

KARANPAL SINGH

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Structural Engineering Professional experienced in Design of Complex Building Structures

SKILLS

- Over 5 years of experience in design of **high/mid-rise commercial, residential, institutional, parking, basement, water retaining** structures based in the US and India. Significant experience in **bridge design**.
- Proficient in **wind & earthquake resistant design** of structures.
- Superior knowledge of design softwares **ETABS, SAFE, SAP, CSI Col**. Well versed with **REVIT, AUTOCAD, STAAD.Pro, Bluebeam, Midas**.
- Knowledge of **retrofit design & evaluation** of existing building structures.
- Experienced in **engaging with various stakeholders** in a project for **planning, scheduling & coordination**.
- Ability to **work as part of a team** as well as **independently** to follow **tight schedules**. Proven capability to **multitask** and **efficiently achieve project milestones**.
- Vast experience in creating **peer review / design reports, comparative studies, manual design calculations, & Excel spreadsheets**.

EDUCATION

Berkeley, United States	University of California	Aug 2012 – May 2013
– M.S. in Civil Engineering, May 2013. GPA: 3.5		
– Graduate Coursework: Non-Linear Analysis, Earthquake Resistant Design, Advanced Earthquake Analysis, Reinforced Concrete Structures, Design of Steel and Composite Structures		
Chandigarh, India	PEC University of Technology	Jul 2007 – May 2011
– B.Eng. in Civil Engineering, May 2011. GPA: 9.45 / 10.		
– Awarded Gold Medal for graduating at the top of class.		

EXPERIENCE

Senior Engineer	LERA Consulting Structural Engineers	Apr 2017 – Sep 2018
Design Engineer	LERA Consulting Structural Engineers	Jul 2013 – Mar 2017

Oberoi Maxima, Mumbai. 35 story residential building + 8 Story Podium for 436 parking spaces

- Optimized the lateral and the gravity structural system for 122,000 sq ft development.
- Successfully led the design of building structural elements based on Indian & US design codes (shear walls, link beams, gravity beams, slabs, columns, retaining walls, water tanks, transfer slabs etc.).
- Re-evaluated the foundation system, walls, & columns post-construction to develop feasible retrofit options to support larger typical floor slab. Closely coordinated with site team to develop simple & easy-to-implement retrofit details.
- As a single point of contact for communication with client, architect, MEP consultant & contractor streamlined project monitoring and problem resolution. Assisted project manager to efficiently steer project from preliminary stage to construction administration.
- Periodically visited site to ensure general conformance of site to design documents. Reviewed & responded to requests for information, requests for deviation, method statements, test reports, & resolved site queries.
- Delegated work to junior engineering staff and interns. Supervised drafting team to develop structural drawings and ensured conformance of drawings to in-house standards.

2050 M St, Washington DC. 11 story commercial building developed by Tishman Speyer.

- Developed & optimized ETABS and SAFE model for 450,000 sq ft project. Effectively managed the complete design process of lateral & gravity system, from preliminary design to construction document stage.
- Saved significant time & effort by developing ACI based MS Excel design spreadsheets for shear walls, retaining walls, link beams, columns, punching shear & isolated footings.
- Efficiently used design summaries, technical presentations, & sketches for result oriented communication with NY based project manager while working at India office.

Tata Consultancy Services Campus, Indore. 1.2 million sq feet IT campus spread over 70 acres, with 18 buildings.

- Managed the complete design process of five different structures from schematic design to GFC stage and successfully multitasked to develop & deliver construction documents.
- Created spreadsheets for comprehensive material estimation to monitor variations through preliminary design to the construction document stage.
- Saved significant construction time & cost by designing efficient pile foundation system for the lateral system.

Eternia, Mumbai. 8 story, Podium Parking Structure for 60 Story Residential Tower

- Coordinated with client & architect to understand their requirements, to develop efficient schematic design for 850 car space parking structure.

Dr Compound, Mumbai. 46 story high residential building located in Mumbai.

- Conducted parametric study of the lateral system (shear walls with coupling beams) for optimal sizing & material strength of structural elements.

KLCC Lots L,M,&N. Mixed-use Podium for 700m tall tower in Kuala Lumpur City Centre, Malaysia

- Performed comprehensive study to develop slab design for temporary & permanent conditions using SAFE. Reviewed the slab strength & serviceability (short term & long term) based on British Standard design codes.

85 Jay St, New York. Peer Review. 1 million sq ft , 21 story residential and retail building

- Performed extensive review of the lateral & gravity system, drawings and related design documents. Documented results & prepared peer review report.

45 Broad Street, Manhattan, NY. Peer Review. 370,000 sq ft, 1200 ft tall, mixed used building.

- Discovered significant error in wind force application, leading to re-design of the structure by the engineer on record.

Hyundai Global Business Centre, Seoul. 105 story mixed use building. Peer Review of Secondary Structures.

- Assisted New York based project manager on peer review of steel Crown Structure, Entrance Portal and Canopy of the 569m tall tower. Reviewed SAP models & structural drawings for stability, strength, and serviceability of the structures. Provided inputs for optimization of the structures.

Bridge Design Engineer

T M Structural Consultant

Oct 2011 – July 2012

- Simplified design process by creating a comprehensive spread sheet for complete design of RCC Bridge including deck, piers and foundation.
- Modelled and analysed bridges using STAAD Pro. Reviewed design of 100ft Steel Truss Bridge.
- Designed props for RCC bridge deck formwork