“Building Information Modelling of College Building”

END TERM PROJECT

Submitted in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

CIVIL ENGINEERING

Under the supervision of

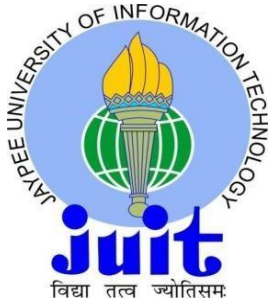
Dr. Saurabh Rawat

(Assistant Professor)

By

VIVEK THAKUR [171614]

SUKRIT SHARMA [171634]



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

WAKNAGHAT, SOLAN – 173234

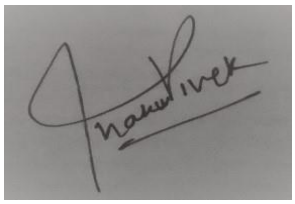
HIMACHAL PRADESH, INDIA

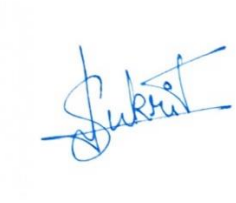
May-2021

STUDENT DECLARATION

We hereby declare that the work presented in Project report entitled **"Building Information Modelling of College Building"** submitted for partial fulfilment of the requirements for the degree of Bachelor of Technology in Civil Engineering at **Jaypee University of Information Technology, Wakhnaghat** is an authentic record of our work carried out under the supervision of

Dr. Saurabh Rawat. This work has not been submitted elsewhere for the reward of any other degree/diploma. We are fully responsible for the contents of our project report.





Vivek Thakur (171614)

Sukrit Sharma (171634)

CERTIFICATE

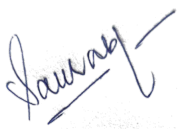
This is to certify that the work which is being presented in the project report titled **"BUSINESS INFORMATION MODELLING OF COLLEGE BUILDING"** in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Civil Engineering and submitted to the Department of Civil Engineering, Jaypee University of Information Technology, Wakhnaghat is an authentic record of work carried out by **Vivek Thakur[171614]** and **Sukrit Sharma[171634]** during a period from August 2020 to May 2021 under the supervision of **Dr. Saurabh Rawat,** Assistant Professor Department of Civil Engineering, Jaypee University of Information Technology, Wakhnaghat.

The above statement made is correct to the best of our knowledge.

Date 13/05/2021

Dr. Ashok Kumar Gupta
Professor & Head of Department
Civil Engineering Department
Jaypee University of Information Technology

External Examiner



Dr. Saurabh Rawat
Assistant Professor
Civil Engineering Department
Jaypee University of Information Technology

ACKNOWLEDGEMENT

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The topic **"BUSINESS INFORMATION MODELLING OF COLLEGE BUILDIING"** was very helpful to us in giving the necessary background information and inspiration in choosing this topic for the project. Our sincere thanks to **Dr. Saurabh Rawat,** Project Guide and Project Coordinator for having supported the work related to this project. Their contributions and technical support in preparing this report are greatly acknowledged.

We wish to thank **Prof. Ashok Kumar Gupta**, Head of the Department, Civil Engineering Department for all his support by the way of providing wonderful working environment and facilities for the study in general and this work. We are forever grateful to our families for their unconditional support.

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ABSTRACT

Building Information Modelling (BIM) has been used all around the world extensively resolving problems of outdated methods used for creating cost estimation model. This study offers a hypothetical model of cost estimation formed by Revit (Building Designing Software) and Staad pro (a software used for structure analysis) to the BIM-based model. The two factors (the budget, and the structural analysis) done with the amalgamation of BIM model and Staad Pro can be considered.

For cost estimation in the early stages of the project:

(1) To create BIM model in Revit.

(2) Use Staad pro for structural analysis,

(3) To do cost estimation of the building and

(4) The total cost is rectified whether meeting owner's budget

The hypothesis is tested via the building Government Degree College situated in Kullu, Himachal Pradesh, India. This hypothesis concludes that model can be implemented practically and delivers positive outcomes for the project.

Keywords: Revit Modelling, Structural Analysis, Cost Estimation

CHAPTER 1: INTRODUCTION

1.1 BIM

Building Information Modelling is an intelligent development in the engineering, construction and architecture industries. With the help of BIM computer-generated designs, a building can be constructed on a software digitally and accurately. Due to this, it allows better analysis and control over designing. After completion, these software-generated models hold precise geometry and lays a methodology of construction, management, procurement, and fabrication for building completion. BIM also helps to accommodate many functions needed to model the lifespan of a building, providing the construction and design proficiencies If adopted well, BIM model can simplify additional cohesive construction and design process that can result in improved building design and reduction in time and cost.

1.2 NEED FOR STUDY

- By a 2014 survey 22% usage of BIM was reported in India.
- The construction market in India is valued at $600 billion as of 2020.
- Cost estimation is 3% more accurate than traditional estimation.
- Time taken to generate cost estimation is 80% compared to traditional system.
- Approx. 40% elimination of unbudgeted change.
- Reduction in project time is 7%.

1.3 OBJECTIVES

- To study Literature review which adequately examines BIM and other impacts on model based on estimation and construction
- To develop a Client friendly building.
- To do Structural Analysis of the building.
- Finally, to calculate the quantity of material required in pre-phase in order to estimate the total expenditure and to do cost cutting in order to make project cost saving.

1.4 MERITS

- There is savings in cost and resource
- Better productivity and briefer lifecycles for project
- Enhanced coordination and communication among architect and engineer
- For integrated construction and prefabrication there are more opportunities
- The quality results are higher

1.5 SCOPE OF PROJECT

A building is a large gamble of money investment and with poor construction management it can be difficult to the investor as it can cross allotted budget. This project focuses on mainly in the 3D Modelling of the building to give realistic view and structural design of the building. Cost of construction is estimated and tried to do cost cutting as to make building inside budget.

1.6 SIGNIFICANCE

Most people are devoid of the knowledge that poor construction management can lead to increase in allotted budget. With 3D modelling it would create a realistic design of the building and it can help to virtualise the final project. The virtualization will help the client to watch final end product before being constructed and can be relaxed how his/her money is going to be invested. If he/she don't like some parts they can be removed on his/her wish and building can be manipulated before any construction and there won't be any money and resources wasted.

With completion of modelling, if the client thinks that at end the budget is going out of the pocket there can be cost cutting done so as the project can be done under budget and there won't be any strain to clients' pocket.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This main focus of chapter is to provide us with the former research's done on Revit Modelling, Structural Analysis, and Cost Reduction and provides us with the baseline idea about how to move forward in this project.

To move forward with this project, we should have an idea about the topic. In order to completely understand this topic several pieces of information were assembled from journals, books, IS codes, the internet as a literature study.

1. A Framework for BIM Model-Based Construction Cost Estimation **(Clark, Michael Thomas, 2019)**

CONCLUSION

Two methods of cost estimation that are widely used in the construction industry today were evaluated. This research shows a short model based on BIM framework that can be achieved with less time and in full completion. It includes guidance for future development of cost-based model and framework.

2**.** BIM methodology, a new approach - case study of structural elements creation **(Lino Maiaa, Pedro Medab, Joao G. Freitasa, 2015)**

CONCLUSION

Time taken to put all the building information in Revit using BIM methodology, consumption of time was very much in early phase than later phases. The software requires high end capacity computers containing large RAM and hardrive, as rendering and reinforcement can take quite a lot minute.

3**.** Using Building Information Modeling (BIM) for Estimating and Scheduling, Adoption Barriers **(Juan Franco, Faiza Mahdi, Hussein Abaza, 2015)**

CONCLUSION

The main objective of this research is to tell the profits of using BIM in estimating projects and the hindrances in the idea of scheduling and automated estimation. It also tells the time consumption in creating a model and training the staff can hinder execution of the automated estimation.

4. A BIM-based Conceptual Cost Estimation Model Considering Structural Analysis and Design **(Chun-Liang Wua, Kun-Chi Wanga and Wei-Chih Wanga, 2018)**

CONCLUSION

This research tells how a conceptual cost estimation model can modify the initial budget to meet the owner's budget in pre phase of construction. After completion the test successfully projects the difference in the budgets and able to reshape it.

5. BIM implementation-Global strategies **(Dr. Peter Smith, 2014)**

CONCLUSION

In this research paper the author is trying to talk about the benefits of BIM as a key in construction market. The developments and initiatives are encouraging implementation of BIM on a larger scale as other countries are realizing the if they don't keep up their pace with leading BIM countries their market will be left behind.

6. Building Information Modeling (BIM): Trends, Benefits, Risks, and Challenges for the AEC Industry **(Dr. Salman Azhar, 2011)**

CONCLUSION

This research tells how the BIM is evolving as a state-of-the-art in digital designing and managing projects. With BIM, the prediction and overall performance is enhanced. The use of BIM should be increased more in projects as it will result in cost saving, good time management and healthy relations among client and customer.

7. BIM Based Cost Estimation/ Monitoring for Building Construction **(Emad Elbeltagi, Ossama Hosny, Mahmoud Dawood and Ahmed Elhakeem, 2014)**

CONCLUSION

This study introduces a new method to monitor/control construction projects. A mathematical practice for assessing construction performance with respect to cost has been developed. Main objectives of the model are to introduce the key variables that affect controlling of project cost.

8. Planning Analysis and Design of Multistoried Building by STAAD PRO V8i **(Anoop .A, Fousiya Hussian, Neeraja.R, Rahul Chandran, Shabina.S, Varsha.S, 2016)**

CONCLUSION

This research paper gave us an overview that how input of values allows the generation of structural model. Seismic, Dead, Live and Wind loads were applied to the structure.

9. Design of Residential Building using Staad Pro **(Dhanavath Seva, Bhukya Chandrashekar, Faria Aseem, 2017)**

CONCLUSION

This project consisted of analysis of G+6 residential building. All the live, dead loads are applied to columns and beam and result are obtained from STAAD Pro.

CHAPTER 3: MATERIAL AND METHODOLOGY

3.1 SOFTWARE REQUIREMENT

3.1.1 AUTODESK REVIT 2021

Revit Architecture is a software which works on BIM (BUILDING INFORMATION MODELLING) that has quickly emerged as the forerunner in the design industry. Revit Architecture is as much a change in system (if you come from a 2D or AutoCAD environment) as it is a change in software's. It has changed the attitude of people about building designing. Revit Architecture has advantage as it can comprise information about the building models and allow complicated models to be designed with accuracy. I have used this software for my architectural planning, all of my plan's elevations and rendering are done in Revit Architecture 2021.

3.1.2 STAAD PRO V8I SS6

STAAD PRO is a software basically based on structural analysis and design. With this proposed value can be inserted in this and it will in turn the process of building and its structure designing more accurate. Beams and Columns are positioned in the model based on which they will appear in the physical world.

Some other software's are also used for small works in the making of this project. Paint, Snipping tool (for figures and pictures)

3.2 METHODOLOGY

3.2.1 REVIT MODELLING

To make building in Revit we must consider various aspects. According to principal conditions on site, we will study the design and construct it properly accordingly. Cost cutting will also be done know whether we were able to accomplish our conditions.

Step 1: To acquire data from site.

Step 2: Start designing the plan of building in Revit according to the plan.

Step 3: Make 3D model of building using all methods and construction material in Autodesk Revit.

Step 4: With structure completion interior of the building was designed with respect to the plan.

Step 5: At last image rendering was done.

3.2.2 STRUCTURAL ANALYSIS

For structural analysis of building each step must be taken accordingly so that the result should be error-free.

Step 1: Entering Node The column position in the plan helps us to enter the node point precisely into Staad pro.

Step 2: Column and Beam representation

Add beam command was used to add column and beam between the two nodes.

Step 3: 3D view of the structure.

Transitional repeat command was used to get 3d structure

Step 4: Specified properties are assigned.

Material of the beam, column, and slab was assigned.

Step 5: 3D view

3d view is visible

Step 6: Seismic load assigning

In +X, -X, +Z, -Z directions seismic load was applied as per IS1893:2016

Step 7: Dead Load assigning

As per IS 875 PART 1 for self-weight, internal and external walls are considered in dead load of a structure.

Step 8: Live Load assigning

As per IS 875 PART 2 live load is considered

Step 9: Analysis

Errors and warnings were checked after completion of above steps

Step 10: Result Extraction

Beam and Column design output is extracted.

CHAPTER 4: 4.1 ARCHITECTURAL DESIGN AND MODELLING

With the help of building plans taking care of every feature of project, plan was transformed into 3D model with Revit. All features were included so to make appearance of building more realistic. The plan of given building is at Kullu, Himachal Pradesh.

4.1.1 BUILDING VIEW

Figure 4. 1 SITE VIEW

4.1.2 DIMENSIONS

S.NO	DESCRIPTION	LENGTH (cm)	BREADTH/DEPTH (cm)	HEIGHT (cm)
1	EXCAVTION	-	457.2	-
2	FOOTING	300	300	45
3	COLUMN	50	50	350
4	BEAM	40	60	-
5	SLAB	-	-	10.16

Table 4. 1 DIMENSIONS

4.1.3 ARCHTECTURAL DESIGN

4.1.3.1 PLAN

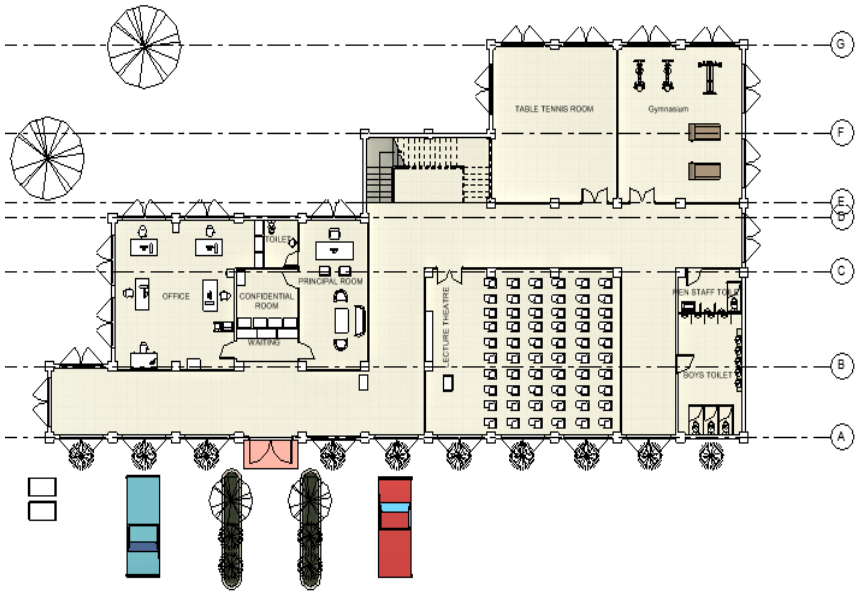

Figure 4. 2 PLAN OF 1ST FLOOR

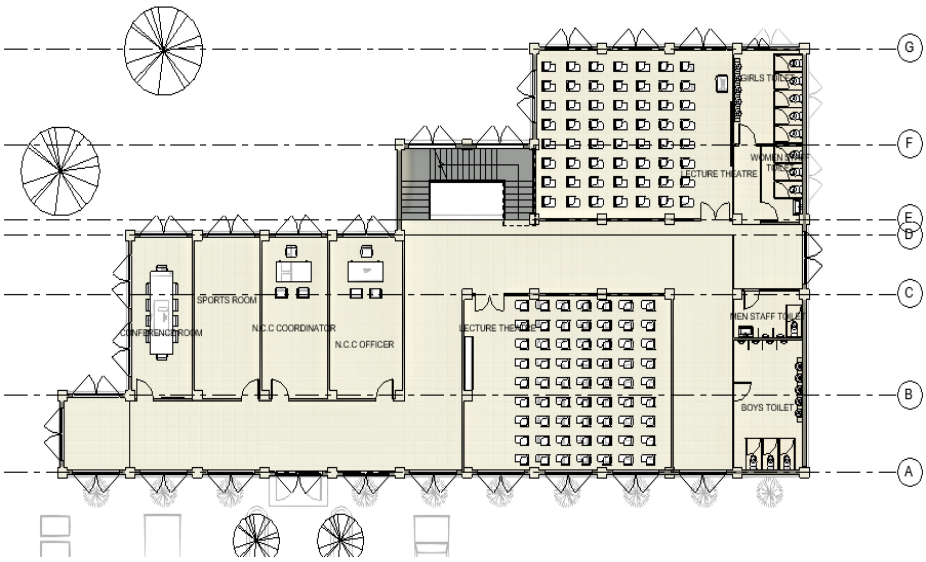

Figure 4. 3 PLAN OF 2ND FLOOR

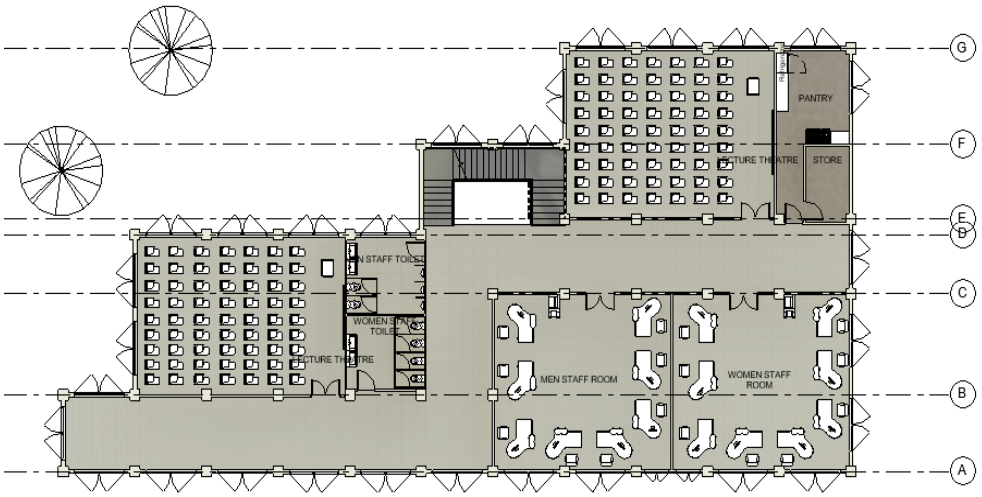

Figure 4. 4 PLAN OF 3RD FLOOR

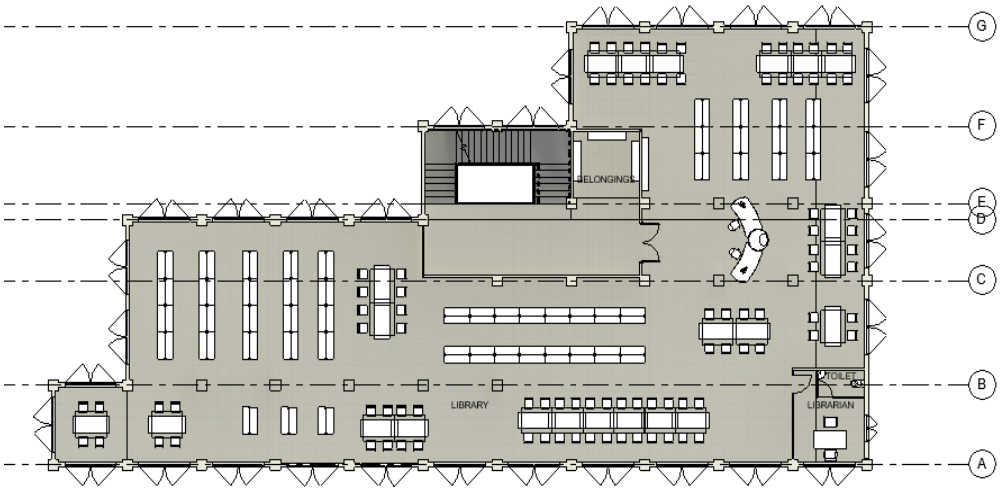

Figure 4. 5 PLAN OF 4TH FLOOR

4.1.3.2 MEASUREMENTS

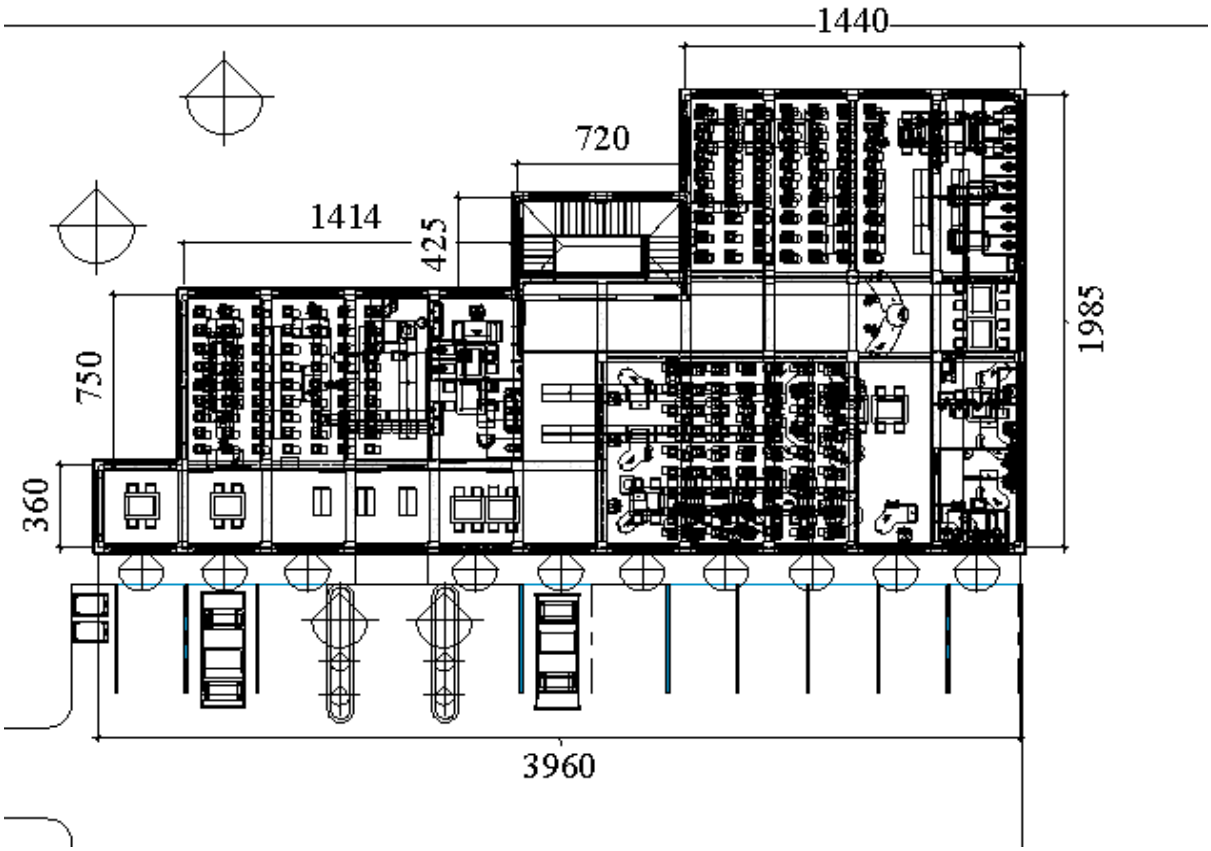

Figure 4. 6 MEASUREMNTS OF BUILDING

4.1.3.3 ELEVATION

Figure 4. 7 ENTRANCE VIEW

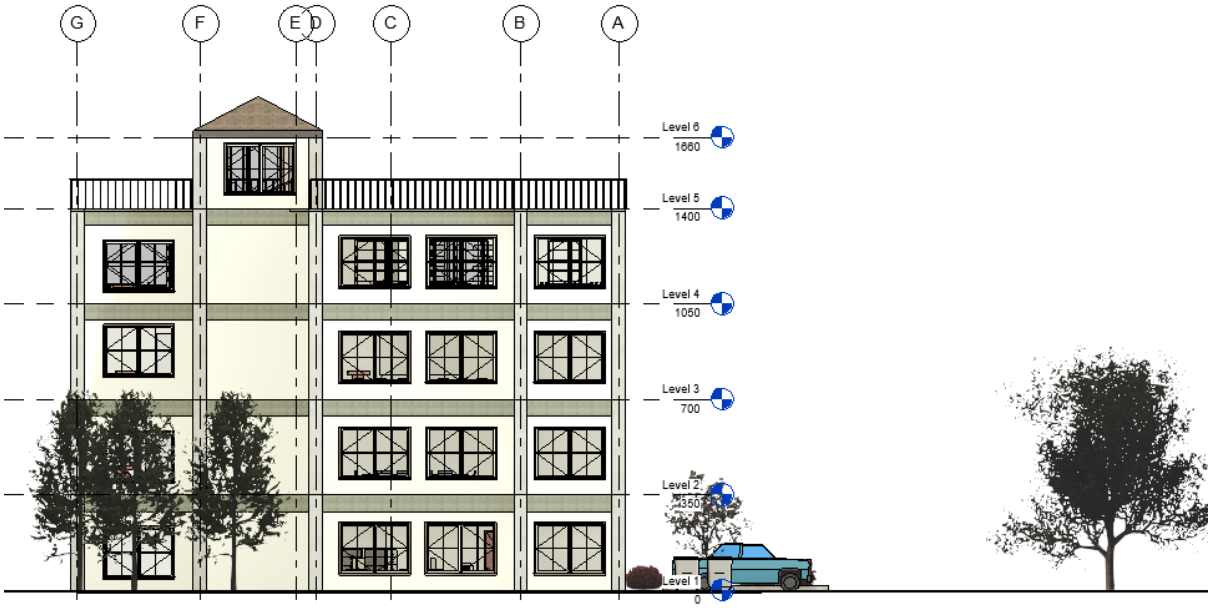

Figure 4. 8 VALLEY VIEW

4.1.4 MODELLING

4.1.4.1 RENDERED VIEW

Figure 4. 9 RENDERED VIEW

4.1.4.2 3D VIEW(INSIDE)

Figure 4. 10 PRINCIPAL OFFICE

Figure 4. 11 ACADEMIC OFFICE

Figure 4. 12 CORRIDOR

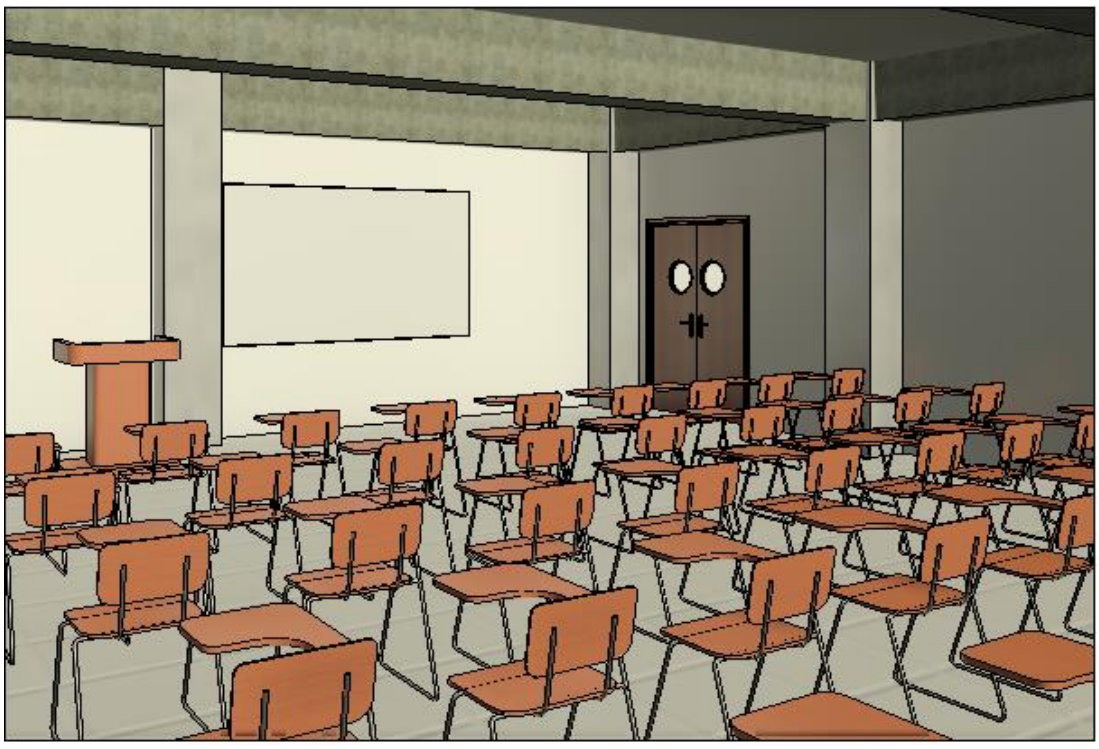

Figure 4. 13 LECTURE THEATRE

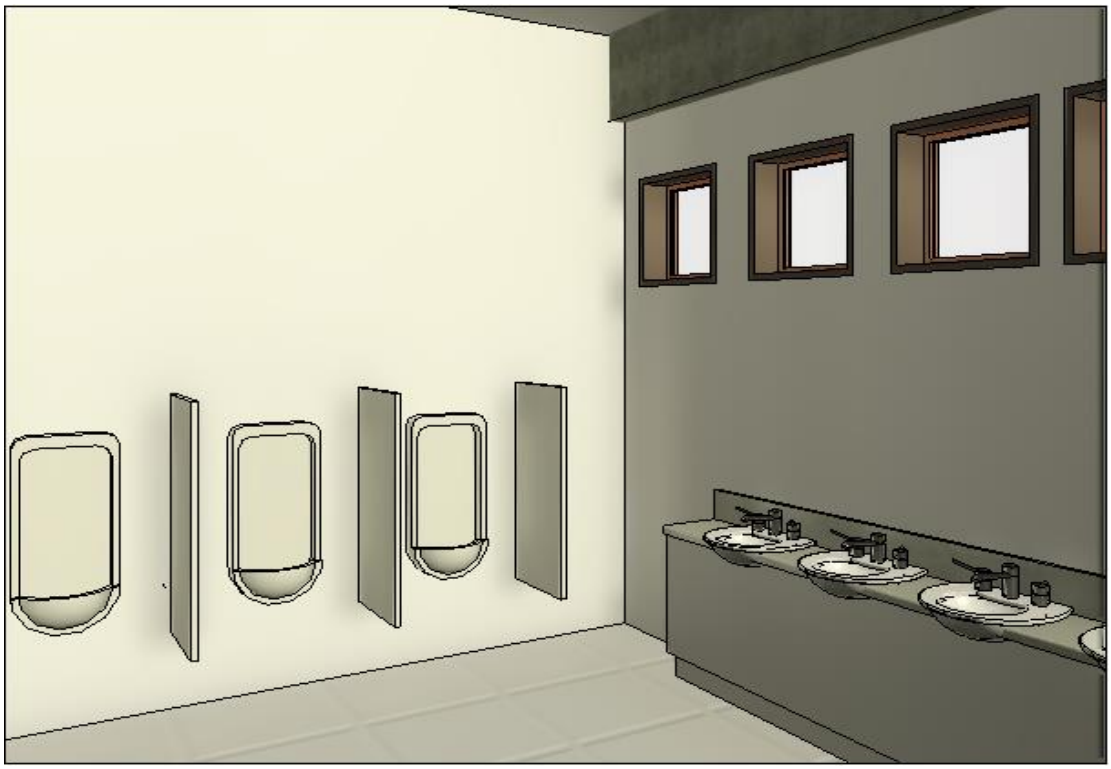

Figure 4. 14 BOYS TOILET

Figure 4. 15 CONFERENCE ROOM

Figure 4. 16 GYMNASIUM

Figure 4. 17 STAIRS

Figure 4. 18 STAFF ROOM

Figure 4. 19 LIBRARY

4.1.4.3 3D VIEW(OUTSIDE)

Figure 4. 20 ENTRANCE

Figure 4. 21 PARKING

CHAPTER 4: 4.2 STRUCTURAL ANALYSIS

4.2.1 BUILDING DATA FOR ANALYSIS

1.	TYPE OF BUILDING	Multi Storey College Building
2.	NO OF STOREY'S	G+3 (4 Storey's)
3.	FLOOR HEIGHT	350 CM
4.	SIZE OF COLUMN	50X50 cm
5.	SIZE OF BEAM	40X60 cm
6.	SIESMIC LOAD	Zone V
7.	DEAD LOAD	Self-weight: -1 Floor Load: -1.5 KN/m^2 Member Load: -11.04, -7.723 KN/m^2
8.	LIVE LOAD	Floor Finish Load: -2.5 KN/m^2
9.	SIZE OF WALL	20 cm, 10 cm

Table 4. 2 BUILDING DATA FOR ANALYSIS

4.2.2 LOADS APPLIED

4.2.2.1 SIESMIC LOAD

As specified in IS 1893 (Part 1) 2016 factors are applied. The building lies in Earthquake Zone V.

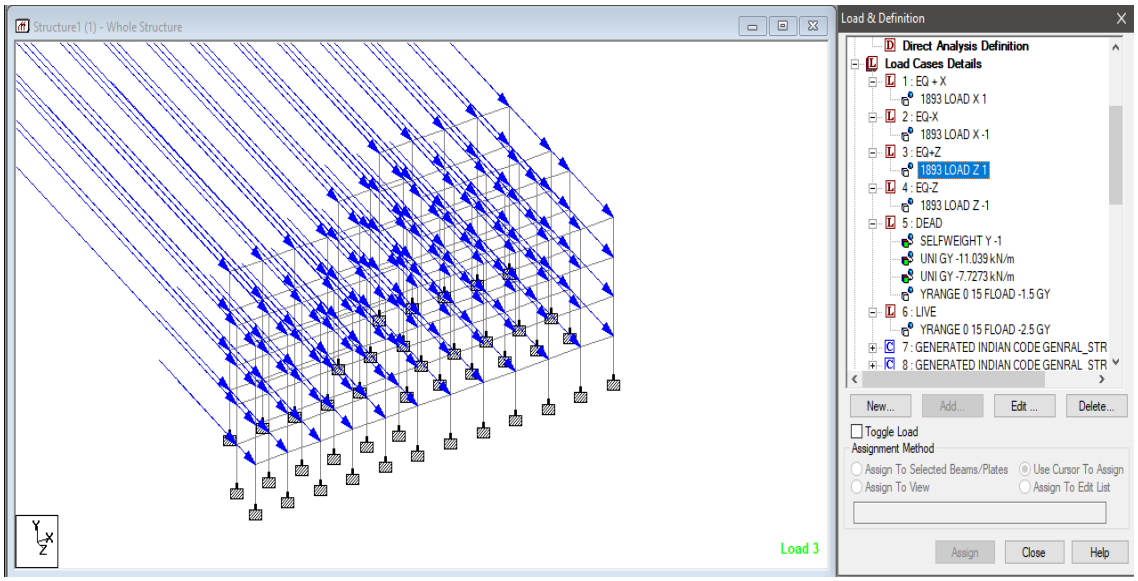

Figure 4. 22 SIESMIC LOAD

4.2.2.2 DEAD LOAD

As per IS 875(Part 1) structural elements like wall, floor finish and self-weight are considered Dead load.

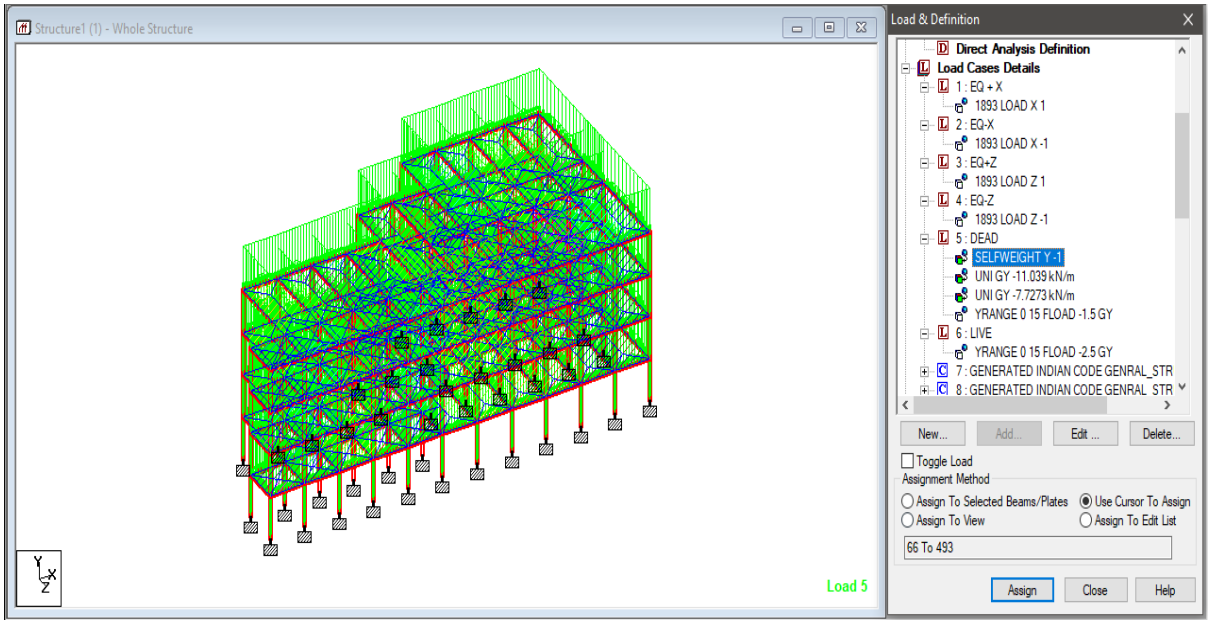

Figure 4. 23 DEAD LOAD

4.2.2.3 LIVE LOAD

The loads that are movable like materials, tools, partitions and equipment's are considered in Live load within the structure as per IS 875 (Part 2).

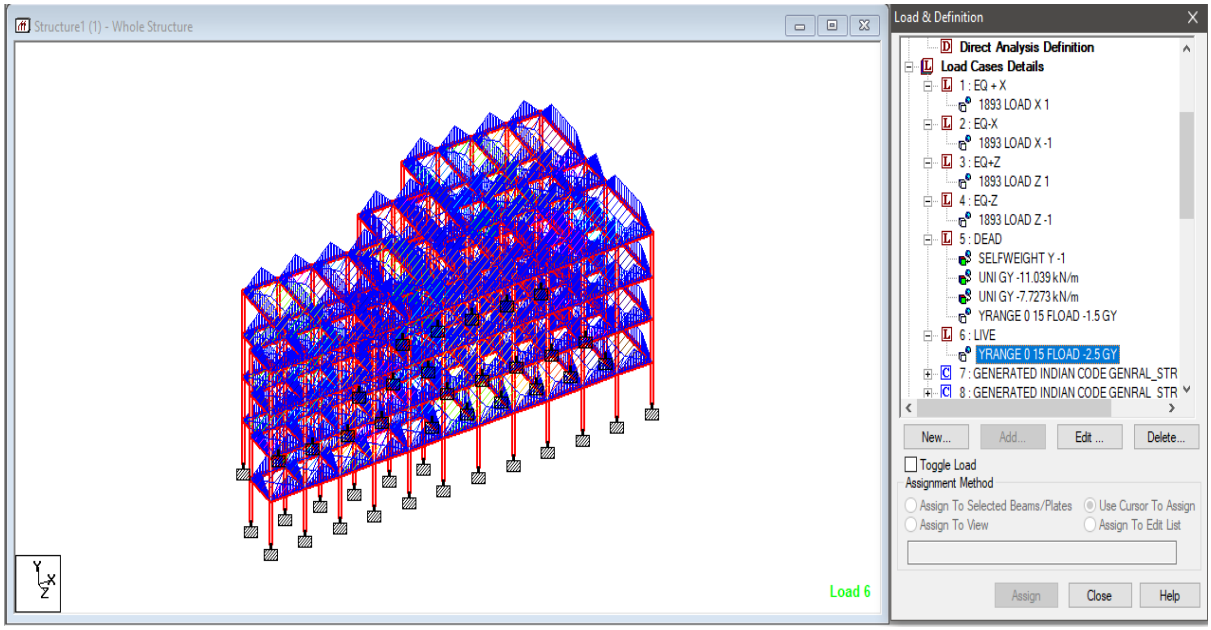

Figure 4. 24 LIVE LOAD

4.2.3 RESULT

4.2.3.1 BEAM

*NOTE- Specific Beam is being taken to show results. For detail designing refer Annexure 2

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	900.0 mm	1800.0 mm	2700.0 mm	3600.0 mm
TOP REINF.	17-10í 2 layer(s)	6-10í 1 layer(s)	6-10í 1 layer(s)	6-10í 1 layer(s)	16-10í 1 layer(s)
BOTTOM REINF.	4-25í 1 layer(s)	4-25í 1 layer(s)	4-25í 1 layer(s)	4-25í 1 layer(s)	4-25í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

Figure 4. 25 BEAM DESIGN

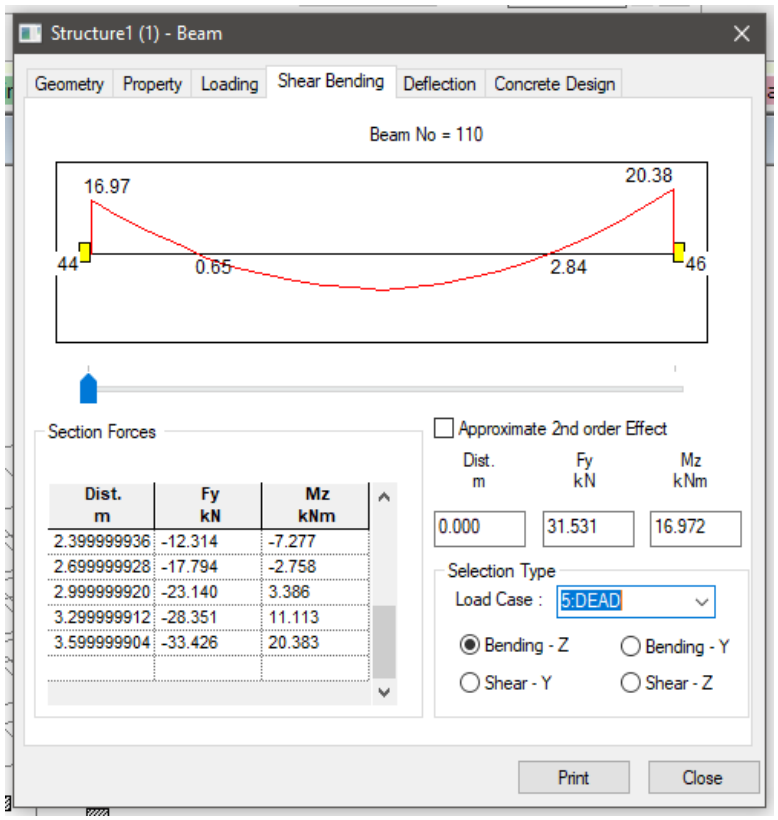

Figure 4. 26 BENDING MOMENT DIAGRAM

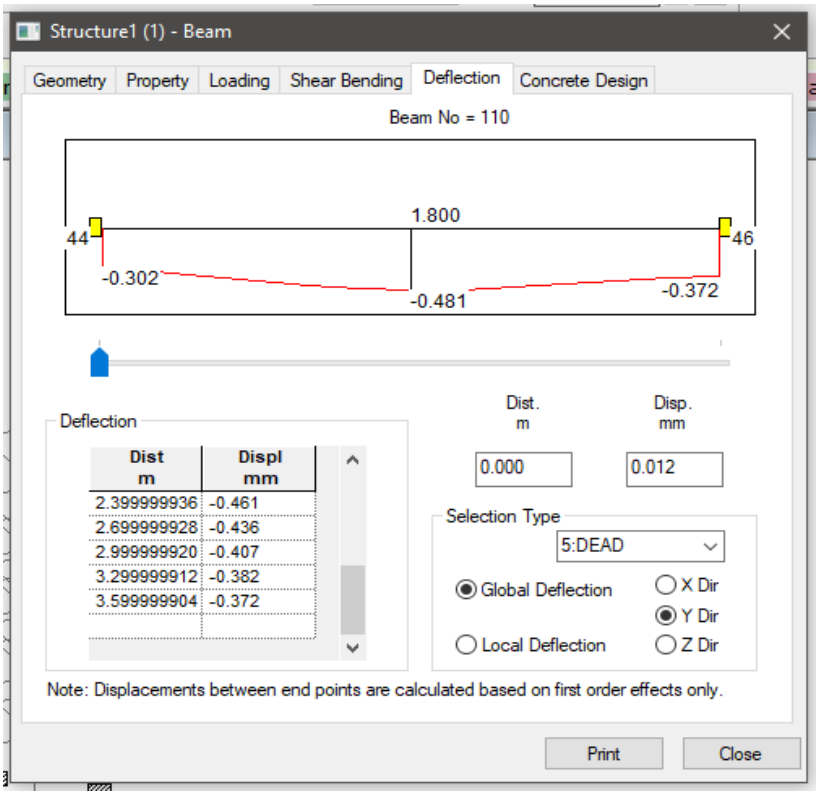

Figure 4. 27 DEFLECTION

4.2.3.2 COLUMN

*NOTE- Specific Column is being taken to show results. For detail designing refer Annexure 2

```
        C O L U M N   N O.    107  D E S I G N   R E S U L T S

     M25                    Fe415 (Main)              Fe415 (Sec.)

LENGTH:  3505.0 mm   CROSS SECTION:  500.0 mm X  500.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:     4 END JOINT:     42  TENSION COLUMN


REQD. STEEL AREA   :      2400.00 Sq.mm.
REQD. CONCRETE AREA:    247600.00 Sq.mm.
MAIN REINFORCEMENT : Provide  12 - 16 dia. (0.97%,    2412.74 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 255 mm c/c
```

Figure 4. 28 COLUMN RESULT

4.2.3.3 VOLUME OF CONCRETE AND WEIGHT OF STEEL

********** CONCRETE TAKE OFF **********

(FOR BEAMS, COLUMNS AND PLATES DESIGNED ABOVE)

NOTE: CONCRETE QUANTITY REPRESENTS VOLUME OF CONCRETE IN BEAMS, COLUMNS, ANI
REINFORCING STEEL QUANTITY REPRESENTS REINFORCING STEEL IN BEAMS AND C
REINFORCING STEEL IN PLATES IS NOT INCLUDED IN THE REPORTED QUANTITY.

TOTAL VOLUME OF CONCRETE = 878.0 CU.METER

BAR DIA (in mm)	WEIGHT (in New)
8	133647
10	77564
12	240755
16	232447
20	106668
25	34572
*** TOTAL=	825654

Figure 4. 29 VOLUME AND WEIGHT

CHAPTER 4: 4.3 ESTIMATION

With the help of Autodesk Revit and Staad Pro software area and volume of construction are calculated. Estimation is done manually, and we can calculate the total quantity of material required in pre phase of construction.

4.3.1 OBTAINING QUANTITY

The price per quantity is taken from the actual price present in market to estimate the project cost. Only those items have been taken where cost cutting can be done, and which will showcase drastic changes.

*NOTE- For detail quantity estimation refer Annexure 1. Tile and False Ceiling area are being taken from Revit.

ITEMS	QUANTITY/AREA	UNIT	PER PRICE(Rs)	COST(Rs)
CONCRETE	878	M^3	4100	3599800
REBARS	119	T	-	5215850
BLOCKS	20111	-	38	764218
PAINT	2617	L	200	523400
TILES*	23346.67	Ft^2	45	1050600
FALSE CEILING*	23088.58	Ft^2	65	1500720
			TOTAL	12654588

Table 4. 3 PROJECTED COST

4.3.2 RATIFYING THE OWNERS BUDGET

The project cost in Table 4.3 is above the owner's budget and for hypothesis the budget of owner is 85 lakhs, and the difference is quite large. Therefore, this requires modifying the project and to make it inexpensive. This can be done by modifying the building structure and building embellishment.

To decrease the cost:

1. Kota stone is used which is cheaper than ceramic tile.
2. Oil Distemper paint is used in place of Emulsion paint.
3. Fly Ash blocks are used instead of Concrete blocks.
4. Instead of false ceiling the ceiling is kept normal.
5. We delete partial structure, decreasing the columns, beams, slab, walls and rebars. Thus, decrease in tile, paint, blocks are apparent.

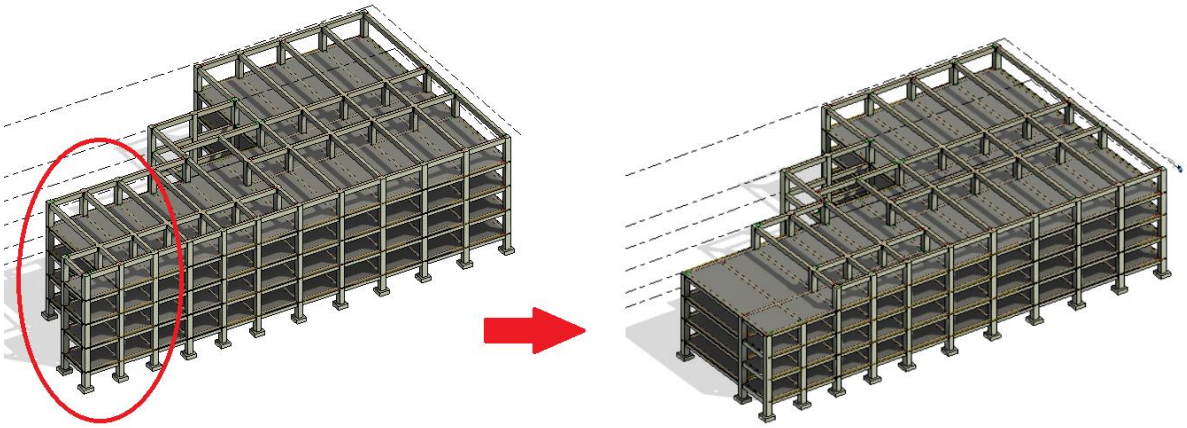

Figure 4. 30 MODIFICATION OF STRUCTURE

ITEMS	QUANTITY/AREA	UNIT	PER PRICE(Rs)	COST(Rs)
CONCRETE	806	M^3	4100	3304600
REBARS	90	T		3928750
BLOCKS	19787	-	20	494675
PAINT	2604	L	70	182280
TILES	22862.5	Ft^2	25	571550
			TOTAL	8481855

Table 4. 4 PROJECTED COST AFTER MODIFICATION

After estimating the quantities and comparing the both projected cost we came to an outcome that the proposed model is capable of substituting projected cost. Therefore, if this concept model is applied in practice, it will adjust it to owner's budget and the owner will have vibrant way of understanding the existing state of project. Thus, through this hypothesis we can achieve goal of cost reduction in pre-phase construction.

CHAPTER 5: CONCLUSION

We can conclude this project in terms of successful management of designing and structural analysis because both are very important for any public building. Some key points are following:

- We tried to make every part of the building realistic so as the people watching can get impression of the final product.
- With Structural Analysis the design of the building was determined according to specified properties.
- Cost estimated in pre phase was more than the owner's budget. With cost cutting 35% reduction was done in total cost.
- Architectural drawings and renderings show a complete actual physical experience and we can modify the structure of building if needed according to the requirements.
- We think this project work is very helpful for the people who are spending money and wants their project to be successful and to provide them with a properly planned and organised building.

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APPENDIX

ANNEXURE 1

(a) Blocks

S.NO	WALL WIDTH	LENGTH	HEIGHT	SURFACE AREA OF WALL	WINDOW LENGTH	WINDOW HEIGHT	SURFACE AREA OF WINDOW	FINAL SURFACE AREA	SURFACE AREA OF BLOCK	NO OF BLOCKS	5% WASTAGE
1	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
2	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
3	20	1100	290	319000	250	180	45000	274000	483.87	567	**596**
4	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
5	20	400	290	116000	250	180	45000	71000	483.87	147	**155**
6	20	670	290	194300	250	180	45000	149300	483.87	309	**325**
7	20	375	290	108750	250	180	45000	63750	483.87	132	**139**
8	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
9	20	700	290	203000	250	180	45000	158000	483.87	327	**344**
10	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
11	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
12	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
13	20	675	290	195750	250	180	45000	150750	483.87	312	**328**
14	20	355	290	102950	250	180	45000	57950	483.87	120	**126**
15	20	315	290	91350	250	180	45000	46350	483.87	96	**101**
16	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
17	20	312	290	90480	250	180	45000	45480	483.87	94	**99**
18	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
19	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
20	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
21	20	784	290	227360	250	180	45000	182360	483.87	377	**396**
22	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
23	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
24	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
25	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
26	20	425	290	123250	250	180	45000	78250	483.87	162	**171**
27	20	720	290	208800	250	180	45000	163800	483.87	339	**356**
28	20	440	290	127600	250	180	45000	82600	483.87	171	**180**
29	20	720	290	208800	250	180	45000	163800	483.87	339	**356**
30	20	440	290	127600	250	180	45000	82600	483.87	171	**180**
31	10	670	290	194300	0	0	0	194300	677.42	287	**302**

32	10	725	290	210250	0	0	0	210250	677.42	311	**327**
33	10	830	290	240700	0	0	0	240700	677.42	356	**374**
34	10	715	290	207350	0	0	0	207350	677.42	307	**323**
35	10	785	290	227650	0	0	0	227650	677.42	337	**354**
36	10	785	290	227650	0	0	0	227650	677.42	337	**354**
37	10	320	290	92800	0	0	0	92800	677.42	137	**144**
38	10	680	290	197200	0	0	0	197200	677.42	292	**307**
39	10	310	290	89900	0	0	0	89900	677.42	133	**140**
40	10	470	290	136300	0	0	0	136300	677.42	202	**213**
41	10	750	290	217500	0	0	0	217500	677.42	322	**339**
42	10	310	290	89900	0	0	0	89900	677.42	133	**140**
43	10	700	290	203000	0	0	0	203000	677.42	300	**315**
44	10	700	290	203000	0	0	0	203000	677.42	300	**315**
45	10	700	290	203000	0	0	0	203000	677.42	300	**315**
46	10	700	290	203000	0	0	0	203000	677.42	300	**315**
47	10	425	290	123250	0	0	0	123250	677.42	182	**192**
48	10	1030	290	298700	0	0	0	298700	677.42	441	**464**
49	10	809	290	234610	0	0	0	234610	677.42	347	**365**
50	10	1060	290	307400	0	0	0	307400	677.42	454	**477**
51	10	350	290	101500	0	0	0	101500	677.42	150	**158**
52	10	750	290	217500	0	0	0	217500	677.42	322	**339**
53	10	310	290	89900	0	0	0	89900	677.42	133	**140**
54	10	1080	290	313200	0	0	0	313200	677.42	463	**487**
55	10	255	290	73950	0	0	0	73950	677.42	110	**116**
56	10	315	290	91350	0	0	0	91350	677.42	135	**142**
57	10	660	290	191400	0	0	0	191400	677.42	283	**298**
58	10	1060	290	307400	0	0	0	307400	677.42	454	**477**
59	10	300	290	87000	0	0	0	87000	677.42	129	**136**
60	10	310	290	89900	0	0	0	89900	677.42	133	**140**
61	10	380	290	110200	0	0	0	110200	677.42	163	**172**
62	10	700	290	203000	0	0	0	203000	677.42	300	**315**
63	10	310	290	89900	0	0	0	89900	677.42	133	**140**
64	10	785	290	227650	0	0	0	227650	677.42	337	**354**
65	10	380	290	110200	0	0	0	110200	677.42	163	**172**
66	10	370	290	107300	0	0	0	107300	677.42	159	**167**
67	10	380	290	110200	0	0	0	110200	677.42	163	**172**
68	10	207	290	60030	0	0	0	60030	677.42	89	**94**

69	10	334	290	96860	0	0	0	96860	677.42	143	**151**
70	10	410	290	118900	0	0	0	118900	677.42	176	**185**
71	10	360	290	104400	0	0	0	104400	677.42	155	**163**
72	10	1029	290	298410	0	0	0	298410	677.42	441	**464**
73	10	705	290	204450	0	0	0	204450	677.42	302	**318**
74	10	700	290	203000	0	0	0	203000	677.42	300	**315**
75	10	785	290	227650	0	0	0	227650	677.42	337	**354**
76	10	1030	290	298700	0	0	0	298700	677.42	441	**464**
77	10	750	290	217500	0	0	0	217500	677.42	322	**339**
78	10	310	290	89900	0	0	0	89900	677.42	133	**140**
79	10	310	290	89900	0	0	0	89900	677.42	133	**140**
80	10	232	290	67280	0	0	0	67280	677.42	100	**105**
81	10	300	290	87000	0	0	0	87000	677.42	129	**136**
82	10	310	290	89900	0	0	0	89900	677.42	133	**140**
83	10	365	290	105850	0	0	0	105850	677.42	157	**165**
84	10	310	290	89900	0	0	0	89900	677.42	133	**140**
85	10	834	290	241860	0	0	0	241860	677.42	358	**376**
86	10	400	290	116000	0	0	0	116000	677.42	172	**181**
87	10	308	290	89320	0	0	0	89320	677.42	132	**139**
88	10	310	290	89900	0	0	0	89900	677.42	133	**140**
89	10	310	290	89900	0	0	0	89900	677.42	133	**140**

TOTAL BLOCKS	20111
PER BLOCK COST	38
TOTAL COST	Rs 764218

Using Fly Ash blocks and after modifying Structure

S.NO	WALL WIDTH	LENGTH	HEIGHT	SURFACE AREA OF WALL	WINDOW LENGTH	HEIGHT	SURFACE AREA OF WINDOW	FINAL SURFACE AREA	SURFACE AREAE OF BLOCK	NO OF BLOCKS	5% WASTAGE
1	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
2	20	1100	290	319000	250	180	45000	274000	483.87	567	**596**
3	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
4	20	400	290	116000	250	180	45000	71000	483.87	147	**155**
5	20	670	290	194300	250	180	45000	149300	483.87	309	**325**
6	20	375	290	108750	250	180	45000	63750	483.87	132	**139**
7	20	310	290	89900	250	180	45000	44900	483.87	93	**98**

8	20	700	290	203000	250	180	45000	158000	483.87	327	**344**
9	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
10	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
11	20	675	290	195750	250	180	45000	150750	483.87	312	**328**
12	20	355	290	102950	250	180	45000	57950	483.87	120	**126**
13	20	315	290	91350	250	180	45000	46350	483.87	96	**101**
14	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
15	20	312	290	90480	250	180	45000	45480	483.87	94	**99**
16	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
17	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
18	20	784	290	227360	250	180	45000	182360	483.87	377	**396**
19	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
20	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
21	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
22	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
23	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
24	20	310	290	89900	250	180	45000	44900	483.87	93	**98**
25	20	425	290	123250	250	180	45000	78250	483.87	162	**171**
26	20	720	290	208800	250	180	45000	163800	483.87	339	**356**
27	20	440	290	127600	250	180	45000	82600	483.87	171	**180**
28	20	720	290	208800	250	180	45000	163800	483.87	339	**356**
29	20	440	290	127600	250	180	45000	82600	483.87	171	**180**
30	20	1110	290	321900	250	180	45000	276900	483.87	573	**602**
31	10	670	290	194300	0	0	0	194300	677.12	287	**302**
32	10	725	290	210250	0	0	0	210250	677.12	311	**327**
33	10	830	290	240700	0	0	0	240700	677.12	356	**374**
34	10	715	290	207350	0	0	0	207350	677.12	307	**323**
35	10	785	290	227650	0	0	0	227650	677.12	337	**354**
36	10	320	290	92800	0	0	0	92800	677.12	138	**145**
37	10	680	290	197200	0	0	0	197200	677.12	292	**307**
38	10	310	290	89900	0	0	0	89900	677.12	133	**140**
39	10	470	290	136300	0	0	0	136300	677.12	202	**213**
40	10	750	290	217500	0	0	0	217500	677.12	322	**339**
41	10	310	290	89900	0	0	0	89900	677.12	133	**140**
42	10	700	290	203000	0	0	0	203000	677.12	300	**315**
43	10	700	290	203000	0	0	0	203000	677.12	300	**315**
44	10	700	290	203000	0	0	0	203000	677.12	300	**315**

45	10	700	290	203000	0	0	0	203000	677.12	300	**315**
46	10	425	290	123250	0	0	0	123250	677.12	183	**193**
47	10	1030	290	298700	0	0	0	298700	677.12	442	**465**
48	10	809	290	234610	0	0	0	234610	677.12	347	**365**
49	10	1060	290	307400	0	0	0	307400	677.12	454	**477**
50	10	350	290	101500	0	0	0	101500	677.12	150	**158**
51	10	1080	290	313200	0	0	0	313200	677.12	463	**487**
52	10	255	290	73950	0	0	0	73950	677.12	110	**116**
53	10	315	290	91350	0	0	0	91350	677.12	135	**142**
54	10	660	290	191400	0	0	0	191400	677.12	283	**298**
55	10	1060	290	307400	0	0	0	307400	677.12	454	**477**
56	10	300	290	87000	0	0	0	87000	677.12	129	**136**
57	10	310	290	89900	0	0	0	89900	677.12	133	**140**
58	10	380	290	110200	0	0	0	110200	677.12	163	**172**
59	10	700	290	203000	0	0	0	203000	677.12	300	**315**
60	10	310	290	89900	0	0	0	89900	677.12	133	**140**
61	10	785	290	227650	0	0	0	227650	677.12	337	**354**
62	10	380	290	110200	0	0	0	110200	677.12	163	**172**
63	10	370	290	107300	0	0	0	107300	677.12	159	**167**
64	10	380	290	110200	0	0	0	110200	677.12	163	**172**
65	10	207	290	60030	0	0	0	60030	677.12	89	**94**
66	10	334	290	96860	0	0	0	96860	677.12	144	**152**
67	10	410	290	118900	0	0	0	118900	677.12	176	**185**
68	10	360	290	104400	0	0	0	104400	677.12	155	**163**
69	10	1029	290	298410	0	0	0	298410	677.12	441	**464**
70	10	705	290	204450	0	0	0	204450	677.12	302	**318**
71	10	700	290	203000	0	0	0	203000	677.12	300	**315**
72	10	785	290	227650	0	0	0	227650	677.12	337	**354**
73	10	1030	290	298700	0	0	0	298700	677.12	442	**465**
74	10	750	290	217500	0	0	0	217500	677.12	322	**339**
75	10	310	290	89900	0	0	0	89900	677.12	133	**140**
76	10	310	290	89900	0	0	0	89900	677.12	133	**140**
77	10	232	290	67280	0	0	0	67280	677.12	100	**105**
78	10	300	290	87000	0	0	0	87000	677.12	129	**136**

79	10	310	290	89900	0	0	0	89900	677.12	133	**140**
80	10	365	290	105850	0	0	0	105850	677.12	157	**165**
81	10	310	290	89900	0	0	0	89900	677.12	133	**140**
82	10	834	290	241860	0	0	0	241860	677.12	358	**376**
83	10	400	290	116000	0	0	0	116000	677.12	172	**181**
84	10	308	290	89320	0	0	0	89320	677.12	132	**139**
85	10	310	290	89900	0	0	0	89900	677.12	133	**140**
86	10	310	290	89900	0	0	0	89900	677.12	133	**140**
										Total	**19787**

TOTAL REQUIRED	19787
PER BLOCK COST	25
TOTAL EXPENDITURE	494675

(b) Paint

S.NO	WALL TYPE	SURFACE AREA OF WALL	SPREADING RATE OF PAINT	COATS	REQUIRED(ML)
1	20CM	44900	11	4	**16328**
2	20CM	44900	11	4	**16328**
3	20CM	274000	11	4	**99637**
4	20CM	44900	11	4	**16328**
5	20CM	71000	11	4	**25819**
6	20CM	149300	11	4	**54291**
7	20CM	63750	11	4	**23182**
8	20CM	44900	11	4	**16328**
9	20CM	158000	11	4	**57455**
10	20CM	44900	11	4	**16328**
11	20CM	44900	11	4	**16328**
12	20CM	44900	11	4	**16328**
13	20CM	150750	11	4	**54819**
14	20CM	57950	11	4	**21073**
15	20CM	46350	11	4	**16855**
16	20CM	44900	11	4	**16328**
17	20CM	45480	11	4	**16539**
18	20CM	44900	11	4	**16328**

19	20CM	44900	11	4	**16328**
20	20CM	44900	11	4	**16328**
21	20CM	182360	11	4	**66313**
22	20CM	44900	11	4	**16328**
23	20CM	44900	11	4	**16328**
24	20CM	44900	11	4	**16328**
25	20CM	44900	11	4	**16328**
26	20CM	78250	11	4	**28455**
27	20CM	163800	11	4	**59564**
28	20CM	82600	11	4	**30037**
29	20CM	163800	11	4	**59564**
30	20CM	82600	11	4	**30037**
31	10CM	194300	11	2	**35328**
32	10CM	210250	11	2	**38228**
33	10CM	240700	11	2	**43764**
34	10CM	207350	11	2	**37700**
35	10CM	227650	11	2	**41391**
36	10CM	227650	11	2	**41391**
37	10CM	92800	11	2	**16873**
38	10CM	197200	11	2	**35855**
39	10CM	89900	11	2	**16346**
40	10CM	136300	11	2	**24782**
41	10CM	217500	11	2	**39546**
42	10CM	89900	11	2	**16346**
43	10CM	203000	11	2	**36910**
44	10CM	203000	11	2	**36910**
45	10CM	203000	11	2	**36910**
46	10CM	203000	11	2	**36910**
47	10CM	123250	11	2	**22410**
48	10CM	298700	11	2	**54310**
49	10CM	234610	11	2	**42657**
50	10CM	307400	11	2	**55891**
51	10CM	101500	11	2	**18455**
52	10CM	217500	11	2	**39546**
53	10CM	89900	11	2	**16346**
54	10CM	313200	11	2	**56946**
55	10CM	73950	11	2	**13446**

56	10CM	91350	11	2	**16610**
57	10CM	191400	11	2	**34800**
58	10CM	307400	11	2	**55891**
59	10CM	87000	11	2	**15819**
60	10CM	89900	11	2	**16346**
61	10CM	110200	11	2	**20037**
62	10CM	203000	11	2	**36910**
63	10CM	89900	11	2	**16346**
64	10CM	227650	11	2	**41391**
65	10CM	110200	11	2	**20037**
66	10CM	107300	11	2	**19510**
67	10CM	110200	11	2	**20037**
68	10CM	60030	11	2	**10915**
69	10CM	96860	11	2	**17611**
70	10CM	118900	11	2	**21619**
71	10CM	104400	11	2	**18982**
72	10CM	298410	11	2	**54257**
73	10CM	204450	11	2	**37173**
74	10CM	203000	11	2	**36910**
75	10CM	227650	11	2	**41391**
76	10CM	298700	11	2	**54310**
77	10CM	217500	11	2	**39546**
78	10CM	89900	11	2	**16346**
79	10CM	89900	11	2	**16346**
80	10CM	67280	11	2	**12233**
81	10CM	87000	11	2	**15819**
82	10CM	89900	11	2	**16346**
83	10CM	105850	11	2	**19246**
84	10CM	89900	11	2	**16346**
85	10CM	241860	11	2	**43975**
86	10CM	116000	11	2	**21091**
87	10CM	89320	11	2	**16240**
88	10CM	89900	11	2	**16346**
89	10CM	89900	11	2	**16346**
			TOTAL REQUIRED		**2616885**

IN LITRE	2616.885
PER LITRE PRICE EMULSION	200
TOTAL EXPENDITURE EMULSION	Rs. 523377

After modification of structure and using cheap paint

S.NO	WALL TYPE	SURFACE AREA OF WALL	SPREADING RATE OF PAINT	COATS	REQUIRED (ml)
1	20	44900	11	4	16328
2	20	274000	11	4	99637
3	20	44900	11	4	16328
4	20	71000	11	4	25819
5	20	149300	11	4	54291
6	20	63750	11	4	23182
7	20	44900	11	4	16328
8	20	158000	11	4	57455
9	20	44900	11	4	16328
10	20	44900	11	4	16328
11	20	150750	11	4	54819
12	20	57950	11	4	21073
13	20	46350	11	4	16855
14	20	44900	11	4	16328
15	20	45480	11	4	16539
16	20	44900	11	4	16328
17	20	44900	11	4	16328
18	20	182360	11	4	66313
19	20	44900	11	4	16328
20	20	44900	11	4	16328
21	20	44900	11	4	16328
22	20	44900	11	4	16328
23	20	44900	11	4	16328
24	20	44900	11	4	16328
25	20	78250	11	4	28455
26	20	163800	11	4	59564
27	20	82600	11	4	30037
28	20	163800	11	4	59564
29	20	82600	11	4	30037
30	20	276900	11	4	100691

31	10	194300	11	2	35328
32	10	210250	11	2	38228
33	10	240700	11	2	43764
34	10	207350	11	2	37700
35	10	227650	11	2	41391
36	10	92800	11	2	16873
37	10	197200	11	2	35855
38	10	89900	11	2	16346
39	10	136300	11	2	24782
40	10	217500	11	2	39546
41	10	89900	11	2	16346
42	10	203000	11	2	36910
43	10	203000	11	2	36910
44	10	203000	11	2	36910
45	10	203000	11	2	36910
46	10	123250	11	2	22410
47	10	298700	11	2	54310
48	10	234610	11	2	42657
49	10	307400	11	2	55891
50	10	101500	11	2	18455
51	10	313200	11	2	56946
52	10	73950	11	2	13446
53	10	91350	11	2	16610
54	10	191400	11	2	34800
55	10	307400	11	2	55891
56	10	87000	11	2	15819
57	10	89900	11	2	16346
58	10	110200	11	2	20037
59	10	203000	11	2	36910
60	10	89900	11	2	16346
61	10	227650	11	2	41391
62	10	110200	11	2	20037
63	10	107300	11	2	19510
64	10	110200	11	2	20037
65	10	60030	11	2	10915
66	10	96860	11	2	17611
67	10	118900	11	2	21619

68	10	104400	11	2	18982
69	10	298410	11	2	54257
70	10	204450	11	2	37173
71	10	203000	11	2	36910
72	10	227650	11	2	41391
73	10	298700	11	2	54310
74	10	217500	11	2	39546
75	10	89900	11	2	16346
76	10	89900	11	2	16346
77	10	67280	11	2	12233
78	10	87000	11	2	15819
79	10	89900	11	2	16346
80	10	105850	11	2	19246
81	10	89900	11	2	16346
82	10	241860	11	2	43975
83	10	116000	11	2	21091
84	10	89320	11	2	16240
85	10	89900	11	2	16346
86	10	89900	11	2	16346

Price Per Litre	70
Total Required	2604
Cost	182280

(c) Rebars

S.NO	TYPE (mm)	WEIGHT(TON)	PRICE PER TON	COST
1	8	24.19	38000	919220
2	10	25.71	43000	1105530
3	12	27.1	45000	1219500
4	16	26.1	46000	1200600
5	20	12	48000	576000
6	25	3.9	50000	195000
			TOTAL	5215850

After modification of structure

S.NO	TYPE (mm)	WEIGHT(TON)	PRICE PER TON	COST
1	8	17.42	38000	661960
2	10	13.58	43000	583940
3	12	24.65	45000	1109250
4	16	21	46000	966000
5	20	11.2	48000	537600
6	25	1.4	50000	70000
			TOTAL	3928750

ANNEXURE 2

(a) Beam Designs

B E A M N O.1 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 885.88 570.70 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 969.10 597.13 473.64 473.64 473.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 8-12í 6-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 2 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 886.18 480.30 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 954.93 590.44 473.64 473.64 473.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 8-12í 5-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 3 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1051.05 608.58 481.33 481.33 607.82

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1049.39 607.30 481.33 481.33 604.47

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 4 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1051.85 607.45 481.33 481.33 609.68

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1044.55 602.30 481.33 481.33 612.26

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 5 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1052.87 609.98 481.33 481.33 594.23

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1043.00 605.00 481.33 481.33 604.66

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 6 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1047.18 607.19 481.33 481.33 597.02

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1038.89 601.30 481.33 481.33 600.09

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 7 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1050.23 609.50 481.33 481.33 596.67

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1043.91 605.05 481.33 481.33 598.77

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O.8 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1049.54 482.34 481.33 481.33 598.91

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1040.50 603.00 481.33 481.33 602.35

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 7-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

B E A M N O. 9 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1056.21 610.41 481.33 481.33 608.84

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1049.17 605.39 481.33 481.33 610.98

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 10 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1051.68 608.82 481.33 481.33 600.67

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1041.89 602.09 481.33 481.33 604.74

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 11 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 967.37 598.57 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 895.46 570.62 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 8-12í 6-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 12 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1044.10 607.13 481.33 481.33 592.98

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1037.33 600.50 481.33 481.33 589.90

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 13 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 913.13 589.60 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 977.18 605.44 473.64 473.64 473.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 14 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1067.06 617.82 481.33 481.33 615.35

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1066.70 617.41 481.33 481.33 613.23

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 15D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1060.23 616.62 481.33 481.33 600.47

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1059.06 615.48 481.33 481.33 598.81

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 16 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1065.41 617.29 481.33 481.33 622.07

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1069.09 617.23 481.33 481.33 610.01

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 17 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 966.79 603.12 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 911.16 587.33 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 18 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 883.97 575.42 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 961.66 595.00 473.64 473.64 473.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 8-12í 6-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 19 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1051.68 609.81 481.33 481.33 616.68

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1062.49 613.04 481.33 481.33 600.26

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 20 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 950.53 596.51 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 893.48 579.26 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 8-12í 6-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 21 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 910.17 476.20 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 980.19 483.91 473.64 473.64 473.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 22 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1066.83 617.88 481.33 481.33 623.06

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1074.28 618.96 481.33 481.33 610.41

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 23 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1061.36 616.79 481.33 481.33 600.81

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1062.67 617.14 481.33 481.33 598.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 24 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1069.49 618.58 481.33 481.33 615.99

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1069.77 618.52 481.33 481.33 614.21

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 25 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 975.83 606.07 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 910.35 588.68 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 26 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 985.75 614.84 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 928.77 598.25 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 5-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 27 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 979.82 607.18 478.25 478.25 478.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 930.57 599.31 476.20 476.20 476.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 28 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 970.52 600.26 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 882.10 569.59 480.30 480.30 480.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 8-12í 6-12í 5-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 29 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 930.87 481.33 481.33 481.33 481.33

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 979.41 607.37 478.25 478.25 478.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 30 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 937.64 602.66 478.25 478.25 478.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 984.48 610.16 478.25 478.25 478.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 31 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1083.39 627.03 481.33 481.33 632.42

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1089.72 628.14 481.33 481.33 618.51

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 9-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 32 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1080.04 627.29 481.33 481.33 609.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1078.18 625.76 481.33 481.33 609.02

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 33 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1085.32 628.18 481.33 481.33 631.42

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1088.66 627.70 481.33 481.33 620.46

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 9-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 34 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1046.89 608.60 481.33 481.33 604.01

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1042.81 602.28 481.33 481.33 594.63

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 35 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1054.44 481.33 481.33 481.33 599.28

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1041.45 601.42 481.33 481.33 606.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 7-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 36 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1054.93 608.79 481.33 481.33 598.20

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1040.51 602.89 481.33 481.33 606.18

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 37 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1054.20 610.62 481.33 481.33 595.72

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1038.46 602.16 481.33 481.33 604.97

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 38 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1060.45 611.69 481.33 481.33 608.53

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1043.79 600.41 481.33 481.33 618.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 39 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1087.52 629.86 481.33 481.33 613.14

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1080.18 626.66 481.33 481.33 619.27

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 9-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 40 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1086.77 630.03 481.33 481.33 614.42

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1081.11 626.84 481.33 481.33 616.24

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 9-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 41 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1086.91 630.39 481.33 481.33 612.86

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1080.25 626.77 481.33 481.33 615.73

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 9-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 42 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm SIZE: 500.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 1090.53 630.33 481.33 481.33 632.76

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1088.79 628.22 481.33 481.33 625.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 876.2 mm 1752.5 mm 2628.8 mm 3505.0 mm

TOP 14-10í 9-10í 7-10í 7-10í 9-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 8-10í 7-10í 7-10í 8-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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B E A M N O. 43 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1758.34 649.47 0.00 666.73 1813.03

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1334.41 606.31 453.47 740.86 1313.00

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-20í 4-20í 2-20í 4-20í 6-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 17-10í 8-10í 6-10í 10-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 44 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1477.10 567.58 0.00 454.70 1260.45

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 983.45 610.69 445.48 578.48 919.88

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 19-10í 8-10í 6-10í 6-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 45 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1320.22 453.47 453.47 453.47 1252.64

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 974.29 617.28 445.48 484.09 828.48

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 17-10í 6-10í 6-10í 6-10í 16-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 46 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1791.92 661.77 454.70 681.79 1706.92

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1136.43 595.88 453.47 730.86 1320.47

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 23-10í 9-10í 6-10í 9-10í 22-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 15-10í 8-10í 6-10í 10-10í 17-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 47 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1132.96 454.70 454.70 454.70 1210.96

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 807.95 472.16 454.70 460.21 770.05

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 7-10í 6-10í 6-10í 10-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 48 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1170.58 454.70 454.70 454.70 1196.14

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 763.79 454.70 454.70 468.81 759.09

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-16í 4-16í 4-16í 4-16í 6-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 10-10í 6-10í 6-10í 6-10í 10-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 49 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1815.80 688.56 451.01 689.24 1673.91

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1130.56 591.31 451.01 754.58 1357.76

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-20í 4-20í 4-20í 4-20í 6-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 50 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1182.35 454.70 454.70 454.70 1191.11

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 793.37 475.88 454.70 472.60 788.90

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-16í 4-16í 4-16í 4-16í 6-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 51 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1827.48 692.54 451.01 692.89 1680.34

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1136.66 594.27 451.01 759.25 1368.02

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-20í 4-20í 4-20í 4-20í 6-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 52 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1176.14 451.01 451.01 451.01 1181.86

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 799.13 470.06 451.01 471.38 786.94

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-16í 4-16í 4-16í 4-16í 6-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 53 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1181.54 454.70 0.00 454.70 1195.63

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 770.61 475.93 454.70 469.91 762.23

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-16í 4-16í 3-16í 4-16í 6-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 10-10í 7-10í 6-10í 6-10í 10-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 54 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1839.20 696.98 451.01 695.49 1685.11

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1142.55 451.01 451.01 764.59 1378.18

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-20í 4-20í 4-20í 4-20í 6-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 55 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1220.68 453.47 453.47 521.97 1321.09

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 860.58 490.83 445.48 600.67 979.12

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 16-10í 6-10í 6-10í 7-10í 17-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 56 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1184.07 453.47 453.47 453.47 1208.40

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 775.90 479.00 453.47 474.90 769.80

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 10-10í 7-10í 6-10í 7-10í 10-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 57 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1949.05 702.23 0.00 704.52 1699.76

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1138.33 581.31 453.47 804.02 1424.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 4-25í 4-25í 2-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-12í 6-12í 5-12í 8-12í 13-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 58 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 1992.39 454.70 454.70 454.70 1979.89

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 516.40 519.72 728.27 504.33 467.13

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 10-16í 4-16í 4-16í 4-16í 10-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 7-10í 7-10í 10-10í 7-10í 6-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 59 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 1949.57 454.70 454.70 454.70 1963.46

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 519.31 605.46 842.65 487.61 468.74

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 7-10í 8-10í 11-10í 7-10í 6-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 60 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 1956.78 454.70 454.70 454.70 1965.66

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 521.88 606.34 842.77 489.95 471.06

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 10-16í 4-16í 4-16í 4-16í 10-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 7-10í 8-10í 11-10í 7-10í 6-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 61 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 1959.00 451.01 451.01 451.01 1965.10

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 525.50 550.52 702.24 496.22 476.23

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 10-16í 4-16í 4-16í 4-16í 10-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 5-12í 5-12í 7-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 62 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 1930.61 454.70 454.70 454.70 1944.44

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 454.70 470.39 832.66 490.08 454.70

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1875.0 mm 3750.0 mm 5625.0 mm 7500.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-10í 6-10í 11-10í 7-10í 6-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 63 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1377.84 537.15 451.01 451.01 1288.45

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 987.37 618.44 451.01 499.35 857.21

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 7-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 64 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1214.11 454.70 454.70 454.70 1226.93

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 794.49 454.70 454.70 489.05 797.24

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 65 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1220.75 454.70 454.70 454.70 1222.28

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 800.06 477.82 454.70 481.45 788.84

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 66 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1345.35 462.40 454.70 543.93 1383.57

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 848.05 501.45 454.70 651.38 1014.70

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 7-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 8-12í 5-12í 5-12í 6-12í 9-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 67 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 4250.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1062.5 mm 2125.0 mm 3187.5 mm 4250.0 mm

TOP 1697.37 618.47 0.00 632.83 1881.74

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1182.82 714.28 451.01 583.16 969.00

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1062.5 mm 2125.0 mm 3187.5 mm 4250.0 mm

TOP 6-20í 4-20í 2-20í 4-20í 6-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 68 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1436.06 562.79 453.47 453.47 1285.89

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 998.04 635.42 451.01 532.68 890.17

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 13-12í 5-12í 5-12í 5-12í 12-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 69 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1343.23 474.13 454.70 576.67 1449.49

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 890.16 511.23 454.70 670.27 1023.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 12-12í 5-12í 5-12í 6-12í 13-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 12-10í 7-10í 6-10í 9-10í 14-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 70 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 4500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1125.0 mm 2250.0 mm 3375.0 mm 4500.0 mm

TOP 1789.31 608.07 454.70 508.79 1710.90

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1106.27 764.34 453.47 616.21 934.98

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1125.0 mm 2250.0 mm 3375.0 mm 4500.0 mm

TOP 23-10í 8-10í 6-10í 7-10í 22-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 10-12í 7-12í 5-12í 6-12í 9-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 71 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1475.61 573.82 454.70 454.70 1307.04

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1001.29 647.89 453.47 551.97 901.81

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 19-10í 8-10í 6-10í 6-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 72 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1233.86 454.70 454.70 454.70 1247.30

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 798.68 488.90 454.70 492.23 801.73

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 73 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1224.94 454.70 454.70 454.70 1222.89

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 803.56 492.11 454.70 483.61 794.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 4-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 74 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1291.03 451.01 451.01 543.08 1392.99

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 865.59 451.01 451.01 622.74 996.09

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 7-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 5-16í 4-16í 4-16í 4-16í 5-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 75 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 2377.29 454.70 0.00 454.70 2305.91

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 557.31 658.43 830.44 560.86 504.01

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 12-16í 4-16í 3-16í 4-16í 12-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 8-10í 9-10í 11-10í 8-10í 7-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 76 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 2009.45 665.02 454.70 828.08 2036.05

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1305.99 665.31 454.70 663.78 1298.33

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 26-10í 9-10í 6-10í 11-10í 26-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 17-10í 9-10í 6-10í 9-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 77 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2444.69 454.70 454.70 454.70 2492.17

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 491.87 489.71 922.74 671.53 543.81

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 8-20í 4-20í 4-20í 4-20í 8-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 78 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 1650.85 648.92 0.00 626.28 1639.39

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1245.53 708.37 448.55 682.25 1214.38

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 15-12í 6-12í 5-12í 6-12í 15-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 79 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7000.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 1750.0 mm 3500.0 mm 5250.0 mm 7000.0 mm

TOP 1869.42 454.70 0.00 454.70 2126.18

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 580.24 618.42 685.60 480.22 553.41

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 1750.0 mm 3500.0 mm 5250.0 mm 7000.0 mm

TOP 17-12í 5-12í 5-12í 5-12í 19-12í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 8-10í 8-10í 9-10í 7-10í 8-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 80 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1474.72 588.76 454.70 464.27 1295.79

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1017.92 533.21 454.70 559.27 932.15

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 19-10í 8-10í 6-10í 6-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 13-10í 7-10í 6-10í 8-10í 12-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 81 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1207.61 454.70 0.00 454.70 1222.41

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 826.84 492.87 454.70 496.06 829.37

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 7-10í 6-10í 7-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 81 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1214.02 454.70 454.70 454.70 1217.50

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 831.38 494.99 454.70 484.52 818.99

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 7-10í 6-10í 7-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 81 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1310.77 456.16 454.70 544.60 1356.92

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 867.77 485.68 454.70 632.44 1032.01

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 12-12í 5-12í 5-12í 5-12í 12-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 12-10í 7-10í 6-10í 9-10í 14-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 82 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 2248.24 453.47 453.47 453.47 2223.28

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 552.41 648.95 799.37 545.27 499.53

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 20-12í 5-12í 5-12í 5-12í 20-12í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 5-12í 6-12í 8-12í 5-12í 5-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 83 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 2188.66 451.01 451.01 451.01 2169.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 547.48 647.09 979.14 542.05 495.05

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 7-20í 4-20í 4-20í 4-20í 7-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 84 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 2189.83 451.01 451.01 451.01 2171.15

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 535.03 635.50 975.62 531.99 483.63

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2000.0 mm 4000.0 mm 6000.0 mm 8000.0 mm

TOP 7-20í 4-20í 4-20í 4-20í 7-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 85 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1378.25 555.05 0.00 488.42 1360.55

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1049.15 454.70 454.70 516.90 887.14

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 7-16í 4-16í 3-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 14-10í 6-10í 6-10í 7-10í 12-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 86 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 1603.50 498.89 453.47 785.17 1904.24

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1221.73 637.70 453.47 646.00 1190.80

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 15-12í 5-12í 5-12í 7-12í 17-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 11-12í 6-12í 5-12í 6-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 87 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1213.89 454.70 454.70 454.70 1224.74

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 830.64 454.70 454.70 492.04 826.36

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 6-10í 6-10í 7-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 88 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 1865.96 645.78 454.70 795.60 1914.35

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1253.10 454.70 454.70 629.89 1232.55

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 17-12í 6-12í 5-12í 8-12í 17-12í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 4-20í 4-20í 4-20í 4-20í 4-20í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 89 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 1939.61 773.41 454.70 825.46 1971.70

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1281.38 458.49 454.70 643.94 1270.96

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 10-16í 4-16í 4-16í 5-16í 10-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 17-10í 6-10í 6-10í 9-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 90 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1212.18 454.70 0.00 454.70 1223.75

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 832.34 494.89 454.70 490.56 826.80

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 7-10í 6-10í 7-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 91 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1209.15 454.70 454.70 454.70 1216.98

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 829.87 454.70 454.70 482.41 815.45

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 11-12í 5-12í 5-12í 5-12í 11-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 6-10í 6-10í 7-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 92 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 1935.27 811.77 454.70 824.35 1963.12

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 1304.07 465.32 454.70 654.67 1295.36

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 875.0 mm 1750.0 mm 2625.0 mm 3500.0 mm

TOP 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 17-10í 6-10í 6-10í 9-10í 17-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 93 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1304.45 454.70 454.70 545.13 1357.63

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 867.86 454.70 454.70 628.53 1026.47

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 7-16í 4-16í 4-16í 4-16í 7-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 12-10í 6-10í 6-10í 9-10í 14-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 94 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2525.24 453.47 453.47 453.47 2327.25

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 482.40 528.97 858.60 631.42 512.24

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 23-12í 5-12í 5-12í 5-12í 21-12í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 4-25í 4-25í 4-25í 4-25í 4-25í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 95 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1307.24 478.33 454.70 464.56 1232.96

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 797.16 524.04 454.70 552.41 832.51

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 17-10í 7-10í 6-10í 6-10í 16-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 11-10í 7-10í 6-10í 8-10í 11-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 96 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2387.24 454.70 454.70 454.70 2376.14

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 456.07 525.22 1061.00 627.02 502.76

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 12-16í 4-16í 4-16í 4-16í 12-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 6-10í 7-10í 14-10í 8-10í 7-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 97 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2392.51 454.70 454.70 454.70 2396.02

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 467.54 451.01 875.45 640.80 516.88

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 12-16í 4-16í 4-16í 4-16í 12-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 4-16í 4-16í 5-16í 4-16í 4-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 98 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2408.53 454.70 454.70 454.70 2413.37

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 472.22 539.02 1063.27 643.14 522.04

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 31-10í 6-10í 6-10í 6-10í 31-10í

REINF. 2 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 2 layer(s)

BOTTOM 7-10í 7-10í 14-10í 9-10í 7-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 99 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 2390.04 454.70 454.70 454.70 2397.12

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 479.22 544.60 1062.71 649.08 529.79

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 2087.5 mm 4175.0 mm 6262.5 mm 8350.0 mm

TOP 12-16í 4-16í 4-16í 4-16í 12-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 7-10í 7-10í 14-10í 9-10í 7-10í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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B E A M N O. 100 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm SIZE: 600.0 mm X 400.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 1185.74 453.47 453.47 453.47 1204.84

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

BOTTOM 787.31 490.20 451.01 479.41 774.08

REINF. (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm) (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION 0.0 mm 900.0 mm 1800.0 mm 2700.0 mm 3600.0 mm

TOP 6-16í 4-16í 4-16í 4-16í 6-16í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

BOTTOM 7-12í 5-12í 5-12í 5-12í 7-12í

REINF. 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s) 1 layer(s)

SHEAR 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í 2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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(b) Column Design

C O L U M N N O. 1 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 1 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 2 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 2 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 3 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 3 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 4 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 4 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

C O L U M N N O. 5 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 5 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 6 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 6 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 7 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 7 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 8 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 8 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 9 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 9 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 10 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 10 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 11 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 11 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 12 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 12 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 13 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 13 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 14 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 14 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 15 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 15 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 16 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 16 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 17 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 17 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 18 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 18 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 19 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 19 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 20 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 20 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 21 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 21 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 22 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 22 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 23 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 23 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 24 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 24 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 25 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 25 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 26 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 26 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 27 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 27 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 28 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 28 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

C O L U M N N O. 29 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 29 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 30 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 28 END JOINT: 30 SHORT COLUMN

REQD. STEEL AREA : 2165.11 Sq.mm.

REQD. CONCRETE AREA: 247834.89 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 31 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 31 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 32 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 32 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 33 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 3 END JOINT: 33 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 34 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 34 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 35 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 35 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 36 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 36 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 37 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 2 END JOINT: 37 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 38 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 1 END JOINT: 38 TENSION COLUMN

REQD. STEEL AREA : 2000.00 Sq.mm.

REQD. CONCRETE AREA: 248000.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 39 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 39 TENSION COLUMN

REQD. STEEL AREA : 2200.00 Sq.mm.

REQD. CONCRETE AREA: 247800.00 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.90%, 2261.95 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 40 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 40 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 41 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 41 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 42 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3505.0 mm CROSS SECTION: 500.0 mm X 500.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 4 END JOINT: 42 TENSION COLUMN

REQD. STEEL AREA : 2400.00 Sq.mm.

REQD. CONCRETE AREA: 247600.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 16 dia. (0.97%, 2412.74 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 43 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 44 TENSION COLUMN

REQD. STEEL AREA : 3840.00 Sq.mm.

REQD. CONCRETE AREA: 236160.00 Sq.mm.

MAIN REINFORCEMENT : Provide 8 - 25 dia. (1.64%, 3926.99 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 44 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 43 SHORT COLUMN

REQD. STEEL AREA : 3004.67 Sq.mm.

REQD. CONCRETE AREA: 236995.33 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 45 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 46 TENSION COLUMN

REQD. STEEL AREA : 2880.00 Sq.mm.

REQD. CONCRETE AREA: 237120.00 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 46 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 45 TENSION COLUMN

REQD. STEEL AREA : 3840.00 Sq.mm.

REQD. CONCRETE AREA: 236160.00 Sq.mm.

MAIN REINFORCEMENT : Provide 8 - 25 dia. (1.64%, 3926.99 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 47 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 47 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 48 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 48 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 49 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 47 TENSION COLUMN

REQD. STEEL AREA : 3840.00 Sq.mm.

REQD. CONCRETE AREA: 236160.00 Sq.mm.

MAIN REINFORCEMENT : Provide 8 - 25 dia. (1.64%, 3926.99 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 50 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 49 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 51 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 50 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 52 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 49 TENSION COLUMN

REQD. STEEL AREA : 3840.00 Sq.mm.

REQD. CONCRETE AREA: 236160.00 Sq.mm.

MAIN REINFORCEMENT : Provide 8 - 25 dia. (1.64%, 3926.99 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 53 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 49 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 54 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 52 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 55 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 51 TENSION COLUMN

REQD. STEEL AREA : 4032.00 Sq.mm.

REQD. CONCRETE AREA: 235968.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 56 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 53 SHORT COLUMN

REQD. STEEL AREA : 2841.48 Sq.mm.

REQD. CONCRETE AREA: 237158.52 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 57 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 54 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 58 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 53 TENSION COLUMN

REQD. STEEL AREA : 4032.00 Sq.mm.

REQD. CONCRETE AREA: 235968.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 59 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 45 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 60 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 47 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 61 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 49 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 62 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 51 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 63 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 53 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 64 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 55 SHORT COLUMN

REQD. STEEL AREA : 2932.67 Sq.mm.

REQD. CONCRETE AREA: 237067.33 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O.65 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 57 TENSION COLUMN

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REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 66 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 57 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 67 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 59 SHORT COLUMN

REQD. STEEL AREA : 2901.48 Sq.mm.

REQD. CONCRETE AREA: 237098.53 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 68 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 4250.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 59 TENSION COLUMN

REQD. STEEL AREA : 4032.00 Sq.mm.

REQD. CONCRETE AREA: 235968.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 69 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 60 SHORT COLUMN

REQD. STEEL AREA : 3026.27 Sq.mm.

REQD. CONCRETE AREA: 236973.73 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 70 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 62 TENSION COLUMN

REQD. STEEL AREA : 3072.00 Sq.mm.

REQD. CONCRETE AREA: 236928.00 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 71 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 4500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 63 SHORT COLUMN

REQD. STEEL AREA : 3703.04 Sq.mm.

REQD. CONCRETE AREA: 236296.95 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 20 dia. (1.57%, 3769.91 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 72 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 63 SHORT COLUMN

REQD. STEEL AREA : 3026.27 Sq.mm.

REQD. CONCRETE AREA: 236973.73 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 73 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 65 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 74 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 66 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 75 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 67 SHORT COLUMN

REQD. STEEL AREA : 2968.67 Sq.mm.

REQD. CONCRETE AREA: 237031.33 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 76 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 68 TENSION COLUMN

REQD. STEEL AREA : 4800.00 Sq.mm.

REQD. CONCRETE AREA: 235200.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 77 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 69 TENSION COLUMN

REQD. STEEL AREA : 4416.00 Sq.mm.

REQD. CONCRETE AREA: 235584.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 78 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 70 TENSION COLUMN

REQD. STEEL AREA : 4992.00 Sq.mm.

REQD. CONCRETE AREA: 235008.00 Sq.mm.

MAIN REINFORCEMENT : Provide 16 - 20 dia. (2.09%, 5026.55 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 79 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 72 TENSION COLUMN

REQD. STEEL AREA : 3648.00 Sq.mm.

REQD. CONCRETE AREA: 236352.00 Sq.mm.

MAIN REINFORCEMENT : Provide 12 - 20 dia. (1.57%, 3769.91 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 80 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 7000.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 71 TENSION COLUMN

REQD. STEEL AREA : 4416.00 Sq.mm.

REQD. CONCRETE AREA: 235584.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 81 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 72 SHORT COLUMN

REQD. STEEL AREA : 3014.27 Sq.mm.

REQD. CONCRETE AREA: 236985.73 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 82 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 74 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 83 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 75 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 84 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 68 SHORT COLUMN

REQD. STEEL AREA : 2899.08 Sq.mm.

REQD. CONCRETE AREA: 237100.92 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 85 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 75 TENSION COLUMN

REQD. STEEL AREA : 4800.00 Sq.mm.

REQD. CONCRETE AREA: 235200.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 86 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 74 TENSION COLUMN

REQD. STEEL AREA : 4800.00 Sq.mm.

REQD. CONCRETE AREA: 235200.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 87 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8000.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 73 TENSION COLUMN

REQD. STEEL AREA : 4608.00 Sq.mm.

REQD. CONCRETE AREA: 235392.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 88 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 81 TENSION COLUMN

REQD. STEEL AREA : 2880.00 Sq.mm.

REQD. CONCRETE AREA: 237120.00 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 89 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 81 SHORT COLUMN

REQD. STEEL AREA : 3959.85 Sq.mm.

REQD. CONCRETE AREA: 236040.16 Sq.mm.

MAIN REINFORCEMENT : Provide 20 - 16 dia. (1.68%, 4021.24 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 90 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 82 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 91 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 82 TENSION COLUMN

REQD. STEEL AREA : 4032.00 Sq.mm.

REQD. CONCRETE AREA: 235968.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 92 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 83 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 93 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 83 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 94 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 19 END JOINT: 83 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 95 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3500.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 20 END JOINT: 84 TENSION COLUMN

REQD. STEEL AREA : 4224.00 Sq.mm.

REQD. CONCRETE AREA: 235776.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 16 dia. (2.01%, 4825.49 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 96 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 69 SHORT COLUMN

REQD. STEEL AREA : 2891.88 Sq.mm.

REQD. CONCRETE AREA: 237108.12 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 12 dia. (1.32%, 3166.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 97 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 12 END JOINT: 71 TENSION COLUMN

REQD. STEEL AREA : 5184.00 Sq.mm.

REQD. CONCRETE AREA: 234816.00 Sq.mm.

MAIN REINFORCEMENT : Provide 28 - 16 dia. (2.35%, 5629.73 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 98 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3600.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 18 END JOINT: 76 TENSION COLUMN

REQD. STEEL AREA : 2688.00 Sq.mm.

REQD. CONCRETE AREA: 237312.00 Sq.mm.

MAIN REINFORCEMENT : Provide 24 - 12 dia. (1.13%, 2714.34 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 99 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 77 TENSION COLUMN

REQD. STEEL AREA : 4992.00 Sq.mm.

REQD. CONCRETE AREA: 235008.00 Sq.mm.

MAIN REINFORCEMENT : Provide 16 - 20 dia. (2.09%, 5026.55 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

C O L U M N N O. 100 D E S I G N R E S U L T S

M25 Fe415 (Main) Fe415 (Sec.)

LENGTH: 8350.0 mm CROSS SECTION: 600.0 mm X 400.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 78 TENSION COLUMN

REQD. STEEL AREA : 4992.00 Sq.mm.

REQD. CONCRETE AREA: 235008.00 Sq.mm.

MAIN REINFORCEMENT : Provide 16 - 20 dia. (2.09%, 5026.55 Sq.mm.)

(Equally distributed)

TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 300 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

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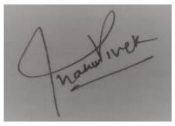

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