#### Introduction

Geo Civil Lab & Consult Pvt. Ltd., is an privately owned engineering firm established in 2021 to provide material testing, skill development trainings, contract managements, consulting services to individual, governmental, semi governmental, private sectors and other institutions. We aim to develop local technical experts to an internationally accepted level based on principle that every enterprise is essential partners in the development process of our country. Our core strategy is to strengthen necessary alliances and bridging the gaps among the entrepreneurs.

We work hard towards offering professional services in the field of civil engineering material testing (bitumen, cement, sand, aggregate, reinforcement & strand wire and others) & relevant field testing (core cutting, field density, material sampling, pile load test, pile integrity test, Standard penetration test, and others), long-term & short-term vocational trainings (civil engineering lab technician, plumbing, residential and industrial wiring works, welding & metal works, mason), relevant civil engineering software (road, water supply, structural analysis, GIS, Auto CAD 2D & 3D).

We offer our best packages to contractors for hiring well deserved candidates from supervisor to engineers who worked in construction sectors for long period. Our aim not only on providing the technical manpower, we also own the full responsibility of the site in case of additional support from the respective experts until the end of the project period with necessary guidance and frequent field visit.



Raja Ram Khadka (Geotechnical Engineer) Msc. Geotechnical Eng. (2012)

# Message from the Management

On behalf of Geo Civil Lab & Consult (P) Ltd., I would like to thank you for showing interest and believing to our Consultancy.

Geo Civil Lab & Consult (P) Ltd. is a newly established engineering consultancy in one of the up-growing city of the country, Butwal (economic capital of Lumbini Province). Understanding the importance of consulting in various development sectors in Nepal, we inaugurated Geo Civil Lab & Consult in this recent year at the embryonic stage of consulting business working headed for achieving and pioneering the development towards Consulting Industry with the diversification of services into various fields of civil engineering, environmental studies, and other.

We understand that maintaining the integrity through a commitment to quality service, team member appreciation and delivering innovative, practical solutions to our clients is the key to our success.

We are confident about the future of Geo Civil Lab & Consult as we look toward new opportunities and continued growth in the sector of material testing and other consulting services within the Province and beyond. We continue to strive towards our aim of becoming a leading consultancy organization in Nepal. I encourage you to contact us to learn more about the services we offer.

Lastly, I would like to thank all our stakeholders for their continuous support and belief. I have no doubt that with their continued support; Geo Civil Lab & Consult will scale even greater heights in coming years.

# **Objective**

The main aim of Geo Civil Lab & Consult (P) Ltd. is to provide quality consulting services in the sector of material testing and other civil engineering services.

# **Our Services**

# 1.Quality Control Works

- ▶ Laboratory testing of different construction materials
- ► Relevant field testing at construction sites
- Mix design for various grades of concrete and asphalt mixes

# 2.Vocational trainings

- ▶ Skill development trainings (civil engineering lab technician, plumbing, electrical wiring, mason, welding & metal works, scaffolding, safety) for foreign employments and national job opportunities.
- Package trainings for road survey using total station and designing using appropriate software.
- ▶ Package trainings for heavy equipment operators
- Other trainings (Structural designing, Auto CAD 2D & 3D, GIS, etc)

# 3.Manpower recruitment

- ➤ Supply of technical (Managing) manpower on contract basis and regular guidance from the office
- Supply of heavy equipment operators who have expertise in their respective fields and having very fast experience(With long experience)
- Supply of (Managing) skilled & semi skilled workers for higher quality of bituminous works

# 4.Civil Engineering

- ▶ Feasibility study and detailed design works for
  - Highway, bridge, building/complex, irrigation & water supply projects and others
- Joint/construction survey of road, building, bridges, irrigation projects and other infrastructure projects
- ▶ Planning & contract management services
- Architectural master plan (with 3D) preparation of apartments, banks, hospital, parks, religious places, etc.

#### 5.Environmental Studies

Road, bridge, building, hydropower, industry, Water Supply, Solid waste and other development projects

#### **Engineering Laboratory:**

#### Test on soil, sand and gravel

- ► Particle size analysis
- ▶ Hydrometer analysis
- Determination of liquid limit, plastic limit & plasticity index (PI)
- Determination of moisture content
- ▶ Determination of bulk density
- ▶ Determination of MDD(Proctor test)
- ► California Bearing Ratio (CBR)
- ▶ Field density
- ▶ Dynamic Cone Penetration (DCP) test
- ➤ Clay/mica content

#### Test on aggregate, cement & concrete

#### For aggregate:

- ► Los Angeles Abrasion (LAA)
- ▶ Aggregate Impact Value (AIV)
- ► Aggregate Crushing Value (AClus Angeles Abrasian (LAA) Testing Machine
- ► Flakiness & Elongation Indices (FI-EI)
- Specific gravity and water absorption

#### For cement.

- Consistency
- Setting time
- Fineness (by Air permeability)
- Soundness
- Compressive strength

#### For concrete:

- ► Mix design for different mixe
- ➤ Compressive strength
- Slump test

# Test on bitumen & asphalt concrete

#### For bitumen:

- Penetration test
- Absolute viscosity
- Kinematic viscosity
- Flash point
- Solubility test
- Softening point
- ► Test on residue from rolling thin film from oven
  - ► Viscosity ratio
  - ▶ Ductility

#### For asphalt concrete:

- ► Asphalt concrete mix design
- ► Marshall stability test



ressive Strength testing machine (CTM)

- ▶ Bitumen content test
- ► Density of core sample (including core cutting)
- ▶ Thickness of core sample

#### Test on reinforcement bars and pre-stressed co

- ▶ Yield stress
- ▶ Ultimate tensile strength
- ► Elongation
- ▶ Diameter

### Test on gabion wires

- ► Tensile strength
- ▶ Mass of zinc coating
- ▶ Uniformity
- ▶ Adhesion

# Universal Testing Machine (UTM)

#### Subsurface exploration and Testing

- ► Field SPT (Bearing Capacity)
- ► Foundation and Pile Design
- ► Pile Load test
- ▶ Pile integrity test

# Location Map





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