



Vidya Vikas Education Trust's

Universal College of Engineering

Near Bhajansons and Punyadham, Kaman Bhiwandi Road, Vasai, Palghar-401208.
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THE BENCHMARK



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Editor's Desk



We are pleased to present September 2021 edition of Benchmark. In this edition you will find an article on Bailong Elevator and contribution by Students and Faculty members of Department of Civil Engineering highlighted in the month of August. News update and departmental activities are the part along with Canva.

Department Vision:

- To excel in every area of Civil Engineering, inculcate research oriented study to explore hidden talent.
- Providing Opportunity to display creativity, out of the box thinking & innovativeness, aimed at providing cutting edge technology for sustainable development.

Department Mission:

- Providing qualified, motivated faculties to deliver the content using updated teaching methodology, inviting industry experts from various areas to disseminate subject knowledge in Civil Engineering.
- Motivating students to undertake the Research Oriented studies, participate in competitions at all levels, grasping new techniques and methods which can be improved on further.
- Conducting and participating in seminars, workshops and training programs with a view to make the students industry ready and improve their employability factor for global career ahead.
- To create quality professionals capable of planning, designing and analytical skills for better infrastructural development in the field of Civil Engineering.

BAILONG ELEVATOR

The Bailong Elevator is a glass double deck elevator built onto the side of a huge cliff in the Wulingyuan area of Zhangjiajie, People's Republic of China. The name Bailong means a Hundred Dragons in English. Therefore, Bailong Elevator is also known as Hundred Dragons Elevator. It is claimed to be the highest and heaviest outdoor elevator in the world. It is a Time-saving and Energy-saving Way to Reach Hallelujah Mountain.



The main equipment of Bailong Elevator was designed and produced by “Ranger Elevator Company” from German, costing 180 million Yuan. It’s an undeniably impressive feat of engineering and, it holds the record for the world’s tallest outdoor lift. Each elevator has a carrying capacity of 4,900 kilograms, with 50 passengers traveling in each car. The total height of it is 335 meters (1099 feet), of which the running height is 326 meters (1069 feet). 154 meters (505 feet) of the total height is in the mountain wells and the rest of 172 meters (564 feet) was composed of steel derrick and other components. When digging the tunnels, many steel structure and roof bolts were installed. The elevator was built into a carefully selected quartz sandstone cliff face, into which tunnels and shafts were dug to accommodate the three glass-faced double-deck elevators.

Construction of the elevator began in October 1999, and it was opened to the public by 2002 with an investment of about \$20 million (approx. 1.5 billion rupees). The Bailong Elevator was barreling at a speed of 3 meters per second, and has been accelerated to 5 meters per second since 2013 after being updated. Also, the lift cars are all now fitted

with earthquake detectors to allow a quick evacuation in case of a quake.



It has won three Guinness Book of World Records Awards: the worlds’ tallest double-decker sightseeing elevator, the tallest full-exposure outdoor elevator, and the world’s fastest passenger elevator with biggest carrying capacity.

Visitors can now come to the park as a day trip, thanks to the greatly reduced travel time. Previously, tourists had to drive for more than three hours along what was at times a dangerous mountain road to access different parts of the park. Now, they just have to queue up for a 1 minute and 32 seconds elevator ride. It not only provides a convenient transportation for tourists’ sightseeing, but also saves time for supplying materials of scenic spots as well as maximizing the protection of the local natural environment and ecological balance.”

- BY KALPITA CHAFEKAR
B.E. CIVIL

DID YOU KNOW

Bailong Elevator Is The World’s Fastest Elevator- It Takes A Minute & Half To Travel From The Bottom All The Way Up To The Observation Site.

*TO KNOW MORE ABOUT BAILONG ELEVATOR,
SCAN THE QR CODE*



How Earthquake-Proof Buildings are Designed

Throughout history, we've built impressive structures and cities only for them to encounter the forces of nature. Earthquakes are one of the Earth's most destructive forces, the seismic waves throughout the ground can destroy buildings, take lives, and costs tremendous amounts of money for loss and repair. According to the National Earthquake Information Centre, there is an average of 20,000 earthquakes each year, 16 of them being major disasters. On September 20, 2017, a magnitude 7.1 rocked Mexico's capital city and killed approximately 230 people. As with the case with other earthquakes, the damage was not caused by the quake itself but by the collapse of buildings with people inside them, making earthquake-proof buildings a must.

Over the past few decades, engineers have introduced new designs and building materials to better equip buildings to withstand earthquakes. Read on to learn how earthquake-proof buildings are designed today.

➤ How to make a building Earthquake-Proof

To design an earthquake-proof building, engineers need to reinforce the structure and counteract an earthquake's forces. Since earthquakes release energy that pushes on a building from one direction, the strategy is to have the building push the opposite way. Here are some of the methods used to help buildings withstand earthquakes.

1. Create a Flexible Foundation

One way to resist ground forces is to "lift" the building's foundation above the earth. Base isolation involves constructing a building on top of flexible pads made of steel, rubber, and lead. When the base moves during the earthquake, the isolators vibrate while the structure itself remains steady. This effectively helps to absorb seismic waves and prevent them from traveling through a building.

2. Counter Forces with Damping

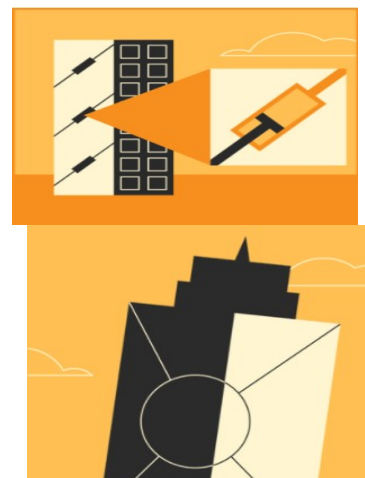
You might be aware that cars have shock absorbers. However, you might not know that engineers also use them for making earthquake-resistant buildings. Similar to their use in cars, shock absorbers reduce the magnitude of shockwaves and help buildings slow down. This is accomplished in two ways: vibrational control devices and pendulum dampers.

- **Vibrational Control Devices**

The first method involves placing dampers at each level of a building between a column and beam. Each damper consists of piston heads inside a cylinder filled with silicone oil. When an earthquake occurs, the building transfers the vibration energy into the pistons, pushes against the oil. The energy is transformed into heat, dissipating the force of the vibrations.

- **Pendulum Power**

Another damping method is pendulum power, used primarily in skyscrapers. Engineers suspend a large ball with steel cables with a system of hydraulics at the top of the building. When the building begins the sway, the ball acts as a pendulum and moves in the opposite direction to stabilize the direction. Like damping, these features are tuned to match and counteract the building's frequency in the event of an earthquake.

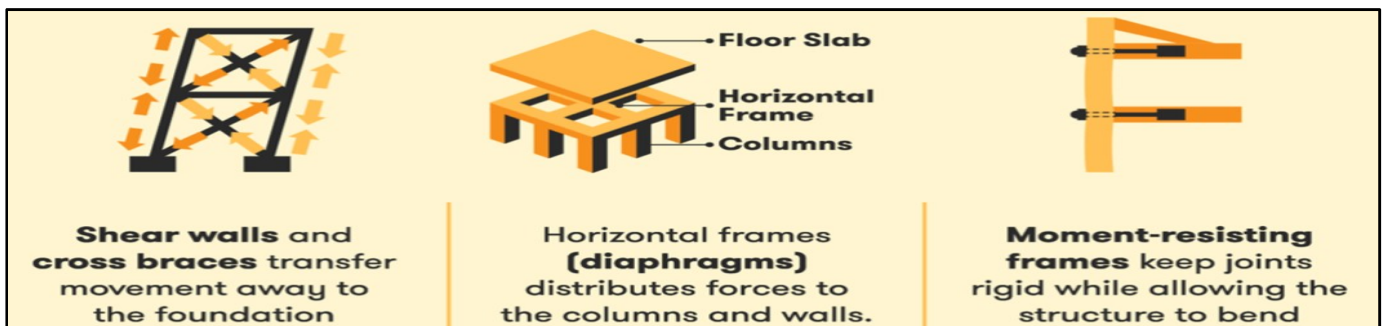


3. Shield Buildings from Vibrations

Instead of just counteracting forces, researchers are experimenting with ways buildings can deflect and reroute the energy from earthquakes altogether. Dubbed the “seismic invisibility cloak”, this innovation involves creating a cloak of 100 concentric plastic and concrete rings in and burying it at least three feet beneath the foundation of the building. As seismic waves enter the rings, they are forced to move through to the outer rings for easier travel. As a result, they are essentially channelled away from the building and dissipated into the plates in the ground.

4. Reinforce the Building’s Structure

To withstand collapse, buildings need to redistribute the forces that travel through them during a seismic event. Shear walls, cross braces, diaphragms, and moment-resisting frames are central to reinforcing a building.



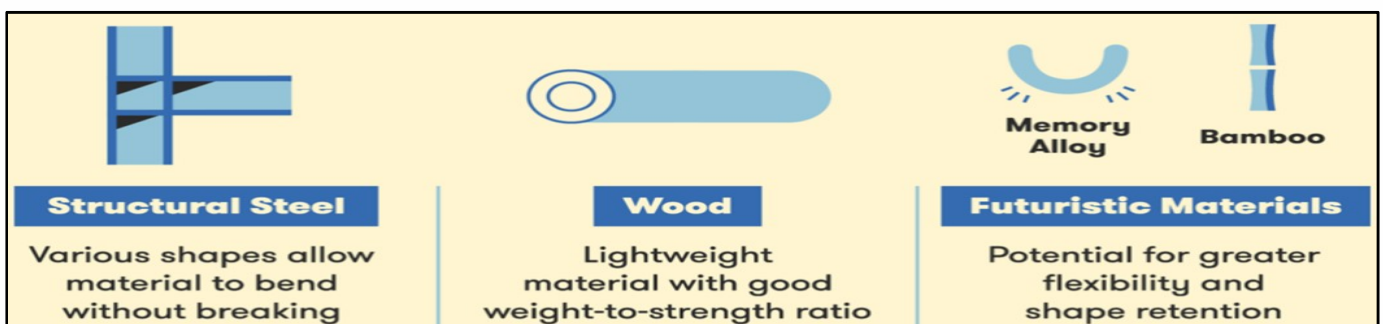
Shear walls are a useful building technology that helps to transfer earthquake forces. Made of panels, these walls help a building keep its shape during movement. Shear walls are often supported by diagonal cross braces. These steel beams have the ability to support compression and tension, which helps to counteract the pressure and push forces back to the foundation.

Diaphragms are a central part of a building’s structure. Consisting of the floors of the building, the roof, and the decks placed over them, diaphragms help remove tension from the floor and push force to the vertical structures of the building.

Moment-resisting frames provide more flexibility in a building’s design. This structure is placed among the joints of the building and allows for the columns and beams to bend while the joints remain rigid. Thus, the building is able to resist the larger forces of an earthquake while allowing designers more freedom to arrange building elements.

❖ Earthquake-Resistant Materials

While shock absorbers, pendulums, and “invisibility cloaks” may help dispel the energy to an extent, the materials used in a building are equally responsible for its stability.



1. Steel and Wood

For a building material to resist stress and vibration, it must have high ductility, the ability to undergo large deformations and tension. Modern buildings are often constructed with structural steel, a component of steel that comes in a variety of shapes that allow buildings to bend without breaking. Wood is also a surprising ductile material due to its high strength relative to its lightweight structure.

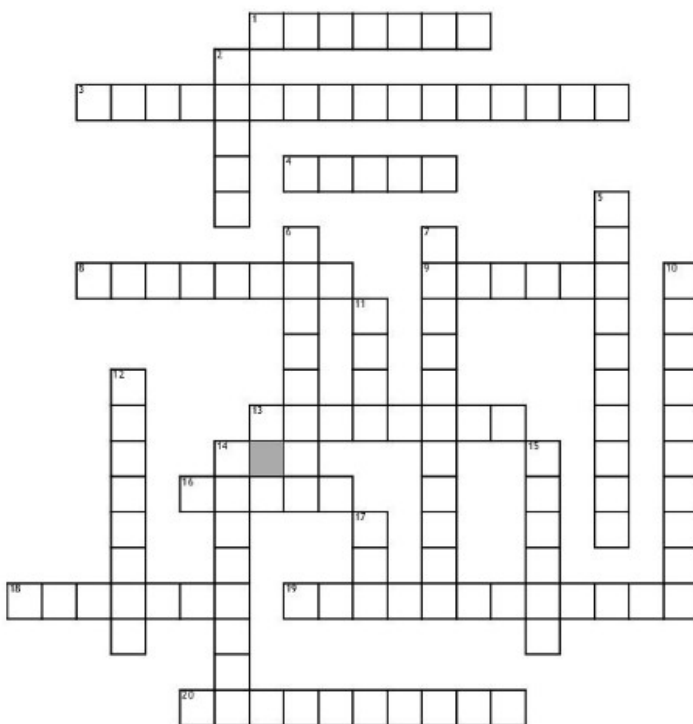
2. Innovative Materials

Scientists and engineers are developing new building materials with even greater shape retention. Innovations like shape memory alloys have the ability to both endure heavy strain and revert to their original shape, while fiber-reinforced plastic wrap — made by a variety of polymers — can be wrapped around columns and provide up to 38% greater strength and ductility.

Engineers are also turning to natural elements. The sticky yet rigid fibers of mussels and the strength-to-size ratio of spider silk have promising capabilities in creating structures. Bamboo and 3D printed materials can also function as lightweight, interlocking structures with limitless forms that can potentially provide even greater resistance for buildings. Over the years, engineers and scientists have devised techniques to create some effective earthquake-proof buildings. As advanced the technology and materials are today, it is not yet possible for building to completely withstand a powerful earthquake unscathed. Still, if a building is able to allow its occupants to escape without collapsing and saves lives and communities, we can consider that a great success.

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SOLVE THE CROSSWORD



Across

1. This is required by law to drive
3. An area where you should look and listen before crossing
4. Perform this action safely by looking and using a signal
8. A lifesaving restraint
9. They are here to keep us safe!
13. A large vehicle to take precaution around
16. To not be intoxicated
18. How the driver indicates which way they are turning
19. Something you should avoid while driving
20. Watch for these to cross the road

Down

2. You apply this to stop your vehicle
5. A pace by which you must abide by
6. Slippery roadways that may not appear as so
7. The indicator of how quickly you are traveling
10. People the driver is responsible for
11. The part of your vehicle that meets the road
12. An area where traffic fines double
14. Emotions to keep under control while driving
15. You should turn these on for safety
17. A digital aid in navigating

Impact of COVID-19 Pandemic on Teaching and Learning

The global outbreak of the COVID-19 pandemic has spread world wide, affecting almost all countries and territories. The outbreak was first identified in December 2019 in Wuhan, China. The countries around the world cautioned the public to take responsive care. The public care strategies have included washing hand, wearing face masks, physical distancing, and avoiding mass gathering and assemblies. Lockdown and staying home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease (Sintema, 2020).

Bhutan first declared closing of schools and institutions and reduction of business hours during these condition in the week of March 2020 (Kuensel, 2020, 6March). The complete nationwide lockdown was implemented from 1 August 2020 (Palden, 2020). In between, movements were allowed, offices began functioning, schools and college reopened for selected levels and continued with online class for others. More than 170,000 children in Bhutan from classes PP–XII are, today, affected by the school closure. The impact is far reaching and has affected learning during this academic year or even more in the coming days. Several schools, colleges and universities have discontinued face-to-face teaching. There is a pressing need to innovate and implement alternative educational and assessment strategies. The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning (Dhawan, 2020).

Research highlights certain dearth such as the weakness of online teaching infrastructure, the limited exposure of teachers to online teaching, the information gap, non-conducive environment for learning at home, equity and academic excellence in terms of higher education. This article evaluates the impact of the COVID-19 pandemic on teaching and learning process across the world. The challenges and opportunities of online and continuing education during the COVID-19 pandemic is summarized and way forward suggested.

Challenges in Teaching and Learning

With the availability of a sea of platforms and online educational tools, the users— both educators and learners—face frequent hiccups while using it or referring to these tools. Some of the challenges identified and highlighted by many researchers are summarized as follows:

Broadly identified challenges with e-learning are accessibility, affordability, flexibility, learning pedagogy, life-long learning and educational policy (Murgatroid, 2020). Many countries have substantial issues with are liable Internet connection and access to digital devices. While, in many developing countries, the economically backward children are unable to afford online learning devices, the online education poses a risk of exposure to increased screen time for the learner. Therefore, it has become essential for students to engage in offline activities and self-exploratory learning. Lack of parental guidance, especially for young learners, is another challenge, as both parents are working. There are practical issues around physical workspaces conducive to different ways of learning.

The innately motivated learners are relatively unaffected in their learning as they need minimum supervision and guidance, while the vulnerable group consisting of students who are weak in learning face difficulties. Some academically competent learners from economically disadvantaged background are unable to access and afford online learning.

The level of academic performance of the students is likely to drop for the classes held for both year-end examination and internal examination due to reduced contact hour for learners and lack of consultation with teachers when facing difficulties in learning/understanding (Sintema, 2020).

Student assessments are carried out online, with a lot of trial and error, uncertainty and confusion among the teachers, students and parents. The approach adopted to conduct online examination varies as per the convenience and expertise among the educators and the compatibility of the learners. Appropriate measures to check plagiarism is yet to be put in place in many schools and institutions mainly due to the large number of student population. The lockdown of schools and colleges has not only affected internal assessments and examinations for the main public qualifications like General Certificate of Secondary Educations (GCSE), but a levels have also been cancelled for the entire cohort in the UK. Depending on the duration of the

lockdown, postponement or cancellation of the entire examination assessment might be grim possibility (United Nations, 2020). Various state-level board exams, recruitment exams, university-level exams and entrance exams have been post-poned across India due to the COVID-19 outbreak and national lockdown. Various entrance examinations (such as BITSAT 2020, NATA 2020, CLAT 2020, MAT 2020, ATMA2020) have also been postponed/ rescheduled. The education system in schools, colleges and universities across the country has been severely impacted due to the ongoing situation.

It is also possible that some students' careers might benefit from the interruptions. For example, in Norway, it has been decided that all 10th grade students will be awarded a high-school degree. A study carried out in France shows that the 1968 abandoning of the normal examination procedures in France, following the student riots, led to positive long-term labor market consequences for the affected cohort (Maurin & McNally, 2008). School time also raises social skills and awareness besides being fun for the children. There are economic, social and psychological repercussions on the life of students while they are away from the normal schedule of schools. Many of these students have now taken online classes, spending additional time on virtual platforms, which have left children vulnerable to online exploitation. Increased and unstructured time spent on online learning has exposed children to potentially harmful and violent content as well as greater risk of cyber bullying. School closures and strict containment measures mean more families have been relying on technology and digital solutions to keep children engaged in learning, entertained and connected to the outside world, but not all children have the necessary knowledge, skills and resources to keep themselves safe online. In the case of online learning in Bhutan, majority of the learners are from rural villages where parents are mostly illiterate farmers. Students are engaged in assisting parents in farm activities such as agriculture, tending to cattle and household chores. Some students even requested to postpone exam time towards the afternoon since they had to work on the fields during morning hours.

Some students expressed that they had to attend to their ailing parents/ grandparents/family members and take them to hospitals. By evening, when they are back home, it becomes difficult for them to keep abreast with the lessons. Parents whose children are in lower grades feel that it would be better to let the children repeat the next academic year. Majority of students do not have access to smart phones or TV at home in addition to poor Internet connectivity. There is no or less income for huge population due to closure of business and offices. The data package (costs) is comparatively high against average income earned, and continuous access to Internet is a costly business for the farming community. Online face-to-face classes (video) is encouraged by most; however, some students (economically disadvantaged) have expressed that the face-to-face online class consumes more data packages. The teachers are in dilemma as to whom to listen to and which tools to adopt. Some think pre-recorded videos could help; however, this would restrict interactions. It is difficult to design a proper system to fit the learning needs and convenience of all students.

Opportunities for Teaching and Learning

Although there have been overwhelming challenges for educators, schools, institutes and the government regarding online education from a different angle, there are several opportunities created by the COVID-19 pandemic for the unprepared and the distant plans of implementing e- learning system.

It has forged a strong connection between teachers and parents than ever before. The homeschooling requires parents to support the students' learning academically and economically. Children with disabilities need additional and special support during this ongoing emergency.

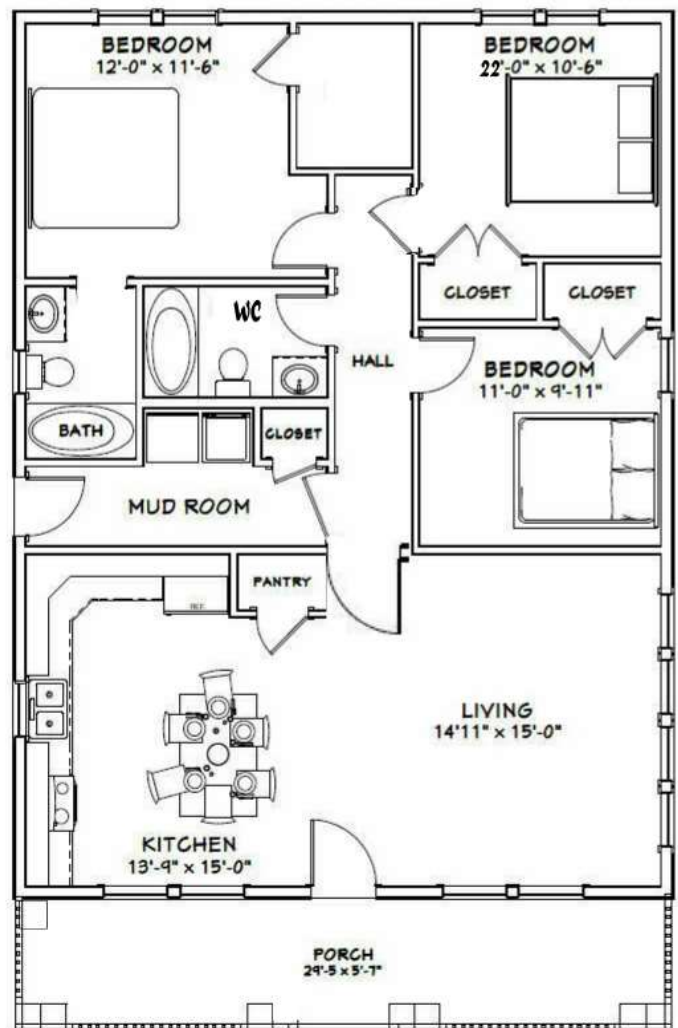
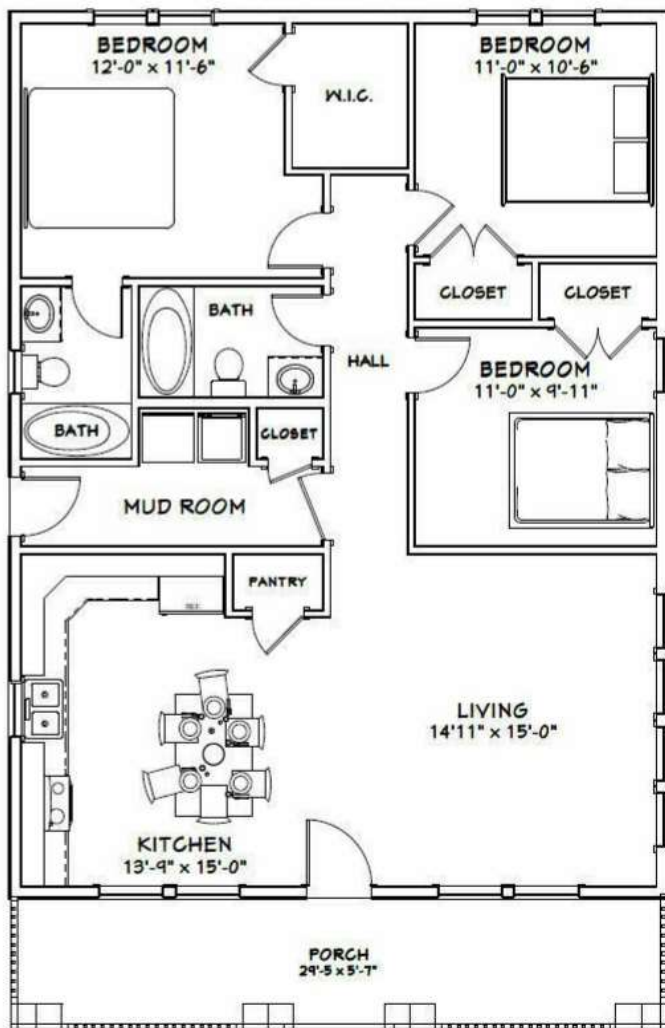
The use of online platforms such as Google Classroom, Zoom, virtual learning environment and social media and various group forums like Telegram, Messenger, WhatsApp and WeChat are explored and tried for teaching and learning for the first time ever to continue education. This can be explored further even after face- to-face teaching resumes, and these platforms can provide additional resources and coaching to the learners.

Teachers are obliged to develop creative initiatives that assist to overcome the limitations of virtual teaching. Teachers are actively collaborating with one another at a local level to improve online teaching methods. There are incomparable opportunities for cooperation, creative solutions and willingness to learn from others and try new tools as educators, parents and students share similar experiences (Doucette et al., 2020). Many

educational organizations are offering their tools and solutions for free to help and support teaching and learning in a more interactive and engaging environment. Online learning has provided the opportunity to teach and learn in innovative way sun like the teaching and learning experiences in the normal classroom setting.

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SPOT THE DIFFERENCE



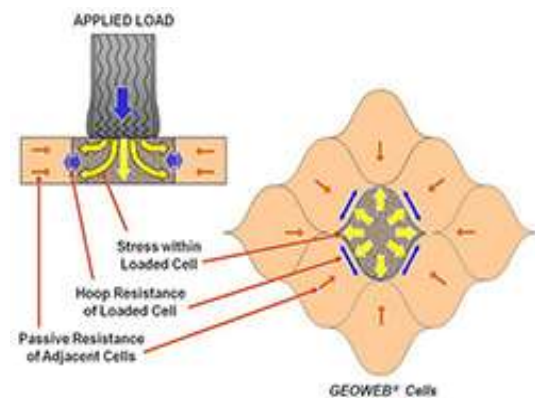
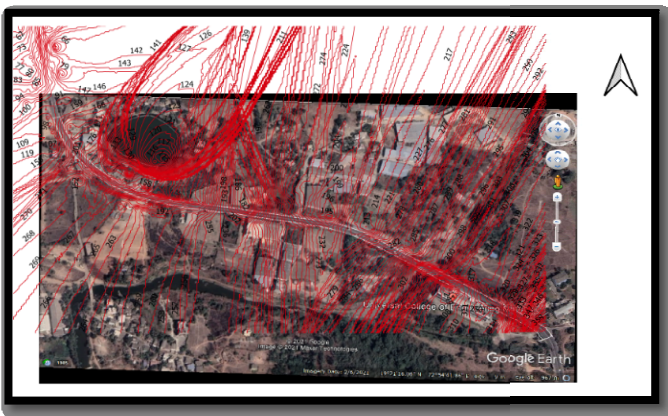
DID YOU KNOW?

The first self-proclaimed civil engineer was John Smeaton who constructed the Eddy stone Lighthouse.

Project Report for Virtual Internship Programme on Sustainable Development Goals and Community Engagement on: **“Improvement of Stability of Pothole Using Geocell for Kaman Road”**

A pothole is defined as a bowl-shaped depression in the pavement surface. With the climate change such as heavy rains in Kaman, damaged pavements like potholes are increasing, and thus complaints and lawsuits of accidents related to potholes are growing. Maintenance of paved and unpaved roads and highways has been a major issue for all road owner authorities. When the roads are not appropriately designed and constructed, life of the roads drastically reduces causing disruption of the traffic. Such roads develop pot-holes, develop uneven riding surfaces, and tend to settle over stretches, thereby disrupting traffic movement. After evaluation, we came to know due to poor drainage and weak sub grade and the heavy rains which create the number of potholes and severely damaged the pavement.

So, to overcome this problem, the present study focuses on the more stable solution for pothole repairs. The scope of this study is to understand the contour of the Kaman by Surveying and QGIS Software Figure.1. Further this study is aims to conduct experimental programme on pothole repair work with various combination of material such as Geocell, Bitumen, Aggregate, Fly Ash and GGBS.



Objectives of the study:

1. To improve the overall stability of pothole repair work by performing experimental work.
2. To avoid rutting in overlay
3. To resist moisture intrusion into the underlying pavement structure
4. To improve the road quality, particularly when roads were built on unstable soil.





Figure 3. Image of road cross section before repair and after repairs of pothole

Major findings

Based on experimental data and laboratory test results of CBR and shear strength test following observation can be made

1. Potholes repairs with geocell inclusion provide lateral restraint through friction and interlock between aggregate, filling material
2. Geocells in-filled with sand / metal improve the strength of the pavement, reducing settlements, formation of reflective crack and potholes.
3. Use of geocells reduces the thickness of the pavement section but also significantly reduces downtime due to maintenance
4. Use of Geocell in potholes may reduce maintenance cost (as it may require to prepare once in season as compare to other method)
5. This method of repairs is more environments friendly as it reduced quantity of aggregate as well as cost.

Suggestions / Recommendations :

1. Geocells (cellular confinement) offer a more effective and practical 3D design solution to load support.
2. Geocells transfer applied loads instantaneously, delivering practical soil stabilization in a product that is fast and easy to install
3. Use locally available natural geotextile material like coir, jute instead of Geocell also possible and further economy can be achieved
4. Geocells have also been effective to nurture grass on beach sand and prevent erosion of the sand
5. Further study needs to be carried out to check other factors such serviceability.

“The Negligence of a few could easily send a ship to the bottom, but if it has the wholehearted cooperation of all on board it can be safely brought to port.”

- Sardar Vallabhbhai

News Bulletin



SEIAA grants Coastal Regulation Zone clearance to Mumbai Metro-5

The Maharashtra State Environment Impact Assessment Authority (SEIAA) has granted Coastal Regulation Zone (CRZ) clearance to the MMRDA Metro-5 line, a Mumbai Urban Transport Project official said. The 25-km fully-elevated corridor, which will connect Thane's Balkum Naka to Kalyan APMC via Bhiwandi, will have 17 stations. A ridership of about three lakh people each day is expected by 2031.



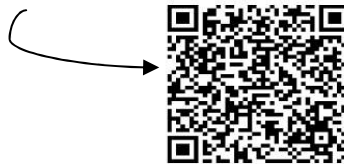
Work on Thane-Borivali twin-tunnel to begin in March 2022: Eknath Shinde

The Mumbai Metropolitan Region Development Authority (MMRDA) will start working on the twin-tunnel road linking Thane-Borivali from March 2022, said Maharashtra PWD Minister Eknath Shinde. The construction of 10.25 kilometre twin-tunnel and 1.55 kilometre junction is expected to cost around ₹11,235 crore. The six-lane twin-tunnel will slash the travel time from the current one hour to 15 minutes.



India's 'Fairy Queen' is world's oldest working steam engine

The 'Fairy Queen' train in India was certified by the Guinness World Records as the 'world's oldest working steam engine' in 1998. Constructed by Kitson, Thompson, and Hewitson in England, the train was brought to Calcutta (now Kolkata) in 1855. Its most recent journey, organised in February 2017, spanned from Delhi Cantonment to Rewari in Haryana.



Over 100-year-old bridge demolished in Maharashtra

The Public Works Department in Maharashtra on Monday used explosives to demolish a bridge on Kalu river that was over 100 years old. The bridge, which was in a dilapidated condition and was declared dangerous for use, connected Murbad and Shahapur areas in Thane district. A proposal to construct a new bridge will soon be submitted by the authorities.



Construction of Navi Mumbai airport expected to begin from Aug: Adani Group

Construction work on the Navi Mumbai International Airport (NMIAL), which is now under the management of Adani Group, is expected to begin from August. "The new airport will be commissioned in 2024," the group recently stated. According to CIDCO, which is the implementation agency for the new airport, at present, land acquisition is completed.



Entire village in New Zealand up for sale at ₹13.5 crore

An entire village in New Zealand which has been abandoned for three decades is up for sale for NZ\$2.8 million (over ₹13.5 crore). Lake Waitaki village was built in the 1930s to accommodate the men working on a nearby dam construction project and their families. The property includes eight three-bedroom houses, a restaurant, a lodge and a cafe/bar among others.



DEPARTMENTAL ACTIVITIES

Independence Day



A great day and a proud day for every Indian. Universal College of Engineering and ACES too was all set to celebrate the Independence Day of India. Everyone on the campus was geared up and enthusiastic to meet their friends after a very long time and enjoy the momentous occasion though the weather didn't seem to be favorable at all.

Krishna Janmashtami

Krishna Janmashtami, also known simply as Janmashtami or Gokulashtami, is an annual Hindu festival that celebrates the birth of Krishna, the eighth avatar of Vishnu. Team ACES had arranged a small virtual function on the occasion of Krishna Janmashtami which included various competitions like rangoli, matki painting, poster, etc.



"Improvement of Stability of Pothole Using Geocell for Kaman Road"

खड्डे बुजविण्यासाठी आधुनिक तंत्रज्ञान

अभियांत्रिकी विद्यार्थ्यांचा अग्रेसर प्रयोग

पोकरोसा खाताहर

बघा: संपूर्ण देशात व परगणा सव्या रस्त्यावर पडणारे मोठे-मोठे खड्डे व खड्डेकडे होणारे अपघात ही सर्वांत मोठी समस्या बनली आहे. या समस्यावर उपाययोजना करण्यात येणे गरजेचे आहे. या प्रकल्पामध्ये रस्त्यावर पडलेले खड्डे हे कमी खर्चात व चांगल्या दर्जाचे करणे शक्य होऊ शकते असा उद्देश्य असला आहे. जे महामार्ग सव्या खड्डे बुजविण्यासाठी लागते त्याला आधुनिक तंत्रज्ञानाची जोड देऊन खड्डे बुजविण्याचे काम करून त्याची पाचगणी पूर्ण केली आहे.

असतत्या व खड्ड्यांवर कायमस्वरूपी व जास्त काळ टिकतील अशी उपाययोजना होणे गरजेचे आहे. या प्रकल्पामध्ये खड्ड्यांची पाचणी करून त्यासाठी रस्त्याची पाचणी करून त्यासाठी वापरण्यात येणारे दगड, सिमेंट कोक्रेट, खारी, ग्रेट पावडर आदी सर्व साहित्याची प्रयोग शाळेत तपासणी केली जात असून हे आधुनिक तंत्रज्ञान वापरून अधिक चांगल्याप्रमाणे खड्डे बुजविण्यासाठीचा प्रकल्प सुरू केला आहे. याची सुरुवात त्यांनी आपल्या महाविद्यालयाच्या सरोवरील रस्त्यावर पडलेल्या खड्ड्यांपासून केली आहे. उक्त भारत अभियान अंतर्गत हा प्रकल्प त्यात बसण्यात येण्यात येतो आहे. या प्रकल्पामध्ये रस्त्यावर पडलेले खड्डे हे कमी खर्चात व चांगल्या दर्जाचे करणे शक्य होऊ शकते असा उद्देश्य असला आहे. जे महामार्ग सव्या खड्डे बुजविण्यासाठी लागते त्याला आधुनिक तंत्रज्ञानाची जोड देऊन खड्डे बुजविण्याचे काम करून त्याची पाचगणी पूर्ण केली आहे.

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खड्डे बुजविण्यासाठी आधुनिक तंत्रज्ञान

सव्या अग्रेसर अभियांत्रिकी विद्यार्थ्यांनी प्रयोगशाळात हा प्रकल्प सुरू केला आहे. याची सुरुवात त्यांनी आपल्या महाविद्यालयाच्या सरोवरील रस्त्यावर पडलेल्या खड्ड्यांपासून केली आहे. उक्त भारत अभियान अंतर्गत हा प्रकल्प त्यात बसण्यात येण्यात येतो आहे. या प्रकल्पामध्ये रस्त्यावर पडलेले खड्डे हे कमी खर्चात व चांगल्या दर्जाचे करणे शक्य होऊ शकते असा उद्देश्य असला आहे. जे महामार्ग सव्या खड्डे बुजविण्यासाठी लागते त्याला आधुनिक तंत्रज्ञानाची जोड देऊन खड्डे बुजविण्याचे काम करून त्याची पाचगणी पूर्ण केली आहे.

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Congratulations to the students for experimenting on such project and thinking about the potholes present on roads. Also congratulations to Prof. Sachin Pawar for a wonderful guidance. You can find the article about this on pg.9

Junior Tantrotsav

The Association of Civil Engineering Students conducted an online Diploma Level Technical event for civil engineering students called 'Junior Tantrotsav' with multiple technical events namely Tech Talks, Virtual Bingo, Debate, Urbania. Diploma students from multiple colleges competed and showcased their technical knowledge. The event was streamed LIVE on YouTube.



UPCOMING EVENTS



Teachers' day

Since 1962, September 5 has been celebrated as Teachers' day to honor Dr Radhakrishnan's remarkable approach towards education and students. On this Teachers day lets inculcate few events for teachers and appreciate their efforts on 5th September 2020.



Ganesh Chaturthi

Ganesh Chaturthi is celebrated annually to mark the birth of Lord Ganesha. Lord Ganesha is considered to be a symbol of wisdom, writing, travel, commerce and good fortune. This year, Ganesh Chaturthi will be celebrated on September 10, 2021, Friday.



Engineer's day

Engineer's day is celebrated to commemorate the birth anniversary of the greatest Indian Engineer Bharat Ratna Mokshagundam Visvesvaraya. On Engineers day let us have a event 'TANTROTSAV' to celebrate Innovation and Creativity of the "Hard working and upcoming Engineers" on 15th September 2021.

Scratch Your Head !!

Frictional Force Encountered After Commencement Of Motion Is Called??

- Post Friction
- Frictional Resistance

- Limiting Friction
- Dynamic Friction

CANVAS



-ARCHIT MANAPETTY
B.E.CIVIL



-DHRUV PARMAR
B.E. CIVIL



-ARCHIT MANAPETTY
B.E.CIVIL

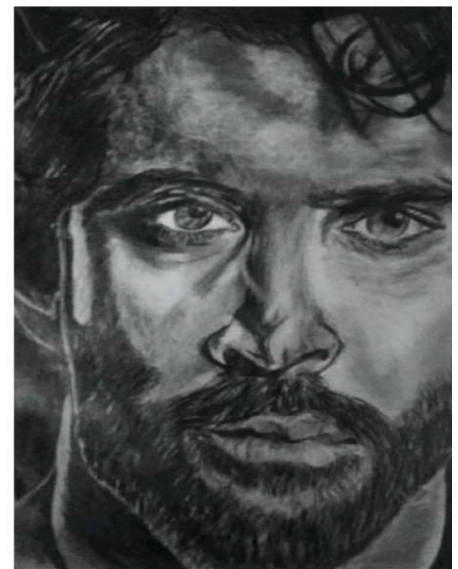


-YASH PATIL
B.E. CIVIL

-YASH PATIL
B.E. CIVIL



-YASH PATIL
B.E. CIVIL



-HARSH RANA
T.E. CIVIL

Answers to "scratch your head"
Dynamic Friction