

Piyush Saxena

Civil Engineer

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Date of birth 18-12-1990

A civil engineer with over 5 years of experience in design of underground structures. I have worked on both Indian projects (Delhi Metro) as well as projects overseas (Doha Metro and King Abdul Aziz Road Development Project). I have been responsible for multiple roles right from the very beginning of my career. The responsibilities range from design of various elements of underground structures both temporary and permanent stages as well as interdisciplinary coordination while handling a team of 4-6 junior engineers. I am comfortable working both in teams or solo as the situation presents.

Professional Experience

09-2015 - present

Engineer, Consultant, Co-ordinator

Cowi India Pvt Ltd, Tunnels and Underground Structures

Doha Metro (5 Stations and Entrance Structures)

I primarily worked on entrance and ancillary structures

Responsibilities:

- Finalization of General Arrangement with requisite stability calculations
- Perform sensitivity analysis to ascertain the impact of differential settlement between two structures.
- Winkler Spring stiffness analysis to finalize soil stiffness
- Detailed Design of R/C elements like slabs and walls

King Abdul Aziz Road Development Project (Mecca)

Responsibilities (Pedestrian Underpasses & Highway Tunnels):

- Perform preliminary design calculations for the structures.
- Prepare structural analysis models
- Provide inputs/modifications for the design Basis report for combinations and loads
- Coordinate and interface with Architect and MEP team for delivering a well coordinated drawings.

For this task i was a bridge between colleagues in Denmark and India. I worked along side Danish colleagues for few months and later assisted in the handover of project. I also then worked on detail design of the structures both assisting on a task and handling another task solo.

Responsibilities (Car Parks):

- Prepare structural analysis models and perform detailed stability and R/C calculations
- Coordinate with Architects and MEP teams and develop General Arrangement drawings
- Coordinate with Geo-technical team for ground stiffness and settlements and collaborate with teams working on adjacent structures to find the best feasible option
- Assist Technical Lead in preparation of Design Basis (inputs ranging on loads, combinations, governing codes etc)
- Assist PM team in progress reviews, planning and audits
- Train and lead a team of 6 fresh engineers

On this task i work mostly as a design lead for small packages (e.g. design of a slab, my role is to explain the arrangement and loadings to the team, check the design prepared and develop the R/C drawings with the BIM team), as an aid to the PM team or work directly with Technical Lead on structure adequacy and challenges.

04-2013 - 08-2015

Engineer (Level 1)

Aecom India Pvt Ltd, Metro Structures

Delhi Metro Project CC20 - Design of Naraina Vihar Station and Cut-n-Cover Tunnel, Ramps, Launching & Retrieving Shaft

Responsibilities (Naraina Station):

- Temporary and permanent stage analysis of Diaphragm Walls; Plunge Columns, Slabs, Columns, Entry Structures and other internal and access structures
- Finalize the General Arrangement and construction sequence (Top Down Construction)
- Getting a detailed R/C drawing prepared from the CAD Team
- Attending the project progress meetings with Contractor and Client along with design approval meetings with Clients Consultant
- Interdisciplinary Coordination with associated departments (different consulting firm)

Responsibilities (Cut-n-Cover Tunnels (Box Tunnel, Bottom Up) and Ramps (Trough Section):

- Finalizing General Arrangement and Construction Sequence drawings
- Design of Temporary structure arrangement (Soldier Piles , Strut And Walers) for Construction Stage Support of the structure and the trench
- R/C Design of the Cut-n-Cover tunnel and Ramp (with deformation control measures as well)

Responsibilities (Launching & Retrieving Shafts for TBM):

- Finalizing General Arrangement and Construction Sequence drawings
- Design of Temporary structure arrangement (Soldier Piles , Strut And Walers) for Construction Stage Support of the structure and the trench
- R/C Design of Slabs with for Temporary (opening for TBM, waler beam) and Permanent Stage (TBM Opening Casted)
- Design of Diaphragm Walls
- Design of Gantry Crane Support (Steel Arrangement)
- Design of Temporary Slabs for launching of TBM (Reation frame rests on a temporary slab)

During the later stages of the project i started training a team of 1-2 engineers.

12-2012 - 03-2013

Engineer

J. Kumar Infraprojects Pvt Ltd, Design Coordination (Underground Metro Station)

Delhi Metro Project CC20 - Design of Naraina Vihar Station and Cut-n-Cover Tunnel, Ramps, Launching & Retrieving Shaft

Responsibilities:

- Monitoring preparation of detailed Bar Bending Drawing of Diaphragm Wall
- Preparation of BBS for Diaphragm Wall
- Monitoring tie-ing, lowering, casting of Diaphragm Wall Panel
- Surveying the site and plotting the effected buildings on the tunnel alignment (with borelog data)

Education

07-2008 - 05-2012

Visvesvaraya National Institute of Technology

Bachelor of Technology in Civil Engineering
CGPA - 6.44

04-2007 - 03-2008

Ramjas School, Pusa Road

CBSE Board Class 12th
Percentage - 89.8

04-2005 - 03-2006

Ramjas School, Pusa Road

CBSE Board Class 10th
Percentage - 90

Skills

MS Office (Word, Excel and Powerpoint)

Analysis Software - StaadPro, Autodesk Robot, Wallap

Drawing Softwares - Autocad, Revit (Basic Awareness)