design Aspect The slab provides a horizontal surface and is usually supported by columns,beams or walls. Slabs can be categorized into two main types: One-way slab is the most basic and common type of slab. One-way slabs are supported by two opposite sides and bending occurs in one direction only. Two-way slabs are supported on four sides and bending occurs in two directions. One-way slabs are designed as rectangular beams placed side by side However, slabs supported by four sides may be assumed as one-way slab when the ratio of lengths to width of two perpendicular sides exceeds 2. Although while such slabs transfer their loading in four directions, nearly all load is transferred in the short direction. These slabs are supported on two opposite sides and all bending moment and deflections are resisted in the short direction. A slab supported on four sides with length to width ratio greater than two, should be designed as one-way slab. One-way joist floor system: This type of slab, also called ribbed slab, is supported by reinforced concrete ribs or joists. The ribs are usually tapered and uniformly spaced and supported on girders that rest on columns. Two-way beam and slab: If the slab is supported by beams on all four sides, the loads are transferred to all four beams, assuming rebar in both directions. A flat slab usually does not have beams or girders but is supported by drop panels or column capitals directly. All loads are transferred to the supporting column, with punching shear resisted by drop panels. This type of slab consists of a floor slab with a length-to-width ratio less than 2, supported by waffles in two directions. One-way slab design 1. Decide the type of slab according to aspect ratio of long and short side lengths. Compute the minimum thickness based on ACI Code. Compute the slab self-weight and total design load. Compute factored loads 1. Compute the design moment. Assume the effective slab depth. Find or compute the required steel ratio. Compute the required steel area. Design the reinforcement main and temperature steel. Two-way slab design procedure by the Direct Design Method 1. If limitations are not met, the DDM can not be used. Determine and assume the thickness of slab to control deflection. Check the slab thickness against one-way shear and two-way shear. Determine the distribution factor for the positive and negative moments using ACI Code. Determine the steel reinforcement of the column and middle strips. Compute the unbalanced moment and check if it is adequate.

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Chapter 2 : Difference Between One Way Slab and Two Way Slab

Analysis and Design of Slabs, One way slabs, online free slab design, design of slabs one way, free slab design online, Design Procedure for One Way Slab.

There are various forms of reinforced-concrete slabs: Slabs can be categorized into two main types: One-way slab is the most basic and common type of slab. It is supported by parallel walls or beams, bend in only one direction and transfer their loads to the two opposite support walls or beams. Two-way slabs are supported on four sides and bending occurs in two directions. One-way slabs are designed as rectangular beams placed side by side But, slabs supported by four sides may be assumed as one-way slab when the ratio of lengths to width of two perpendicular sides exceeds 2. Although while such slabs transfer their loading in four directions, nearly all load is transferred in the short direction. These slabs are supported on two opposite sides and all bending moment and deflections are resisted in the short direction. A slab supported on four sides with length to width ratio greater than two, should be designed as one-way slab. One-way joist floor system: This type of slab, also called ribbed slab, is supported by reinforced concrete ribs or joists. The ribs are usually tapered and uniformly spaced and supported on girders that rest on columns. Two-way beam and slab: If the slab is supported by beams on all four sides, the loads are transferred to all four beams, assuming rebar in both directions. A flat slab usually does not have beams or girders but is supported by drop panels or column capitals directly. All loads are transferred to the supporting column, with punching shear resisted by drop panels. This type of slab consists of a floor slab with a length-to-width ratio less than 2, supported by waffles in two directions. One-way slab design 1. Decide the type of slab according to aspect ratio of long and short side lengths. Compute the minimum thickness based on ACI Code. Compute the slab self-weight and total design load. Compute factored loads 1. Compute the design moment. Assume the effective slab depth. Find or compute the required steel ratio. Compute the required steel area. Design the reinforcement main and temperature steel. Two-way slab design procedure by the Direct Design Method 1. If limitations are not met, the DDM can not be used. Determine and assume the thickness of slab to control deflection. Check the slab thickness against one-way shear and two-way shear. Determine the distribution factor for the positive and negative moments using ACI Code. Determine the steel reinforcement of the column and middle strips. Compute the unbalanced moment and check if it is adequate.

Chapter 3 : Designing a Continuous One Way Reinforced Concrete Slab per ACI Code

One-Way Slab Design Procedure. The following procedure is intended for the rebar in one-way slabs where Long Side >= 2 Short Side. Notes: â€¢ You are always designing a b=12" strip of slab, running the short distance between the spandrel beam.*

Chapter 4 : One way and Two way Slab Design Aspect

(a) One way slab with supports on two opposite sides and (b) One way slab with supports on all sides but length of longer direction is greater than twice the length of shorter side 1 Design of One-Way Slabs 2 Saurav Shrestha (Kantipur Engineering College).

Chapter 5 : One-Way Slab Design Procedure - [DOC Document]

Summary of One-way Solid Slab Design Procedure Once design compressive strength of concrete and yield stress of reinforcement are specified, the next steps are followed.

Chapter 6 : One Way Slab Reinforcement Details - Daily Civil Engineering

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In this post, I will go over the fourth example in our course that covers the analysis and design of reinforced concrete one-way slabs. The aim of this reinforced concrete design example is to design a continuous reinforced concrete one-way slab subjected to dead and live loads per ACI Code

Chapter 7 : Difference Between One Way Slab And Two Way Slab - Daily Civil

The one-way slabs are identified as follows. 1) When a rectangular slab is supported only on two opposite edges, it is a one-way slab spanning in the direction perpendicular to the edges.

Chapter 8 : One Way Slab Design Procedure | How To Design A One Way Slab

In typical cases, beams, one-way slabs, and two-way slabs will be tension controlled sections, so that the strength reduction factor is equal to in accordance with Section

Chapter 9 : Design Procedure Steps for One Way Slab | Slab Design Steps

Design of One Way Slab. Civil Mentor. Here we'll discuss one-way slab. Slabs are normally designed as one-way slab or two-way slab. Before understanding the one-way slab, one should also.