

View_03 (3d)
NTS

Notes:
Foundation design by others (specialist sub-contractor).
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Architectural setting out of Safdarjung Station and platforms by others.
Drawings to be read together with the latest revision of Structural Specification 284197-ARP-22-ZZ-RP-2X-000005.
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Design of connections and details TBD. All the drawings (and drawing references) for details are WIP.
It was agreed that as part of the review, details and connection design do not need to be finalised.



GOOD FOR CONSTRUCTION
By: Francis Archer
Date: 22-05-2024

02	22/05/24	Good for construction
01	20/07/23	For Comments
Issue	Date	



Arup IP Limited
Or Western Express Highway Andheri (East)
Mumbai
www.arup.com

Client
Rail Land Development Authority
Ministry of Railways

Project Title
Innovative Design of Modular
Railway Station Components
in Brownfield Projects
Safdarjung Station

Drawing Title
Cover Over Platform
3D View
End and typical bay

Scale at A1: NTS
Hub: Structural
Status: S4 - Submission

Arup Job No: 284197
Rev: 02

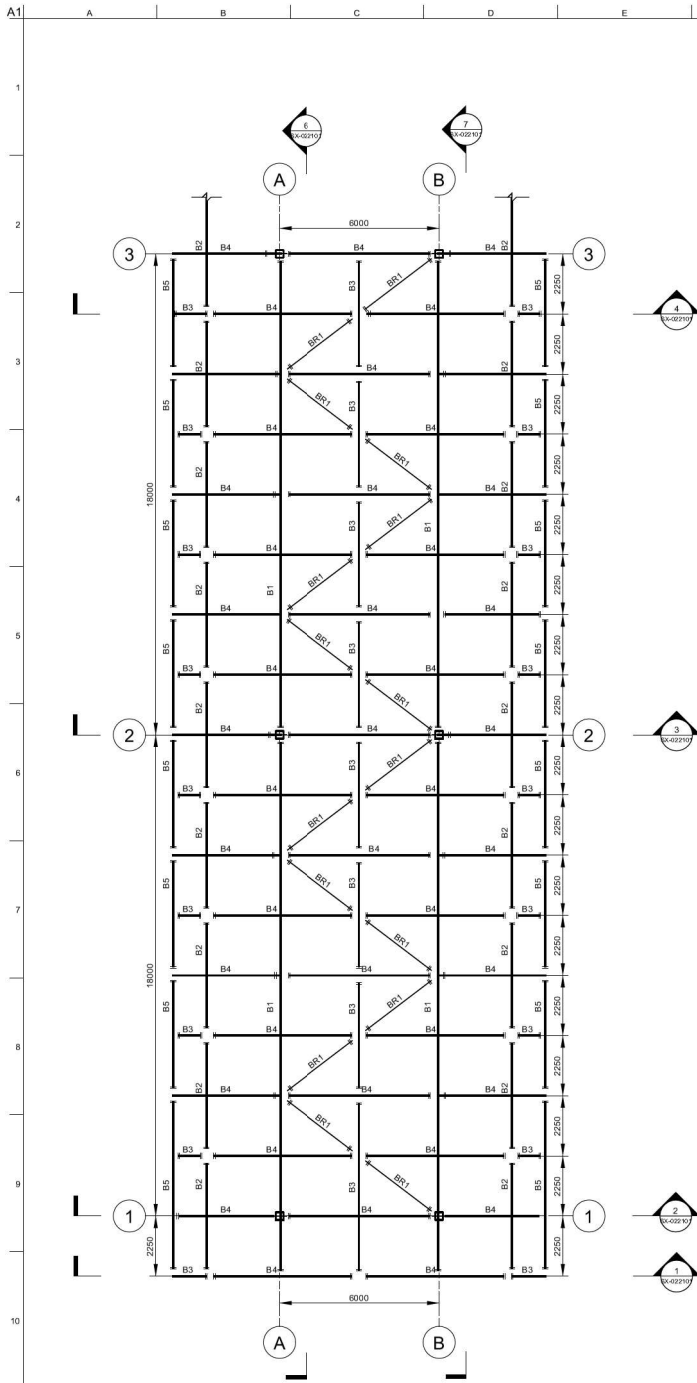
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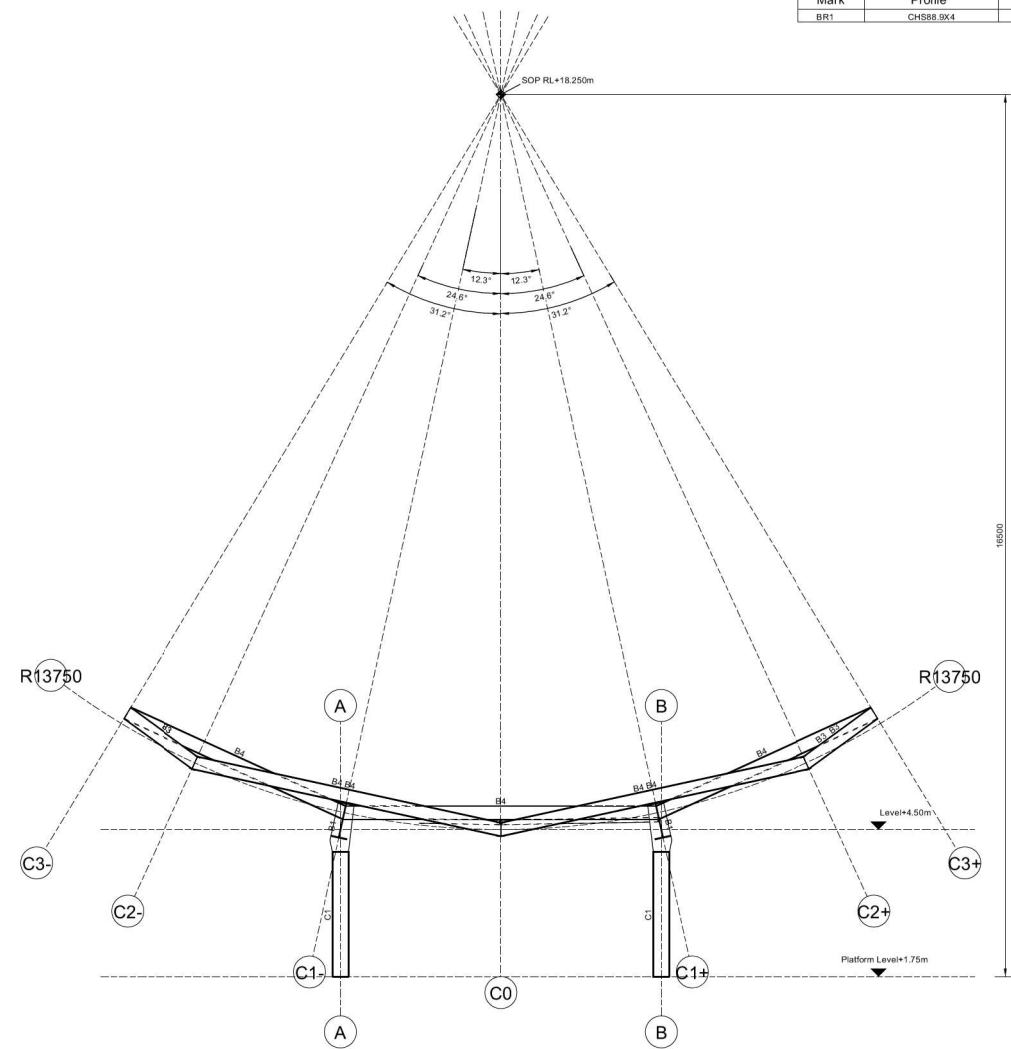
APPROVED
By: Himanshu Singhal
Date: 25-11-2024



APPROVED
By: Joachin Kumar
Date: 25-11-2024



Plan View
Scale 1:100



Section 1-1
Scale 1:50
(SX-022101)

Steel Column Schedule		
Mark	Profile	Grade
C1	SHS300*300*10.0	E350

Steel Beam Schedule		
Mark	Profile	Grade
B1	WPB700X300X149.89	E350
B2	UB254*102*28	E350
B3	UB254*146*31	E350
B4	UB254*146*43	E350
B5	ISMC250	E260

Steel Bracing Schedule		
Mark	Profile	Grade
BR1	CHS88.9X4	YST310

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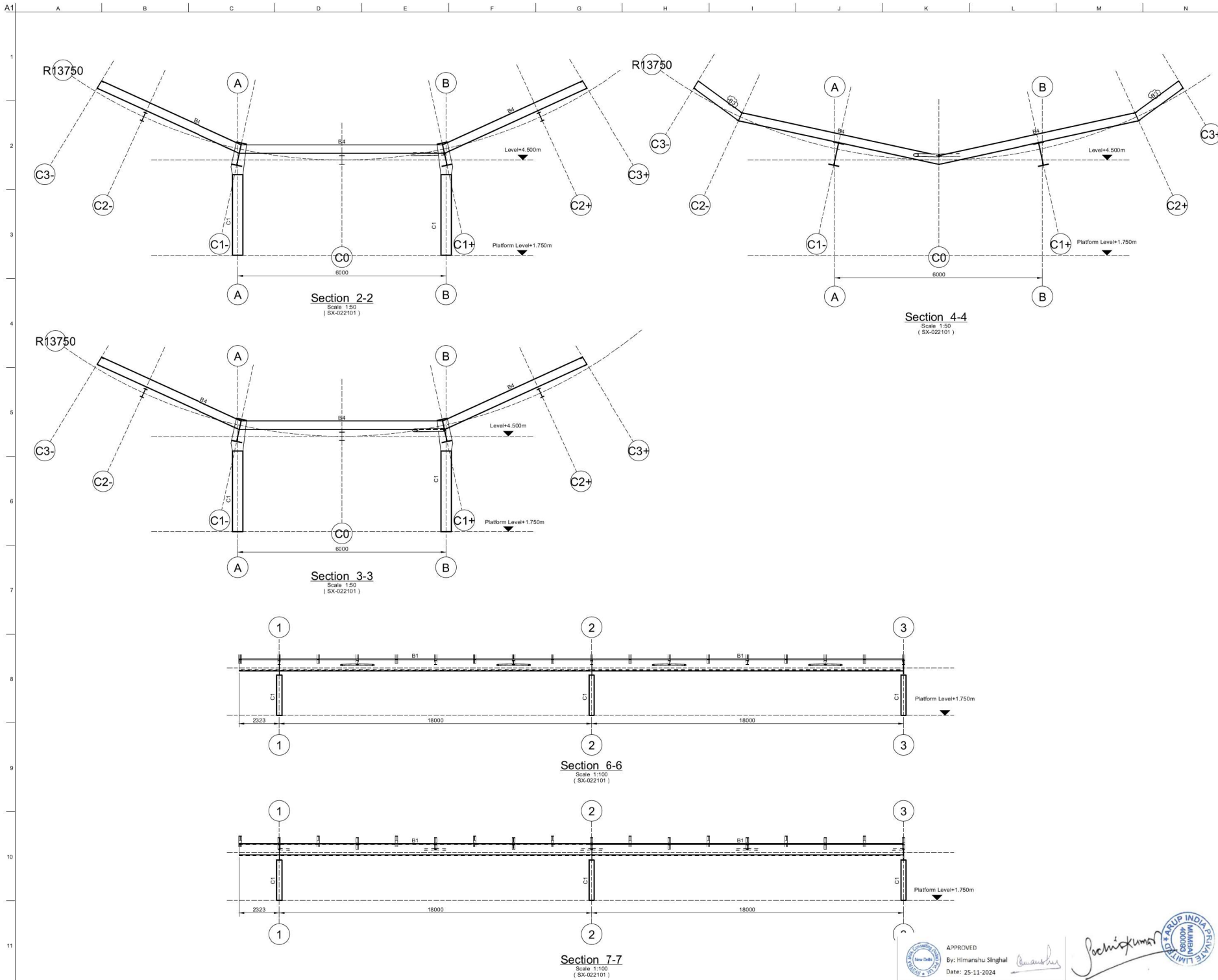
Project Title
Innovative Design of Modular
Railway Station Components
in Brownfield Projects
Safdarjung Station

Drawing Title
Cover Over Platform
Plan, sections and setting out
End and typical bay

Scale at A1	1:50 1:100	By/Checked/Prepared	By/Checked/Prepared
Role	Structural	Signature	Signature
Status	S4 - Submission	Signature	Signature
App. Job No.	284197	Rev	02
Project No.	284197-ARP-CP-ZZ-DR-SX-022101		

APPROVED
By: Himanshu Singhal
Date: 25-11-2024

ARUP INDIA PRIVATE LIMITED
400030



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GOOD FOR CONSTRUCTION

By: Francis Archer

Date: 22-05-2024

02	22/05/24	Good for construction
01	20/07/23	For Comments
Issue	Date	

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Or Western Express Highway Andheri (East)
Mumbai
www.arup.com

Client
Rail Land Development Authority
Ministry of Railways

Project Title
Innovative Design of Modular
Railway Station Components
in Brownfield Projects
Safdarjung Station

Drawing Title
Cover Over Platform
Sections
End and typical bay

Scale at A1	1:50	1:100	By/Checked/Approved	By/Checked/Approved
Role	Structural			
Status	S4 - Submission			
Arup Job No.	284197		Rev	02
284197-ARP-CP-ZZ-DR-SX-052101				

APPROVED

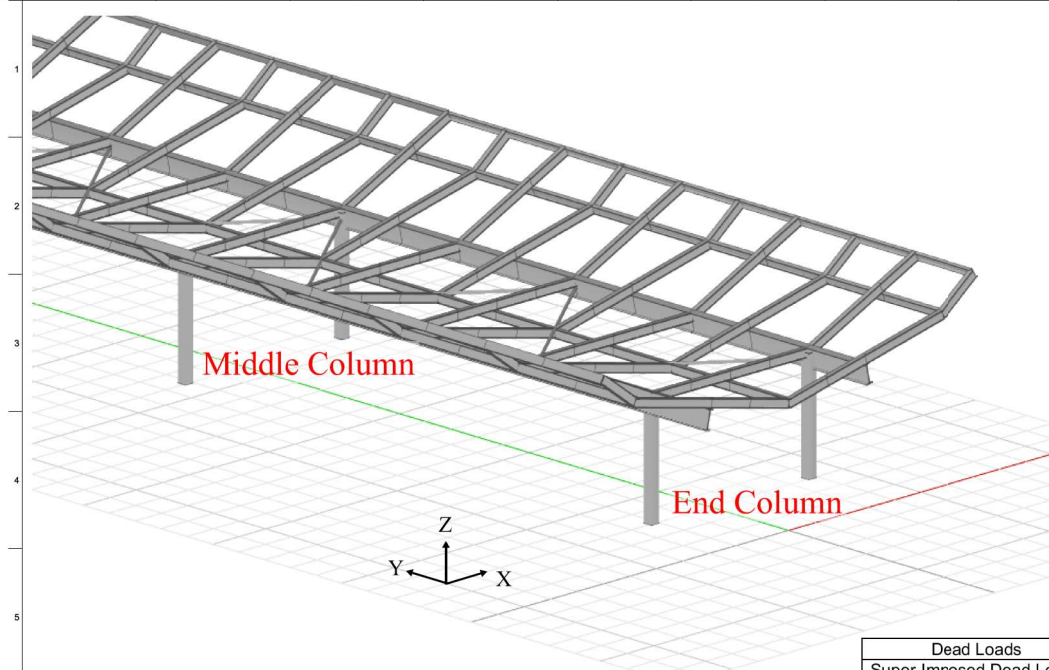
By: Himanshu Singh

Date: 25-11-2024

Arup India Private Limited

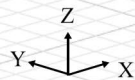
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NEW DELHI



Middle Column

End Column



	Vertical Load (Z-direction) ¹	
	End column	Middle column
Dead Loads	55	75
Super-Imposed Dead Loads	50	70
Imposed Loads	70	100
Wind Downward	55	75
Wind Suction	-95	-135
Wind Combination	+/-125	+/-175
Thermal load +	0	0
Thermal load -	0	0
Earthquake X	+/-5	+/-10
Earthquake Y	+/-5	+/-5
Earthquake Z	+/-5	+/-5

	Horizontal Load (Y-direction) ¹	
	End column	Middle column
Dead Loads	5	5
Super-Imposed Dead Loads	5	5
Imposed Loads	5	5
Wind Downward	5	5
Wind Suction	5	5
Wind Combination	5	5
Thermal load +	15	15
Thermal load -	15	15
Earthquake X	10	10
Earthquake Y	30	30
Earthquake Z	5	5

	Horizontal Load (X-direction) ¹	
	End column	Middle column
Dead Loads	5	5
Super-Imposed Dead Loads	5	5
Imposed Loads	5	5
Wind Downward	5	5
Wind Suction	10	10
Wind Combination	25	35
Thermal load +	5	5
Thermal load -	5	5
Earthquake X	15	25
Earthquake Y	5	5
Earthquake Z	5	5

	Moment Mxx	
	End column	Middle column
Dead Loads	5	5
Super-Imposed Dead Loads	5	5
Imposed Loads	5	5
Wind Downward	5	5
Wind Suction	10	10
Wind Combination	10	5
Thermal load +	55	50
Thermal load -	50	45
Earthquake X	30	30
Earthquake Y	110	110
Earthquake Z	5	5

	Moment Myy	
	End column	Middle column
Dead Loads	10	10
Super-Imposed Dead Loads	10	5
Imposed Loads	10	10
Wind Downward	15	15
Wind Suction	20	20
Wind Combination	95	115
Thermal load +	15	15
Thermal load -	10	15
Earthquake X	50	90
Earthquake Y	10	10
Earthquake Z	5	5

	Moment Mzz	
	End column	Middle column
Dead Loads	5	5
Super-Imposed Dead Loads	5	5
Imposed Loads	5	5
Wind Downward	5	5
Wind Suction	5	5
Wind Combination	5	5
Thermal load +	5	5
Thermal load -	5	5
Earthquake X	5	5
Earthquake Y	5	10
Earthquake Z	0	0

Notes:

1. Horizontal action are NOT sign sensitive. They are always both positive and negative in direction.
2. Vertical action are sign sensitive. Negative indicates uplift.
Earthquake reactions noted can act both as pressure or uplift.
3. All loads in kN. All loads are NOT factored.
4. Loads are given at the platform level of +1.75m
5. The moments apply in both directions



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01	20/07/23	For Comments
Issue	Date	For Comments

ARUP

Arup IP Limited
 89 Pagar Road, Suite 1001 (East)
 Mumbai
 www.arup.com

Client
 Rail Land Development Authority
 Ministry of Railways

Project Title
 Innovative Design of Modular
 Railway Station Components
 in Brownfield Projects
 Safdarjung Station

Drawing Title
 Cover Over Platform
 Foundation Loads

Scale at A1	NTS	By/Checked/Approved	ES/AF/PA
Rise	Structural		
Status	S4 - Submission		
Arup Job No.	284197	Rev	02
ID	284197-ARP-CP-00-DR-SX-002102		