

AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY

A Constituent College of Vinayaka Mission's Research Foundation
(Deemed to be University Under Sec 3 of UGC Act 1956)
Vinayaka Nagar, Old Mahabalipuram Road, Paiyanoor
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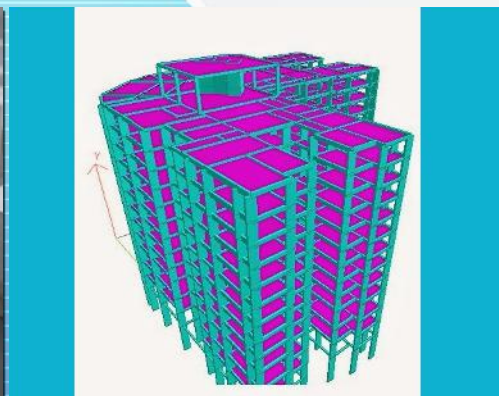


DEPARTMENT OF CIVIL ENGINEERING

CONSULTANCY DIVISION

The Department of Civil Engineering was established in the year 2008 and has grown into a full-fledged department with specializations in all the major areas of Civil Engineering. The department has produced several eminent engineers who have made significant contributions in the planning and execution of Civil Engineering projects in India as well as abroad. The faculty of the department continues to strive loftier by exploring new frontiers of knowledge, imparting the latest technical knowledge to the students and conducting high quality of research. The departmental activities embrace Planning, Design, Construction and Management. All the laboratories of the department are well equipped with advanced and sophisticated equipment to satisfy the training needs of the students and to meet the research and consultancy requirements of the department. The department has been constantly involved in a range of consultancy projects through the following Research center and laboratories.

- **CENTRE FOR CONCRETE RESEARCH AND TESTING**
- **COMPUTER AIDED DESIGN AND DRAFTING LABORATORY**
- **SOIL ENGINEERING LABORATORY**



CENTRE FOR CONCRETE RESEARCH AND TESTING

The Department of Civil Engineering has established a **Centre for Concrete Research and Testing** in 2015. The centre provides technical support to all projects related to special subjects of testing of materials, structural components, and field assessments. It is consistently providing the services to various construction companies and conducts material testing. The centre also offers solutions and bridges the gaps in implementation of new technologies in construction. The centre inspires the young engineers to conduct innovation works, imparts training and adopts best quality standards and motivates them to address challenging tasks in innovation of new construction materials. We are proud to have established an academic-industrial partnership with research teams at Dalmia and Ramco cements to develop alternative building materials. These efforts will focus on identifying and developing alternative supplemental materials that can be used to replace cement in concrete.



UNIVERSAL TESTING MACHINE



LOADING FRAME



COMPRESSION TESTING MACHINE



VEE BEE CONSISTOMETER



REBOUND HAMMER



FLOW TABLE



COMPACTION FACTOR APPARATUS



AGGREGATE IMPACT VALUE APP.



TESTS ON HARD CONCRETE

- ~ Flexural Strength Test
- ~ Cube Compression Test
- ~ Tensile Strength Test

TESTS ON FRESH CONCRETE

- Workability Test by*
- ~ Vee Bee Consistometer
 - ~ Compaction Factor Apparatus
 - ~ Slump Cone

TESTS ON CEMENT

- ~ Fineness, Soundness, Consistency, Setting Time Tests

TESTS ON AGGREGATE

- ~ Sieve Analysis of M-Sand
- ~ Los Angeles Test for Aggregate
- ~ Crushing Strength of Aggregate
- ~ Impact Strength of Aggregate
- ~ Sieve Analysis of Sand



SOIL ENGINEERING LABORATORY

The **Soil Engineering Laboratory** deals with soil testing, in order to give some help in acquiring the overall picture for soil problems which involve the soil property under testing. In many engineering problems such as design of foundation, retaining walls, slab bridges, pipes, sheet piling, the value of the angle of internal friction and cohesion of the soil are required for the design. The laboratory experiment uses the principles of geotechnical engineering to investigate subsurface conditions and materials.

The main sets of objectives of this lab are

- To test the soil for Index and Engineering properties
- To conduct the advanced research in the field of Soil Engineering



TRIAXIAL SHEAR APPARATUS



DIRECT SHEAR TEST APPARATUS



CONSOLIDATION TEST APPARATUS



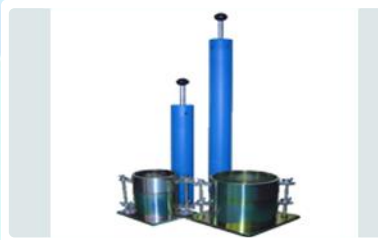
UNCONFINED COMP. TEST APPARATUS



PYCNOMETER



STANDARD AND MODIFIED PROCTOR TEST



CASAGRANDE APPARATUS



MECHANICAL SIEVE ANALYSIS



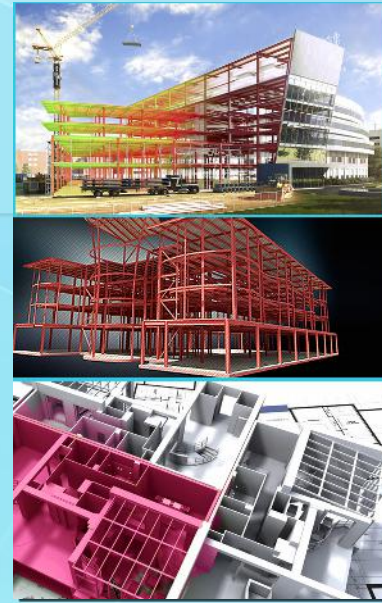
TEST IN SOIL ENGINEERING LABORATORY

1. Specific Gravity
2. Mechanical sieve size analysis
3. Liquid limit – Casagrande tool
4. Plastic limit
5. Shrinkage Limit
6. Falling Head permeability test
7. Constant Head permeability test
8. Standard proctor compaction test
9. Modified proctor compaction test
10. Consolidation test
11. California Bearing Ratio (CBR)
12. Direct shear test
13. Unconfined compressive strength test
14. Triaxial shear Test

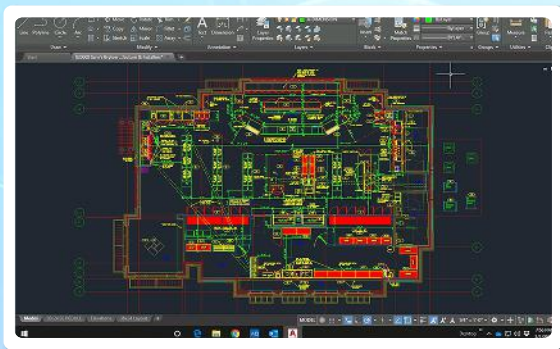


COMPUTER AIDED DESIGN AND DRAFTING LABORATORY

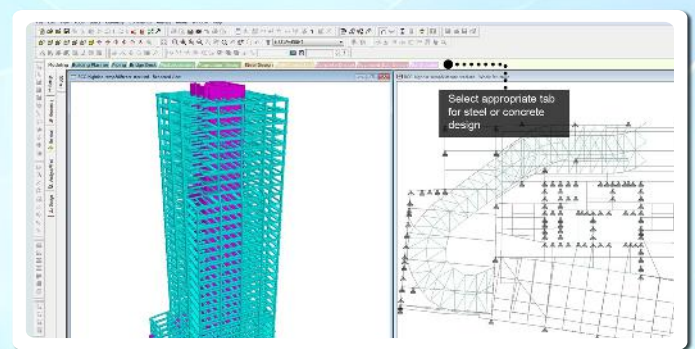
The Computer Aided Design and Drafting Laboratory is a vibrant zone of the department where many productive activities are been performed apart from the academics. The Department of Civil Engineering, AVIT has signed MoU with Bentley Ltd. where the students and faculty members are trained and guided by the experts from 'Bentley Educations' team with all the software packages provided by the Bentley. This facilitates the students with industry ready knowledge and develop their skills out of the syllabi box. Active consultancy activities in the area of 'Reinforced Cement Concrete', 'Steel Structures', etc. are been carried out in this laboratory. Faculty members with industry knowledge are providing consultancy service for industries like United Shakthi Associates, Sundaram Clayton Ltd., Harita Fehrer Ltd, etc. through the CADD Laboratory using Bentley STAAD Pro. software, Autodesk AutoCAD, etc. Structural consultancy for any type and size of civil structures are provided with competitive charges and with reliable quality.



AUTOCAD DRAFTING AND DETAILING



STAAD PRO. ANALYSIS AND DESIGN



AVIT CHENNAI CAMPUS

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