

# INFRACREATOR

## Newsletter

ISSUE 12 (DEC 2023)



**GOVERNMENT  
POLYTECHNIC  
PALANPUR**



**CIVIL ENGINEERING  
DEPARTMENT**



### ABOUT THE DEPARTMENT

Started in 1984, Civil Engineering Department, Government Polytechnic Palanpur offers 3 years (6 semester) Diploma Civil Engineering Program with 90 intake capacity.

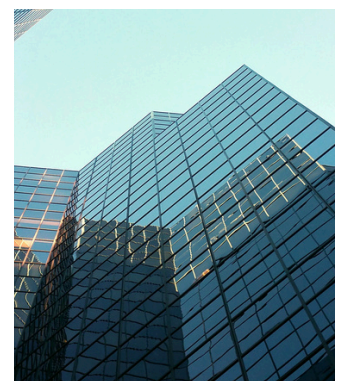
This Program is Approved by All India Council for Technical Education (AICTE) and Affiliated to Gujarat Technological University, Ahmedabad(GTU).

### Vision

The department envisions to achieve professionals in emerging field of civil engineering to meet aspirations of the society, by transforming students to be technically skilled, managers, ethical, entrepreneur's leaders, and environmentally sensible civil engineers.

### Mission

- To impart civil engineering skill to enhance their employability in the industries.
- Establish industry collaboration through internship and interaction with professional society through experts, workshops
- 3Promote leadership, management, entrepreneurship skills in a student through various projects, co-curriculum, extra-curriculum events.
- 4Impart social, environment awareness and responsibility in students to serve society and industry to promote sustainable growth.



01/18



## HOD's Message

Welcome to the Department of Civil Engineering. The Department of Civil Engineering strives for Excellence in teaching and learning and ethical professional development. We are proud to have State-of-the-art laboratories and technical staff to support our academic program. We have well balanced and innovative teaching-learning atmosphere and qualified and well experienced dedicated academic staff. The students here are encouraged to participate in co-curricular and Extra-curricular activities for personal development.

There are many careers paths for Civil Engineers. They are essential in Government agencies, Private and Public sector undertaking to complete various Mega Projects.

## Newsletter Committee



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- Mr N N RAJGOR (HOD Civil)

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- Mr F A MUKHI (Lecturer Civil)

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- PRAJAPATI OM D 5th Sem
- RAVAL JAIMIN D 3rd Sem
- BAGHEL PUNAM I 3rd Sem
- GOSWAMI PRINCEGIRI 1st Sem
- NANDOLIYA AHMEDRIJVAN 1st Sem

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# Independence Day Celebration

At Government Polytechnic Palanpur, On 15th August 2023, the occasion of 77th Independence Day, a flag hoisting program was arranged in which all the officials, employees and students of the institute enthusiastically participated.



## Admission Awareness Program

Diploma engineering admission awareness programs were arranged at major schools of all talukas of Banaskantha district in last week of december 2023



# A Site visit of Multi storey Building

A Site visit at Jalotra road approach was arranged on 23/10/2023 for Advanced Construction Technology subject. In which total 23 students of 5th semester participated. Students get to know various construction activities at various stages of the project



## Project on Foundation marking



# Project of Profile Levelling

An project on profile leveling was arranged on 03/11/2023 for 3rd semester civil engineering students at under construction party plot near malan gate. students learn how to take levels, level calculation an how to prepare contour map for fiven site.



# Visit of RMC Plant

A visit of A R K RMC Plant at chadotar was arranged on 14/12/2023 for 5th semester civil engineering students. Total 39 students were participated which was organized by applied mechanics departments. In which students gain knowledge about Ready Mix Concrete procedures and applications



# Induction Program

An Induction program for newly admitted diploma civil engineering students was arranged on 2nd August. In which All the necessary information related to department, institute, GTU, fees payment, exam form etc are given to students



Shot on OnePlus  
By Faten Wukhi

# A Field visit of Residential Scheme

A Field visit at Amrut Villa, Dhaniyana chokdi, Palanpur was arranged on 30/12/2023 for Construction Materials & technology subject. In which total 62 students participated. Students get to know various construction activities at various stages of the project



# Summer Internship

Some examples of the reports of summer internship by semester 3 and 5 diploma civil engineering students are here:

## Introduction

- For a career-oriented applied education Gujarat Technological University (GTU) introduced a new and significant Diploma Civil Engineering student "Summer Internship – I (4330001)" for 3rd sem students. A internship is a period of working experience offered by an organization for limited period of time.
- The Summer Internship - I bridge the gap between theory and practice and provides students with practical, field-based, real-world experience during their year study.
- During this training period, students learn how to relate our theoretical knowledge with practical fields. What are the difficulties faced by an engineer. how to manage everything and what are the duties of an engineer.
- In addition, an internship can be used to build a professional network can assist with letters of recommendation or lead to future employment opportunities.
- For these practical and technical skill I participated in "PRABHU ENTERPRISE" Construction company.

**PROJECT INFORMATION :-**  
**Company name :- Prabhu Enterprise**  
**School Building Construction Work**  
**At- Gangva, Ta. Danta, Dist. B.K.**

## LEARNING OBJECTIVES

- The Orient us with the Practical Civil engineering works.
- The allows us to apply our theoretical knowledge in to the Practical field.
- To let us gaining Practical experience.
- To let us understand of planning, design and drawing.

## Weekly Overview of Internship

<u>Project Name</u>	<u>Project Engineer</u>	<u>Duration</u>	<u>What me saw?</u>
School Building Construction Work	Mr. S.N.Prajapati (D.C.E. & B.E. Civil)	10/08/2023 to 16/08/2023	Introduction of site, Study about building material, Excavation, PCC, Footing, Saw the steel arrangement in foundation, Pedestal, Tie Beam, CC Work
School Building Construction Work	Mr. S.N.Prajapati (D.C.E. & B.E. Civil)	17/08/2023 to 23/08/2023	I Saw below Activities Like, Brick Work in Plinth, Filling, Watering, Ramming

# Summer Internship

## Daywise Detailing

□ DAY-1 (Introduction of Site, General Knowledge about Civil Material):-

- First day I want to visit the project of School Building Construction work. I Observed the site and got information about different materials used in Civil Engineering.

### Introduction of project :-

- The Name of this project is School Building Construction work.
- This Project is Related to Construction of three Classroom
- This Structure is Frame Structure.

### **Study of Civil Engineering Material:**



□ DAY – 2 to 7 ( Excavation, P.C.C., Footing, Pedestal, Steel Work, Tie Beam and C.C. Work ):-



# Summer Internship

## □ DAY -8 to 14 ( Brick Work in plinth, Filling, Watering, Ramming):-

- Brickwork is masonry produced by a brick layer using bricks and mortar.
- Typically rows of brick called courses are laid on top of another to build up a structure such as brick wall bricks may be differentiated from block by size.



### Filling :-

- The sand filling is provided to help avoid the concrete directly touching the soil surface.

### Watering :-

- The process of watering of concrete during construction of a building is called Curing.

### Ramming :-

- Rammed earth is a technique for constructing foundations, floors, and walls using compacted natural raw materials such as earth, chalk, lime, or gravel.

## Conclusion

- During my summer internship I can acquire new skills and abilities which can improve myself as new learner at practical field and further through experience of summer internship the practical knowledge recalls and improve my theoretical knowledge which already I have studied.
- It was also helpful to get knowledge to overcome the uncertain hurdles faced during ongoing construction work and from site evaluation got know the responsibilities of site engineer for carrying out quality work, proper planning and safety measures in the construction field.
- Also I got knowledge about;
- Various construction materials.
- Various Activities using in Construction Site.
- How to concrete mix, place at construction site.
- Role of quality control to get good construction work. Etc...

# Summer Internship

Date: - 27/7/2023

Enroll: - 216260306003

Day: - Thursday

Name: - Manasiya Talha

## Provide brief summary of activities performed on site:-

- C70, C71, C72, C73 column concrete work with M30 grade.
- Water tank wall (pardi) concrete work with M30 grade.
- Retaining wall concrete work with M30 grade between C69 to C73.
- Levelling by auto level for p.c.c. on the ground.
- Daily curing in concrete work.

## Procedure describe you have learned / observation you have made:-

M30 grade (1:0.75:1.5) mean 1 part cement, 0.75 part sand & 1.5 parts aggregate. Cement shall be fresh Portland cement confirming to IS-269 up-to-date. The fine aggregate shall conform to IS: 383 up-to-date. Coarse aggregate shall be of hard broken stone of granite or similar stone. Water used shall be clean and reasonably free from injurious quantities of deleterious materials such as oils, acids, alkalises, salts and vegetable growth. Generally potable water shall be used.

Concrete is directly supply by RMC (Ready mix concrete) plant. Rmc concrete using main advantages is maintain proportion and no wastage of material. No any types of store area of material is required.



# Summer Internship

Date: - 29/7/2023

Enroll: - 216260306003

Day: - Saturday

Name: - Manasiya Talha N.

## Provide brief summary of activities performed on site:-

- Column formwork up to 8ft in C
- Column concrete work up to 8ft
- Column footing work Concrete work
- Wall formwork & Concrete work near hospital slot
- Column footing near lift Cabin – C40
- lift Cabin formwork & Concrete work
- Column tie arrange – 8¢-4" c/c
- Concrete in Retaining Wall
- Daily curing in concrete work.

## Procedure describe you have learned / observation you have made:-

M30 grade (1:0.75:1.5) mean 1 part cement, 0.75 part sand & 1.5 parts aggregate. Cement shall be fresh Portland cement confirming to IS-269 up-to-date. The fine aggregate shall conform to IS: 383 up-to-date. Coarse aggregate shall be of hard broken stone of granite or similar stone.

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# Mumbai Trans Harbour Link: A Game-Changer in Connectivity

- **NANDOLIYA AHMED RIJVAN**  
(Sem I Diploma Civil Engineering)

## INFRA ARTICLE



The Mumbai Trans Harbour Link (MTHL) is a transformative infrastructure project aimed at bridging the gap between Mumbai and Navi Mumbai. This 21.8-kilometer, six-lane bridge promises to revolutionize connectivity and unlock economic potential in the region.

### Key Features:

- **Connectivity Enhancement:** Linking Sewri in South Mumbai to Nhava Sheva in Navi Mumbai, the MTHL will significantly reduce travel time and alleviate congestion.
- **Economic Impetus:** By improving access to Navi Mumbai's commercial and industrial zones, the MTHL is expected to stimulate economic growth and create employment opportunities.
- **Environmental Considerations:** Sustainable design practices are incorporated to minimize ecological impact on the marine ecosystem of Mumbai Bay.
- **Technological Innovation:** State-of-the-art engineering ensures structural integrity and safety for long-term use.

## Okha Bet Dwarka Bridge

The Okha Bet Dwarka Bridge in Gujarat connects Okha on the mainland to Bet Dwarka Island, which is built at a cost of around ₹980 crore. The 2.32km cable-stayed bridge is the longest of its kind in the country

### Key Features

- **Connectivity:** Enhances movement of people and goods between Okha and Bet Dwarka, fostering economic activities and tourism.
- **Tourism:** Provides easy access to Bet Dwarka's religious sites and scenic beauty, boosting tourism in the region.
- **Engineering Marvel:** Constructed with advanced techniques, ensuring structural integrity and safety.



# Advancing GIFT City: Exciting New Construction Projects

- **GOSWAMI PRINCEGIRI**  
(Sem 1 Diploma Civil Engineering)



Gujarat International Finance Tec-City (GIFT City) is undergoing transformative development with new construction projects aimed at enhancing its status as a premier financial hub. These projects signify an expansion and diversification of offerings to attract global businesses and investors.

## Key Projects

### 1. Iconic Towers:

- Designed by top architects, these towers will provide cutting-edge office spaces and retail outlets, reshaping the city's skyline and aesthetic appeal.

### 2. Commercial Complexes:

- Modern complexes offering flexible office spaces and amenities to foster collaboration and growth, setting new standards for corporate infrastructure.

### 3. Residential Enclaves:

- Quality living spaces integrated with recreational amenities and green spaces to create a vibrant urban community within GIFT City.

### 4. Infrastructure Upgrades:

- Investments in road networks, public transportation, and smart technology solutions to enhance connectivity and efficiency.

Despite challenges like funding and market demand, GIFT City remains poised to capitalize on emerging opportunities, supported by government backing and private sector involvement.

The ongoing construction projects in GIFT City reflect its commitment to innovation, growth, and sustainability. As these projects materialize, they will redefine GIFT City's identity as a hub of progress and prosperity in India's evolving economic landscape.



# Report on the Newly Built Mumbai Coastal Road

- **Chaudhary Priyanka**  
(Sem 6 Diploma Civil Engineering)



## **Introduction:**

The Mumbai Coastal Road project, spanning [X kilometers], aims to alleviate traffic congestion along Mumbai's western coast. This report provides an overview of its construction methods, environmental considerations, and potential impact.

## **Project Overview:**

The road comprises elevated sections and reclaimed land, connecting South Mumbai with the northern suburbs. It offers improved connectivity and smoother commutes.

## **Construction Methods:**

- Land reclamation using hydraulic fills and dredging
- Elevated segments built with precast concrete
- Construction of seawalls to prevent erosion

## **Environmental Considerations:**

- Preservation of marine ecosystems
- Advanced stormwater drainage systems
- Sustainable construction practices

## **Impact Assessment:**

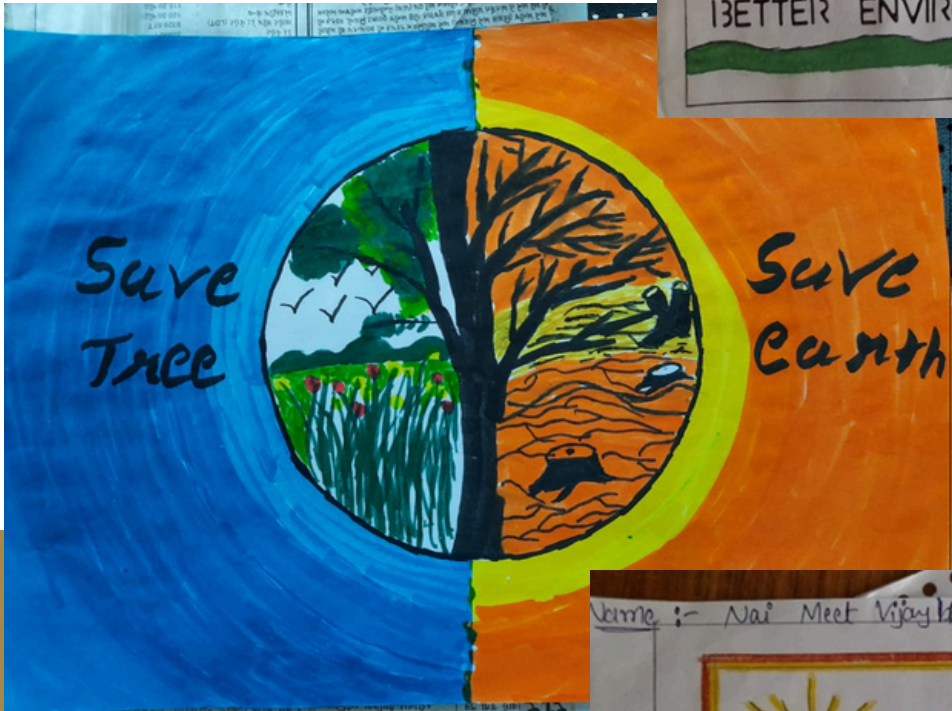
- Traffic decongestion and reduced travel time
- Economic growth along the coastal corridor
- Social benefits including improved access to recreational spaces

## **Conclusion:**

The Mumbai Coastal Road project signifies a milestone in infrastructural development, emphasizing engineering innovation, environmental sustainability, and societal well-being.

# PAINTING BY STUDENTS

Paintings done by-  
Prajapati Sachin Sem 5 Civil  
on the theme of 'Save  
ENvironment'



Paintings done by-  
Patni Naresh Sem 5 Civil  
on the theme of 'Save  
Environment'

Paintings done by-  
Nai Meet Sem 5 Civil  
on the theme of 'Save  
ENvironment'



# ★ Out Star Students

Semester	Name of Student	Enrollment No	SPI
6	Mevada Harsh Kirankumar	206260306006	9.03
4	Chaudhary Priyanka Raghjibhai	216260306030	9.55
2	Luhar Raghukumar Narayanbhai	226260306037	7.73



## Faculty Achievements

Sr No	Name of Faculty	Achievement
1	Y T RANA	Certificate from NPTEL for being recognized as <b>NPTEL DISCIPLINE STAR</b>
2	F M MUKHI	Delivered Expert lecture on <b>Innovation Talk</b> at <b>G P himmatnagar</b> on 22/09/2023
3	A N PATEL	Attended 1 Week (31/07/2023 TO 04/08/2023) <b>Training on STRUCTURAL EVALUATION AND MAINTENANCE OF PAVEMENT</b> at NITTTR, Bhopal
4	A R PATEL, H P PATEL	Attended 1 Week (07/08/2023 To 11/08/2023) <b>Training on TQM and six Sigma for engineering institutions</b> at NITTTR, Bhopal
5	N V PRAJAPATI	Attended 1 Week (16/10/2023 to 21/10/2023) <b>Training on Advances in Earthquake Engineering &amp; Structural Resilience</b> at GTU, Chandkheda
6	D N SHETH, V P PATEL, A R PATEL	Attended 1 Week (11/12/2023 to 16/12/2023) <b>Training on Influence of Seismic, Geotechnical and Structural aspects on Infrastructural Projects</b> at GPERI, Mehsana