SADAQAT ULLAH KHAN

Professor and Chairperson
Department of Civil Engineering (TIEST)
Thar Institute of Engineering, Sciences and Technology (TIEST)
NED University of Engineering & Technology, Karachi 75270, Pakistan
Phone: +92-21-99052558, Mobile: +92-3452143977
Email: sadaqat@cloud.neduet.edu.pk, sadaquat78@hotmail.com

ResearcherID: F-6419-2015

URL: http://www.researcherid.com/rid/F-6419-2015

ORCID: http://orcid.org/0000-0002-3845-541X

QUALIFICATION

PhD (Structural and Material Engineering) in Universiti Teknologi PETRONAS, Malaysia in year 2015.
MS (Structure) from NED University of Engineering & Technology, Karachi, Pakistan in year 2008.
B.E (Civil) secured First place and Gold Medal from NED University of Engineering & Technology in year 2003.

KEY PROFILE

Practical academic and research experience in the field of Structural, material and Civil Engineering

Academic:

- Excellent Academic record throughout.
- First position Holder in B.E (Civil) Gold medallist from NED University.
- 3.75 CGPA in M.S (structure) from NED University.
- Well Experienced in Outcome based Education (OBE) System Implementation, providing guidance to faculty and dealing with Accreditation team and compliance

Technical:

- Experience in the use of sustainable and cement replacing materials and their characterisation
- Experience in fibre reinforced concrete and composites
- Over 15 years of experience in civil and structural engineering field.
- Experience in structural design, such as tall buildings over 30 story, River mounted steel structures, utility and commercial structures such as airport terminals, institutional, residential, industrial structures, earth retaining structures, parking and water storage facilities, bridges flyover and overpass, steel walkways in accordance with US building codes/standards with working stress and LRFD design methodologies.
- Experienced and well learned in latest computational and analytical software.

Managerial:

- Working Experience in more than two projects concurrently.
- Working Experience as lead Engineer, coordination with other discipline, contractor and client.
- Experience of providing assistance and guidance to colleague engineer.
- Experience in providing guidance to faculty and dealing with Accreditation team and compliance according to OBE system

Specialty:

- Experience in the use of sustainable and cement replacing materials and their characterisation
- Experience in fibre reinforced concrete and composites
- Vast experience in designing of buildings and bridges super structures and sub-structures.
- Outcome Base Education (OBE) design and implementation and dealing with accreditation body

On-Going Projects

1. Design of GTS Transfer Stations and Waste Reception (Landfill)
2. Investigation of Lightweight Aggregate Concrete in Structural Application.
3. Flexural Behaviour of Self-Healing Cementitious Composite reinforced with PVA fibres.
4. Mechanical Properties of Self-Healing Cementitious Composite reinforced with PVA fibres.
5. Effect of Curing on the Strength of Geopolymer Concrete at Ambient Temperature

6. Strength Optimization of Plastic Pavers and Blocks.
7. Flood Resistant Eco-Friendly House: An Alternative to Conventional Rural House in Sindh, Pakistan

PUBLICATION (Total Impact Point 39.094)

Journal Papers

1. **Khan, S.U**., Ayub, T. & Ahmed, B. (2025) Synergistic effects of PVA fibres and healing agent encapsulated gelatine carrier in cementitious composites. Innov. Infrastruct. Solut. 10, 166. https://doi.org/10.1007/s41062-025-01971-6. **IF=2.2**
2. Chin, S. C., Shaaban, I. G., Rizzuto, J. P**., Khan, S. U**., Mohamed, D., Roslan, N. I. M., & Aziz, A. A. (2024, March). Predictive models for mechanical properties of hybrid fibres reinforced concrete containing bamboo and basalt fibres. In *Structures* (Vol. 61, p. 106093). Elsevier. **IF=1.646**
3. **Khan, Sadaqat Ullah**, Tehmina Ayub, and Sadia Khan. (2023). "Performance of Epoxy-Injection and Microorganism-Based Crack-Healing Techniques on Cracked Flexural Members" *Buildings* 13, no. 11: 2697. **IF=3.8**
4. Montaser, W. M., Shaaban, I. G., Zaher, A. H., **Khan, S. U.**, & Sayed, M. N. (2022). Structural behaviour of polystyrene foam lightweight concrete beams strengthened with FRP laminates. *International Journal of Concrete Structures and Materials*, *16*(1), 1-20. **IF=3.192**
5. **Khan, S. U.**, & Ayub, T. (2022). PET Fiber–Reinforced Engineered Geopolymer and Cementitious Composites. *Journal of Materials in Civil Engineering*, *34*(3), 06021010. **IF=1.984**
6. **Khan, S. U.**, & Ayub, T. (2022). Mechanical Properties of Hybrid Self-Compacting Fibre-Reinforced Concrete (SCC-FRC) Containing PVA and PP Fibres. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, *46*(3), 2677-2695. **IF=0.8**
7. Ayub, T., **Khan, S. U.**, & Mahmood, W. (2022). Mechanical properties of self-compacting rubberised concrete (SCRC) containing polyethylene terephthalate (PET) fibres. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, *46*(2), 1073-1085. **IF=0.8**
8. Ayub, T., & **Khan, S. U.** (2022). Flexural Investigation of a/d Ratio for High-Strength PVA-FRC Beams Based on Experimental and Finite Element Analysis. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, *46*(1), 717-732. **IF=0.8**
9. Shaaban, I. G., Said, M., **Khan, S. U.**, Eissa, M., & Elrashidy, K. (2021). Experimental and theoretical behaviour of reinforced concrete beams containing hybrid fibres. In *Structures* (Vol. 32, pp. 2143-2160). Elsevier. **IF=1.646**
10. **Khan, S. U.**, Afzal, A., Ali, S., Ayub, A., Shuja, A., & Shahid, M. A. (2021). Use of scrapped rubber tires for sustainable construction of manhole covers. *Journal of Renewable Materials*, *9*(5), 1013. **IF=1.34**
11. **Khan, S. U.**, Ayub, T., & Shafiq, N. (2020). Physical and Mechanical Properties of Concrete with Locally Produced Metakaolin and Micro-silica as Supplementary Cementitious Material. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, *44*(4), 1199-1207. **IF=0.8**
12. **Khan, S. U.**, & Ayub, T. (2020). Flexure and shear behaviour of self-compacting reinforced concrete beams with polyethylene terephthalate fibres and strips. In *Structures* (Vol. 25, pp. 200-211). Elsevier. **IF=1.646**
13. Ayub, T., **Khan, S. U.**, & Ayub, A. (2019). Analytical model for the compressive stress–strain behavior of PVA-FRC. *Construction and Building Materials*, *214*, 581-593. **IF=3.485**
14. Ayub, T., **Khan, S. U.**, & Shafiq, N. (2018). Flexural modelling and finite element analysis of frc beams reinforced with PVA and basalt fibres and their validation. *Advances in Civil Engineering*, *2018*. **IF=1.296**

15. **Khan, S. U.**, Ayub, T., & Shafiq, N. (2017). Comparison of Physical and Chemical Properties of Micro-Silica and Locally Produced Metakaolin and Effect on the Properties of Concrete. *International Journal of Civil and Environmental Engineering*, *11*(8), 1085-1099.
16. Shafiq, N., Ayub, T., & **Khan, S. U.** (2016). Investigating the performance of PVA and basalt fibre reinforced beams subjected to flexural action. *Composite structures*, *153*, 30-41. **IF=3.318**
17. **Khan, S. U.**, & Ayub, T. (2016). Modelling of the pre and post-cracking response of the PVA fibre reinforced concrete subjected to direct tension. *Construction and Building Materials*, *120*, 540-557. **IF=2.296**
18. Ayub, T., Shafiq, N., & **Khan, S. U.** (2016). Compressive stress-strain behavior of HSFRC reinforced with basalt fibers. *Journal of Materials in Civil Engineering*, *28*(4), 06015014. **IF=1.296**
19. Shafiq, N., Nuruddin, M. F., **Khan, S. U.**, & Ayub, T. (2015). Calcined kaolin as cement replacing material and its use in high strength concrete. *Construction and Building Materials*, *81*, 313-323. **IF=2.296**
20. Nuruddin, M. F., **Khan, S. U.**, Shafiq, N., & Ayub, T. (2015). Strength prediction models for PVA fiber-reinforced high-strength concrete. *Journal of Materials in Civil Engineering*, *27*(12), 04015034. **IF=1.296**
21. **Khan, S. U.**, Nuruddin, M. F., Shafiq, N., & Ayub, T. (2014). Effect of metakaolin and PVA fibres on the workability and mechanical properties of concrete. In *Advanced Materials Research* (Vol. 935, pp. 188-192). Trans Tech Publications Ltd.
22. Nuruddin, M. F., **Khan, S. U.**, Shafiq, N., & Ayub, T. (2014). Strength development of high-strength ductile concrete incorporating Metakaolin and PVA fibers. *The Scientific World Journal*, *2014*. **IF=1.219**
23. **Khan, S. U.**, Nuruddin, M. F., Ayub, T., & Shafiq, N. (2014). Effects of different mineral admixtures on the properties of fresh concrete. *The Scientific World Journal*, *2014*. **IF=1.219**
24. Ayub, T., **Khan, S. U.**, & Memon, F. A. (2014). Mechanical characteristics of hardened concrete with different mineral admixtures: a review. *The Scientific World Journal*, *2014*. **IF=1.219**
25. **Khan, S. U.**, Ayub, T., & Rafeeqi, S. (2013). Prediction of compressive strength of plain concrete confined with ferrocement using artificial neural network (ANN) and comparison with existing mathematical models. *American Journal of Civil Engineering and Architecture*, *1*(1), 7-14.
26. Ayub, T., Shafiq, N., **Khan, S. U.**, & Nuruddin, M. (2013). Durability of concrete with different mineral admixtures: a review. *International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering*, *7*(8), 265-276.
27. **Khan, S. U.**, Rafeeqi, S. F. A., & Ayub, T. (2013). Strengthening of RC beams in flexure using ferrocement. *Iranian Journal of Science and Technology. Transactions of Civil Engineering*, *37*(C), 353. **IF=0.719**
28. **Khan, S. U.**, Nuruddin, M. F., Ayub, T., & Shafiq, N. (2013). Effects of ferrocement in strengthening the serviceability properties of reinforced concrete structures. In *Advanced Materials Research* (Vol. 690, pp. 686-690). Trans Tech Publications Ltd.
29. Memon, F. A., Nuruddin, M. F., **Khan, S. U.**, Shafiq, N., & Ayub, T. (2013). Effect of sodium hydroxide concentration on fresh properties and compressive strength of self-compacting geopolymer concrete. *Journal of Engineering Science and Technology*, *8*(1), 44-56.
30. Rafeeqi, S. F. A., **Khan, S. U.**, Zafar, N. S., & Ayub, T. (2012). Implication of unbondedness in reinforced concrete beams. In *Advanced Materials Research* (Vol. 587, pp. 36-41). Trans Tech Publications Ltd.

Book Chapter

1. Khan, S. U. & Ayub, T. (2023). Reuse of Waste Plastic as an Alternative of Concrete Used in Blocks. Smart & Sustainable Infrastructure: Building a Greener Tomorrow

2. Ayub, T., Shafiq, N., Nuruddin, M. F., & **Khan, S. U.** (2014). Mechanical properties of high-strength concrete reinforced with PVA and basalt fibres. In InCIEC 2013 (pp. 567-575). Springer, Singapore.

Conference Papers

1. Ayub, T., **Khan, S. U.**, & Mahmood, W. (2018). Behavioral Study of RC Beams Designed for Shear Using CFP and ACI Code Models. In *MATEC Web of Conferences* (Vol. 203, p. 06008). EDP Sciences.
2. **Khan, S. U.**, Ayub, T., & Shafiq, N. (2017). Comparison of Physical and Chemical Properties of Micro-Silica and Locally Produced Metakaolin and Effect on the Properties of Concrete. *International Journal of Civil and Environmental Engineering*, *11*(8), 1085-1099.
3. Ayub, T., & **Khan, S. U.** (2017, September). Finite element modelling of FRC beams containing PVA and basalt fibres: a comparative study. In *AIP Conference Proceedings* (Vol. 1872, No. 1, p. 020002). AIP Publishing LLC.
4. Shafiq, N., Ayub, T., & **Khan, S. U.** (2016, December). 3D nonlinear finite element analysis of HPFRC beams containing PVA fibers. In *Engineering Challenges for Sustainable Future: Proceedings of the 3rd International Conference on Civil, Offshore and Environmental Engineering (ICCOEE 2016, Malaysia, 15-17 Aug 2016)* (p. 417). CRC Press.
5. **Khan, S. U.**, Shafiq, N., & Ayub, T. (2015, July). Microstructure characteristics of concrete incorporating metakaolin and PVA fibers and influence on the compressive strength. In *AIP Conference Proceedings* (Vol. 1669, No. 1, p. 020017). AIP Publishing LLC.
6. Ayub, T., Shafiq, N., Nuruddin, M. F., & **Khan, S. U.** (2014). Mechanical properties of high-strength concrete reinforced with PVA and basalt fibres. In *InCIEC 2013* (pp. 567-575). Springer, Singapore.
7. Ayub, T., Shafiq, N., Nuruddin, M. F., & **Khan, S. U.** (2014). Flexural behaviour of high performance Basalt fibre reinforced concrete beams: 3D nonlinear finite element analysis. In *IEEE Colloquium on Humanities, Sci. Engg*.
8. **Khan, S. U.**, Nuruddin, M. F., & Shafiq, N. (2014). Strength Development of Concrete incorporating Metakaolin and PVA fibres. In *Applied Mechanics and Materials* (Vol. 567, pp. 505-510). Trans Tech Publications Ltd.
9. **Khan, S. U.**, Ayub, T., & Qadir, A. (2014). Effect of overloaded vehicles on the performance of highway bridge girder: A case study. *Procedia engineering*, *77*, 95-105.
10. Nuruddin, M. F., **Khan, S. U.**, & Shafiq, N. (2014). Effect of Calcined Kaolin on the Mechanical Properties of High-strength Concrete as Cement Replacing Material. In *Applied Mechanics and Materials* (Vol. 567, pp. 375-380). Trans Tech Publications Ltd.
11. Ayub, T., N. Shafiq, N., Nuruddin, M.F. & **Khan, S.U.** (2012, June) Numerical Modelling of High-Strength Ductile Concrete (HSDC) Beams. International Conference on Civil, Offshore & Environmental Engineering (ICCOEE) 2012, 12-14 June, 2012, Kuala Lumpur, Malaysia (ISBN No. 978-983-2271-77-2).
12. Rafeeqi, S. F. A., **Khan, S. U.**, & Lodi, S. H. (2012). Performance of ferrocement as flexural strengthening in rural areas. In *10th International Symposium on Ferrocement and Thin Reinforced Cement Composites (Ferro10), Havana, Cuba* (pp. 213-221).

REVIEWER OF ARTICLES OF FOLLOWING JOURNALS

- ACI Material Journal

- Arabian Journal of Science and Engineering (AJSE)
- Iranian Journal of Science and Technology (Transactions of Civil Engineering)
- Construction and Building Materials
- Science Progress Journal
- Structures Journal
- Environment, Development and Sustainability
- Journal of Materials in Civil Engineering
- Advanced Mechanics of Materials and Structures
- Measurement Journal
- Mechanics of Advanced Materials and Structures
- Designs (MDPI)
- Sustainability (MDPI)
- Scientific Report

FUNDING FETCHED

- Award of Funding of United Nation Sustainability Development Goal Funding (SDGF) of 100,000 USD in year 2023
- Award of Funding of **7.9 million PKR** under National Research Program for Universities **(NRPU)** from Higher Education Commission **(HEC)** Pakistan in 2021
- PI on "Development of Environment and Energy Conservative Indigenous Cement Replacing Materials" research project of **1 million PKR** Funding supported by NED University (2019)

AWARDS AND HONOUR

- **Best Researcher Award** in two consecutive years from **2020-2021 in NED University of Engineering and Technology**
- **Patent** on Method of Producing Pozzolanic Ultrafine Metakaolin, Grant No. **MY-175016-A**, **Patent No. PI 2014701105 in 2019.**
- Member Board of Studies (Urban) (BoS year 2015 to 2021) and BoS member (Civil) from 2021 to date
- Member of Board of Faculty (BoF from 2021 to date)
- **Bronze Medal** in International Invention, Innovation and Technology Exhibition 2015 (ITEX15) by exhibiting Ultra Fine Calcined Kaolin
- **Gold Medal** in International Invention, Innovation and Technology Exhibition 2014 (**ITEX14**) by exhibiting Metakaolin blended with Cement (**Pozzo-Cem MK**)
- **Second Position** in the **High Early Strength Competition** 2013 held by **ACI-KL Chapter** and **UiTM Shah-Alam, Malaysia.**
- **First position Holder in B.E (Civil) Gold medallist** from NED University in 2003

MASTERS SUPERVISED

- **Response of cement based fibre reinforced composites and geopolymer baed fibre reinforced composites** (Muhammad Noman Zaman Khan CE-007 Batch 2017-18)
- **Response of Self-Healing PVA Fibre Reinforced Cementitious Composites For Serviceability** (Bilal Ahmed CE-010 Batch 2020-21)
- **Investigation of PVA fibre reinforced self-healing lightweight aggregate concrete (**Rasool Badshah Sailaab Batch 21**)**

PROFESSIONAL WORKSHOP, COURSES AND LECTURES ATTENDED

- "**2-Day International Workshop on Road safety Analysis & Modelling**" organized by Department of Urban & Infrastructure Engineering NED University of Engineering and Technology, Karachi, Pakistan held on 17-12-2015 to 18-12-2015.
- "**Essential knowledge of concrete cracks**" jointly organised by Principal of academy of concrete technology and Universiti Teknologi Mara (UiTM); 20th November 2014.
- "**Deep Offshore Structures and Pipelines**"; jointly Sponsored by Total Professeurs Associes and Universiti Teknologi PETRONAS; 27- 3O MAY, 2013; Perak, Malaysia
- "**Conventional Offshore Structures and Pipelines**"; jointly Sponsored by Total Professeurs Associes and Universiti Teknologi PETRONAS; 6- 9 November, 2012; Perak, Malaysia.
- Lecture on "**Flexural and Shear Strengthening of RC Beams with CFRP Laminates**" delivered by Prof Dr Shuaib Ahmed organised by ACI-KL Chapter and UiTM Shah-Alam, Malaysia.
- Short course on "**Exploratory Data Analysis (EDA)**" organized by Civil engineering department, Universiti Teknologi PETRONAS, Perak, Malaysia, held on 5-06-2012 to 7-06-2012.
- Short course on "**Design Considerations for Coastal Structures**" organized by NED Academy, Karachi, Pakistan, held on 3-02-2011 to 4-02-2011.
- Workshop on "**Vulnerability Assessment of Buildings subjected to Earthquake**" conducted by NED University of Engineering and Technology, Karachi, Pakistan held on 12-08-2009 to 13-08-2009.
- Workshop on "**Latest Development in Earthquake Engineering**" conducted by centre for continuing engineering education, NED University of Engineering and Technology, Karachi, Pakistan held on 19-03-2007 to 21-03-2007.
- Workshop on "**Presentation skills**" conducted by Pakistan Institute of Management and organized by NESPAK, Karachi on 10-06-2006 to 17-06-2006.
- Workshop on "**Socially responsive environmental design**" conducted by Architecture and Planning Education Forum, Dawood College of Engineering and Technology, Karachi, Pakistan held on 22-08-1998.

PROFESSIONAL EXPERIENCE

1. **As Structural Engineer (Jul 2021–to Date)**

   - Design of Boundary Wall for retaining Malir River at PNS Mehran
   - Design of GTS Transfer Stations at Sharafi Goth, Gutter Bagicha, Dinga Morr and Imtiaz
   - Design of Structures/facility for Waste Reception (Landfill) at Jam Chakro

2. **As Professor and Chairperson Civil (TIEST) in NED University of Engineering & Technology, Pakistan (Jul 2021–to Date)**

   Responsibility

   - Administration and managing the Academics and Commercial Acitivities of Department
   - Attaining the academic and research Quality
   - Organising the events for Academic and Commercial growth of department, faculty and students

3. **As Associate Professor in NED University of Engineering & Technology, Pakistan (Mar. 2018–to December 2021)**

Responsibility

- Present lectures on undergraduate and postgraduate civil engineering courses, Preparation of structural design and details for on-going development in the university, Research activities and research publications.
- Undergraduate projects and postgraduate research and ISP supervisions

Undergraduate Final Year Project Supervised

- Strengthening of RC Beams in flexure using Ferrocement
- Strengthenning of Highway Bridge
- Study of different super structure sections of prestressed concrete bridge
- Computer Aided Analysis And Design of Post Tensioned Box Girder Bridge
- Behaviour of High Rise Building using Two Different Seismic Analysis Strategies
- 5D Building Information Modelling (BIM) of An Infrastructure –Case Study Project
- Utilization of Waste Polyethylene Terephthalate (PET) Bottles In Concrete Beams
- Durability of Blended Concrete in Marine Environment
- Behavioural Study of Hybrid HPFRC Concrete Containing Polyvinyl Alcohol and Polypropylene Fibres
- Use of Scrap Tire as Reinforcement for the Manhole Cover
- Response of Polyethylene Terephthalate Fibre Reinforced Cementitious Composite
- Response of Geopolymer Fibre Reinforced Cementitious Composite

Postgraduate Courses Delivered

- Finite Element Analysis
- Advanced Prestressed Concrete
- Bridge Analysis and Design
- Design of High Rise Structures

4. As Assistant Professor in NED University of Engineering & Technology, Pakistan (July. 2009–Mar. 2018)

Responsibility

Present lectures on undergraduate civil engineering courses, Preparation of structural design and details for on-going development in the university, Research activities and research publications.

Undergraduate Courses Delivered

- Reinforced Concrete Design
- Structural Analysis
- Mechanics of Solids
- Steel Structure
- Statics and Dynamics

5. As Structural Engineer in ARKITEKNIK International, Dubai, UAE (Oct. 2008–Jun. 2009)

Projects

1. BADRAH Waterfront (Dubai)

   Bad rah Development Stages 5, 8A and 8B. . The Client of the project is M/S Nakheel. This project consisted of buildings, Villa's, Studio Apartments, Community center, Health club, Mosques and Swimming Pools. The code of ACI 318-99 and UBC – 97 has been adopted for

the analysis and designing. The buildings have flat slab system and Villa's has Hollow core framing system. Static and dynamic analysis has been performed for seismic forces using the software of ETABS.

2. Jumeirah Village-2 (Dubai)

It has a tall building of Basement, Ground plus 21 storeys. The Client of the project is M/S Nakheel. The building has parking and retails areas from basement to 4th floor and the rest portion serve as office. Static and dynamic analysis of this structure has also been performed for seismic forces.

6. As Structural Engineer in JGC-DESCON ENG. Pvt. Ltd. Karachi, Pakistan (March. 2008 – Sep. 2008)

Projects

a) Extention of Sharourah Power Plant by 51MW Gas Turbine Units (Saudi Arabia)

Designing of GTG foundation and Preparation of drawings, coordination with other disciplines, detailed analysis of GTG using Sap2000 and stability checks using time history analysis.

b) FFCL BOP for 42MW Power Generation Project, Sind, Pakistan

Designing of Pipe racks and Preparation of drawings, coordination with other disciplines, detailed analysis of pipe rack using StaadPro and design and check of structure against seismic, wind, thermal and testing loads using more than 500 working combinations as per JGC standards.

c) MIANO 8 & 10 Wellhead Development Project, Sind, Pakistan

Design of compressor skid and Cooler skid foundation and Preparation of drawings.

d) Badin Oil and Gas Fields Sind, Pakistan

Design of equipment foundation, pipe supports, preparation of drawings, coordination with other disciplines, review of client's and contractor's comments.

7. As Structural Engineer in National Engineering Services, Pakistan (June. 2003 – March 2008)

Projects

a) Airport Terminal Buildings and Hangar

i. VIP Hangar at Lahore Airport, Pakistan

Analysis and design of hangar building and trussed roof. Wind and seismic analysis as per UBC-97 using StaadPro. Coordination with other discipline, Drawings preparation, checking and coordination.

ii. Public Terminal Najran Airport (Saudi Arabia)

Analysis and design of terminal building of RC frame with Vault shape trussed roof. Coordination with architect, preparation of Drawings by applying standard drawing templates, Modeling and design of Structure consist of more than 1500 trussed members.

b) Buildings

i. Pakistan Aeronautical Complex, Kamra, Attock, Pakistan

Metrological Center Building # 55 for seismic zone 4 has been analysed and designed. Design is based on ACI-2002 code. Coordination with HVAC, Electrical and plumbing. Coordination and negotiation with Architect over member sizing and architectural detailing.

ii. EOBI Office Building Sector G-10/4 Mauve Area, Islamabad, Pakistan

Analysis and design of Building of over ten story office building. Framing and trial member sizing for preliminary analysis. Seismic analysis based on UBC97 in earthquake prone area Zone 3. Design of raft using Safe. Stability check against overturning. Preparation of submission drawings and vetting calculation.

iii. Islamabad Stock Exchange, Islamabad, Pakistan

Analysis and Design 16 story building with three basements and six story provision. Seismic analysis based on UBC97 in earthquake prone area Zone 3. Member sizing and framing to balance torsional irregularity through structural framing. Preparation of tender drawings.

c) Flyover and Overpass

i. Overpass at KPT Central Gate, Karachi, Pakistan

Analysis and checking of design, Re-strengthening of previously designed pier, Preparation of drawings and conceptual plans.

ii. Quaidabad Flyover, Karachi, Pakistan

Analysis and Design of flyover superstructure (Box-Girder) simply supported and continuous, analysis and design of sub-structure based on AASHTO-96. Preparation of Drawings, Checking of shop drawings. Revision of design as per time constrains, compliance the new superstructure with pre-constructed structure.

iii. KPT Flyover and Overpass, Karachi, Pakistan

Analysis and Design of flyover simply supported and continuous prestressed Box Girder, analysis and design of sub-structure based on AASHTO-96. Preparation of Drawings, Checking of shop drawings. Prestress design of Flared Box-girder from the top of deck slab, Special detailing of highly compressive zone at ends of girder due to prestressing. Analysis of the effect of prestressing on bearing pad size and effect on thickness of pad due to prestressing from the top of deck.

iv. Grade separated Intersection at Shahra-e-Faisal and Korangi Road intersection, Karachi, Pakistan

Vetting of calculations of superstructure, Substructure, Checking of shape, dimension and location of related structural elements on constructional drawings

v. Pedestrian Steel Bridge on University Road Karachi, Pakistan

Vetting of calculations of structure and checking of related structural elements on constructional drawing.

vi. Extension of Mahmoodabad Bridge, Karachi, Pakistan

Analysis and Design of bridge sub structure and super structure and Preparation of Drawings, Accommodation of new construction within the existing bridge, structural framing as per site constrains. Checking of Existing Deck cantilevers for vehicular loading.

vii. PICT Bridge, Karachi, Pakistan

Analysis and Design of flyover two lane carriageway supported on single column pier, design as per port traffic based on BS-5400, dynamic analysis of sub-structure based on AASHTO-96, Preparation of Drawings.

d) Water-Front Structures

i. Reconstruction of KPT Jetty at Boat Basin Keamari, Karachi, Pakistan

Analysis and Design of structure and Preparation of Drawings, Accommodation of new construction within the existing jetty, structural framing as per site constrains.

ii. Kadanwari Gas Pipeline Overhead Crossing on River Indus, Jamshoro, Pakistan

Analysis and design for strengthening of existing trussed structure for installation of two gas pipelines. Thermal analysis of pipes using simflex. Estimation of resultant forces from pipe analysis and application over structure using StaadPro for checking of truss.

iii. Water Supply, Sewerage and Storm water network in Defence Phase VII, Karachi, Pakistan

Analysis and Design of underground Water reservoir & sewage lift station.

iv. FaujI Oil Terminal, Karachi, Pakistan

Evaluation and checking of existing platform for crane loading for installation of loading arm.

ASSOCIATIONS:

- Member of PEC (Pakistan Engineering Council)
- Member of IEP (Institutes of Engineers of Pakistan)