
Webinar on UNDERGROUND METRO RAIL STRUCTURES- 10th August

1 message

HOD Civil SVCE <hodce@svce.ac.in>

Thu, Jul 30, 2020 at 11:01 AM

To: Principal SVCE <principal@svce.ac.in>

Cc: HODs Group <hod@svce.ac.in>, Faculty Group <svcefaculty@svce.ac.in>

Dear Professors

Pl. find attached the poster for the Webinar on "UNDERGROUND METRO RAIL STRUCTURES - BORED TUNNELS AND STATIONS" by **Mr. Mu Ramanathan**, Director - Structures, Transit and Railways AECOM, Chennai, Tamil Nadu, India on **10th August 2020** , 4 pm, organized by the Department of Civil Engineering.

Thanks and Regards

Dr.R.Kumutha

Professor and Head

Department of Civil Engineering

Sri Venkateswara College of Engineering

Sriperumbudur

Ph:9894125626

----- Forwarded message -----

From: **RUBY FREYA** <rubyfreya@svce.ac.in>

Date: Thu, 30 Jul 2020, 10:43 am

Subject: Webinar on UNDERGROUND METRO RAIL STRUCTURES- 10th August

To: HOD Civil SVCE <hodce@svce.ac.in>

Dear Madam

I hereby attach the poster for the Webinar on "UNDERGROUND METRO RAIL STRUCTURES - BORED TUNNELS AND STATIONS" by **Mr. Mu Ramanathan**, Director - Structures, Transit and Railways AECOM, Chennai, Tamil Nadu, India on **10th August 2020** , 4 pm.

The registration link is :

<https://forms.gle/mBqiyBvGg3bvx6ML8>

Thanks and Regards

Ruby Freya

poster.jpg
376K



SRI VENKATESWARA COLLEGE OF ENGINEERING

(an Autonomous Institution affiliated to Anna University, Chennai)
Pennalur, Sriperumbudur Tk – 602117



DEPARTMENT OF CIVIL ENGINEERING

Report of Webinar on " UNDERGROUND METRO RAIL STRUCTURES - BORED TUNNELS AND STATIONS"

Date : Monday, 10th August 2020

Time : 4:00 pm - 5:00 pm

Mode : Online through Google Meet

Meeting Link: Meeting URL: meet.google.com/dvh-phvb-hjz

Speaker

Mr. Mu Ramanathan,

Director - Structures, Transit and Railways

AECOM, Chennai

Convenor

Dr.R.Kumutha, Professor & Head/Civil Engg.

Coordinator

Ms.Ruby Freya, Assistant Professor/ Civil Engg

Target Audience : Students , Faculty members and Industry Personnel – 211 registered

Number of Participants benefited: 140

Students : 80

Research Scholars : 3

Faculty : 25

Industry Personnel : 28

SVCE Alumni : 4

Number of Participants submitted feedback : 75

Students : 50

Research Scholars : 3

Faculty : 19

Industry Personnel : 2

SVCE Alumni : 1

BROCHURE

**SRI VENKATESWARA COLLEGE
OF ENGINEERING**
DEPARTMENT OF CIVIL ENGINEERING



**CORDIALLY INVITES YOU FOR
A WEBINAR ON**



**UNDERGROUND METRO RAIL
STRUCTURES - BORED
TUNNELS AND STATIONS**

Mr. Mu Ramanathan
Director
Structures, Transit and Railways
AECOM
Chennai, Tamil Nadu, India



10th August 2020
4 pm to 5 pm



Registration link:
<https://forms.gle/mBqiyBvGg3bvX6ML8>

Convenor
Dr. R. Kumutha
HoD / Civil Engineering

Coordinator
Ms. Ruby Freya
Assistant Professor/ Civil Engineering

PROFILE OF THE COMPANY AND SPEAKER

Company Profile

With over 3,200 employees located in five regional offices and project offices across 26 states in India, AECOM has the resources and expertise to see projects through from concept to completion.

Our interdisciplinary team of engineers, designers, planners and program and construction managers has been successfully executing major projects in the country across various sectors, such as urban development, transportation, environment, master planning and energy efficient building engineering. We have been involved in designing and completing more than 63 LEED-certified projects, over 5,000 kilometers of highway, 300 kilometers of metro rail and 14 sea ports.

With a dedicated Smart Cities program, India is at the forefront of creating a new standard of living, working and leisure for residents and visitors.

Linked by our common vision to make the world a better place, our team combines in-depth local knowledge and expertise with the experience of our global workforce from over 150 countries to serve our clients.

Our experience in the region includes:

- Vizag Smart City
- Dholera Special Investment Region
- Delhi Sewerage System Masterplan
- “Seabird” Project
- Chenab Railway Bridge
- Allain Duhangan Hydroelectric Complex
- Dhamra Port
- Hyderabad Metro
- ITC Grand Chola

Speaker Profile

Mr. M Ramanathan is a director of AECOM. Mr. Ramanathan is trained in Hong Kong for over two decades, and presently working as the project manager for the design consultancy of the Chennai Metro Rail’s Phase 2 works.

He is a post graduate in structural engineering, and a member of the prestigious Institution of Structural Engineers, UK and Institution of Civil Engineers, UK. He is a registered professional engineer of Hong Kong and a chartered engineer of UK. He has had experience in design, construction supervision, and contract administration associated with metro rail and large-scale building works.

Mr. Ramanathan has been extensively involved in the structural design of Hong Kong metro rail stations, which is considered as the best metro in the world. Between 2009 and 2014, he has led the tender design of the Chennai Metro Rail stations and depot, and also overseen its detailed design including both the underground and elevated stations. Subsequently he has worked as the project manager of the Hong Kong Airport’s Underground depot for Automatic People Mover, Riyadh Metro Rail Project in Saudi Arabia and Mumbai Coastal Road Project.

He has prepared several technical reports, bid proposals and contract documents. He has completed a study on design rework commissioned by the City University of Hong Kong. He has also published several technical papers. He also writes occasional articles in Tamil newspapers.

Brief Report of the Webinar

The webinar started with a welcome note by Dr. R. Kumutha, Professor & Head/ Civil Engineering, who is the Convenor of this Program. Ms. Ruby Freya, Assistant Professor and the organizer of the program gave the brief introduction about the speaker to the Participants

Mr. M. Ramanathan, Director – Structures, Transit and Railways, Transportation, AECOM, Chennai, delivered the lecture with complete overview on Metro rail in Chennai, the design and construction aspects in underground stations and the tunneling methods.

To begin with, he mentioned the advantages of metro rail and the projects all over India. The explanation of the underground stations with many photos was good. The typical section, the excavation methods, shoring systems, diaphragm wall construction, soil investigations, design forces and the detailed construction stages of the underground station were explained in detail. The site photos of underground stations in Chennai were also shown.

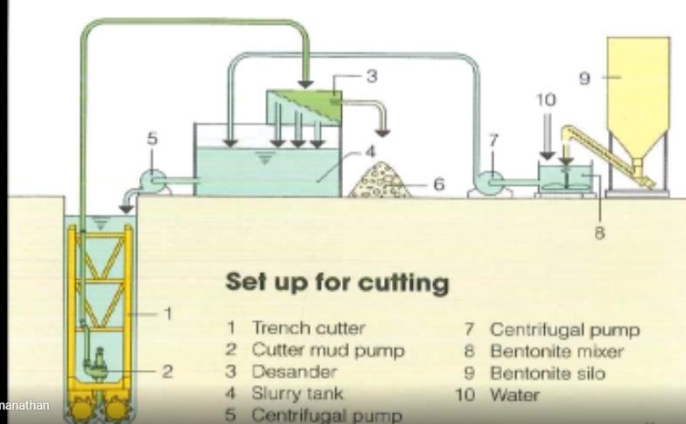
Next, the speaker explained about bored tunneling. He covered the typical cross section details, the tunnel boring machine details and the earth pressure balance machine. A video was shown on how tunneling will be executed. The constraints in tunnel construction were discussed.

The speaker concluded the session and discussed on the queries from the participants.

The student and faculty participants from host as well as other institutions participated in the webinar. Few industry personnel also attended the session. The session was interactive and the questions raised by the participants were answered by the speaker. The session ended with a vote of thanks delivered by Ms. Nancy, third year student of Civil Engineering. The participants also had appreciated the webinar being well organized with good content and apt speaker.

SNAPSHOTS DURING THE WEBINAR

D-Wall Construction



The diagram illustrates the components and flow of a D-wall construction system. It shows a trench cutter (1) at the bottom of a trench, connected to a cutter mud pump (2). The pump feeds slurry into a desander (3), which then feeds into a slurry tank (4). A centrifugal pump (5) draws slurry from the tank and pumps it back into the trench. A bentonite mixer (8) and bentonite silo (9) provide bentonite to a centrifugal pump (7), which feeds a bentonite mixer (8) that then feeds into the slurry tank (4). Water (10) is also added to the slurry tank. The trench is shown with a trench cutter (1) and a cutter mud pump (2) at the bottom.

Set up for cutting

1 Trench cutter	7 Centrifugal pump
2 Cutter mud pump	8 Bentonite mixer
3 Desander	9 Bentonite silo
4 Slurry tank	10 Water
5 Centrifugal pump	

Meeting details

Peo... (105) 0 Chat (8)

Add people

- RUBY FREYA (You)
- AKRIITHA K CE
- Alamelu Ramanathan
- Allen Enrich
- Anees Kanan
- Anish Hazra
- Anjan kumar m u

Mu Ramanathan

TBM Launch and Arrival



The left photograph shows a large tunnel boring machine (TBM) cutterhead being launched into a deep shaft. The right photograph shows the interior of a tunnel with a group of workers standing in the center, surrounded by debris and rock.

Meeting details


Peo... (105) 108 Chat (10)

Add people

- RUBY FREYA (You)
- AKRIITHA K CE
- Alamelu Ramanathan
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- Anees Kanan
- Anish Hazra
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Mu Ramanathan

REC R You are presenting



Webinar on "Underground ..." Turn on captions You are presenting

The video feed shows a man with glasses and a mustache, wearing a light blue shirt, speaking. The interface includes a red 'REC' button, a green 'R' icon, and the text 'You are presenting'. At the bottom, there are icons for microphone, video, and chat, along with the text 'Webinar on "Underground ..."', 'Turn on captions', and 'You are presenting'.

REINFORCEMENT FIXING AT THIRUMANGALAM STATION



Sample Certificate

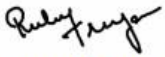
SRI VENKATESWARA COLLEGE OF ENGINEERING
(an Autonomous Institution affiliated to Anna University, Chennai)
Pennalur, Sriperumbudur Tk – 602 117


DEPARTMENT OF CIVIL ENGINEERING



Certificate of Participation

This is to certify that
R.Vignesh

has participated in the Webinar on “**Underground Metro Rail Structures - Bored Tunnels and Stations**”, delivered by **Mr. M. Ramanathan**, Director, Structures - Transit and Railways, AECOM, Chennai held on **10th August, 2020**.


Coordinator
Mrs. Ruby Freya
Assistant Professor / Civil


Convenor
Dr. R. Kumutha
Professor and Head / Civil



List of participants

S.No.	Name	Name of the Institution/Organisation	Category
1	A.Jenisha	Sri Venkateswara College of Engineering	Student
2	A.Vignesh	Sri Venkateswara College of Engineering	Student
3	Ajay Krishnamurthy	Sri Venkateswara College of Engineering	Student
4	Akilandam Krishnan	Retired	Industry Personnel
5	Akriitha K	Sri Venkateswara College of Engineering	Student
6	Anand Dharmarajan Meppilly	St. Peter's Institute of Higher Education and Research	Student
7	Anish Hazra	AECOM India Pvt. Ltd.	Industry Personnel
8	Anjan Kumar M U	N K Orchid College of Engineering and Technology Solapur	Faculty
9	Ankit Som	AECOM India Pvt. Ltd.	Industry Personnel
10	Ankur Ghosh	AECOM India Pvt. Ltd.	Industry Personnel
11	Anuwar Husain S	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY	Student
12	Arshiya A S Ce	Sri Venkateswara College of Engineering	Student
13	Arun Kumar	AECOM India Pvt. Ltd.	Industry Personnel
14	Bharanidharan. B	Sri Venkateswara College of Engineering	Student
15	Bharath M	Sri Venkateswara College of Engineering	Student
16	Brithisha S	Sri Venkateswara College of Engineering	Student
17	Chayan Sardar	Sri Venkateswara College of Engineering	Student
18	Chidambaram Kannan	Construction	Industry Personnel
19	Chintaguntala Riteswar	ST.PETER'S INSTITUTE OF HIGHER EDUCATION AND RESEARCH	Student
20	Chiranjib Sarkar	AECOM India Pvt. Ltd.	Industry Personnel
21	Chokkalingam M	Consultant	General
22	Mr.Baskaran.P.	Cliff Engineering Constructors	Industry Personnel
23	D.Meenalakshmi	Anna University	Research Scholar
24	Dangeti Satish	SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (A)	Faculty
25	Debojyoti Mondal	AECOM India Pvt. Ltd.	Industry Personnel
26	Deepak Binny	Coramandel international	Industry Personnel
27	Dharshini.G	Sri Venkateswara College of Engineering	Student
28	Dheepika Ravindran	Easwari Engineering College	Student
29	Dhivyalakshmi	Sri Venkateswara College of Engineering	Student

30	Diravia Balan S	Sri Venkateswara College of engineering	Faculty
31	Dr. S. Muralikrishnan	Arignar Anna Institute of Science and Technology	Faculty
32	Dr. S.R.Malathi	SRI VENKATESWARA COLLEGE OF ENGINEERING	Faculty
33	Dr.K.Vijai	St.Joseph's College of Engineering	Faculty
34	Dr.R.Kumutha	Sri Venkateswara College of Engineering	Faculty
35	Er.S.Hari Prasath	St.Peter's College of Engineering and Technology	Student
36	G Arun	Sri Venkateswara College of Engineering	Faculty
37	G.Harshavarthani	Sri Venkateswara College of Engineering	Student
38	G.Monisha	Sri Venkateswara College of Engineering	Student
39	Gayathri M S	AECOM India Pvt. Ltd.	Industry Personnel
40	Gogula Chezhiyan.N	Sri Venkateswara College of Engineering	Student
41	Gokul K	Sri Venkateswara College of Engineering	Student
42	Gokul R	Sri Venkateswara College of Engineering	Student
43	Gopinath A V	Sri Venkateswara College of Engineering	Student
44	Gowtham S	Sri Venkateswara College of Engineering	Student
45	Hariharan.V	Sri Venkateswara College of Engineering	Student
46	Hariswaran S	Sri Venkateswara College of Engineering	Faculty
47	Haritha	Sri Venkateswara College of Engineering	Student
48	Hemalatha	Sri Venkateswara College of Engineering	Student
49	Humsavardhana R	Sri Venkateswara College of Engineering	Student
50	Inam-Ul-Haq	Global Institute of Engineering and Technology	Student
51	J.Haritha	Sri Venkateswara College of Engineering	Student
52	Jay Vishnu T	ANNA UNIVERSITY	Student
53	Jayandheran	Sri venkateswara college of engineering	Alumni
54	K Anees	Sri Venkateswara College of Engineering	Student
55	K.Arun	CREATIVE STRUCTURES	Industry Personnel
56	K.B.Shoba	ST.PETERS INSTITUTE OF HIGHER EDUCATION AND RESEARCH	Faculty
57	K.Rajendhiran	VELAMMAL ENGINEERING COLLEGE	Faculty
58	Kalaivannan R	Sri Venkateshwara College of Engineering	Faculty
59	Kanta Naga Rajesh	GMR Institute of Technology	Faculty
60	Karthi Sivagurunathan	Construction	Engineer

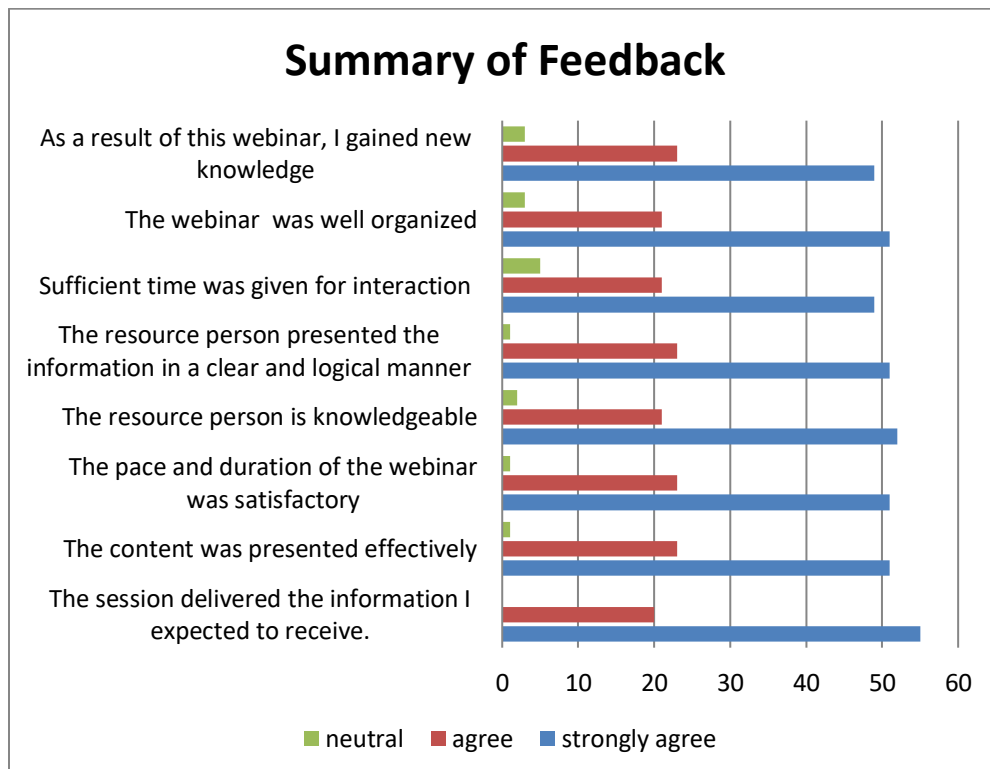
61	Kavinselva P	Sri Venkateswara College of Engineering	Student
62	Keerthana Namineni	Rise krishna sai Prakasam group of institutions	Student
63	Keerthi Vaasan R	Sri Venkateswara College of Engineering	Student
64	Kiruthiga Selvan	Sri Venkateswara College of Engineering	Student
65	Kishor Kumar V	KCG COLLEGE OF TECHNOLOGY	Faculty
66	Kishore Kumar	Sri Venkateswara College of Engineering	Student
67	Kolastic Vincent Paul J	St. Peter's institute of higher education and research	Student
68	P.Lakshmi	Adhi college of engineering and technology	Student
69	Laleeth Kumar D	Sri Venkateswara College of Engineering	Student
70	Lalith Kumar T	Sri Venkateswara College of Engineering (SVCE), Sriperumbudur, Kanchipuram district	Student
71	Logeshwari R	Sri Venkateswara College of Engineering Sriperumbuthur	Student
72	Madhurima Mitra	AECOM India Pvt. Ltd.	Industry Personnel
73	Malathi S R	Sri Venkateswara College of Engineering	Faculty
74	Mani Bharathi	Sri Venkateswara College of Engineering	Student
75	Mathiyazhagan R	Sri Venkateswara College of Engineering	Faculty
76	Mr. Dangeti Satish	SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (A)	Faculty
77	Mr.P.Prabhakaran	VELAMMAL ENGINEERING COLLEGE	Faculty
78	Muniraj M	Sri Venkateswara College of Engineering	Student
79	Murali Manogar Joshi S	Sri Venkateswara College of Engineering	Student
80	Naveen	Sri Venkateswara College of Engineering	Student
81	Naveen S	Sri Venkateswara College of Engineering	Student
82	Nice Video Explanation Sir	Sri Venkateswara College of Engineering	Student
83	Nithya V	SAP, ANNA UNIVERSITY, CHENNAI	Faculty
84	P Rishi	Sri Venkateswara College of Engineering	Student
85	Padmanaban N	Sri Venkateswara College of Engineering	Student
86	Padmanaban.N	Sri Venkateswara College of Engineering	Student
87	Praba Karan	AECOM India Pvt. Ltd.	Industry Personnel
88	Prabakaran B	CEG - ANNA UNIVERSITY, CHENNAI	Student
89	Mr.P.Prabhakaran	Velammal Engineering College	Faculty
90	Pradheepa R	St peters university of higher education and research	Student

91	Pranendu Prasad Bhowmik	AECOM India Pvt. Ltd.	Industry Personnel
92	Praveen Kumar	Sri Venkateswara College of Engineering	Student
93	Praveen Kumar V	Sri Venkateswara College of Engineering	Student
94	Priyadharshani S	Sri Venkateswara College of Engineering	Student
95	Priyasankar Paul	AECOM India Pvt. Ltd.	Industry Personnel
96	Rahul Raja.R	Sri Venkateswara College of Engineering	Student
97	Rajarajan V	Sri Venkateswara College of Engineering	Student
98	Rajdipta Paul	AECOM India Pvt. Ltd.	Industry Personnel
99	P. Rajendran	Chennai Metro Rail Limited, Chennai	Industry Personnel
100	Raju Dey	AECOM India Pvt. Ltd.	Industry Personnel
101	Ram Priya B	Anna University	Research Scholar
102	Ramanan Bb	Sri Venkateswara College of Engineering	Student
103	Ranjana Piriyadharshini	Sri Venkateswara College of Engineering	Student
104	Rohit V	Sri Venkateswara College of Engineering	Student
105	Roselin Kiruba	Anna University	Student
106	S.Gowtham	Sri Venkateswara College of Engineering	Student
107	Sankaranarayanan J	Sri Venkateswara College of Engineering	Student
108	Santhosh	Sri venkateswara college of engineering	Alumni
109	Sathish Kumar T	Sri venkateswara college of engineering	Alumni
110	Sharadha Lakshmi	Sri Venkateswara College of Engineering	Student
111	K.B.Shoba	St.peters Institute of Higher Education and Research	Faculty
112	Shrea Dhar	AECOM India Pvt. Ltd.	Industry Personnel
113	Siddharth J U	Sri Venkateswara College of Engineering	Student
114	Sivaranjani	Sri Venkateswara College of Engineering	Student
115	Snehal Kumar	AECOM India Pvt. Ltd.	Industry Personnel
116	Soheb Najad N	Younus College of Engineering and Technology	Faculty
117	Sriram L	Sri Venkateswara College of Engineering	Student
118	Sudarvelazhagan K	College of engineering, Anna University Chennai	Research Scholar
119	Sudharsan B	ABS CONSULTS	Student
120	Sumit Kumar	AECOM India Pvt. Ltd.	Industry Personnel
121	Sushovan Dutta	AECOM India Pvt. Ltd.	Industry Personnel

122	Sutirtha Bose	AECOM India Pvt. Ltd.	Industry Personnel
123	V J Vedhanayaghi	RAJALAKSHMI ENGINEERING COLLEGE	Faculty
124	V.Naveen Chandru	NPR COLLEGE OF ENGINEERING AND TECHNOLOGY	Student
125	V J Vedhanayaghi	RAJALAKSHMI ENGINEERING COLLEGE	Faculty
126	Vengadesh	Sri Venkateswara College of Engineering	Student
127	Venkatesh Raghuraman	Sri venkateswara college of engineering	Alumni
128	M.Vignesh	Mahendra Engineering College	Faculty
129	Yamni	Sri Venkateswara College of Engineering	Student
130	Yokesh J P	Sri Venkateswara College of Engineering	Student
131	Mr.S.Hari Prasath	St.Peter's College of Engineering and Technology	Student
132	M.Jenani	Sri Venkateswara College of Engineering	Student
133	Mohamed Nibras S	Sri Venkateswara College of Engineering	Student
134	Nancy	Sri Venkateswara College of Engineering	Student
135	Neha Govindamurali	Sri Venkateswara College of Engineering	Student
136	Nibras S Md	Sri Venkateswara College of Engineering	Student
137	Nitish Kumar Barnwal	AECOM India Pvt. Ltd.	Industry Personnel
138	Pon Pradeep	Sri Venkateswara College of Engineering	Student
139	Prabhakar Kamaraj	AECOM India Pvt. Ltd.	Industry Personnel
140	R.Humsa Vardhana	Sri Venkateswara College of Engineering	Student

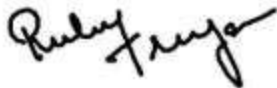
SUMMARY OF FEEDBACK

Total Number of respondents:74				
Feedback	Strongly Agree	Agree	Neutral	Disagree
The session delivered the information I expected to receive	55	20	0	-
The content was presented effectively	51	23	1	-
The pace and duration of the webinar was satisfactory	51	23	1	-
The resource person is knowledgeable	52	21	2	-
The resource person presented the information in a clear and logical manner	51	23	1	-
Sufficient time was given for interaction	49	21	5	-
The webinar was well organized	51	21	3	-
As a result of this webinar, I gained new knowledge	49	23	3	-



Additional comments/feedback from participants:

- It was a good informative session.
- More webinars are welcome
- Advanced and informational webinar
- The presenter is a well renowned expert in the industry and SVCE has done a really good job by bringing him in and introducing students to the industry and the opportunities in it.
- Very interactive session
- Very clear explanation
- The session was very knowledgeable
- It helped us gain more knowledge on metro rail construction.



Prepared By

Ms.Ruby Freya (AP/Civil Engg.)

Coordinator



Approved By

Dr.R.Kumutha(HoD/Civil Engg.)

Convenor