

# Projects:

## (A) Sponsored Research Projects:

2009-2010	Affordable housing in India using steel, <i>ArcelorMittal</i> , Liege, Belgium (principal investigator).
2008-2011	Structural health monitoring and assessment of prestressed girder bridges, <i>United Kingdom India Education &amp; Research Initiative</i> , Delhi (principal investigator).
2000-2003	Passive structural control for earthquake response using Tuned Liquid Dampers, <i>Ministry of Human Resources Development</i> , New Delhi (principal investigator).
2000-2003	Development of an analytical approach for detection of flaws in composite materials using high frequency ultrasonic waves, <i>Indian Space Research Organisation, Department of Space</i> , New Delhi (principal investigator).
1997-2000	Base isolation strategies for aseismic design of NPP structures and components, <i>Bureau of Research in Nuclear Studies, Department of Atomic Energy, Bombay</i> : (co-investigator).
1994-1996	Structural idealisation of internal structures for earthquake response analysis of PHWR containment building, <i>Bureau of Research in Nuclear Studies, Department of Atomic Energy, Bombay</i> : (principal investigator).
1991-1995	Seismic response and risk analysis of pipeline systems, <i>Department of Science and Technology, New Delhi</i> : (principal investigator).
1983-1987	Earthquake response analysis of torsionally-coupled buildings, <i>National Science Foundation, USA</i> (research assistant).

## (B) Major Contract Research Projects:

2008	Damping study for wind vibrations of long span EHV conductor and earth wire transmission lines, <i>Reliance Infrastructure Limited, Mumbai</i>
2006-present	Structural Health Monitoring of 24 railway bridges for CC+8+2 loading on iron ore routes, <i>Indian Railways, New Delhi</i>
2005-2006	Condition assessment and rehabilitation strategies for 6 distressed railway bridges, <i>East Coast Railway, Bhubhaneshwar</i>
2005	Condition assessment and strategies for life extension of 4 distressed railway bridges, <i>Eastern Railway, Kolkata</i>
2004	Condition assessment and rehabilitation strategies for a distressed arch bridge, <i>South East Central Railway, Bilaspur</i>
2004	Health assessment of the substructure of a railway bridge near Lumding, <i>North East Frontier Railway, Guwahati</i>
2004	Structural and failure analysis of failed FOB at Dombivli, <i>Central Railway, Mumbai</i>
2002-2004	Development of earthquake resistant features, including materials, for design of waterworks including pipelines and storage tanks, <i>Gujarat Water Supply and Sewerage Board, Gandhinagar, (under ADB Project)</i>
2002	Development of strategy for safety of Mumbai-Manmad petroleum product pipeline for road-widening project, <i>Bharat Petroleum Corporation Limited, Mumbai</i>
2001-2002	Condition survey and health assessment of 90-year-old railway bridge over Tapti River in Bhusawal Division, <i>Central Railway, Mumbai</i>
2001	Earthquake damage survey, and recommendations for earthquake-resistant retrofitting and new construction of railway structures in Gujarat, <i>Western Railway, Mumbai</i>
1996-1997	Earthquake hazard and response analysis of Mumbai-Manmad petroleum product pipeline, <i>Engineers India Ltd., New Delhi</i>
1995	Experimental verification of different earthquake rehabilitation and retrofitting strategies used in Marathwada region, <i>DHV Consultants, Netherlands, (under World Bank Project)</i>
1994-1995	Rehabilitation of 15 major road bridges in Sholapur district, <i>Consulting Engineering Service, New Delhi (under World Bank Project)</i>

### (C) Major Consultancy Projects:

2008	Review of concept plan, analysis and design of 20-storeyed residential building, <i>U.D. Chande &amp; Associates, Mumbai</i>
2008	Dynamic wind vibration analysis of electrical transmission lines of various spans with Stockbridge dampers, <i>Reliance Infrastructure Limited, Mumbai</i>
2007	Efficiency evaluation of slab pre-stressing system, <i>Vigyashree Saroda Infrastructure Limited, Mumbai</i>
2007	Proof check and design review of PSC box girder river bridge, <i>East Coast Railway, Bhubhaneshwar</i>
2007	Design review and proof check of Road Under Bridge at Thane, <i>Central Railway, Mumbai</i>
2007	Proof check and design review of Grade Separator/Interchange at Kengeri, <i>Karnataka Road Development Corporation Limited, Bangalore</i>
2007	Performance evaluation of post-tensioning systems, <i>Sanfield India, Bhopal</i>
2007	Review of design and proof check of Terminal Building at Surat, <i>Airport Authority of India, Delhi</i>
2005-2007	Design review and proof check of major road bridge over Pawana river near Pune, <i>Maharashtra State Road Development Corporation, Mumbai</i>
2004-2008	Proof check of design and drawings for multiple HAL structures at different locations, <i>Gherzi Eastern Limited, Mumbai</i>
2003	Design Review and proof check of terminal and technical buildings at Amritsar airport for AAI, <i>Sthapati Design &amp; Consultants Pvt. Ltd., Navsari</i>
2002-2007	Design review and proof check of multiple ROBs and FOBs, <i>Indian Railways &amp; National Highway Authority of India, New Delhi</i>
2002	Seismic qualification of solenoid valves, <i>Rotex Engineers, Baroda</i>
2001	Review of structural and foundation design for a 140 m TV tower and 60 MW tower, <i>Richardson &amp; Cruddas (1972) Ltd., Nagpur</i>
2001	Review and proof checking of structural design of the PSC box girder superstructure of new Vasai Creek bridge, <i>Western Railway, Mumbai</i>
2001	Review of earthquake-resistance of foundation and structure for cellular microwave towers in Gujarat, <i>Fascel Ltd., Ahmedabad</i>

- 2001 Review of structural and foundation design for a 65 m FM tower at Tiruchirapalli, *Richardson & Cruddas (1972) Ltd., Nagpur*
- 2001 Review and proof checking of structural design for multi-storeyed residential building at CBD, Belapur, *Gas Authority India Ltd, Mumbai*
- 2001 Qualification of Pot-type bridge bearings by load test, *Ircon International Ltd., Mumbai*
- 2001 Review and proof checking of structural design of PSC girders for platform extension over Bridge 48/4 on Bombay Division, *Central Railway, Mumbai*
- 2001 Earthquake rehabilitation and retrofitting of buildings in GAIL colony, *Gas Authority India Ltd., Surat*
- 2000 Review of structural and foundation design of St. Leo road building, *P.N. Writer & Co., Mumbai*
- 2000 Review of design and causes of failure of warehouse at JNPT, *Gateway Enterprises, Singapore*
- 2000 Design of a RC gravity retaining wall for slum redevelopment programme, *MHADA, Mumbai*
- 2000 Review of structural and foundation designs for a 50 m FM tower and 40 m SW tower for AIR, *Richardson & Cruddas (1972) Ltd., Nagpur*
- 2000 Review of structural and foundation designs for two 100 m FM towers at Mangalore and Mysore and a 150 m TV tower at Jalgaon, *Richardson & Cruddas (1972) Ltd., Nagpur*
- 2000 Review and proof checking of design for 39-storeyed “Kalpataru Heights” building, *Caprihans India Ltd., Mumbai*
- 1999-2000 Review of alternate quay wall designs for Machilipatnam Port, *Port Department, Govt. of Andhra Pradesh, Kakinada*
- 1999-2000 Review of structural and foundation design for various multi-storeyed prefabricated buildings for SPPL, *Voltas India Ltd., Mumbai*
- 1999 Review of structural and foundation designs for six TV towers at different locations, *Richardson & Cruddas (1972) Ltd., Nagpur*
- 1999 Design of a racking system using cold-formed steel sections, *Jost’s Engineering Co. Ltd., Mumbai*
- 1999 Review of design of weigh-bridge superstructure and foundation, *Global Weighing Pvt. Ltd., Pune*
- 1998 Review of structural and foundation designs for three TV towers at different locations, *Richardson & Cruddas (1972) Ltd., Nagpur*
- 1998 Review of the conceptual design of “Go-Go Tower”, an innovative central core concept for a tall building, *Vakil Mehta Sheth Consultants, Mumbai*

1988 – 1997

Completed 40 other major consultancy projects mostly involving expertise in earthquake engineering, structural dynamics, and structural behaviour of steel and reinforced concrete structures.