**SUKHDEEP SINGH GABRI  
Mobile**: (+91) - 8860578703 | **Email**: sukhcivil@gmail.com | [LinkedIn](http://www.linkedin.com/in/sukhdeep-singh-0254739)

**PROFILE SUMMARY:**

* Highly proficient Civil engineer with over 14 years of managerial cum technical experience in transportation and infrastructure design, management and business operations in Australia, India, United Arab Emirates and United Kingdom.
* Proven expertise in design of tunnels and rock caverns, foundation analysis and design, numerical modeling, slope stability and support systems design, analysis of multiple openings, soil/rock testing, sensitivity and flexibility analysis, geotechnical and structural assessment, retention system analysis and design, interpretations of geotechnical investigation reports, instrumentation and monitoring scheme proposals and data reviewing, settlement prediction and risk assessments for urban structures, soil structural interaction analysis, modeling and validations.
* Well versed with tunnel boring machine (TBM), cut and cover, new Austrian tunneling method (NATM), box pushing, conventional drill and blast method and micro-tunneling techniques.
* Tools: ROCDATA, WALLAP, FREW, PLAXIS, FLAC, S-WEDGE, UN-WEDGE, PHASE, GEOSLOPE, ROCKLAB, STAAD- PRO, BEM, CADUGS, PIGLET, SLOPE-W, AUTOCAD AND MICRO STATION.

**PROFESSIONAL EXPERIENCE:**

The detail project list of the entire work experience is enlisted at ***DETAIL PROJECT LIST***

***Sr. Manager - Design co-ordination***

*Larsen & Toubro Limited Apr 2018 – Present*

* + **Pioneering Extreme Engineering Project**
* Strengthen the design team and lead the project design to progress which was delayed for more than six months. Good for construction drawings (GFC) have been issued in record time of 4 months so that lagging in execution could be addressed.
* Resolved deadlock in project design and interface issues worth $50 million after joining the organization and accelerated design and construction pace to meet its target timeline and quality.
* Timely submissions of design and drawings and thereof physical progress maneuvered to achieve 50% financial targets (approximately $60 million out of $119.8 million) of ongoing project. This has been done by leading design team and co-coordinating with construction team to overcome extreme geology and engineering challenges comprising of urban utility diversion.
* Cut and cover tunnels each of 3 lane width has been designed to cater huge traffic loading and heavy concentrated loads on tunnel roof due to interface structures column loading ranging from 450 Ton to 3000 Ton.
* Permissible Settlement limits of two adjacent structures (Tunnels and buildings on pile) maintained so that no differential settlement takes place. Pre-stressing in top slab has been proposed to counter deflection of top slab due to heavy concentrated loads.
* Designed four branch tunnel interfaces with main tunnel, comprising approx. 45m wide tunnel in tough urban geology and high water table condition.
  + **Project Management, Co-ordination and Technical Expertise**
* Supervision and overall responsibility of design submissions and approvals for Civil, Highways, drainage and MEP.
* Co-ordination with Designer and Proof Consultant for design and approval process under EPC mode of contract.
* Reviewed drawings of Underpasses, cut and cover tunnel, box pushing and highway profiling works.
* Offer cost optimized solutions through review of drawings and design. Guided for approximately 15% savings in underpass ramp design by providing expansion joints.
* Resolve interface issues of design with stakeholders/contractor, provide loadings and loading criteria inputs to detailed Designer.
* Liaison with Government bodies like PWD, Railways, ITPO and other Stakeholders of the project to solve the interface issues.
* Identify and settle site issues related to design during construction phase for smooth execution. Monitored 8 member design team comprising of urban planners, design engineers and draftsmen.
* Prepare Project progress and statistics; prepare report on issues in design and brief to Management in Headquarter and cluster office.

***Discipline Lead /Design Advisor - Geotechnical & Tunnels***

*GMR Infrastructure Ltd/ COWI June 2017 –March 2018*

* + Cut and cover station construction sequence have been modelled in Plaxis for verification against structural modelling.
  + Reviewed Pile and shallow foundation design and offered optimum design.
  + Managed Geotechnical and Tunnel Engineering design team and oversaw design and delivery of high-end design projects.
  + Monitored and recommended Geotechnical investigations for design.
  + Compiled Geotechnical interpretative reports.

***Sr. Design Engineer/Senior Manager- Design***

*STUP Consultant Pvt. Ltd January 2013 – June 2017*

* + Successfully delivered projects worth $9.7 billion within stipulated timeline through resolving Tunnel and Geotechnical related issues in Railways Freight Corridors and Metro Design in the role of Geotech Lead to the client and JV consultant.
  + Computed design calculations for Temporary retention systems using WALLAP, ROCDATA and PLAXIS.
  + Developed Foundation and Embankment design for major structures. Prepared Risk and settlement assessments, Instrumentations and monitoring schemes.
  + Suggested Ground improvements and analyzed liquefaction potential.
  + Co-ordinated with other team of designers and contractors/consultants involved in various tasks.

***Engineer/Senior Engineer- Tunnels***

*Halcrow Consulting - a CH2MHILL Company, August 2010 – January 2013*

* + Prepared detailed Tunnel design as well as managed all phases of Tunneling and Geotechnical projects in Transportation, Hydropower and Metro sectors onsite (United Kingdom, Australia) and offsite.
  + Won 60% projects during biddings through market intelligence and developed business by adopting proactive approach ahead of project anticipation through visiting clients and organizing workshops.
  + Slashed project cost by 35% by proposing team management strategy as per time zone that led to enhanced on-site and off-site team productivity and successful project delivery within the estimated timeframe
  + Collaborated with sub consultant for client interactions and for field and laboratory testing comprising of civil design calculations, preparation and review of drawings.
  + Executed seepage analysis for concrete faced rock fill dam (CFRD). Assisted in finite element modeling in PHASE 2D.
  + Responsible for surge shaft excavation support system design during construction.

***Engineer –Tunnels and Geotechniques***

*ATKINS November 2007 – August 2010*

* + Deputed for a period of 1.5 years at United Arab Emirates as Engineer – Tunnels and Geotechniques for tunnel design projects based in United Kingdom.
  + Recognized by UK based Client Metronet for preparation and timely high grade delivery of deep tube tunnel assessment report for Central, Bakerloo and Victoria (in United Kingdom) line assets. The efficient team work led Atkins Rail to achieve maximum revenue from this project
  + Performed Soil structural interaction analysis and prepared geological sections as per British Geological Society.
  + Designed running tunnels and shafts of 3 meter to 8 meter diameter and analyzed tunnel lining based on Muir Wood and Curtis method using FLAC 5.0, LIAS.
  + Designed tunnel RLX03 Manchester to Wigan (United Kingdom) under track crossing-UTX using pipe jacking techniques.
  + Responsible for settlement analysis of 87.5 meter long pipe jacking tunnel and structural analysis of Pre-cast concrete lining used in pipe jacking.

***Design Engineer***

*Jaypee Ventures Ltd, Delhi NCR, India June 2005 – November 2007*

* + Performed Rock support analysis and designed intake tunnels of 6 meter diameter, link and connecting tunnels of 6 meter and 8 meter diameter, Head race tunnel, sedimentation chamber with multiple openings of 30.25 meter x 18.0 meter each, power house cavern of size 52 meter x 23 meter considering various rock mass structures.
  + Responsible for analysis of rock bolt/Shotcrete by using PHASE and UNWEDGE.
  + Created Lining design of cross sections using latest theories by Dr. A. Schlesis.
  + Computed Hydraulic calculations and hydrological studies for a tunnel diversion of 10.75 meter diameter, intake and spillways, considering losses to decide coffer dam levels.

**EDUCATION:**

*Master of Technology (M.Tech) in Rock Engineering and Underground Structures - Indian Institute of Technology, Delhi, India 2003-2005*

WES Canadian Education Equivalency- Master’s degree

*Bachelor of Engineering (B.E) in Civil Engineering – Jabalpur Engineering College,*

*Jabalpur, India 1998-2002*

WES Canadian Education Equivalency- Bachelor's degree (four years)

**TRAINING:**

*PMP Certification Training Dec 2017*

# DETAIL PROJECT LIST

**Larsen & Toubro Limited, New Delhi**

* + India: Construction of Integrated Transit Corridor Development Plan in and around Pragati Maidan, New Delhi. Client – Public Works Department (PWD) / India Trade Promotion Organization (ITPO)

**GMR Infrastructure Ltd/ COWI India (P) Ltd. Gurgaon, India**

* + Saudi Arabia: King Abdul Aziz Road Development Project (KAAR) - Client - Nesma & Partners
  + Design Advisor for Dedicated Freight Corridor Corporation (DFCC).

**STUP Consultant Pvt. Ltd, New Delhi, India**

* + India: Mumbai Metro Line -3, UG-07, Package- Client - L&T
  + India: Dedicated Freight Corridor Corporation (DFCC), Client – GMR Infrastructure Limited
  + India: Underground stations design (Pkg. CC-32, CC-24) for Delhi metro rail corporation (DMRC) Phase III.

**Halcrow Consulting – a CH2MHILL Company, Noida, India**

* + India: Feasibility Study, Rapid Rail Transit System (RRTS), Delhi-Ghaziabad-Meerut Corridor. Client - National Capital Region Planning Board, DIMTS
  + India: Pali-Pindwara Tunnel Project, Rajasthan. Client- Gammon India Limited
  + India: Parwanoo-Solan, Barog Tunnel, Himachal Pradesh. Client- Gammon India Limited
  + India: Detailed Design, Twin Tunnels, 3-Lanes Each, Thrissur Vadakanchery, NH47 Kerala. Client- Thrissur Expressway Ltd
  + India: Amravati-Jalgaon National Highway Project NH-6 - Worked as Employer’s Engineer. Client- L&T IDPL
  + India: Ganderbal Hydroelectric project (93MW).
  + India: Seepage Analysis, Concrete Faced Rock Fill Dam, Kishan Ganga Hydro Electric Project (330 MW). Client - Hindustan Construction Company (HCC).
  + Australia: Roy Hill Iron Ore. Client: Clough Forge Private Limited (CFPL)
  + Australia: Delta - Emporium/Myer Temp Tunnel Access. Client: Halcrow Pacific
  + Australia: Boxhill Hospital. Client: Halcrow Pacific
  + UK: Aylesbury Waterside. Client- Halcrow UK

**ATKINS Bangalore, India**

* + UK: Assessment of Deep Tube Tunnels, London Underground Limited (now Transportation for London). Client: Metronet UK
  + UK: West East Link Main Design. Client: United Utilities
  + UK: Bond Street Stage D+ Duties. Client: Transport for London
  + UK: Birmingham Queensway Tunnel Refurbishment. Client: Birmingham Council

**Jaypee Ventures Ltd, Delhi NCR, India**

* + India: Karcham-Wangtoo HE Project, 1000MW Kinnaur, Himachal Pradesh. Client: Jaypee Karcham Hydroelectric Ltd.
  + India: Baspa HE Project, Stage II, 300MW. Client: Jaypee Hydroelectric Ltd.