

# **FACULTY OF CIVIL ENGINEERING**

## **A REPORT ON “SITE VISIT”**

Under the course of  
**Design of Reinforced Concrete Structures (2170607)**

B. E. IV, Semester – VII (2018-2019)

(Date: 10<sup>th</sup> July 2018, 1.30 PM onward)

**Location of Site: Time Square, VIP road, Surat.**



**SARVAJANIK EDUCATION SOCIETY**  
**SARVAJANIK COLLEGE OF ENGINEERING & TECHNOLOGY**

**DR. R.K. DESAI MARG, ATHWALINES, SURAT 395001**

*.....towards progressive civilization*

## **ACKNOWLEDGEMENT**

This site visit would not have been possible without the kind support of many people. We take this opportunity to acknowledge those who have been a great sense of support and inspiration, for the site visit to be successful. We are grateful to the Principal and head of the department for giving us permission to visit the construction site. We are also very much thankful to the project manager and site engineers for providing us guidance and helping us in explaining various aspects of design, detailing of reinforcement and construction from practical point of view.

**List of students of BE-IV (SEM-VII)**  
**Visited Site on 10-07-2018, 1.30 PM onward.**

<b>Sr. No.</b>	<b>Enrolment No.</b>	<b>Name</b>
1	150420106001	AMIN HARSH KAMLESHKUMAR
2	150420106002	AAYUSHI DOSHI
3	150420106006	CHAUDHARI KINJALKUMARI HARSINGBHAI
4	150420106007	CHAUDHARI YASHSVINIKUMARI GIRISHBHAI
5	150420106008	CHEVLI JAYDIP KISHORKUMAR
6	150420106010	DALWADI RUSHI DINESHBHAI
7	150420106012	DHODIA DHRUVKUMAR CHANDRAKANTBHAI
8	150420106013	GABANI ABHISHEK BHARATBHAI
9	150420106014	GANDHI ADITYA BHARATBHAI
10	150420106016	GARASIA PARTH JITENDRA
11	150420106018	GUJARATI HARSHKUMAR LALITBHAI
12	150420106019	NIKALWALA HARSH NIMIT
13	150420106020	JARIWALA AAYUSHIBEN YOGESHKUMAR
14	150420106021	JARIWALA PARTH JITENDRA
15	150420106022	YADAV JAY VIRENDRAKUMAR
16	150420106023	JAYDEEP KISHORBHAI VEKARIYA
17	150420106024	GANDHI JENNY RAKESHKUMAR
18	150420106027	KASWALA NEVIL DIPAKKUMAR
19	150420106030	DHIMAR KRINA SAURABH
20	150420106031	LADAVIA CHIRAG PRAVINBHAI
21	150420106033	LIMBAD KRISHNA RAJENDRABHAI
22	150420106034	MAHIMA JARIWALA
23	150420106035	MALEK MOHAMMED ALKIN MOHAMMED ASLAM
24	150420106036	MANGUKIYA UKSHIL ATULBHAI
25	150420106037	MEHTA AAYUSHI ASHWINKUMAR
26	150420106038	MEVAWALA JENCY PANKAJBHAI
27	150420106039	BHANIYA MOIN MUBARAKBHAI
28	150420106042	PARMAR MANAV PRADIPSINH
29	150420106043	PATEL BHAUMIK TULESHKUMAR
30	150420106044	PATEL BHUMI KIRANBHAI
31	150420106045	PATEL CHIRALI BHUPESHBHAI
32	150420106046	PATEL HIRAL SURESHBHAI
33	150420106047	PATEL JEEGNA BHARATBHAI
34	150420106048	PATEL KEVIN SATISHBHAI
35	150420106049	PATEL TANAY BALVANTBHAI
36	150420106050	RAFALIYA MAULIK MANSUKHBHAI
37	150420106052	PATEL RIKEN SHAILESHBHAI
38	150420106053	SHAH DARSHANKUMAR PAVANKUMAR

39	150420106054	SHAH DEEP VIPULKUMAR
40	150420106055	SHAH VISHESH KAUSHIKKUMAR
41	150420106056	SHUKLA AAKASH AMIT
42	150420106057	SOLANKI SUJAN SURESHBHA
43	150420106058	THUMMAR ZEEL SURESHBHA
44	150420106059	VAIBHAV VIJAY MAURYA
45	150420106061	VASOYA PRIYANK JIVRAJBHA
46	150420106062	VEKARIYA HARSH RAVJIBHA
47	150424106001	DHARIA MIHIR MANOJKUMAR
48	160423106002	CHAUDHARI JAYDIPKUMAR DINESHBHA
49	160423106004	DONDA SIDDHARTH MANOJBHA
50	160423106005	HATHIWALA ADITYA SUNILKUMAR
51	160423106007	MEHTA SAHIL DEVENDRAKUMAR
52	160423106009	PATEL SHIVANGI JAYESHBHA
53	160423106010	PATEL YASH MANHARBHA
54	160423106011	PRAJAPATI SOHAMBHA BHARATBHA
55	160423106012	RAVAL KRISHNA NARESHBHA
56	160423106013	SURATI KHYATI CHETANKUMAR
57	160423106014	TANK MITALIBEN RAJNIKANTBHA

**List of Faculty members joined the site visit:**

Sr. No.	Name of Faculty members
1.	Prof. Dharmesh Bhagat
2.	Prof. Siddharth Shah
3.	Prof. Kunal Porwal
4.	Prof. Hiren Patel

## Introduction:

The aim of ongoing construction site visit was to make students aware of practical and field aspects of designing and detailing of various structural elements.

The site named as “**Time Square**” situated at **VIP road, Surat** taken as a site of visit with the reason of having ongoing shuttering and centering work of beams, columns and slab elements. The laying of reinforcement was in progress during site visit.

The attempt was made to correlate theoretical aspects of design and detailing of various structural elements with the practical concept that is usually applied on the field.

The total **57 students** with **4 faculty members** had visited the site.

### Details of Study at Site:

During site visit the students learnt about structural planning, orientation of columns, structural layout, reinforcement detailing drawings and its importance.

They understood the concept of floating column (The position and orientation was changed at 4<sup>th</sup> floor) provided at 4<sup>th</sup> floor which in reality is not advisable under seismic load. However it was provided as per functional requirement and enough care was taken in designing of support system for floating columns to withstand gravity load and seismic load as well.

They saw the form work for slab, beam and column elements with its supporting system. The supports for shuttering of slab element were alternately braced to prevent the buckling of props as the slab was of double height.

They also saw a laying of reinforcement for one way continuous slab where they found the alternate bent up bars at 45<sup>0</sup> bent was provided at a distance of L/4 from support. Also they observed the extra top reinforcement provided at support to carry the negative moments as tension is generated at top near supports.

They saw the proper placement of cover blocks to prevent the bars touching to the shuttering plates and also they saw how the chairs are provided to keep the slab reinforcement in proper position.

They also studied the bars provided for cantilever slab and they saw how alternate “U” bend provided in cantilever slab. They found main reinforcement provided at top as the tension is generated at top.

They studied the implementation of IS code provisions for placing of column reinforcement (Longitudinal and transverse) on site. They understood the reasons for providing 2-legged and 4-legged stirrups in columns and also the distance between two longitudinal reinforcement.

They saw and understood how and why the bottom straight bars and bent up bars at 45<sup>0</sup> were provided. They found the stirrups provided in beams at non uniform spacing throughout the span and they understood the reason for non uniformity in spacing as because of the shear is maximum at supports while at mid span shear is zero or minimum.

Also they saw the side face bars provided and it was needed as the depth of web of beam was exceeded the specified limit as mentioned in IS Code.



Following are few glimpses taken during site visit:



**(Reinforcement Details of Beam)**





**(Explanation by Faculty Members)**



**(Reinforcement Details of Slab)**





**(Reinforcement Details of Beams and Columns)**

### **Conclusion:**

By visiting the site, the students were able to know about practical aspects of structural planning, Orientation of columns, structural layout, reinforcement detailing drawings and its importance.

They got the knowledge of significance of designing and detailing of various structural elements and they were able to correlate with codal provisions.

All in all, the entire site visit under the subject of “**Design of Reinforced Concrete Structures**” was very much fruitful and knowledgeable and it will be helpful to the students when they will start their carrier as Civil Engineer after completion of graduation.