

MUNICIPAL CORPORATION OF GREATER MUMBAI

CH.E. ROADS AND TRAFFIC DEPARTMENT

PROJECT INFORMATION MEMORANDUM (PIM)

PRE-PROPOSAL CONFERENCE

**For Access Control to Western Express Highway and
Eastern Express Highway**

Issued By

Chief Engineer (Roads and Traffic)
Engineering Hub Building,
Dr. E.Moses Road,
Worli Naka, Worli, Mumbai-400018

DOC NO.

DATE - 03/11/2023

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Doc. No.:	XXXXXXXXXXXXXX
Name of Organization	BRIHANMUMBAI MUNICIPAL CORPORATION
Subject	"PRE-PROPOSAL CONFERENCE for Access Control to Western Express Highway and Eastern Express Highway"
Date of Pre-Proposal Conference	17/11/2023 Time: 12: 00 Hrs.
Last date & time for Submission of Suggestion and Queries	24/11/2023 Time: 15: 00 Hrs.
Venue for Pre-Proposal Conference	At the Conference Hall, 2nd Floor, Office of Additional Commissioner (Projects), Head Office, Annexue Building, BMC
Address for communication	Office of the:- Ch.E.(Roads and Traffic)'s office BMC, Zero floor, Engineering Hub Building, Dr. E. Moses Road, Worli Naka, Worli, Mumbai-400018
Website	http://portal.mcgm.gov.in
Contacts	Shri. Chandrakant Kurankar E.E. P to Ch.E.(Roads & Traffic) Mob- 9820527206
E-mail ID	che.rt@mcgm.gov.in

Project Information Memorandum

About Brihanmumbai Municipal Corporation

Established under the Bombay Municipal Corporation Act 1888, the Brihanmumbai Municipal Corporation covers an area of 437.71 Sq. Km. with a population of 1.24 Crores as per 2011 census. The metropolis accounts for major portion of India's international trade and government's revenue, from being one of the foremost centers of education, science and technological research and advancement.

The Mumbai Metropolis has historic tradition of strong civic activism dedicated to the cause of a better life for all its citizens, and it's the Brihanmumbai Municipal Corporation (BMC), the responsibility for urban governance in Mumbai.

BMC is one of the largest local self-governments in the Asian Continent. To match with the change in its citizen's current lifestyle, BMC is focusing on providing almost all kinds of engineering services viz, water supply, storm water drains, sewerage, roads, bridges, solid waste management, and environmental services. Additionally, BMC is also providing dedicated services in various segments such as health, primary education, construction and maintenance of public markets and slaughter houses etc.

BMC handles large scale projects on PPP mode, EPC mode and other mode of public procurement. Some of the ongoing, flagship projects are Mumbai Coastal Road Project, Mumbai Sewage Disposal Project, Collection, Transportation, Processing & Disposal of Construction & Demolition (C&D) Waste, and Development of 600 TPD Waste to Energy Project on DBO basis etc.

Project Background

With the rapid urbanization and increase in vehicular population, the city roads are turned into the traffic chaos. People are getting more inclined towards personal motorized trips. This naturally had impact on number of non-motorized trips in the city. People while cycling or walking on footpaths feel unsafe and probably this will lead to reduce their mode share further down.

The Brihanmumbai Municipal Corporation (BMC) is committed to constantly improve mobility of people. In general, the Western Express Highway and Eastern Express Highway are two roads which forms backbone for the vehicular movement and act as arterial road connecting Mumbai city to other major cities in Mumbai Metropolitan Region (MMR) and to other cities in Maharashtra. The Western Express Highway (Named as "Ali Yavar Jung Marg") Starts from Bandra East to end of BMC jurisdiction at Dhaisar east and Eastern Express Highway starts from Sion to the end of BMC jurisdiction at Mulund east. There is heavy traffic flow on these two highways due to the importance as mentioned earlier hence there are certain major junction which suffered from traffic congestion. In order to solve this issue BMC has proposed to improve the access control to Western Express Highway and Eastern Express Highway on junctions with traffic congestion.

Figure 1 Location of Western and Eastern Express Highway



Project Location and Proposed Solutions

Overall, nine (9) locations were identified to initiate the project of traffic improvement, out of this three (3) location are on western express highway and six (6) are on Eastern express highway for improvement. List of identified location is mentioned in below:

Table 1 List of Locations

Western Express Highway	Eastern Express Highway
Sudhir Phalke Flyover	Airoli Junction
Parla Hanuman Road	Kanjurmarg U-Turn for waste Dumping Vehicle
Milan Subway	JVLR Powai Junction
	Ghatkopar Junction
	Chheda Nagar Junction
	BKC Connector Extension

Table 2 Location wise Proposed Solution

Sr. No.	Location	Proposed Solution
1	Airoli Junction	Underpasses
		Double Elevated Flyover
2	Kanjurmarg U-Turn for SWM Dumping Vehicles	U-turn Flyover
3	JVLR Powai Junction	Underpass
4	Ghatkopar Junction	Flyover
5	Chheda Nagar Junction	Underpass
6	BKC Connector Extension	U-turn Flyover
7	Sudhir Phadke Flyover	Underpass & Road Raising
8	Vile Parle Hanuman Road	
9	Milan Subway junction	

Note: Detail Alignment is attached as annexure-I

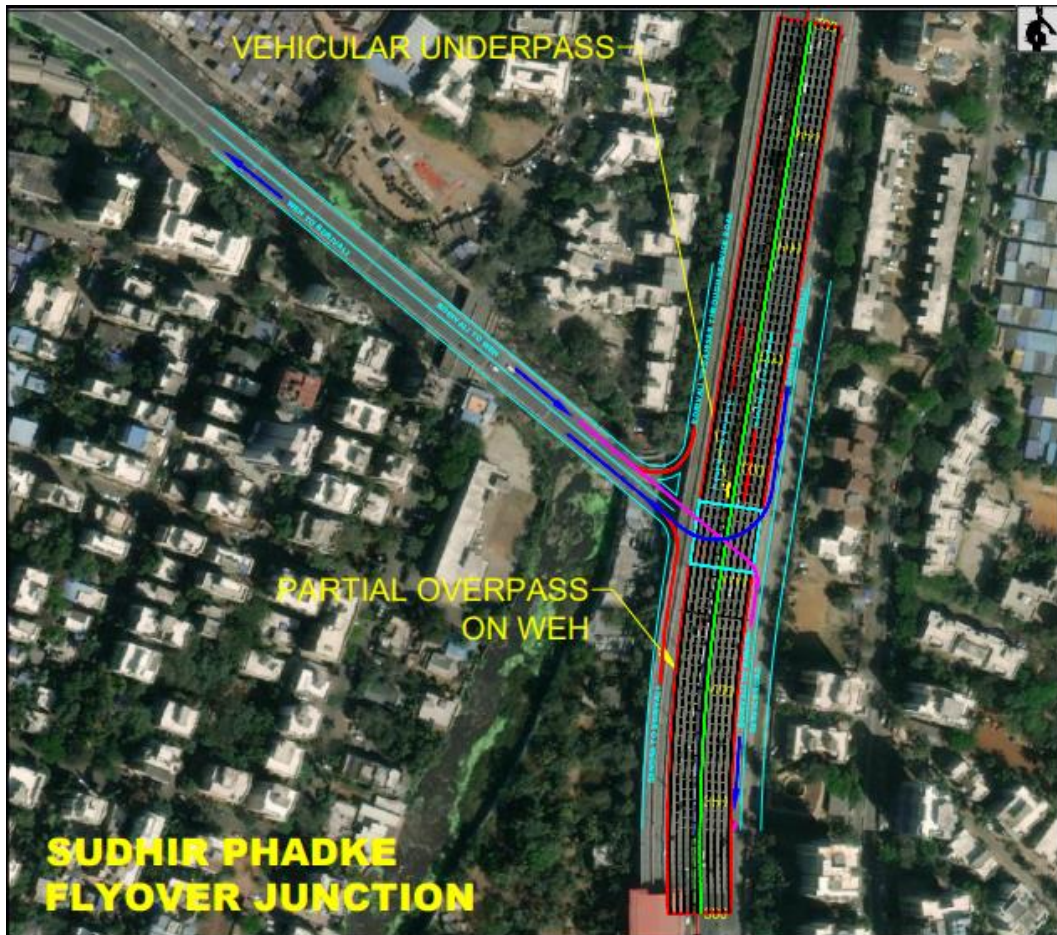
Figure 2: Location Map



Sudhir Phadke Flyover:

Presently Sudhir Phadke flyover doesn't have direct access from western express highway which result in traffic congestion at national park junction and Ovaripada Metro Station junction. In order to provide smooth access for the people of Dhaisar and Borivali-West to Western Express Highway and this will help in reducing traffic congestion near Ovaripada Metro Station junction a vehicular underpass and road raising is proposed here.

Figure 3 Propose Vehicular underpass and at Sudhir Phadke Flyover



The Vehicular Underpass is proposed to connect Sudhir Phadke Flyover to Western express Highway for south bound traffic.

Proposal for Sudhir Phadke Flyover:

Proposal involves raising main carriageway of Express Highway about 3m with dual four lane configuration involving width and length of about 28m and 450m respectively and accommodating 6 lane two-way vehicular underpass of internal size 25m x 4m with 4m wide slip road on eastern side of Express Highway to facilitate right turn from Dahisar to Borivali and Borivali to Bandra.

Vile Parle Hanuman Road:

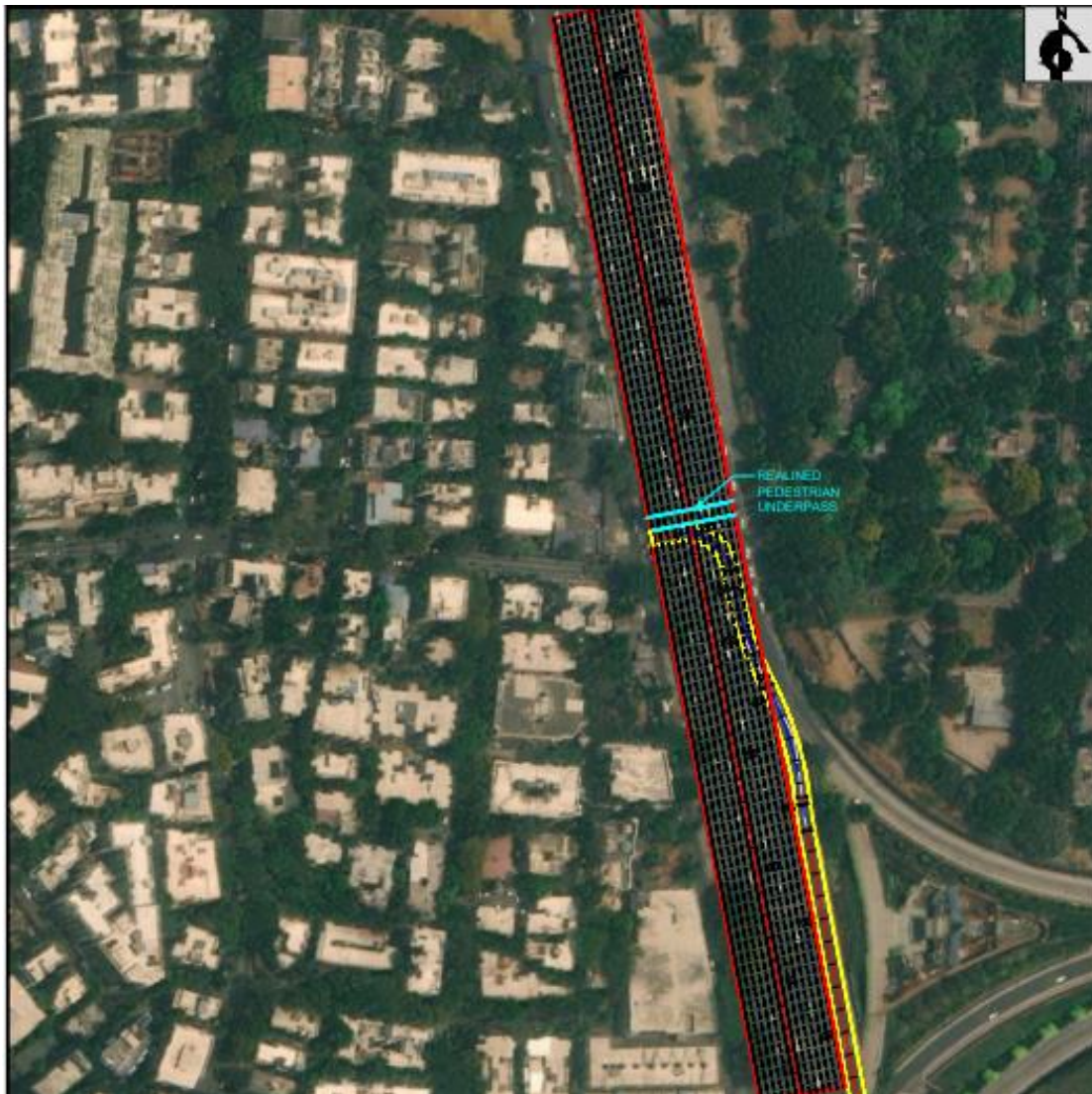
Vile Parle Hanuman Road there is no direct access to Western Express Highway, basically here the traffic movement originating from Captain Vinayak Gore Flyover and Parle-east traffic is diverted to

airport junction which affect the airport junction by creating traffic congestion at airport junction. Hence here at Vile Parle Hanuman Road Vehicular underpass and road raising is propose to ease the traffic congestion at airport junction and to provide direct access.

Proposal for Vile Parle Hanuman Road:

Proposal involves raising main carriageway of Express Highway about 2.5m with dual five lane configuration involving width and length of about 35m and 480m respectively and accommodating intermediate lane one-way vehicular underpass of internal size 6.5m x 4m to facilitate right turn from Hanuman Road to Bandra, passes through the road raising admeasuring 120m with exit through open to sky ramp admeasuring 160m adjacent to Shivaji Maharaj Statue. Pedestrian underpass of internal size 6m x 2.5m also included across the Express Highway to facilitate existing pedestrian and vehicular movements.

Figure 4 Propose Vehicular underpass and road raising at Vile Parle Hanuman Road

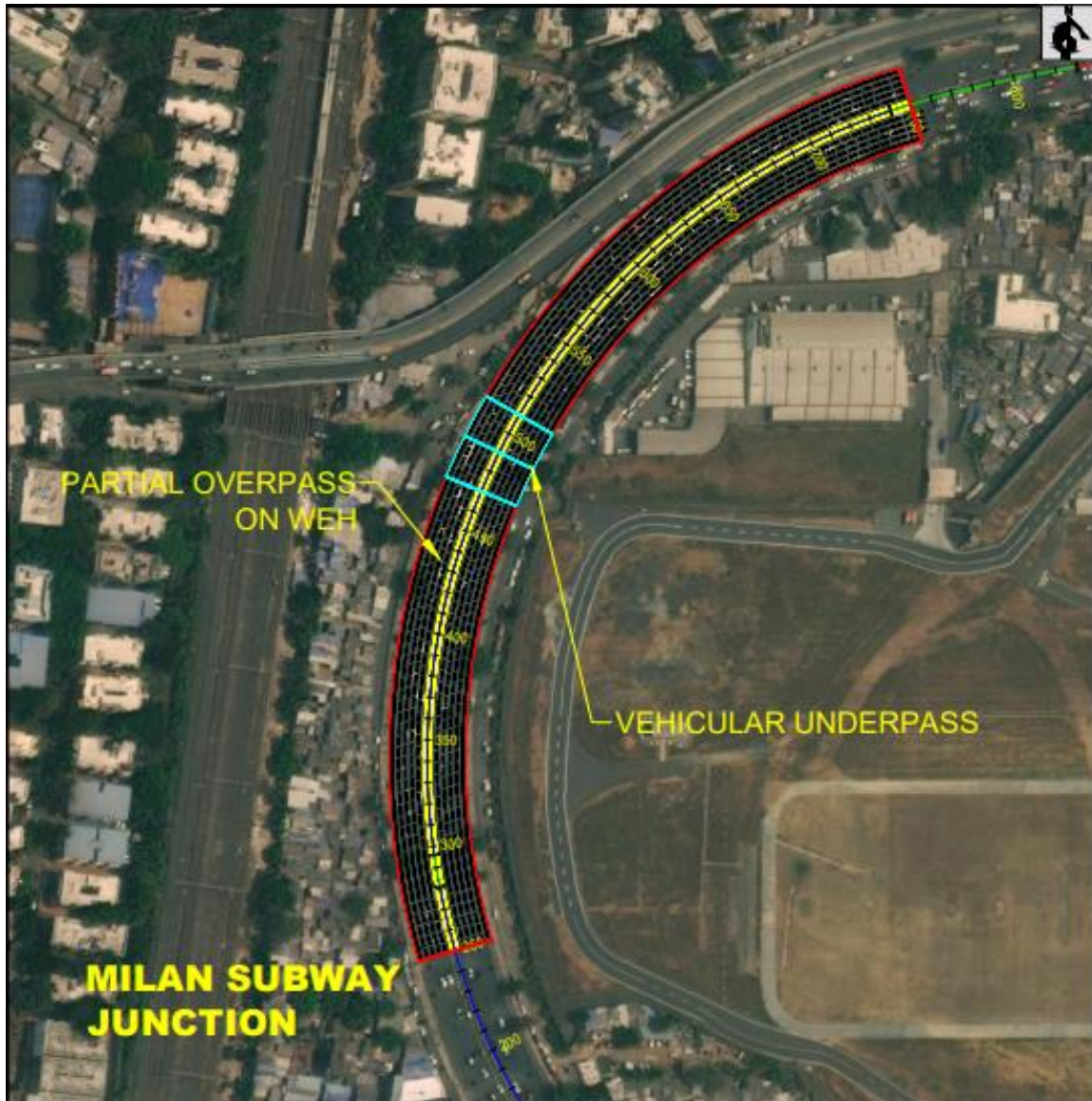


The Vehicular Underpass is proposed to connect Hanuman Road to Western express Highway for south bound traffic.

Milan Subway Junction:

At Milan Subway also there is no direct access from the highway to subway. Here inbound and outbound traffic is generated from Vakola junction thereby affecting the traffic movement of Santacruz east area. Also, junction improvement is required to accommodate traffic originating from SCLR extension. Hence Vehicular underpass and road raising is proposed here.

Figure 5 Propose Vehicular underpass and road raising at Milan Subway Junction



The Vehicular Underpass is proposed to connect Milan Subway to Western express Highway.

Proposal Milan Subway Junction:

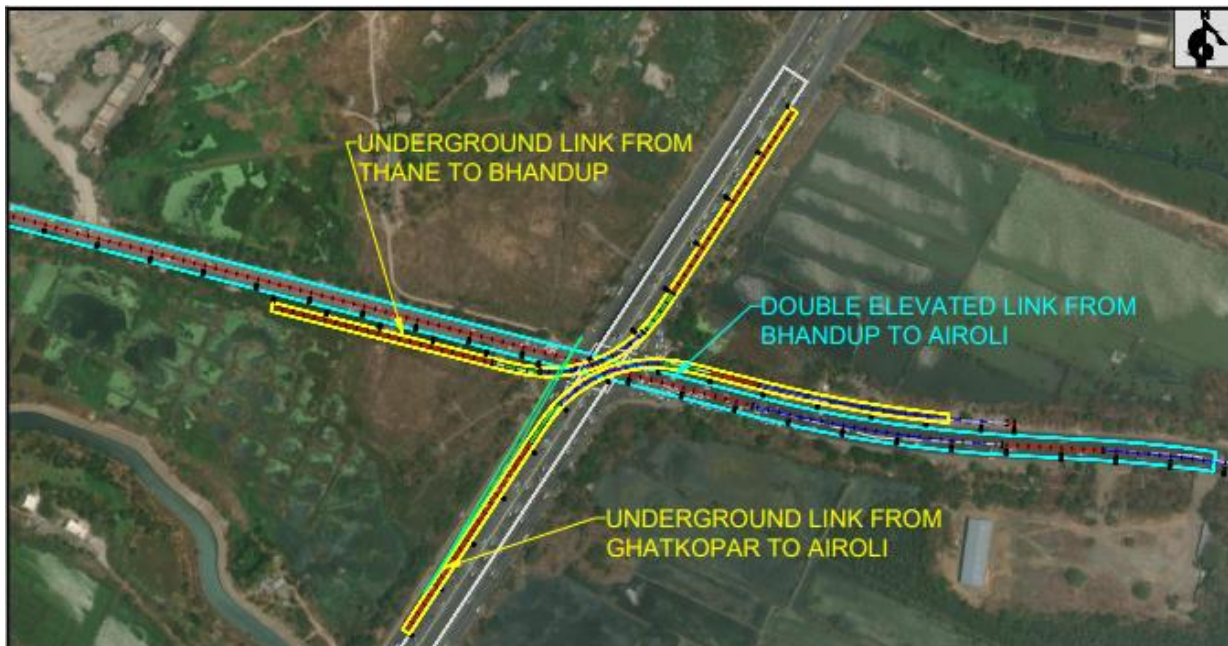
Proposal involves raising main carriageway of Express Highway about 2.5m with dual five lane configuration involving width and length of about 35m and 500m respectively and accommodating 6 lane two-way vehicular underpass of internal size 25m x 4m joining both

service roads to facilitate right turn from Milan Subway to Bandra and Andheri to Milan Subway.

Airoli Junction:

Airoli Junction is a critical junction as it provides access to Navi- Mumbai and Kalyan-Dombivli area, also propose GMLR here shall connect western suburb to Thane district. Presently multiple movement at this junction, in order to create ease of movement through this junction two underpass and one flyover is proposed.

Figure 6 Propose Vehicular underpass and Double Elevated Flyover at Airoli Junction



The Underpass and Flyover is proposed to connect South Mumbai to Navi-Mumbai.

Proposal for Airoli Junction:

Proposal involves 11.5m wide vehicular underpass from Ghatkopar to Airoli accommodating 3 lanes and admeasuring 620m. It also includes 8.0m wide vehicular underpass from Thane to Bhandup accommodating 2 lanes and admeasuring 600m. 18.0m wide Double Level Flyover is included to facilitate through traffic between Bhandup and Airoli admeasuring 1140m with 100m obligatory span over existing flyover on Eastern Express Highway.

Kanjurmarg U-Turn for SWM Dumping Vehicles:

At Present, SWM vehicles which are going to Kanjurmarg landfill and originating from western suburb & city are required to travel till Airoli junction to have access to Kanjurmarg landfill site which results in wastage of fuel and create traffic congestion in stretch between JVLR junction and Airoli junction. Therefore, it is proposed to provide access to north bound lane to south bound lane through U-type flyover.

Figure 7 Propose U-type Flyover for Kanjurmarg U-Turn for SWM Dumping Vehicles



The U-Type Flyover is proposed to provide access to north bound lane to south bound lane at Kanjurmarg on Eastern Express highway.

Proposal for Kanjurmarg U-Turn for SWM Dumping Vehicles

Proposal involves 8.5m wide one-way U-Turn Flyover for Kanjurmarg Dumping Ground vehicles admeasuring 840m.

JVLR Powai Junction:

Presently JVLR Powai junction has one way flyover and at grade separation between south bound vehicular movement and Powai. This movement is affected by south bound traffic of Powai and Mankhrud in order to prevent this traffic congestion an under pass is proposed for traffic movement from Thane to Powai.

Figure 8 Proposed Underpass at JVLR Powai Junction



The Underpass proposed to connect Powai to Eastern Express Highway.

Proposal for JVLR Powai Junction:

Proposal involves 8.0m wide vehicular underpass from Thane to Powai accommodating 2 lanes and admeasuring 640m.

Ghatkopar Junction:

At present, the traffic congestion is created at Ghatkopar junction due to the traffic originating from Ghatkopar and Saki Naka area hence to ease this traffic flyover is proposed.

Figure 9 Proposed Flyover at Ghatkopar Junction



The Flyover proposed to connect Ghatkopar to Eastern Express Highway.

Proposal for Ghatkopar Junction:

Proposal involves 8.5m wide flyover from Thane to Ghatkopar with 6m wide elevated entry to west bound carriageway of existing Railway Over Bridge being built by BMC and 6m wide at-grade exit after crossing Ghatkopar Bus Depot admeasuring 1350m.

Chheda Nagar Junction:

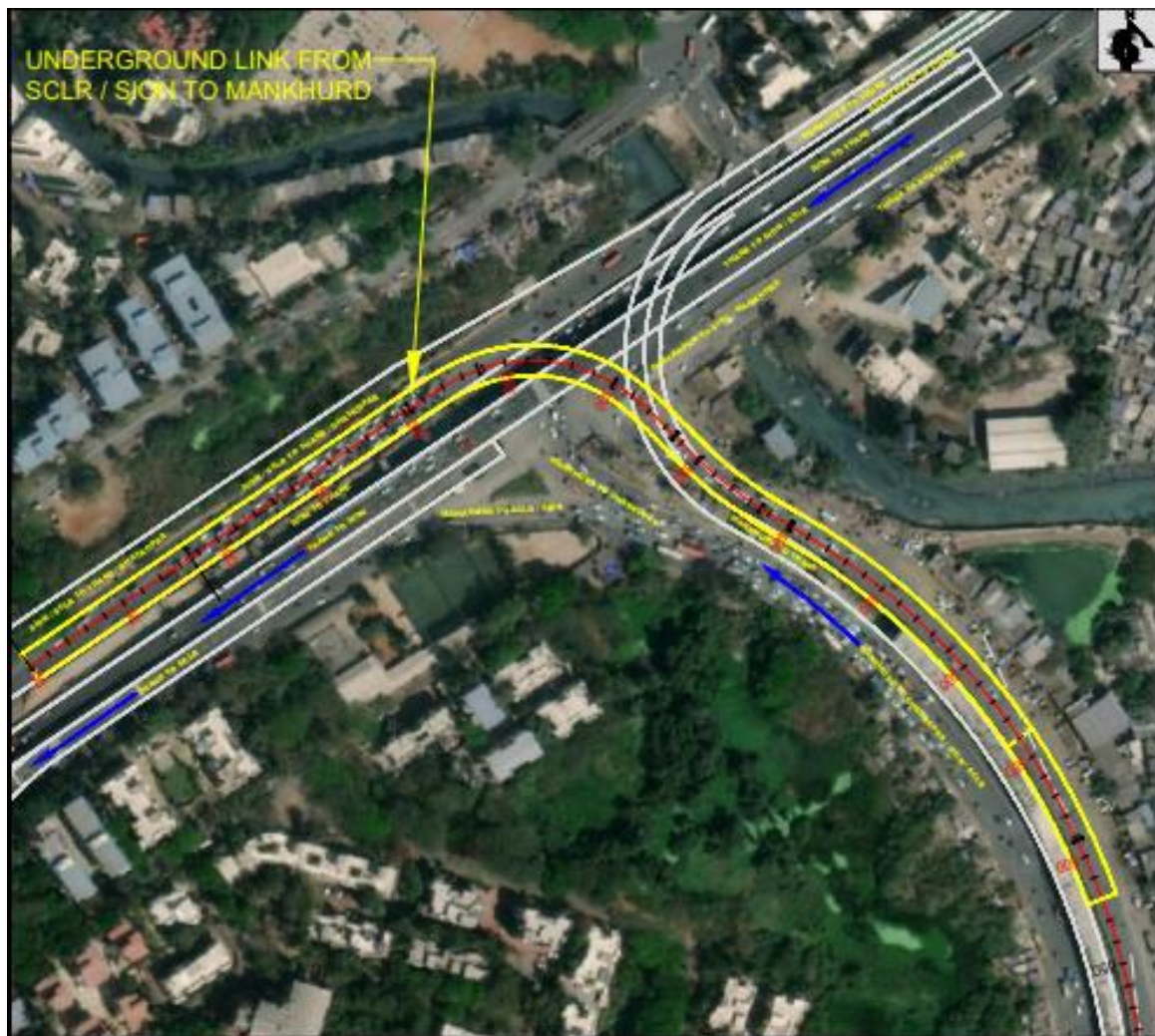
Chheda Nagar Junction has multiple movement of the traffic, in addition to this MMRDA has created a grade separator for movement of traffic from Mankhrud to Thane_and flyover to cater the south to north bound traffic. However the major movement of traffic from SCLR and south Mumbai to Mankrud bridge needs to be address. Hence underpass for Traffic

movement from south Mumbai to Mankhurd is proposed. This will ease out the traffic toward Ghatkopar and Pant Nagar.

Proposal for Chheda Nagar Junction:

Proposal involves 11.5m wide vehicular underpass from Sion / SCLR to Mankhurd accommodating 3 lanes and admeasuring 620m. 6.5m wide bridge across SWD is also included to facilitate movement from Ghatkopar to Sion / Mankhurd admeasuring 400m.

Figure 10 Proposed Underpass at Chheda Nagar Junction



The Underpass proposed to connect Chheda Nagar to Eastern Express Highway.

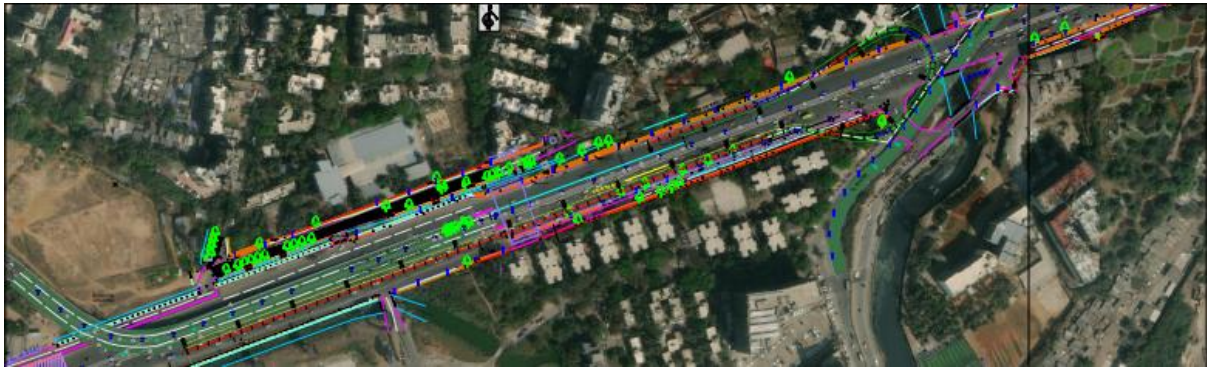
BKC Connector Extension

BKC Connector Extension is avital link which provide the access to BKC Business Hub. At present there is no connectivity towards south Mumbai from this connector . The present traffic from Dadar and Sion have to travel to Kalanagar junction through Dharavi area which create the traffic congestion on both Eastern and Western express highway. In order to provide connectivity towards south Mumbai , an U- type Flyover is proposed.

Proposal for BKC Connector Extension

Proposal involves 8.5m wide U-Turn flyover from Sion to BKC and BKC to Sion with 6.5m wide elevated entry to BKC bound carriageway of BKC Connector (Sion to BKC) and 6.5m wide at-grade exit (BKC to Sion) admeasuring 1000m.

Figure 11 Proposed U-type Flyover at BKC Connector Extension



The Underpass proposed to connect BKC Connector Extension to Dadar & Sion.

Objectives of this Project:

- To decrease is the continuously increasing traffic congestion at identified location as mentioned above
- To decrease over all journey time on Eastern and western Express highway.
- To allow better control over traffic at identified location
- To promote unobstructed vehicular movement.
- To Facilitate high Travelling speed
- To help enhance vehicular movement and reduce pollution
- To provide free movement of traffic on identified locations

Objectives of this Pre- Proposal Conference:

BMC envisages to improve the traffic congestion problem on identified location on western and Eastern Express Highway. The proposed solution for the same as mention in earlier section and alignment for the same is attached as annexure-I; In order to execute this project this Pre-Proposal conference is organized with following object.:

- To get realistic estimate of time period which will be required for execution of this project
- To understand various construction methodology which can be adopted.

PIM - Pre-proposal Conference Access for Control to Western Express Highway and Eastern Express Highway

- To understand for point of view of contractor's, what all challenges are there for each location which will hamper the successful execution of this project
- To get Suggestion from Contractors regarding this project

Brief scope of work

The Brief scope of the Agency/contractor shall consist of designing and building of various proposal as mentioned below:

Sr. No.	Location	Proposed Solution
1	Airoli Junction	Underpasses
		Double Elevated Flyover
2	Kanjurmarg U-Turn for Dumping Vehicles	U-turn Flyover
3	JVLR Powai Junction	Underpass
4	Ghatkopar Junction	Flyover
5	Chheda Nagar Junction	Underpass
6	BKC Connector Extension	U-turn Flyover
7	Milan Subway	Underpass & Road Raising
8	Parla Hanuman Road	
9	Sudhir Phadke Flyover	

Expectations of BMC from the Expert and stakeholder

BMC request Expert and Stakeholder to suggest or submit their suggestions or comments for improvement of this scheme through e-mails and further in-person if requested. The e-mail id for sending comments and suggestions is che.rt@mcgm.gov.in.

Expectations of BMC from the Agencies /Contractors working in the line

BMC is hereby inviting agencies /contractors having experience in similar work for Pre-Proposal Conference with following expectation

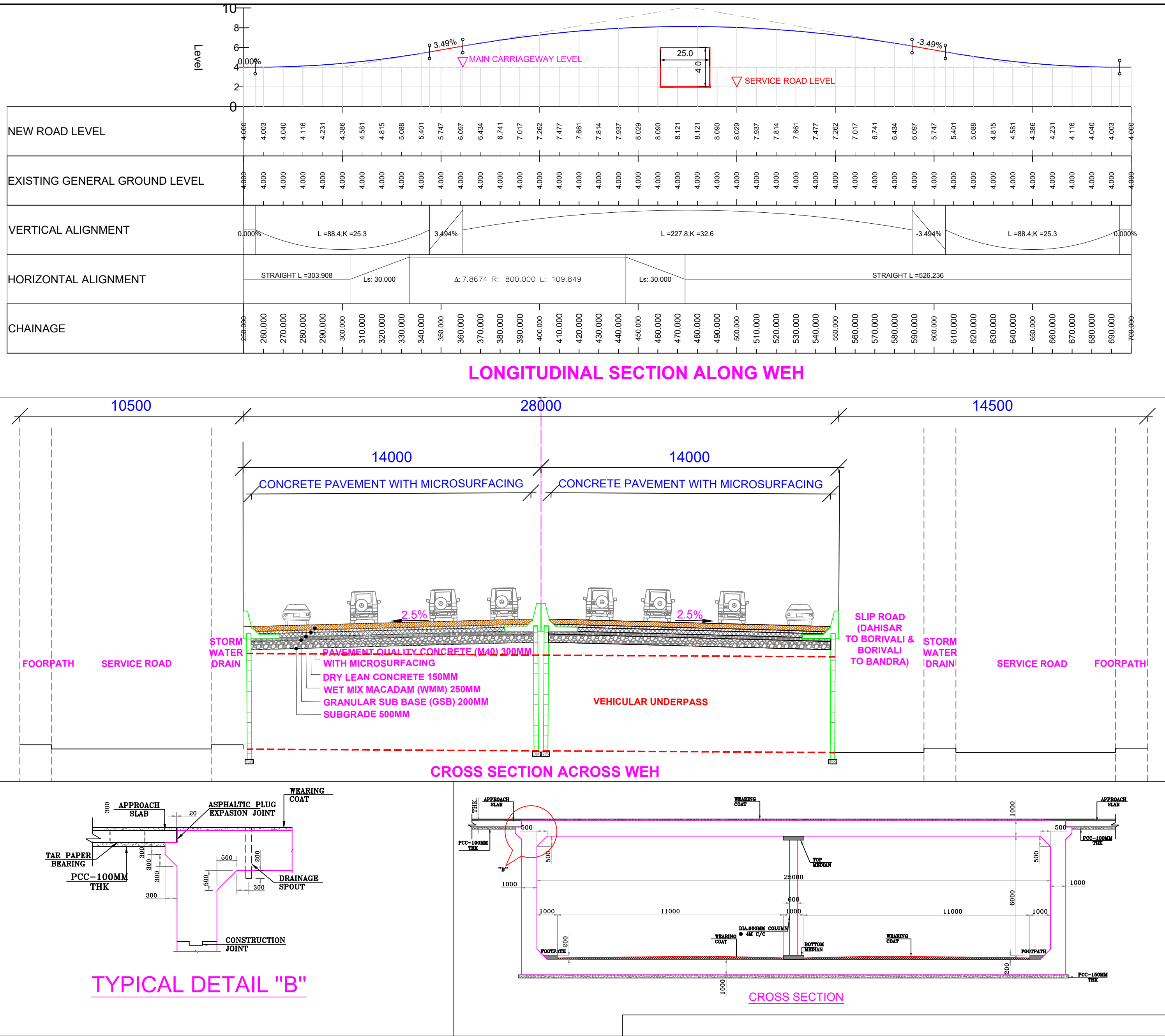
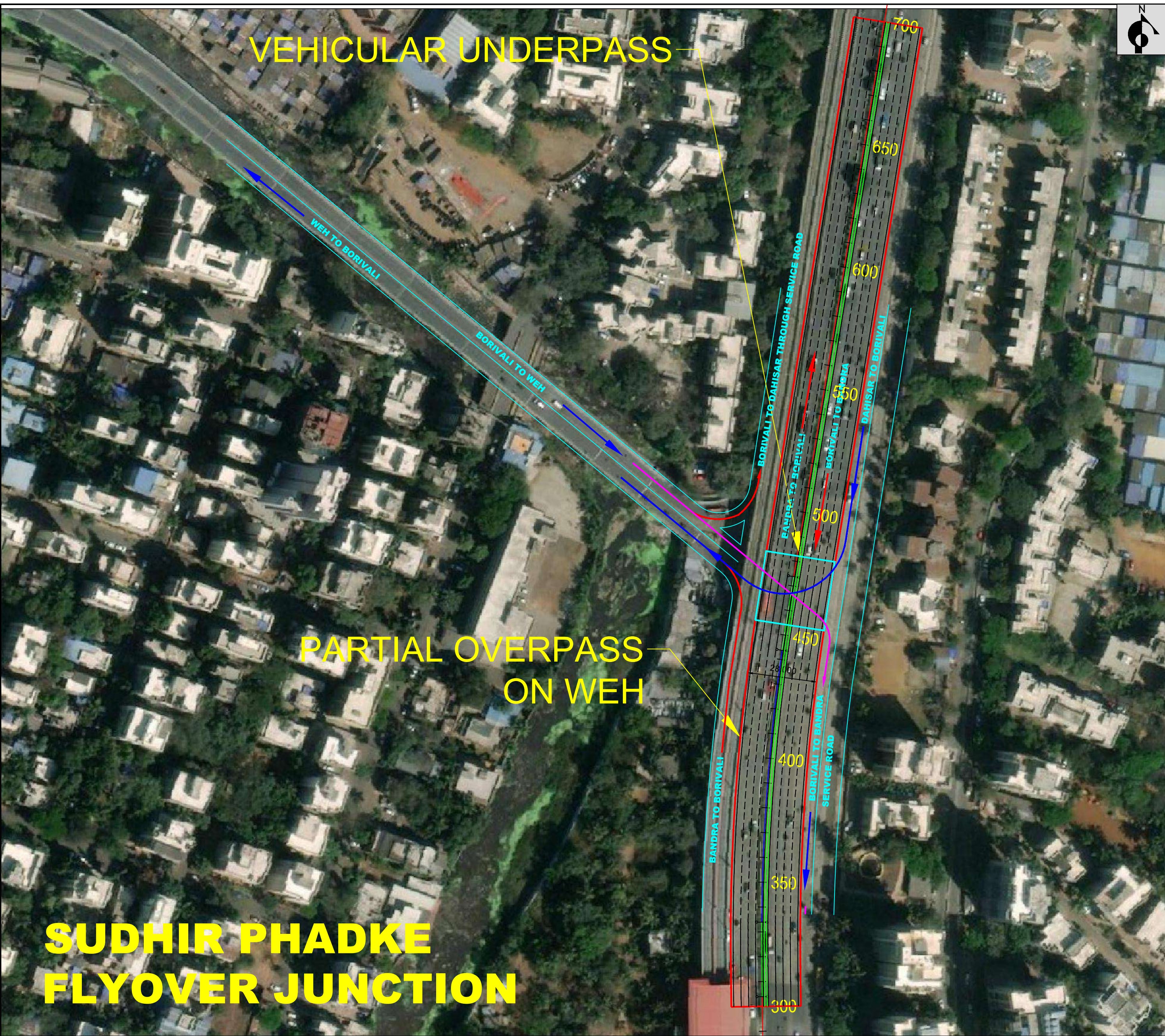
- The Agencies /Contractors shall explain its construction methodology for above mentioned proposal solution for each location (alignment for the same is attached as annexure-I)
- The Agencies /Contractors shall clearly indicate expected time period required for each proposed solution
- The Agencies /Contractors shall indicate according to them what are the challenges for execution of the proposed solution for each location.
- The Agencies /Contractors can also provide their suggestion.

Sd/-

Chief Engineer (Roads and Traffic)


Annexure-I

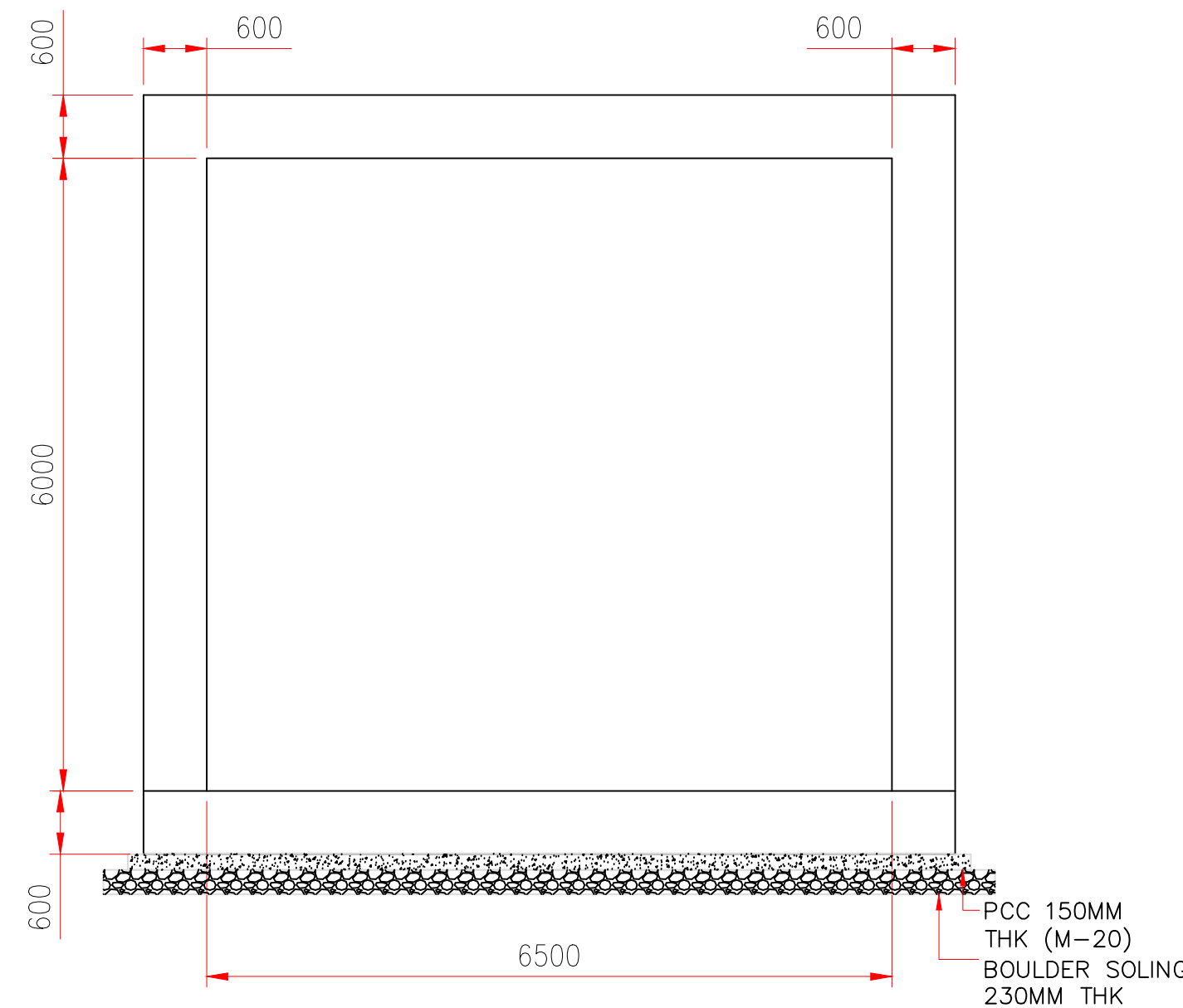
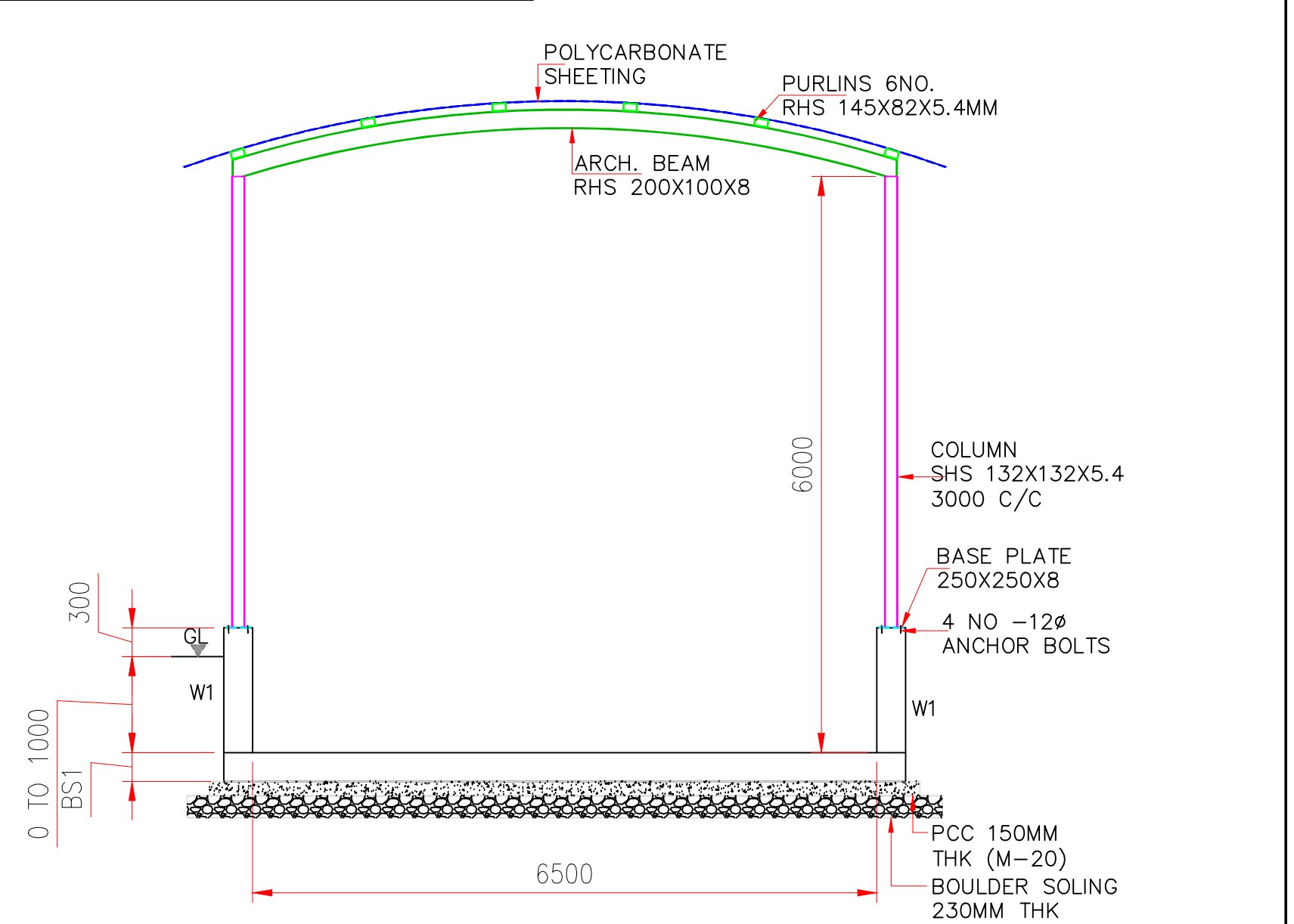
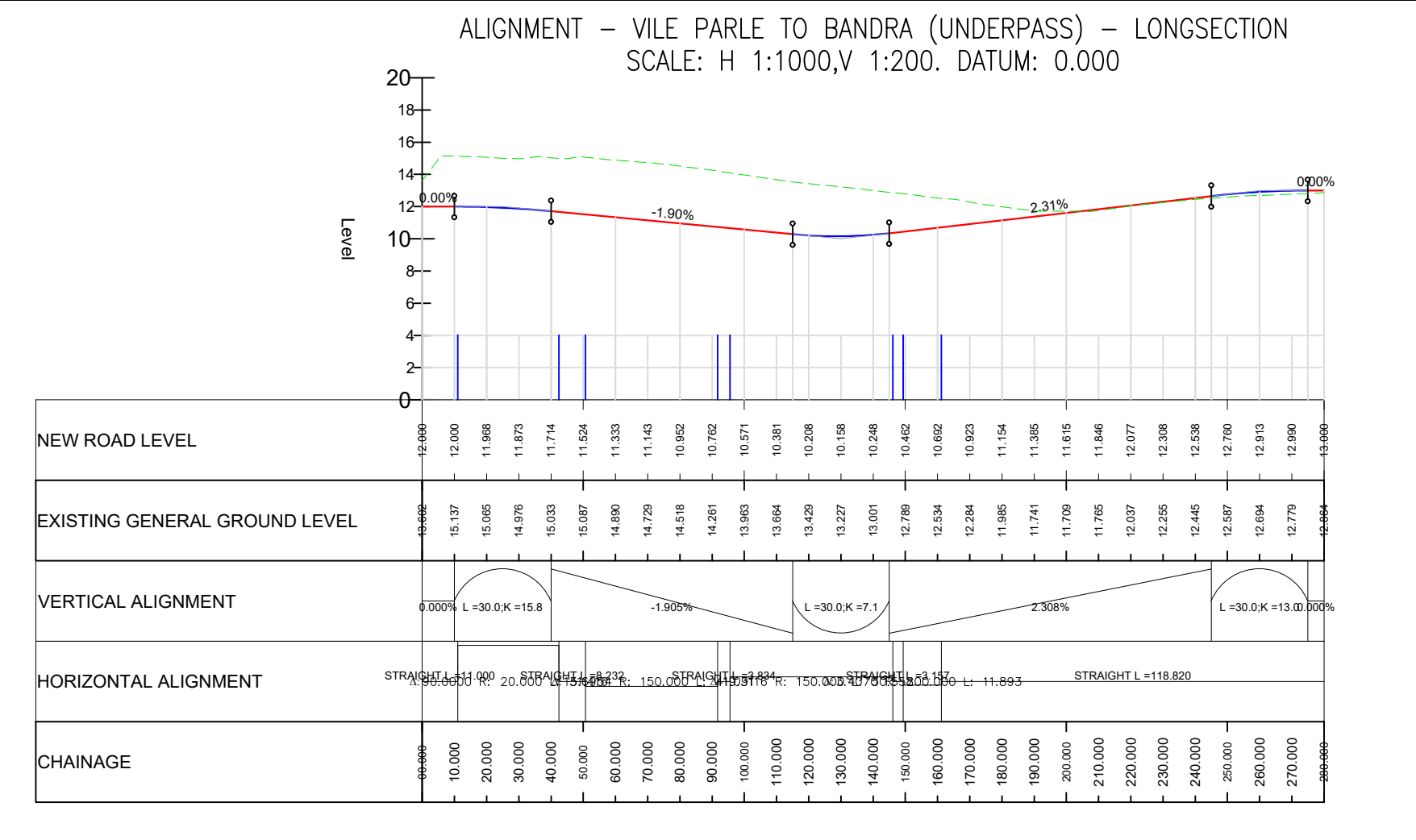
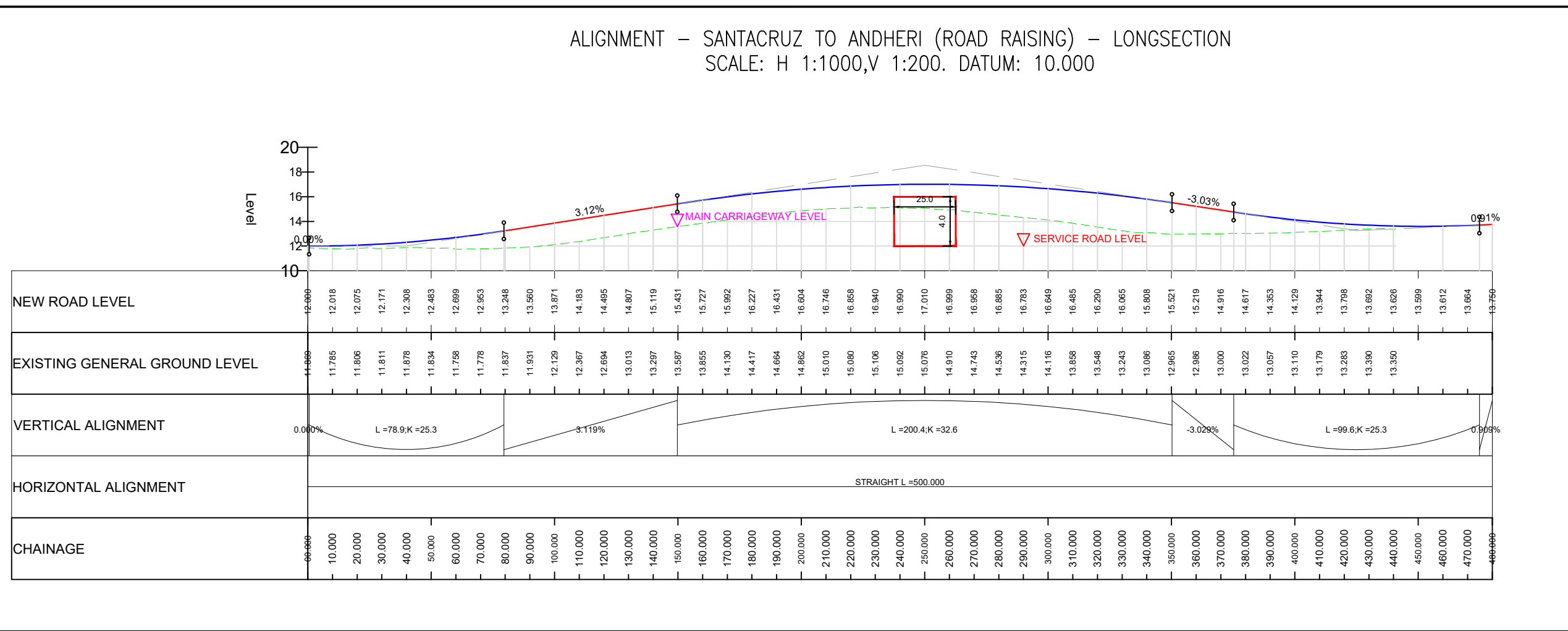
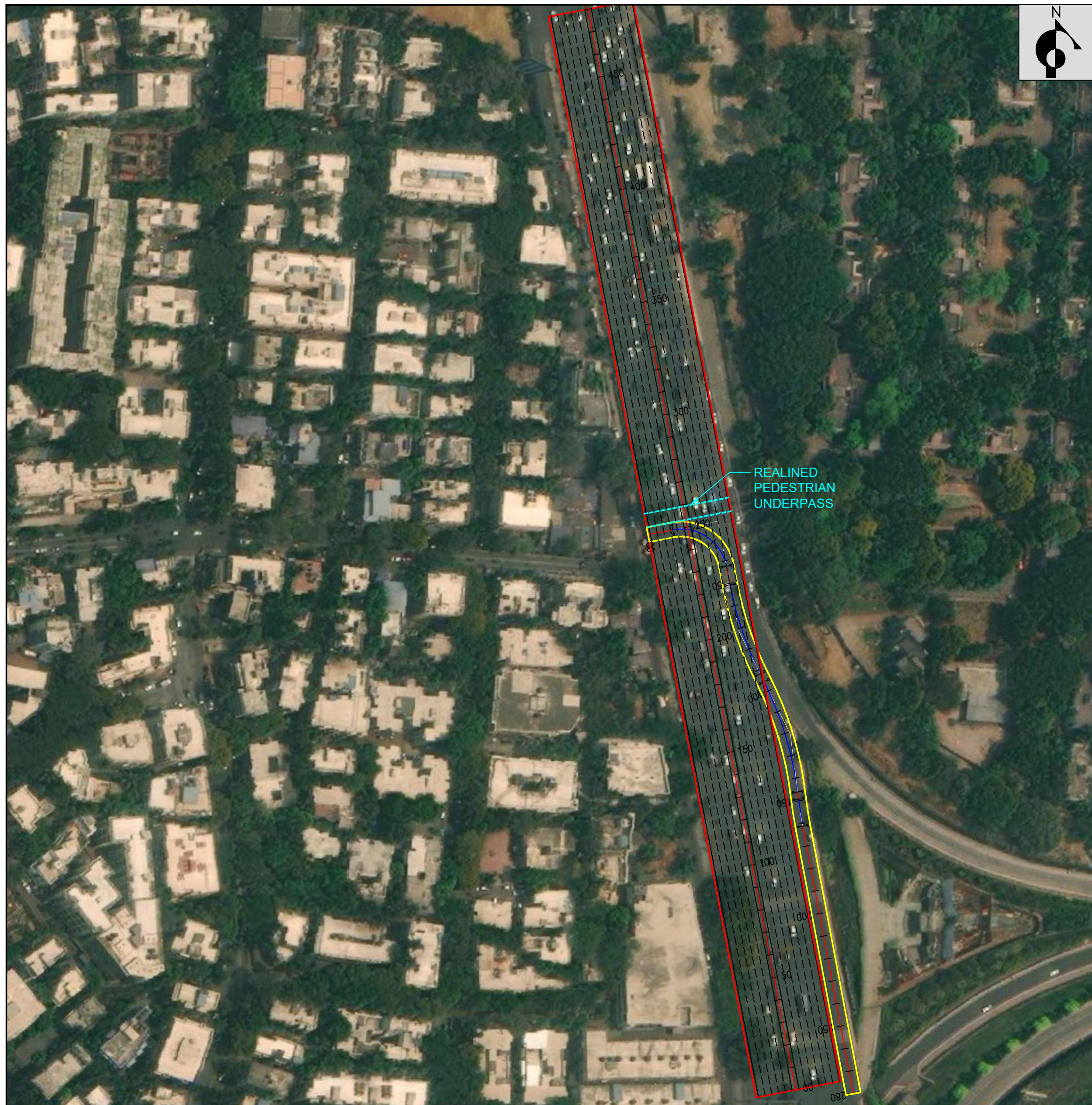
Western Express Highway



NOTES:-

- 1) ALL DIMENSION ARE IN MILLIMETERS.
- 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
- 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
- 4) GRADE OF STEEL TO BE USED FE-500D
- 5) DEVELOPMENT LENGTH 50D
- 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
SUDHIR PHADKE FLYOVER JUNCTION ON WESTERN EXPRESS HIGHWAY PLAN & PROFILE FROM CH.0+250 TO CH.0+700 TENDER PURPOSE ONLY	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div> <table><tr><td>DRG NO</td><td>SCALE</td><td>DATE</td><td>DRN BY</td></tr><tr><td>TUSPL/BMC/WEH/P&F/01</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/WEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.
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PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

VILE PARLE HANUMAN MANDIR
ROAD JUNCTION ON WESTERN
EXPRESS HIGHWAY

JUNCTION IMPROVEMENT FOR
ACCESS CONTROL

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

Telefax : +91 22 26655335

contact@tandonandassociates.com|www.tandonandassociates.com

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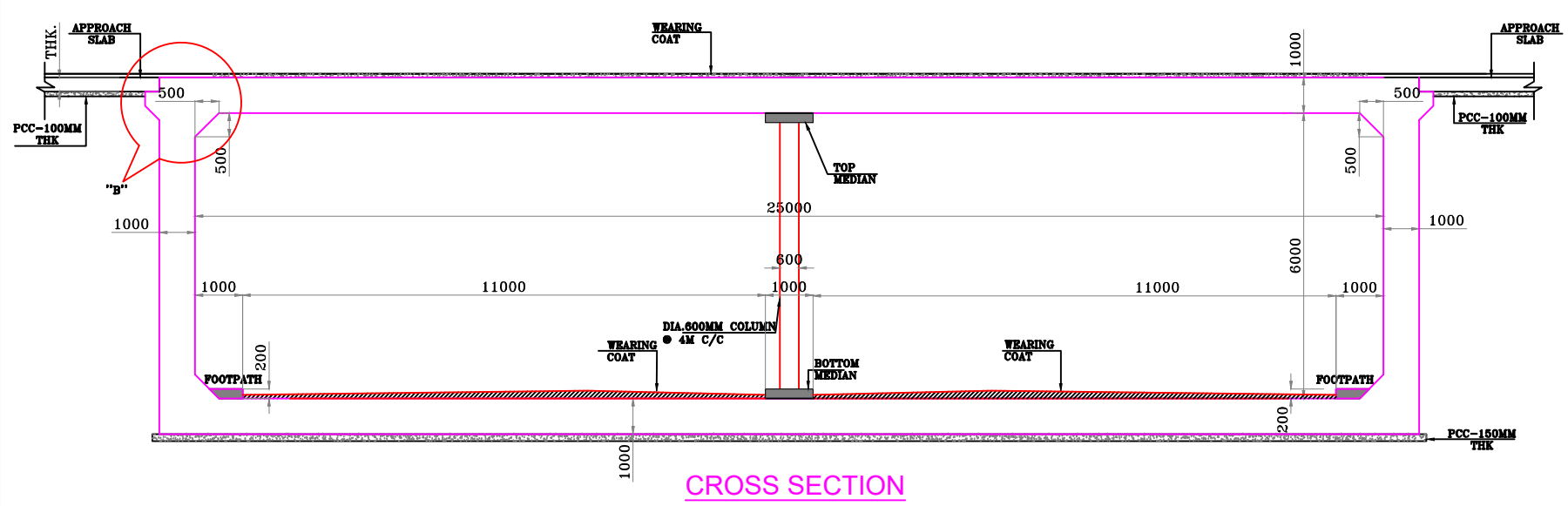
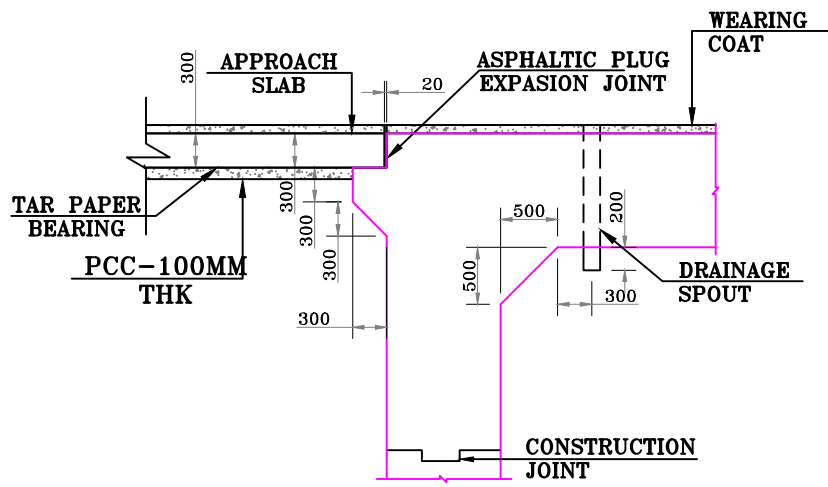
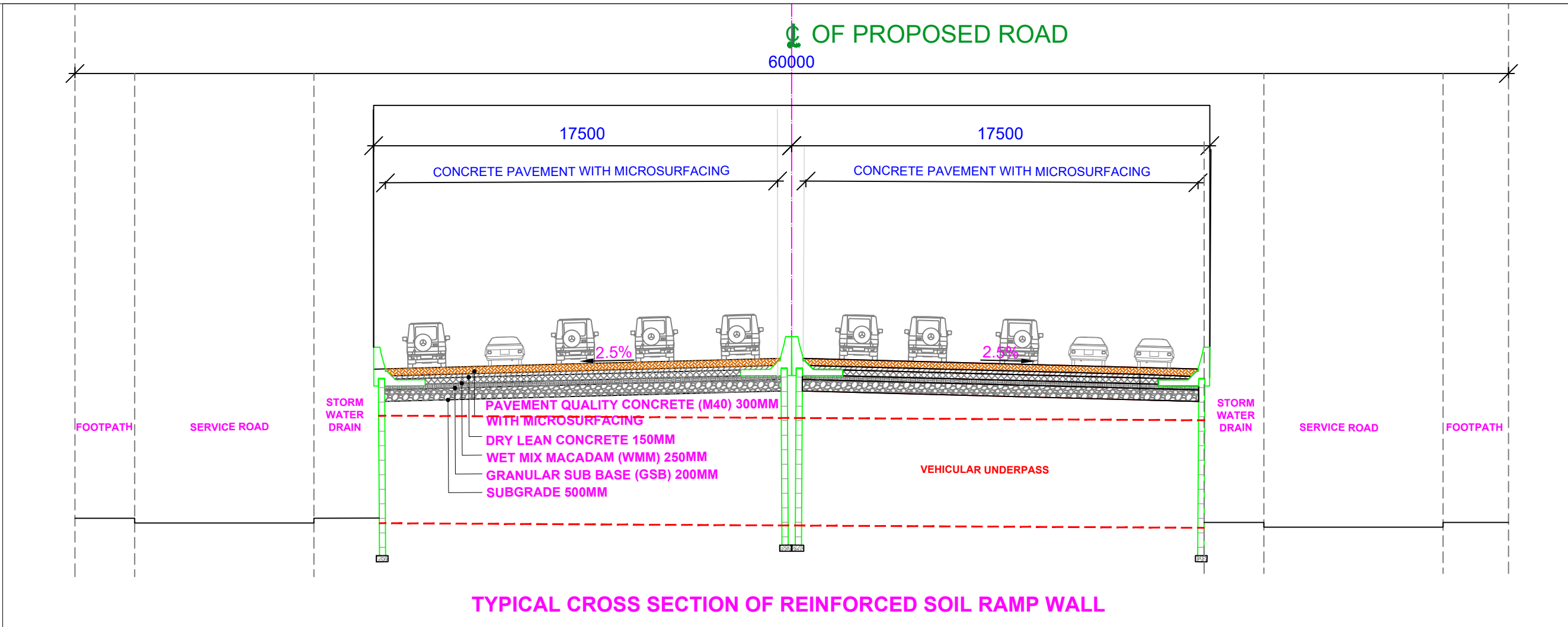
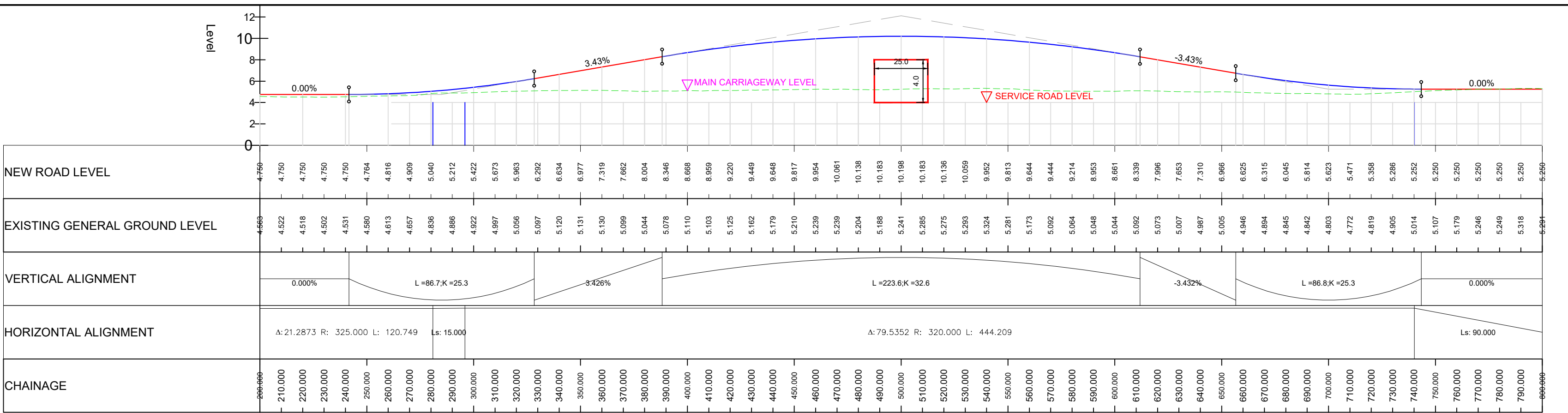
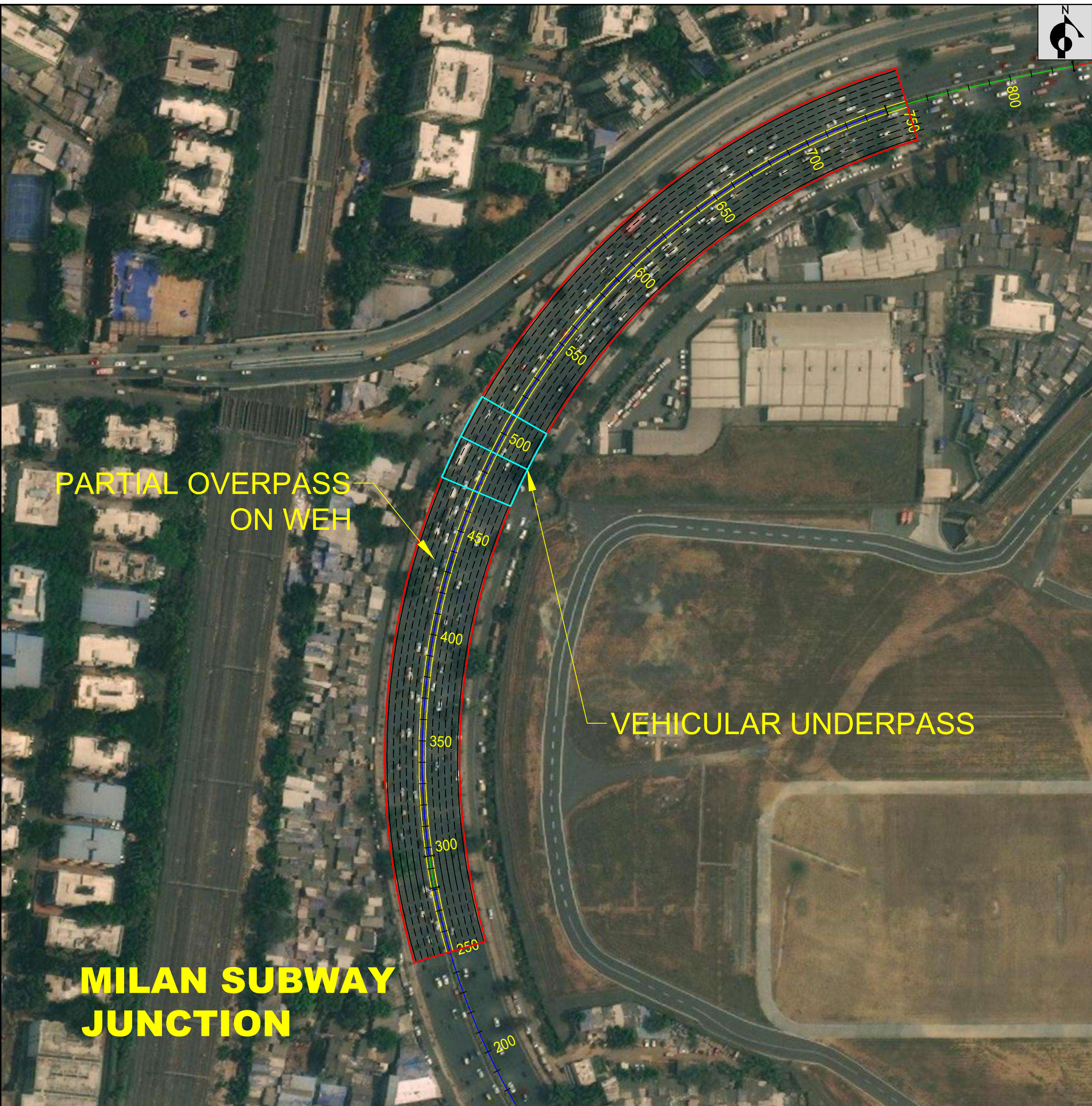
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Ravindra S.

TENDER PURPOSE ONLY

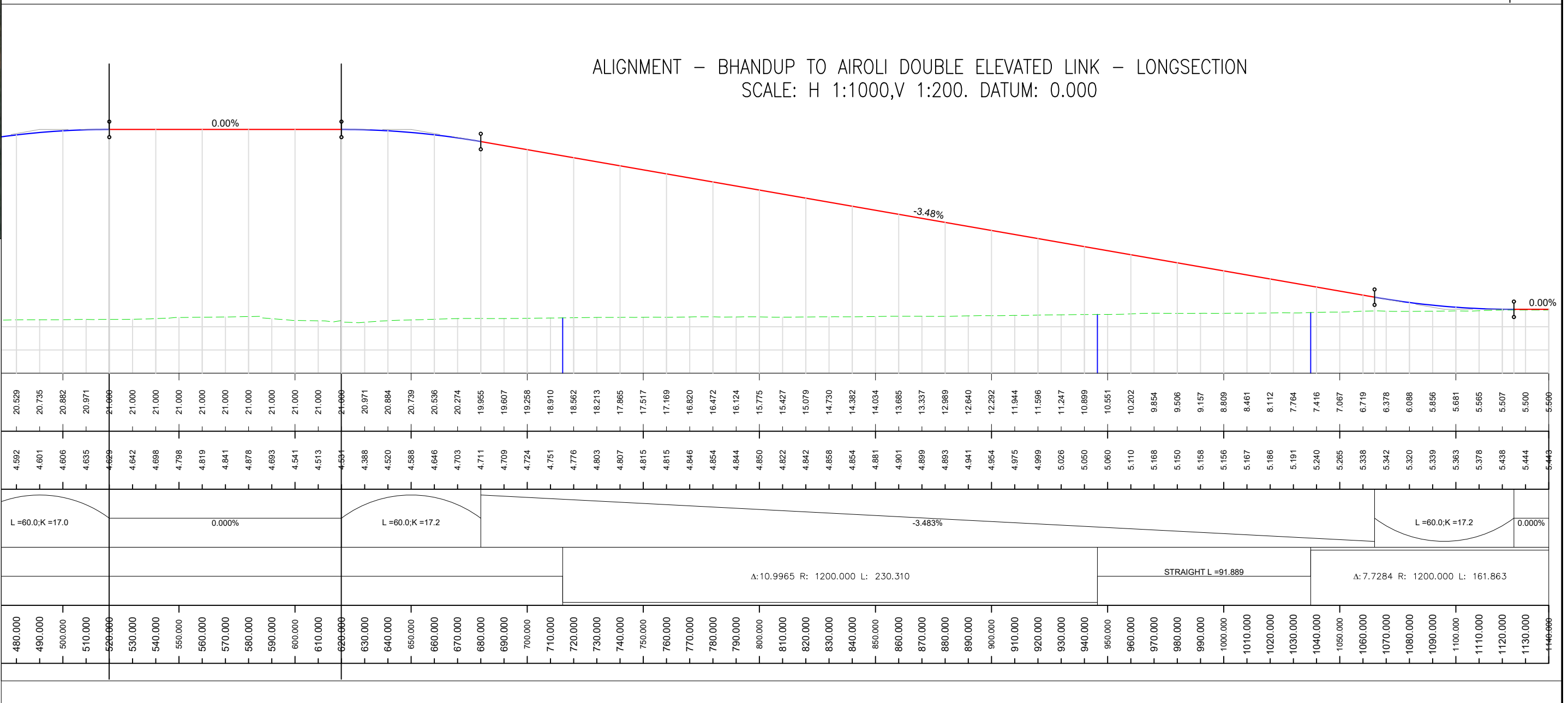
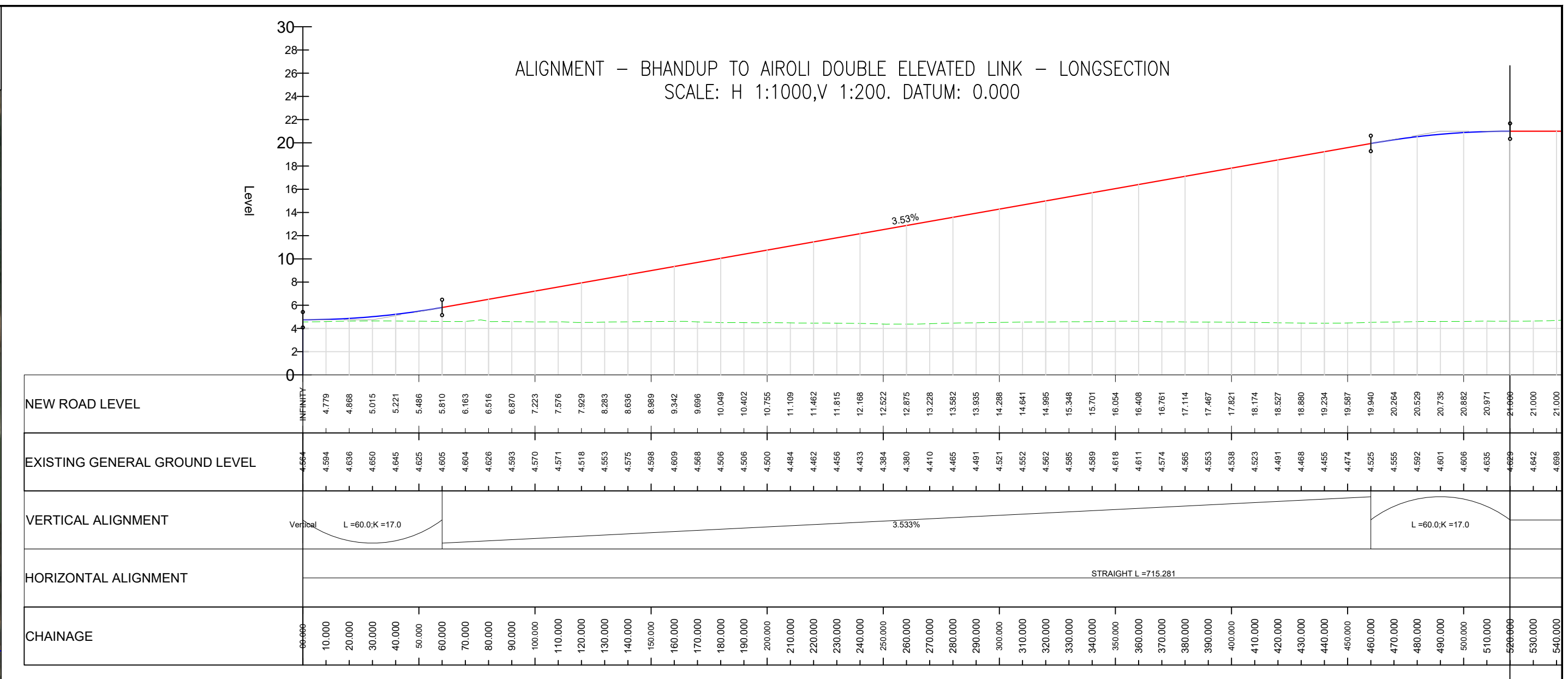
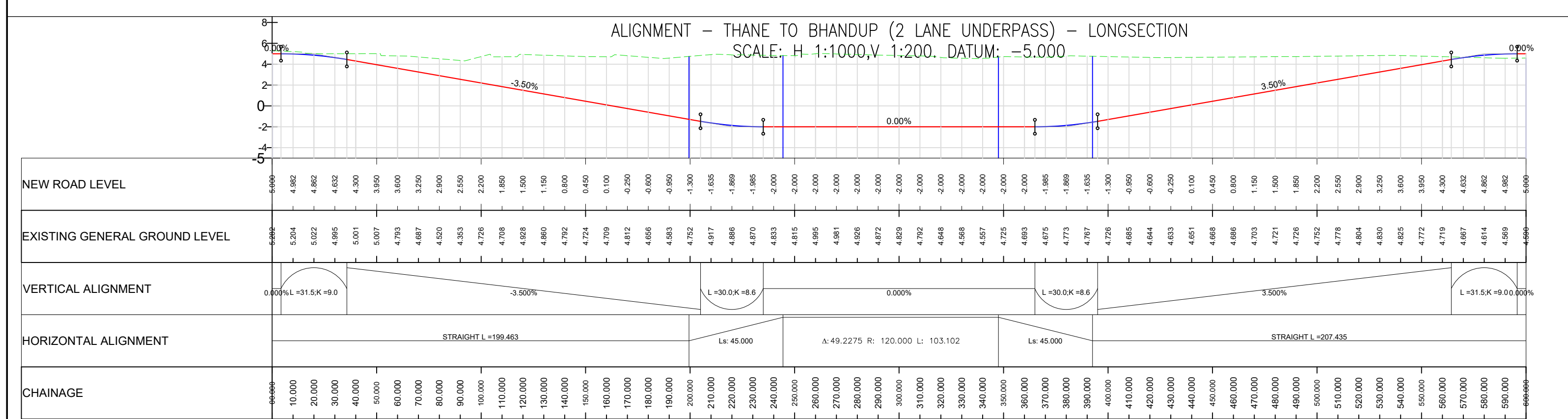
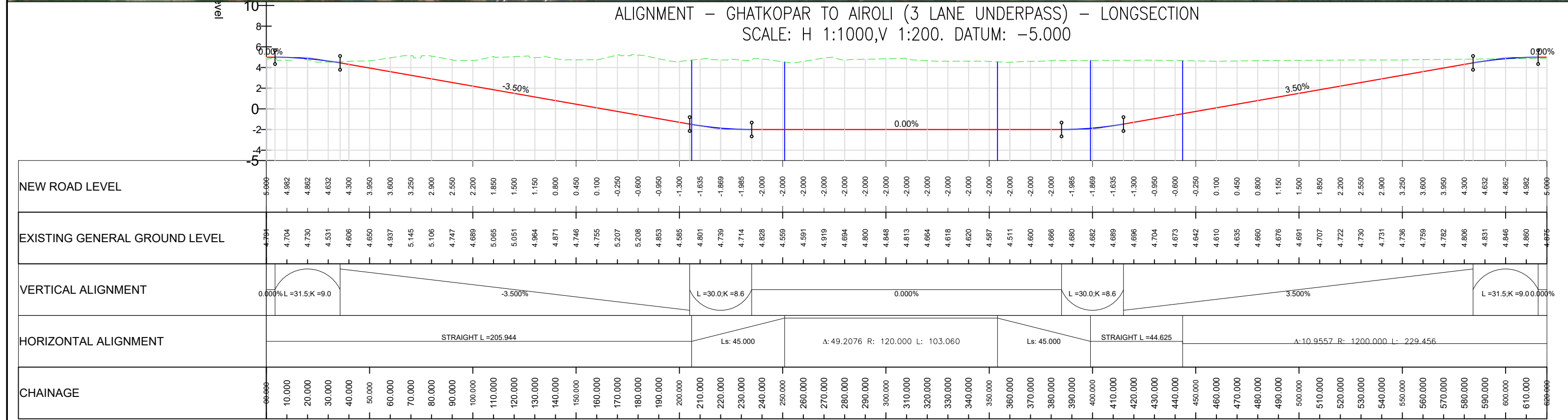
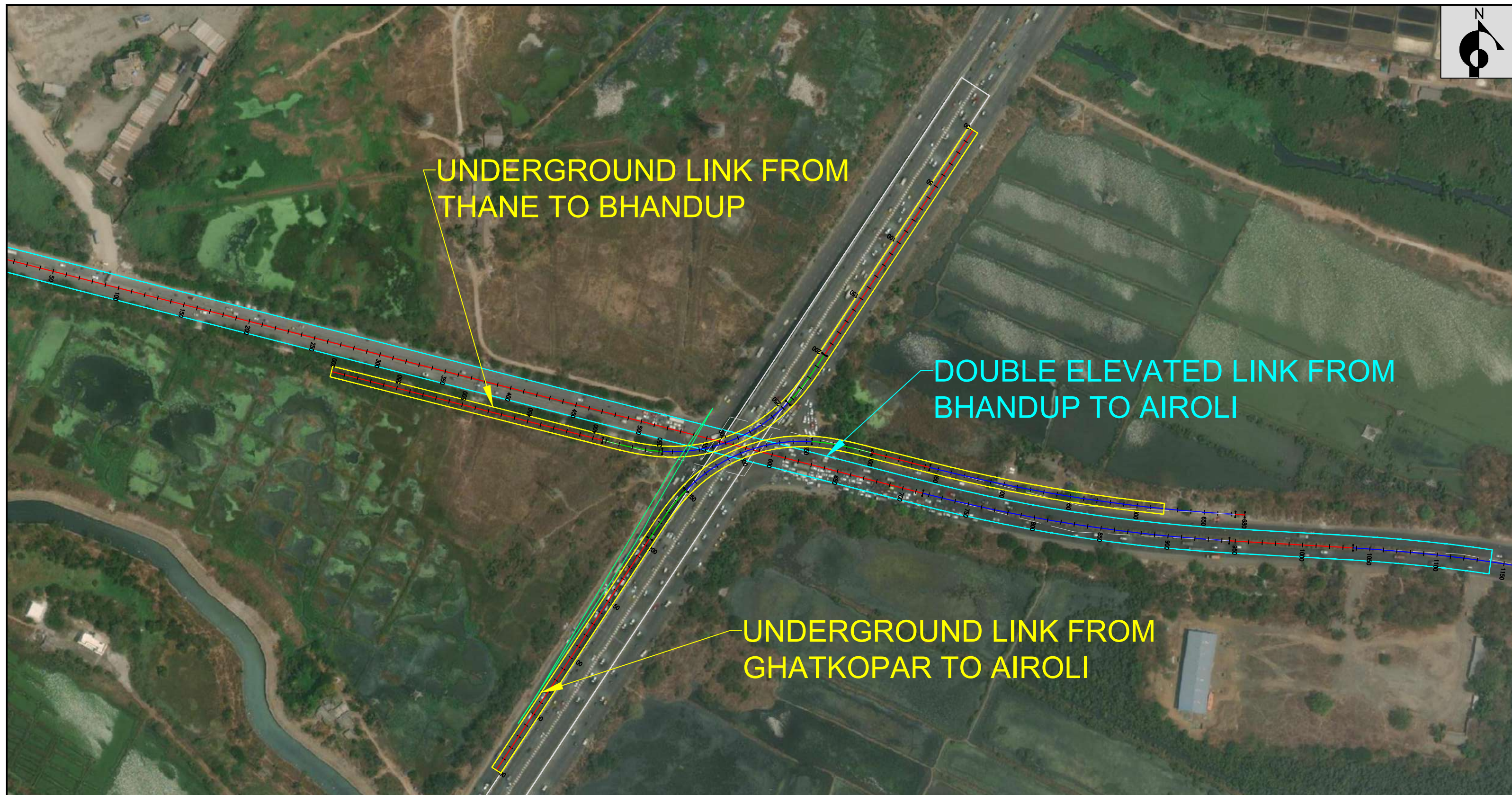


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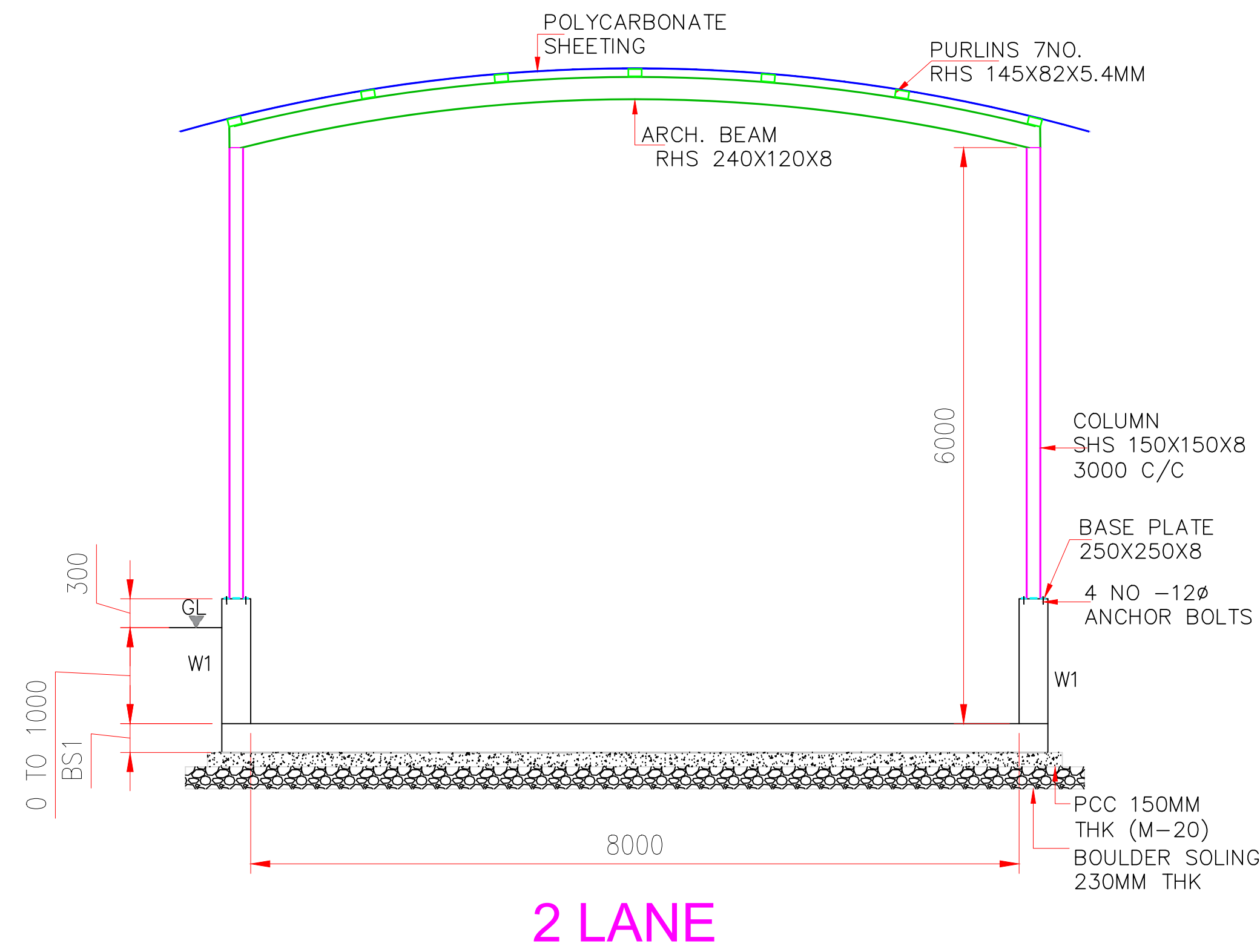
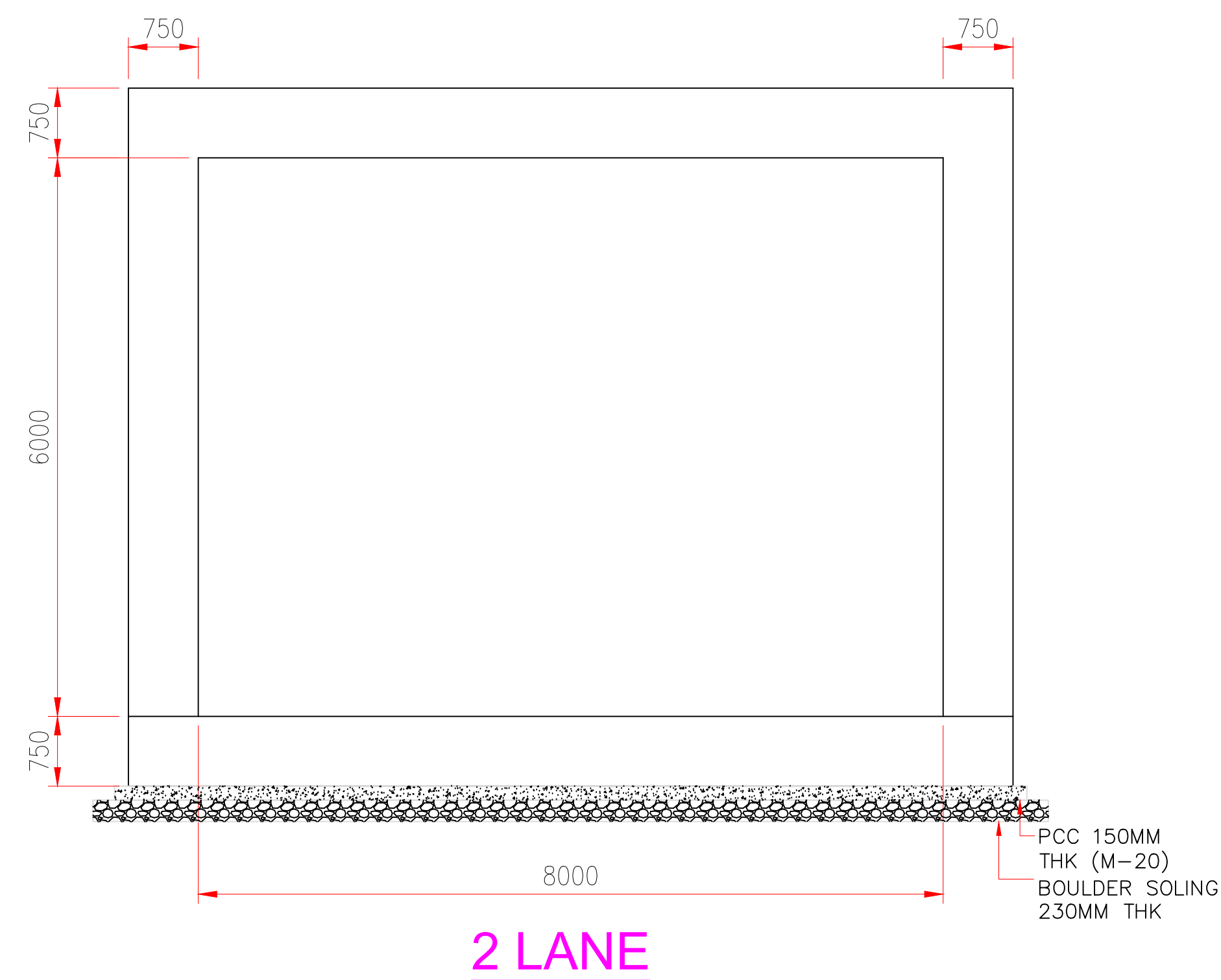
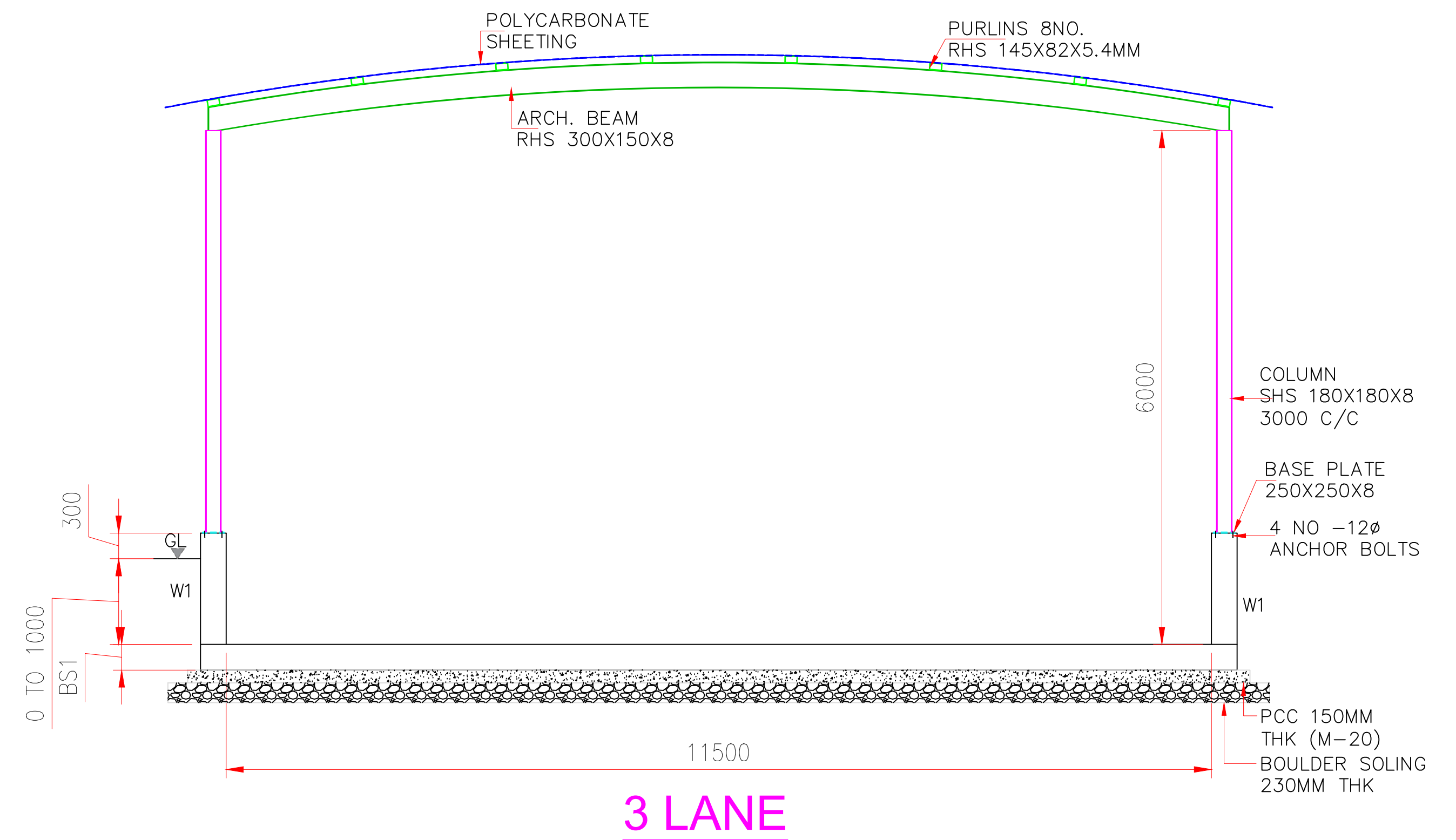
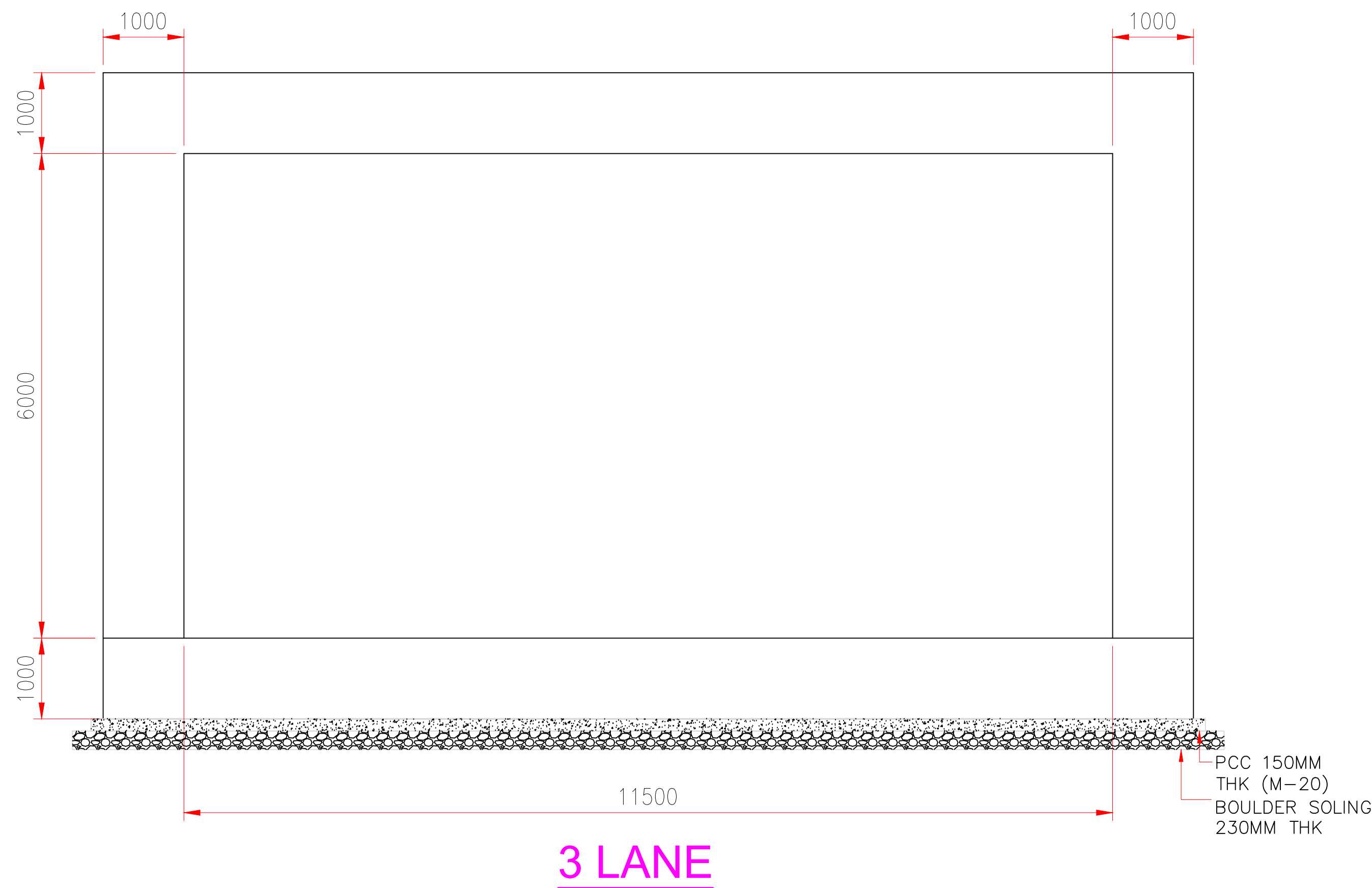
Eastern Express Highway



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UNDERPASSES AND DOUBLE ELEVATED OVERPASS AT AIROLI JUNCTION	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com
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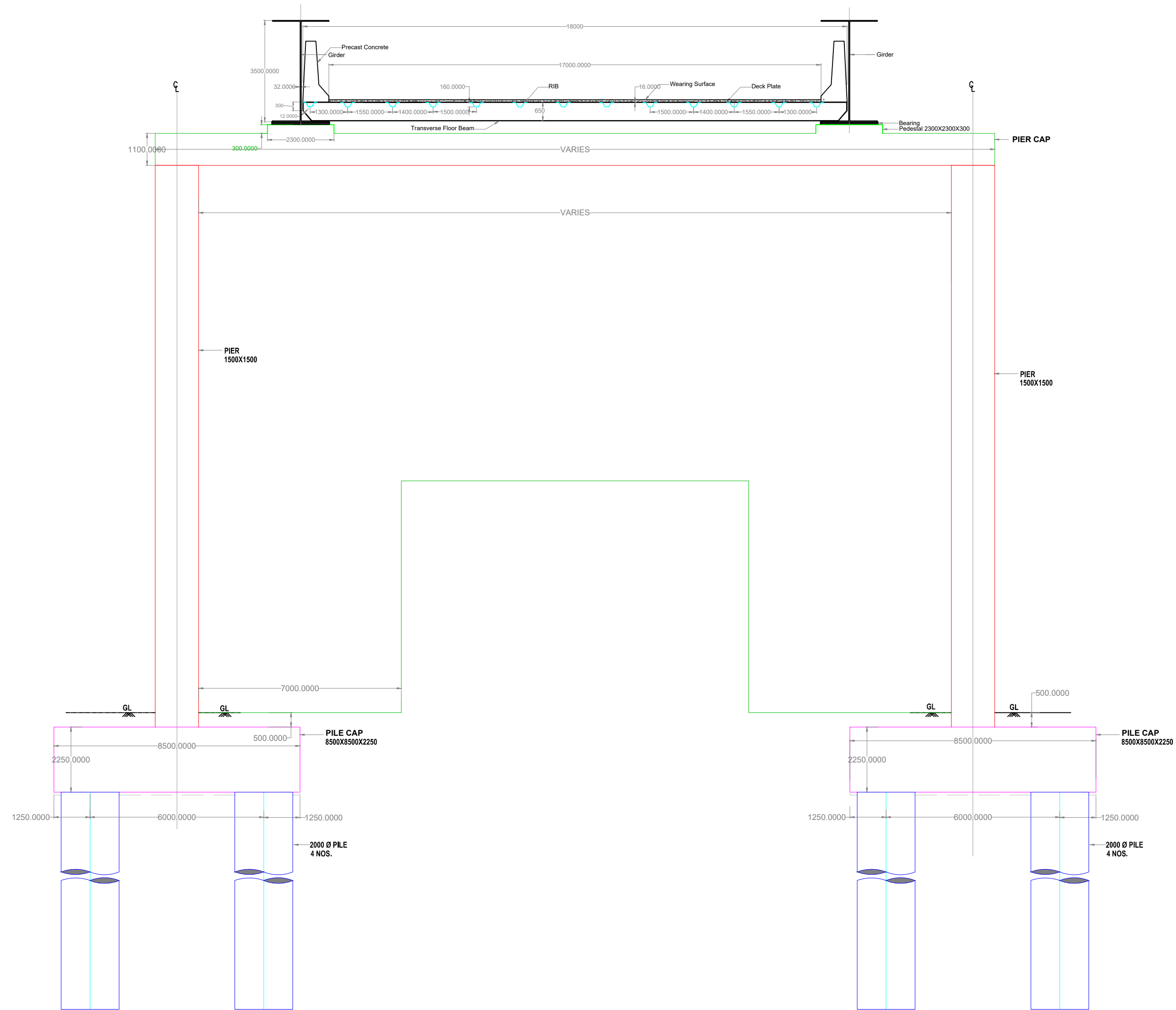


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- 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
- 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
- 4) GRADE OF STEEL TO BE USED FE-500D
- 5) DEVELOPMENT LENGTH 50D
- 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

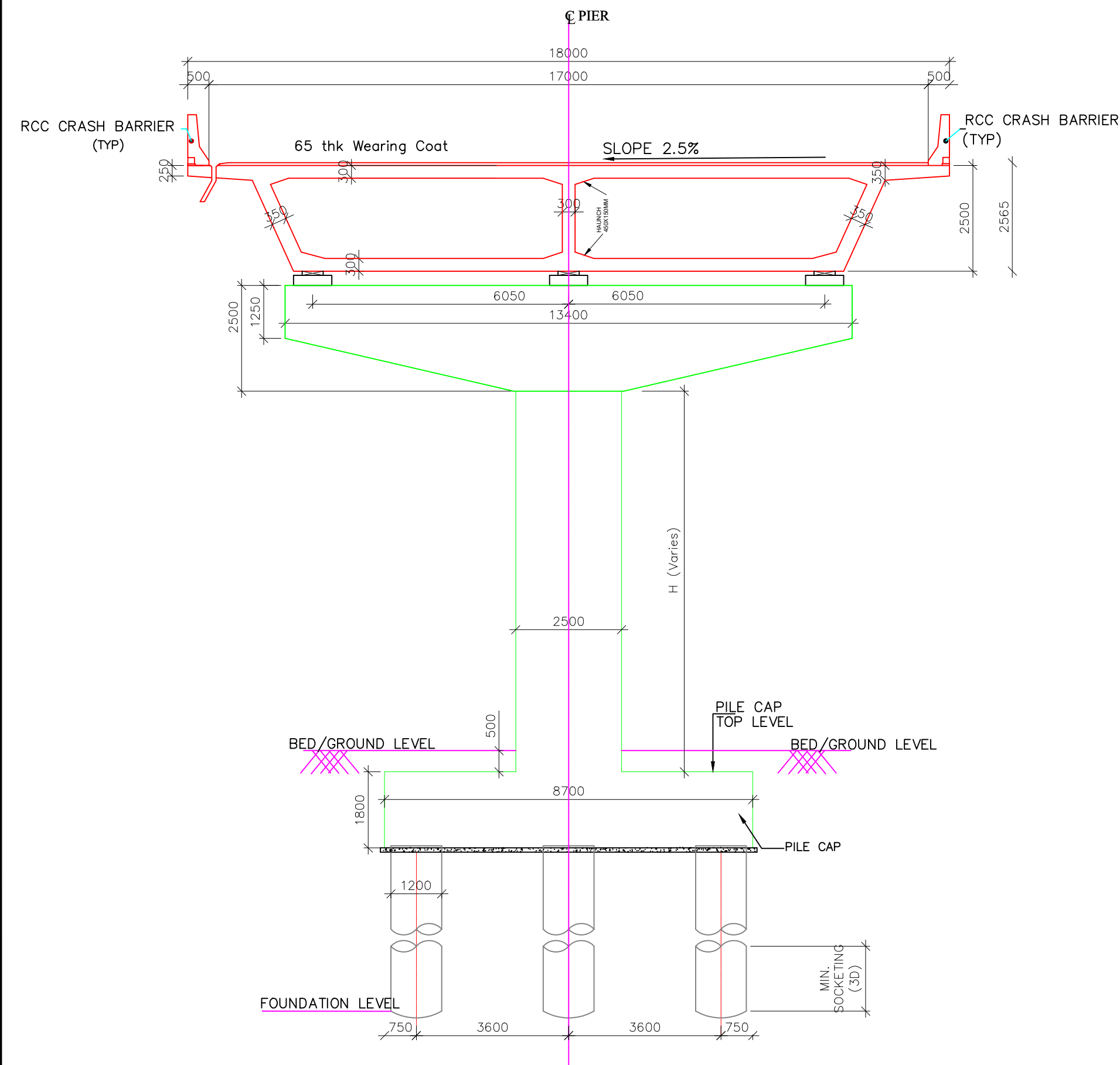
NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
UNDERPASS DETAILS	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/EEH/GAD/01	SCALE:- NTS	20-10-2023	RAVINDRA S.



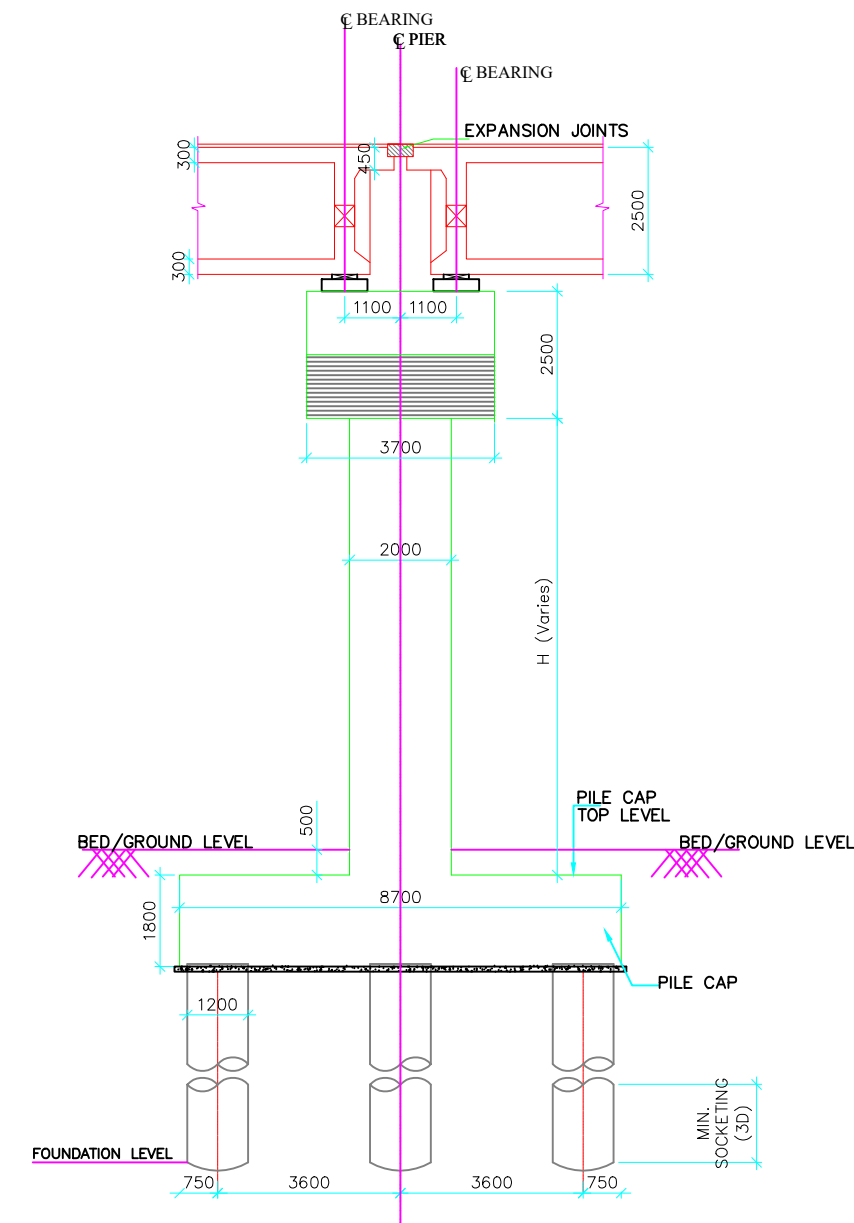


LOGITION SECTION VIEW
(SCALE 1:100)

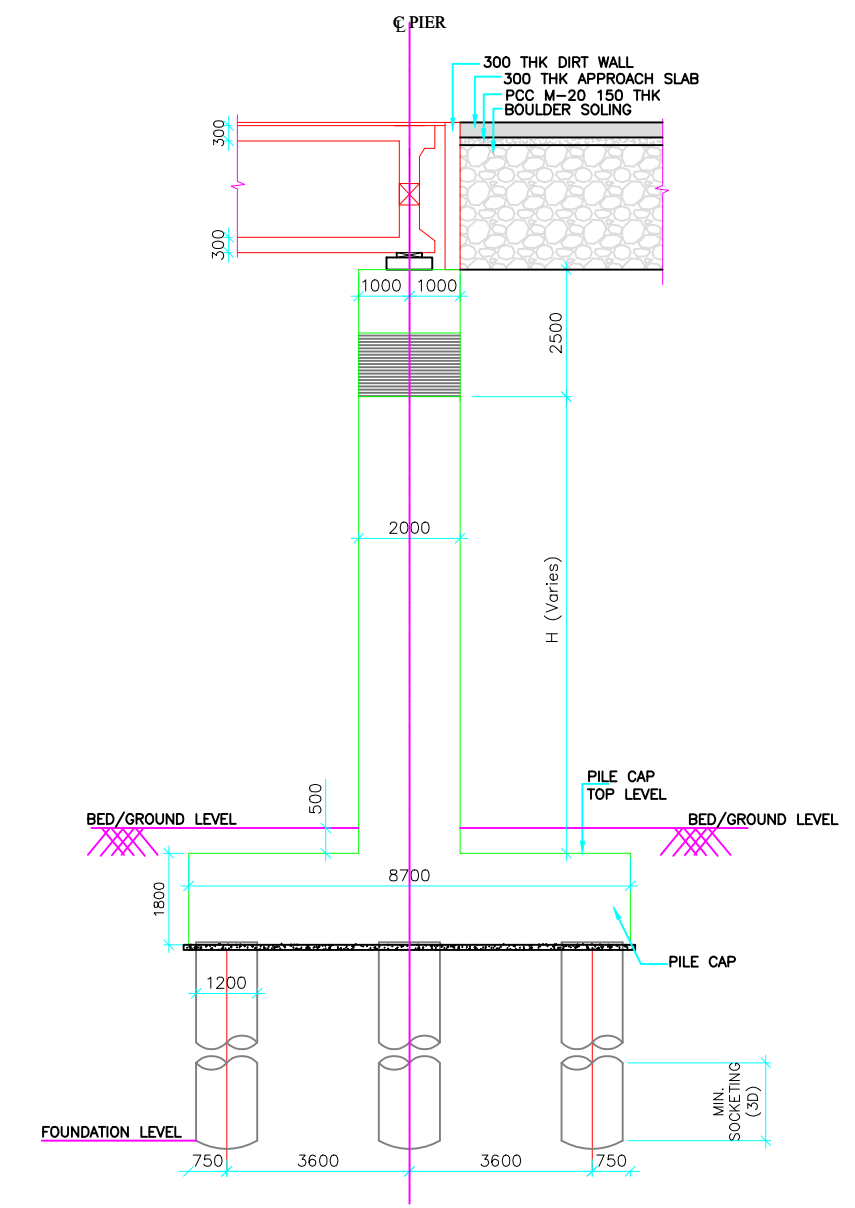
NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT				
OVERPASS DETAILS 100M SPAN 18M WIDTH TENDER PURPOSE ONLY	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) 	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassocaies.com www.tandonandassociates.com				
			DRG NO	SCALE	DATE	SHEET	DRN BY
			TUSPL/BMC/VD/STR/414	SCALE:- NTS	01-08-2023	1	P.P





CROSS SECTION (TYP)

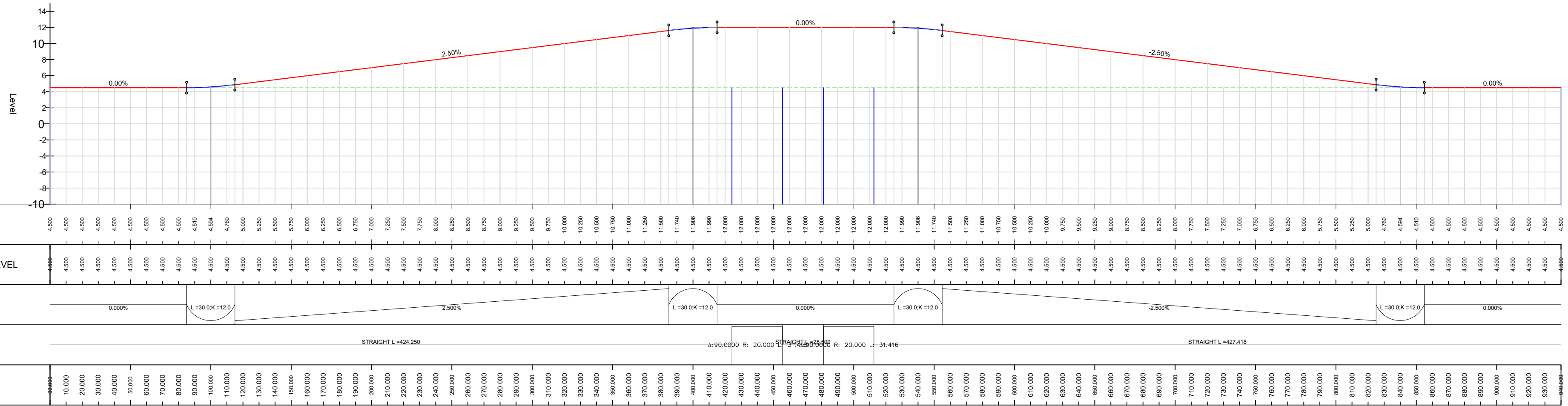
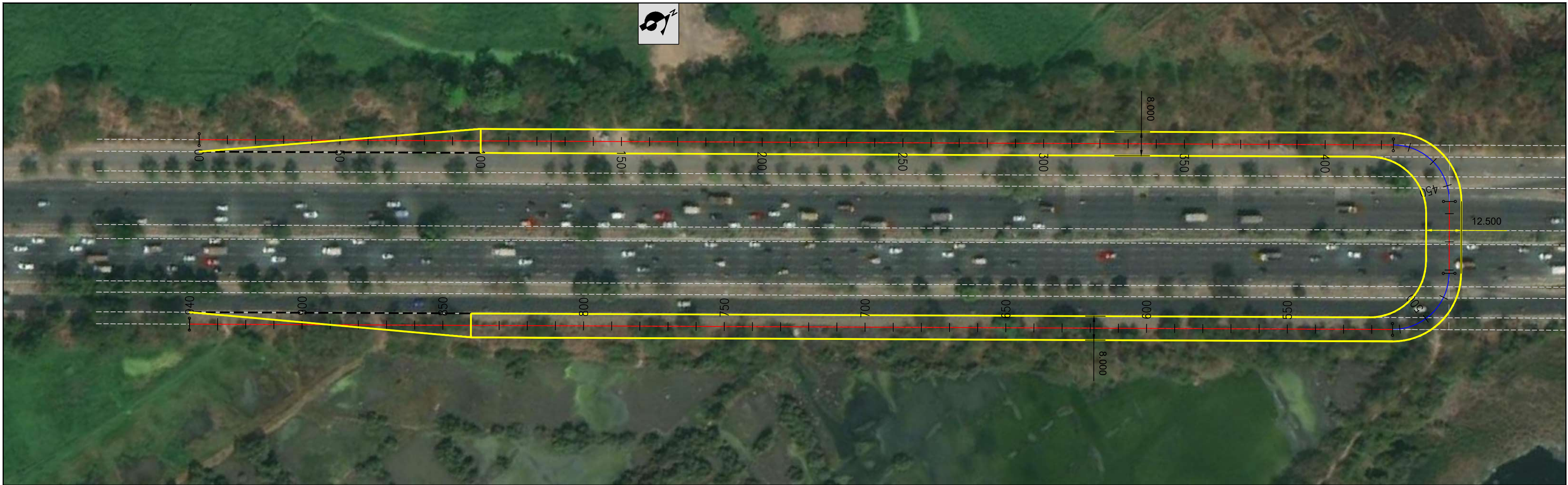




EJ - LONGITUDINAL SECTION (TYP)

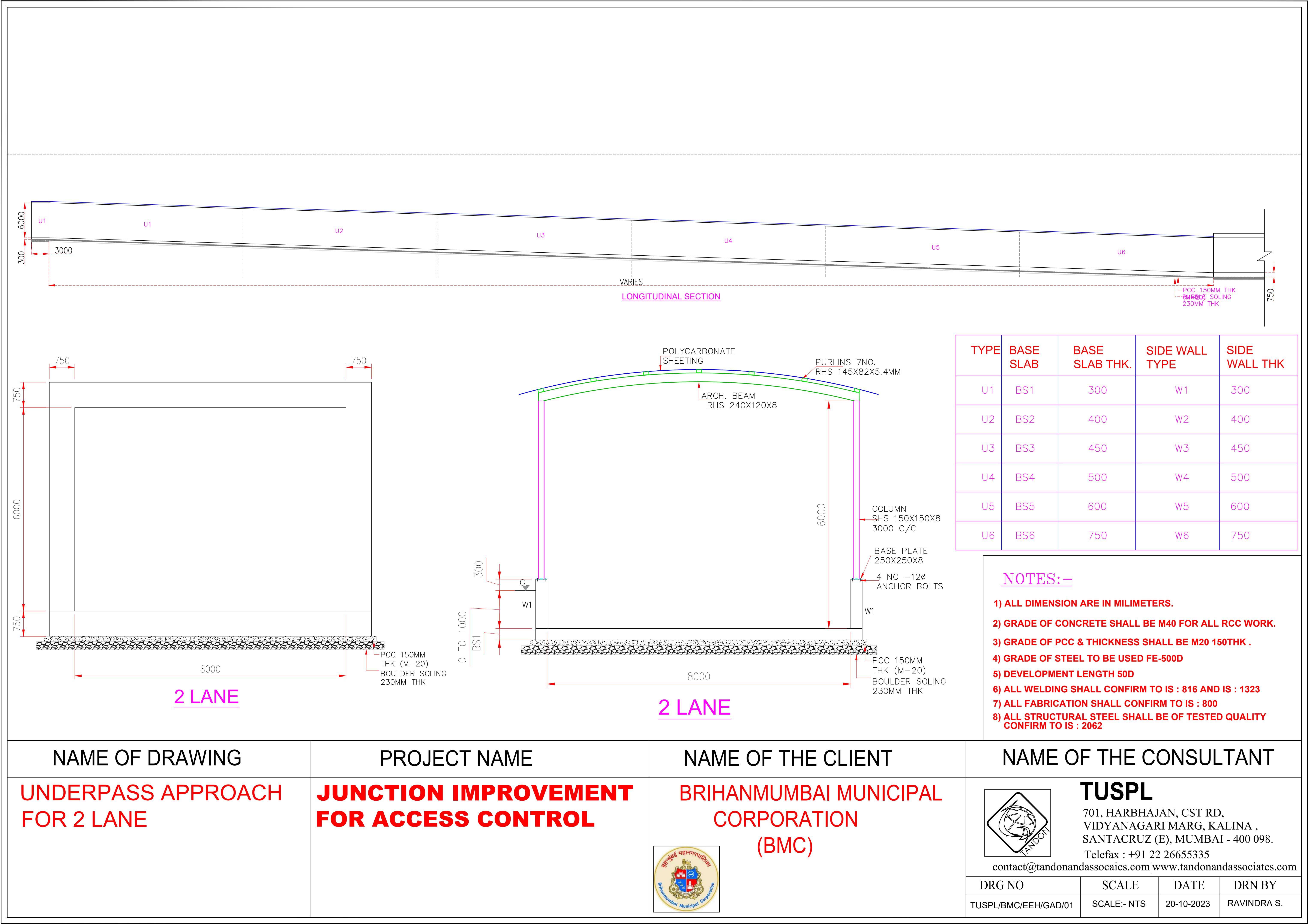


ABUTMENT

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
OVERPASS DETAILS 30M SPAN 18M WIDTH	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com								
TENDER PURPOSE ONLY			<table> <tr> <th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr> <tr> <td>TUSPL/BMC/DB/STR/505</td><td>SCALE:- NTS</td><td>11-01-2023</td><td>Ravindra .S</td></tr> </table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/DB/STR/505	SCALE:- NTS	11-01-2023	Ravindra .S
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/DB/STR/505	SCALE:- NTS	11-01-2023	Ravindra .S								





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT			
U-TURN FOR KANJURMARG ON EASTERN EXPRESS HIGHWAY PLAN & PROFILE FROM CH.0+00 TO CH.0+940	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div><div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div></div>			
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			TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	AM



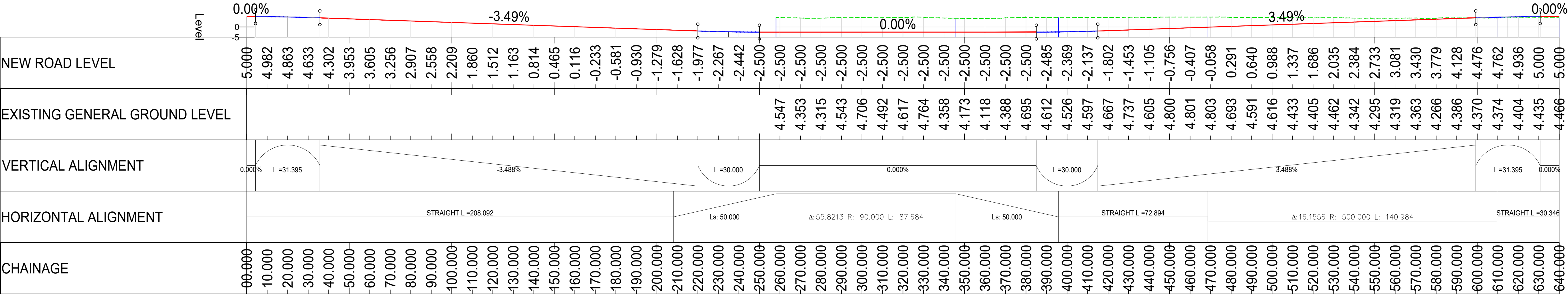
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U2	BS2	400	W2	400
U3	BS3	450	W3	450
U4	BS4	500	W4	500
U5	BS5	600	W5	600
U6	BS6	750	W6	750

- NOTES:-**
- 1) ALL DIMENSION ARE IN MILLIMETERS.
 - 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
 - 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
 - 4) GRADE OF STEEL TO BE USED FE-500D
 - 5) DEVELOPMENT LENGTH 50D
 - 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
 - 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
 - 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
UNDERPASS APPROACH FOR 2 LANE	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div>								
			<table><tr><th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr><tr><td>TUSPL/BMC/EEH/GAD/01</td><td>SCALE:- NTS</td><td>20-10-2023</td><td>RAVINDRA S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/EEH/GAD/01	SCALE:- NTS	20-10-2023	RAVINDRA S.
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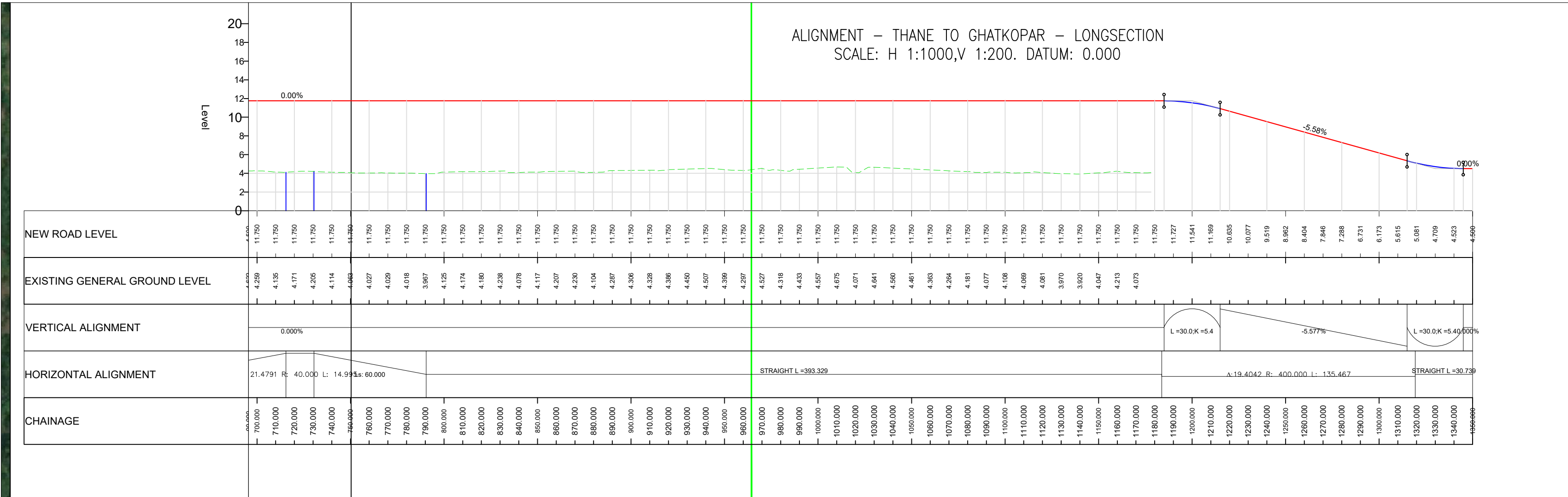
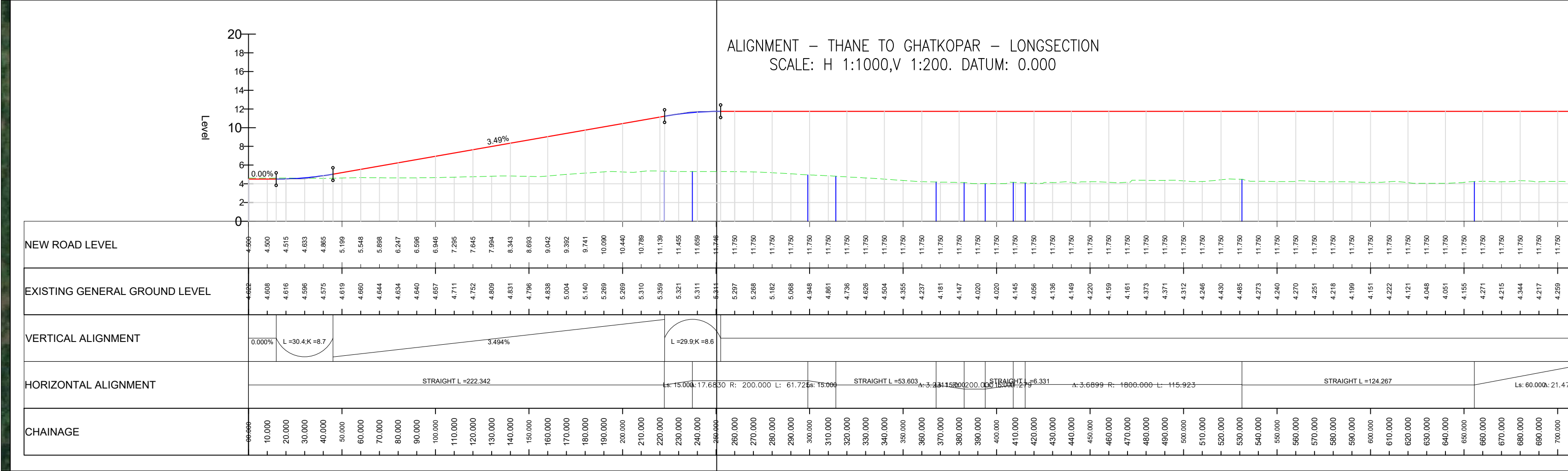


ALIGNMENT - THANE TO POWAI - LONGSECTION
SCALE: H 1:1000,V 1:1000. DATUM: -5.000



NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
THANE TO POWAI JUNCTION ON EASTERN EXPRESS HIGHWAY PLAN & PROFILE FROM CH.0+00 TO CH.0+640	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div>								
TENDER PURPOSE ONLY		<div></div>	<table><tr><td>DRG NO</td><td>SCALE</td><td>DATE</td><td>DRN BY</td></tr><tr><td>TUSPL/BMC/EEH/P&F/01</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.
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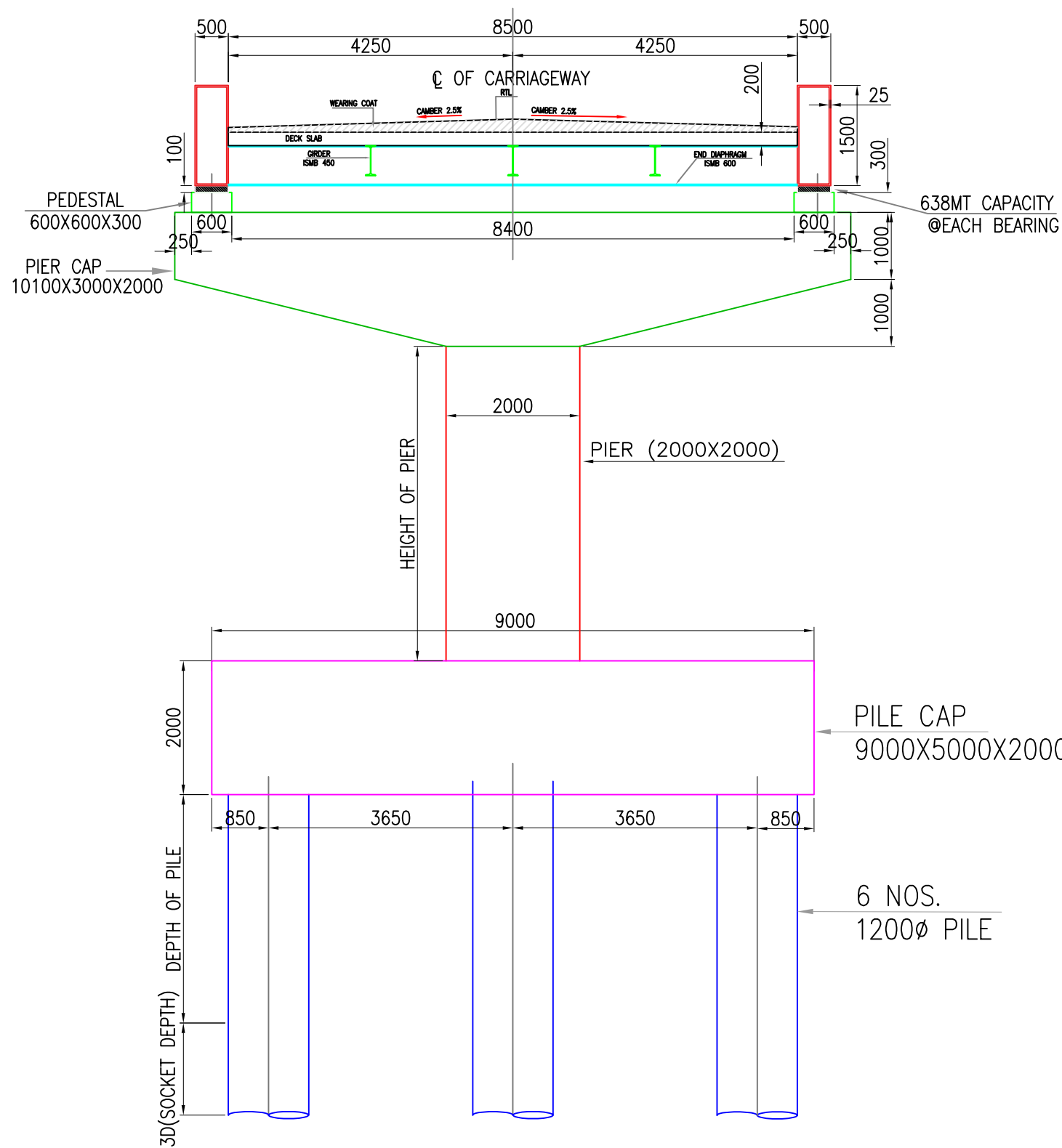
APPROACHES AND BOX DETAILS					
POWAI					
From Ch.	To Ch.	Length	Clear Width	Remark	Depth Below Ogl
0	40	40	8	U1	1.2
40	85	45	8	U2	2.4
85	125	40	8	U3	3.6
125	165	40	8	U4	4.8
165	210	45	8	U5	6
210	250	40	8	U6	7.2
250	420	170	8	box 8x6	7.2
420	460	40	8	U6	7.2
460	505	45	8	U5	6
505	545	40	8	U4	4.8
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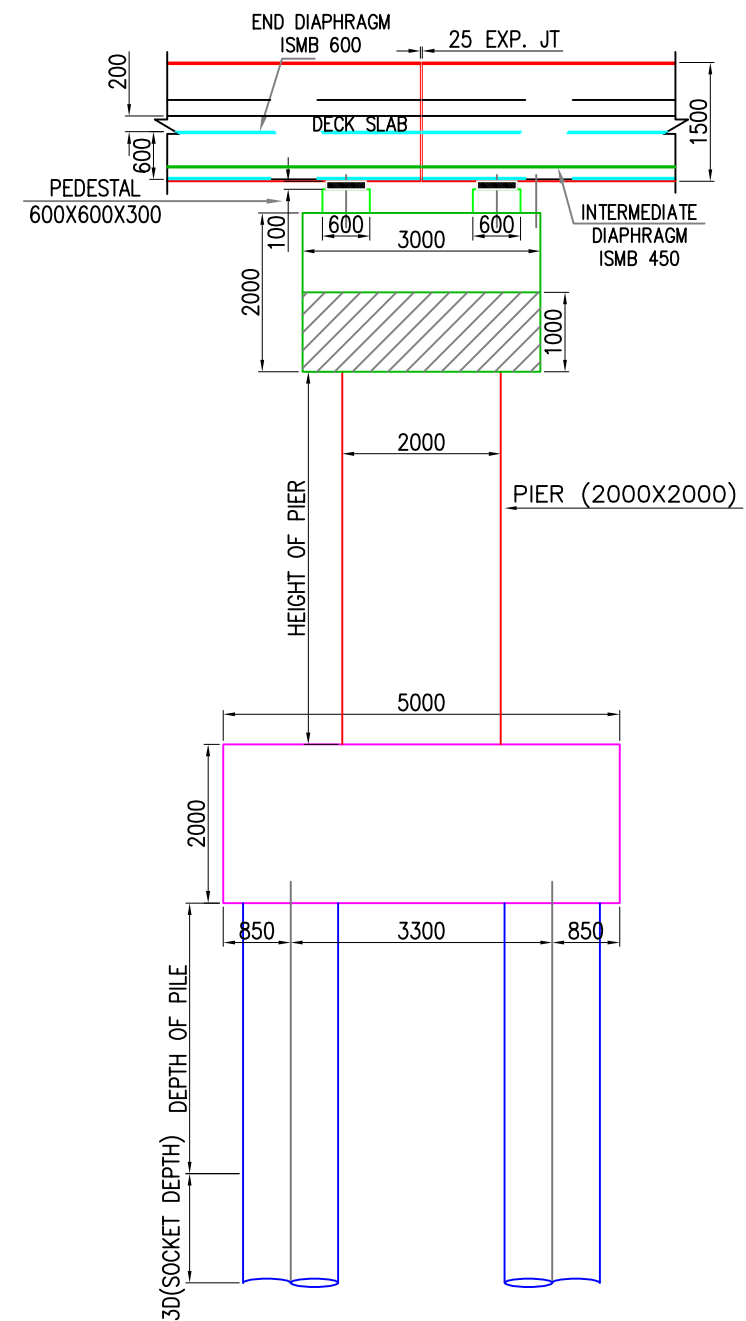
NOTES:-

- 1) ALL DIMENSION ARE IN MILLIMETERS.
- 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
- 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
- 4) GRADE OF STEEL TO BE USED FE-500D
- 5) DEVELOPMENT LENGTH 50D
- 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
THANE TO GHATKOPAR ON EASTERN EXPRESS HIGHWAY PLAN & PROFILE FROM CH.0+00 TO CH.1+350	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com								
TENDER PURPOSE ONLY			<table><tr><th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr><tr><td>TUSPL/BMC/EEH/P&F/01</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.								





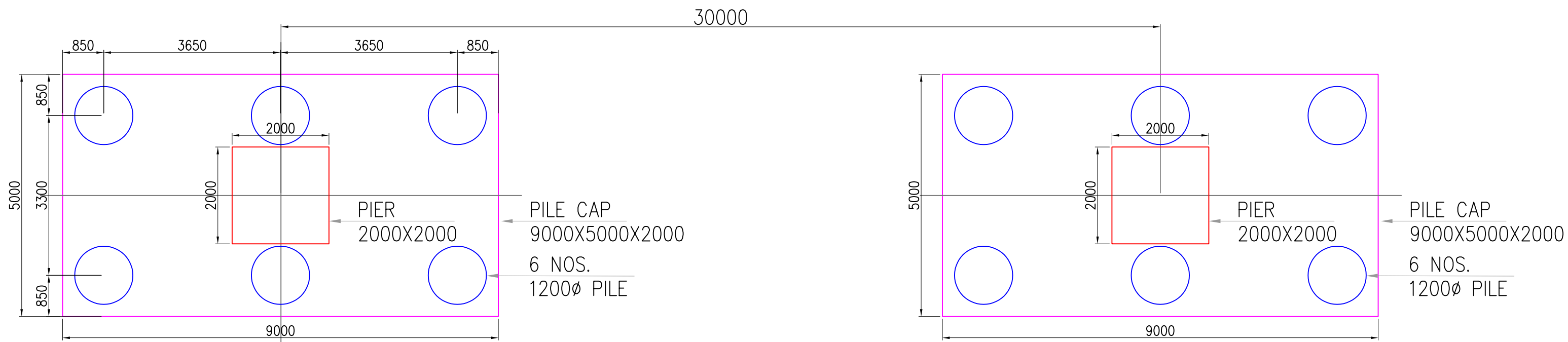
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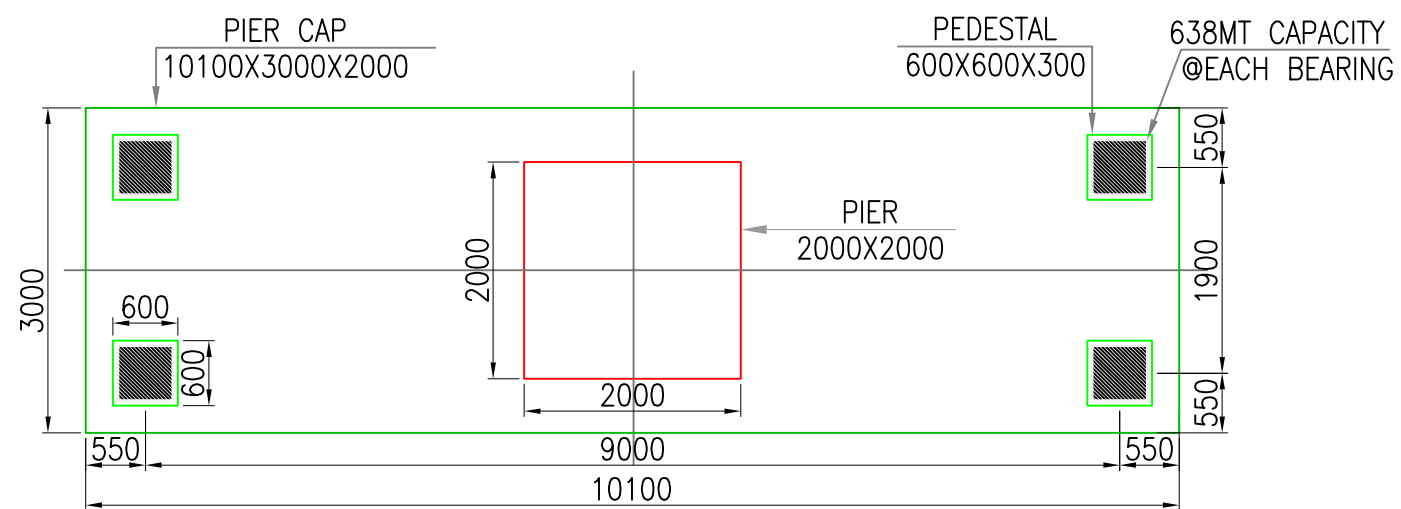
LONGITUDINAL VIEW

- NOTES:-**
- 1) ALL DIMENSION ARE IN MILIMETERS.
 - 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
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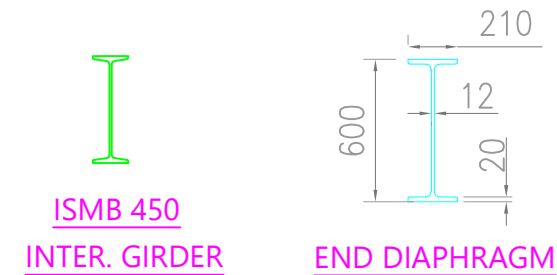
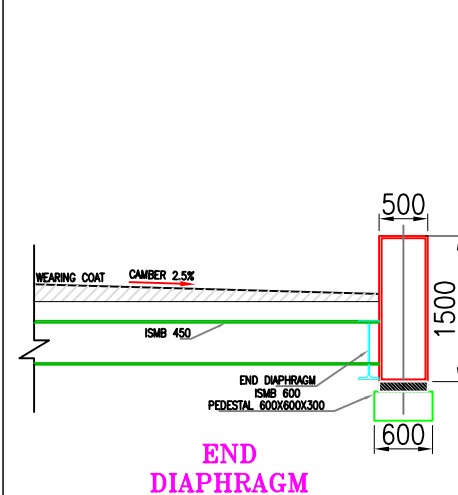
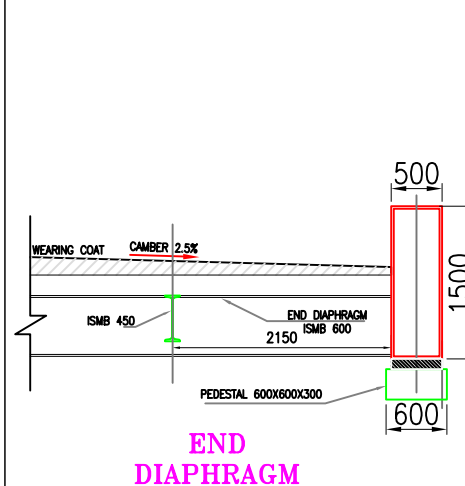
NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
GA DRAWING FOR 8.5M WIDTH & 30M SPAN FOR SINGLE SUPPORT		BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) 	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com/www.tandonandassociates.com								
			<table> <tr> <th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr> <tr> <td>TUSPL/BMC/WSJ/GAD/01</td><td>SCALE:-</td><td>28-10-2023</td><td></td></tr> </table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/WSJ/GAD/01	SCALE:-	28-10-2023	
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/WSJ/GAD/01	SCALE:-	28-10-2023									



PILE CAP PLAN FOR 30 M SPAN



PIER CAP PLAN



NOTES:-

- 1) ALL DIMENSION ARE IN MILLIMETERS.
- 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
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- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

GA DRAWING FOR
8.5M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



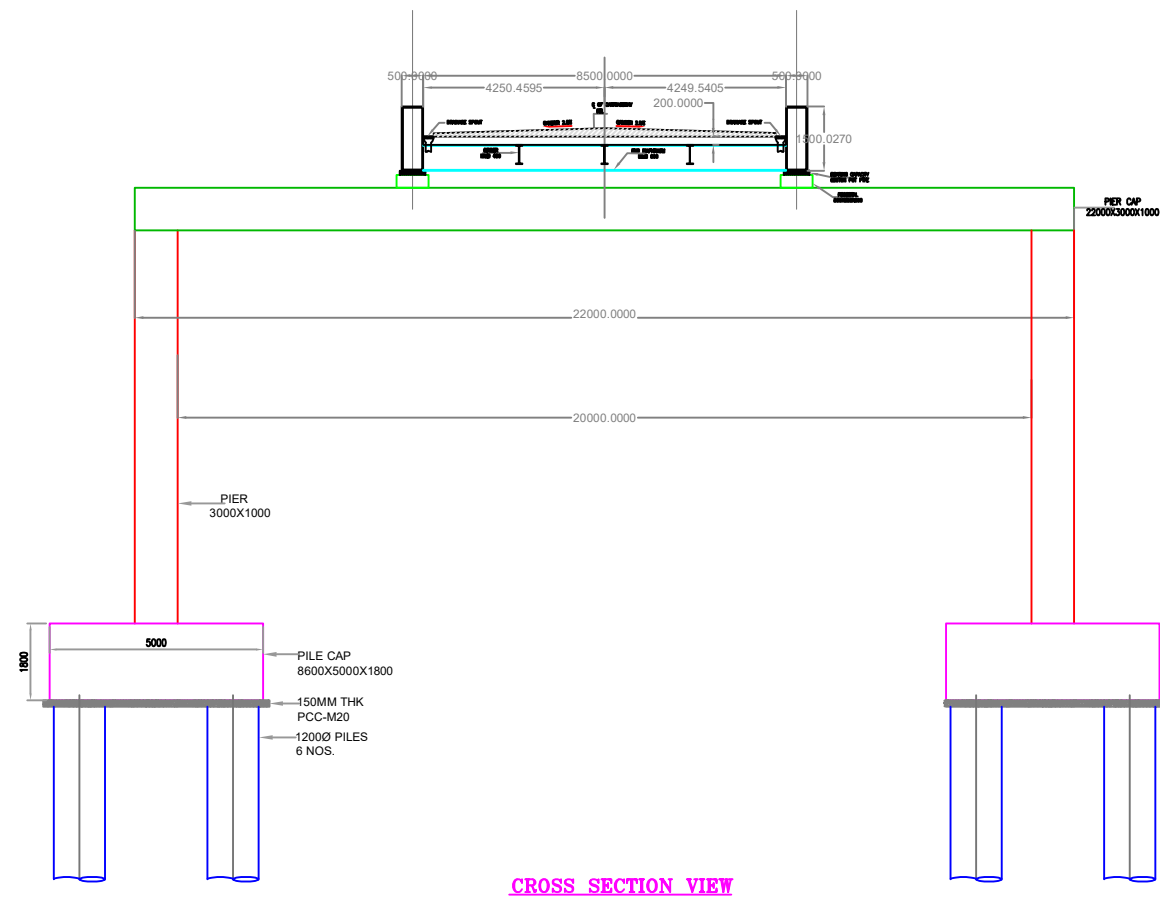
TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

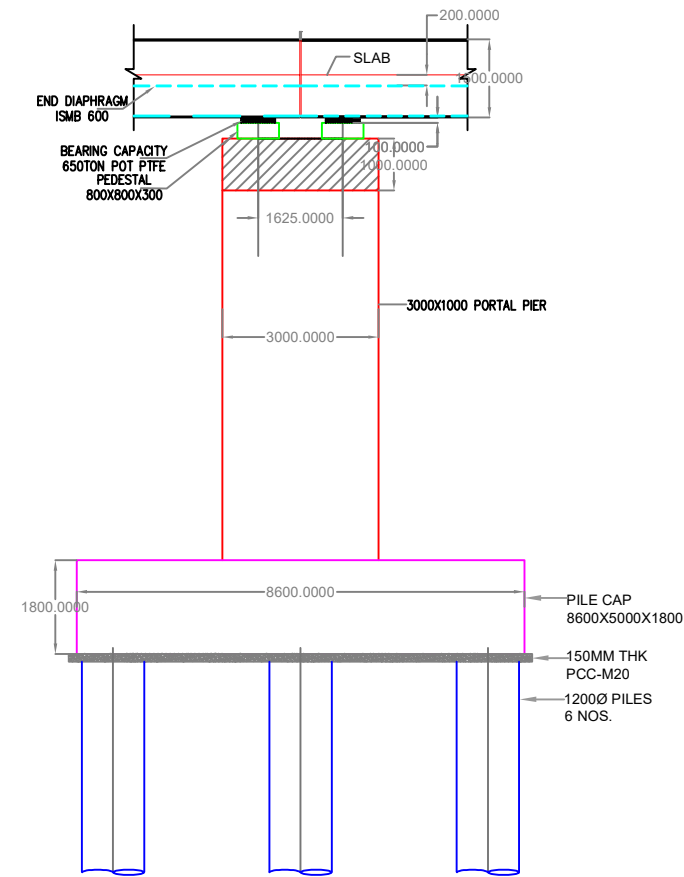
Telefax : +91 22 26655335

contact@tandonandassociates.com/www.tandonandassociates.com

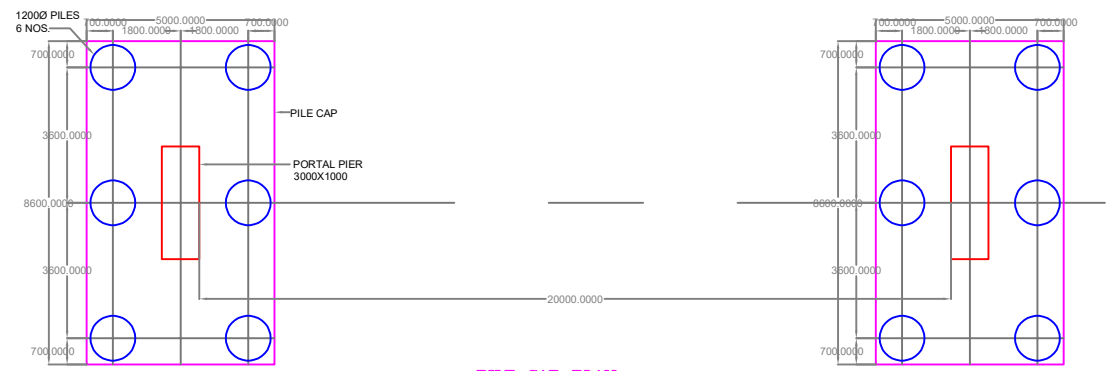
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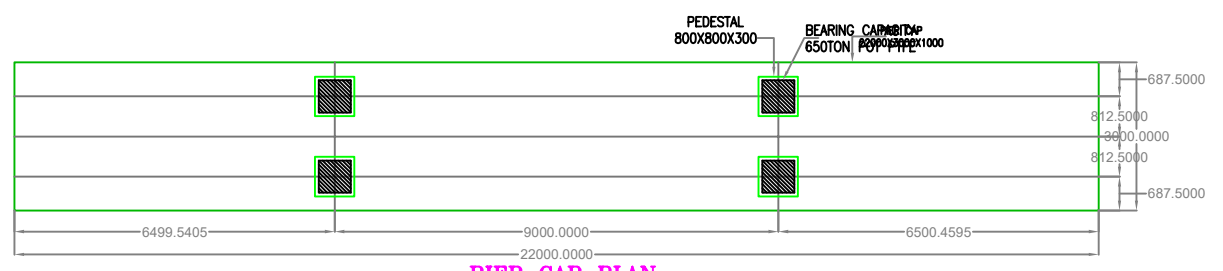
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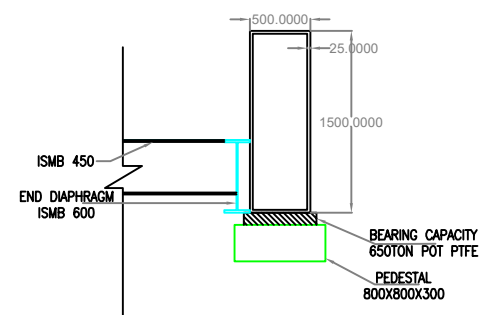
LONGITUDINAL VIEW



PILE CAP PLAN





PIER CAP PLAN

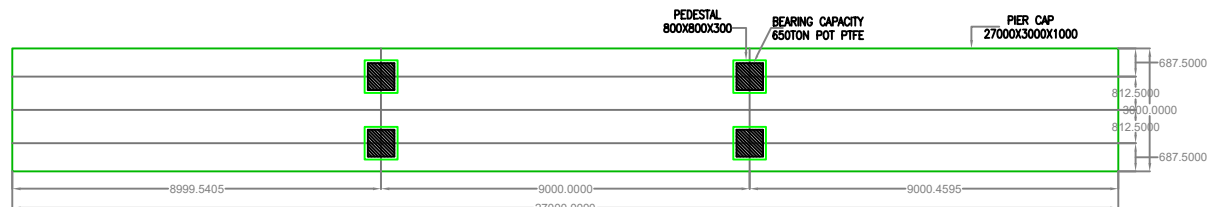
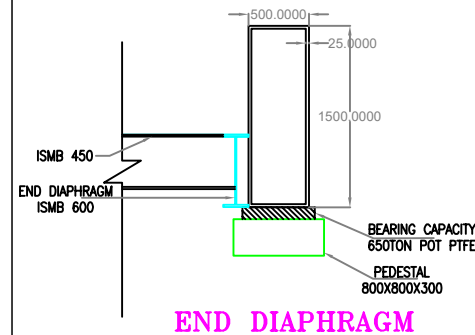
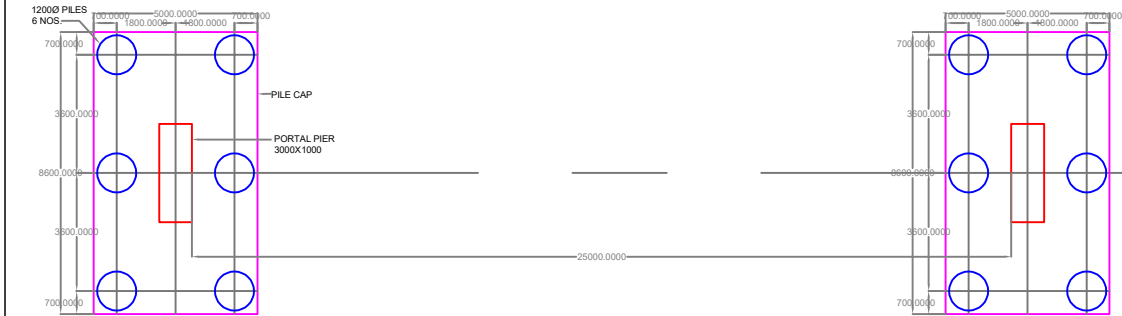
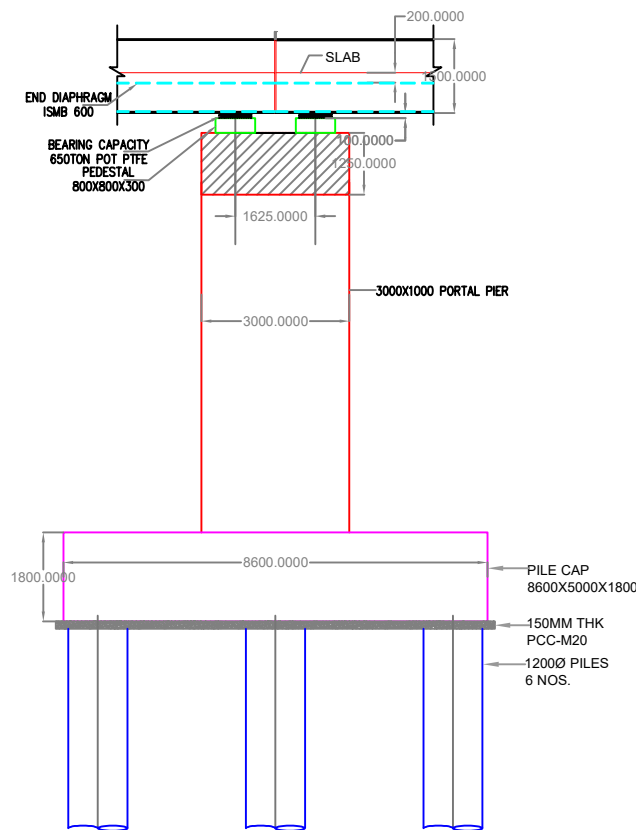
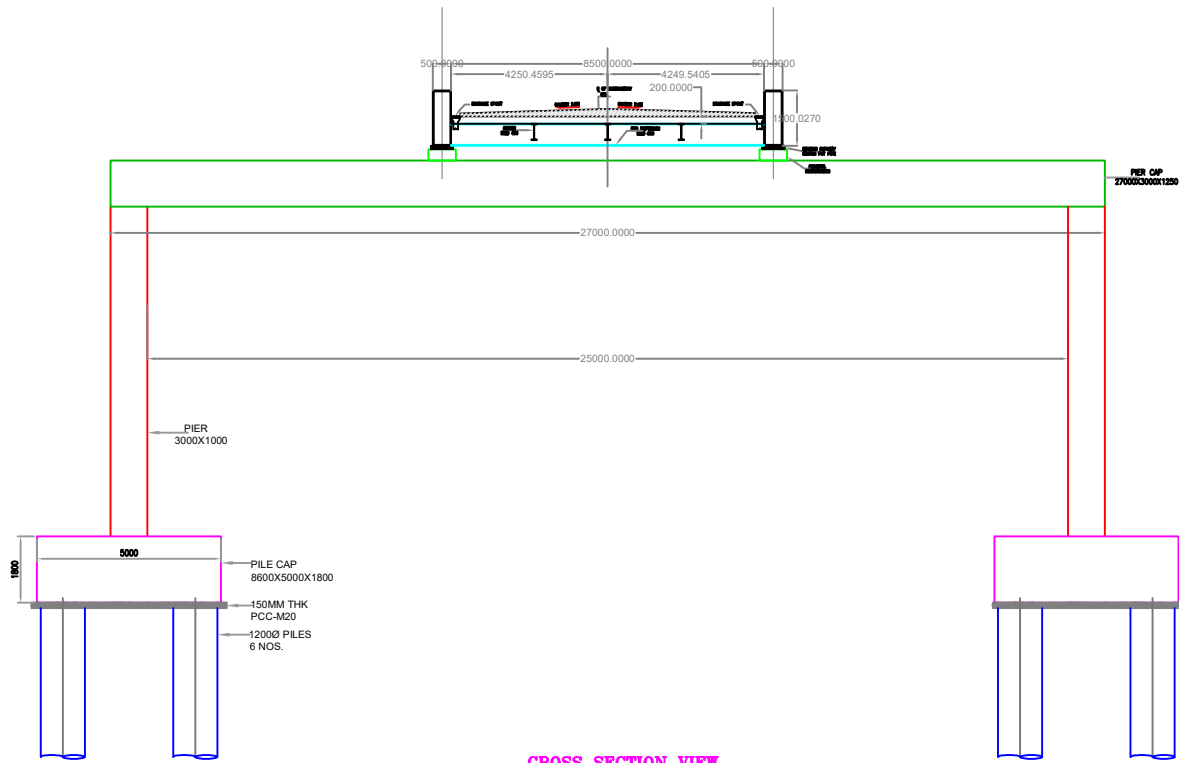


END DIAPHRAGM

NOTES:-

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- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
PORTAL FOR 30M SPAN 8.5M WIDTH FOR 2 LANE BRIDGE (20M SPAN)	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div>								
TENDER PURPOSE ONLY			<table><tr><th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr><tr><td>TUSPL/BMC/EEH/STR/03</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/EEH/STR/03	SCALE:- NTS	21-10-2023	Ravindra S.
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/EEH/STR/03	SCALE:- NTS	21-10-2023	Ravindra S.								



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NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

PORTAL FOR 30M SPAN 8.5M
WIDTH FOR 2 LANE BRIDGE (25M
SPAN)

JUNCTION IMPROVEMENT FOR
ACCESS CONTROL

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

Telefax : +91 22 26655335

contact@tandonandassociaies.com|www.tandonandassociates.com

DRG NO

SCALE

DATE

DRN BY

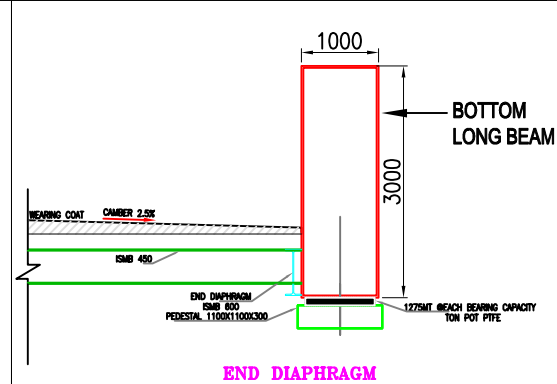
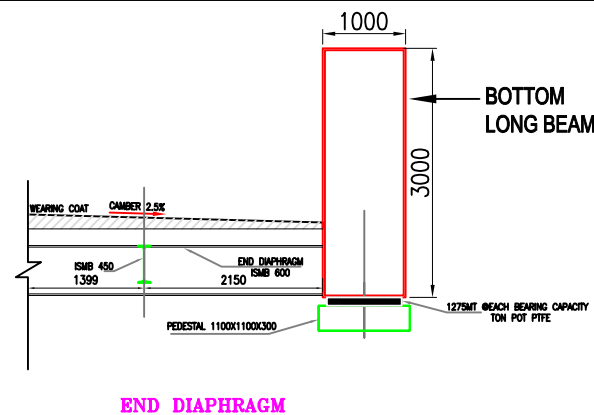
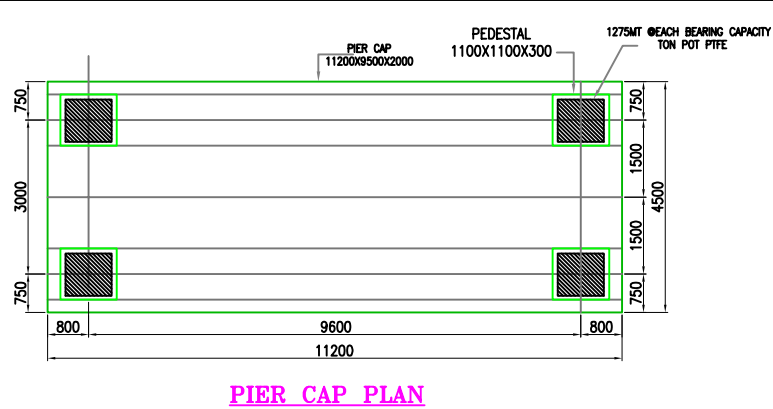
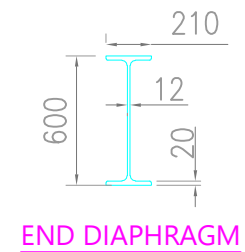
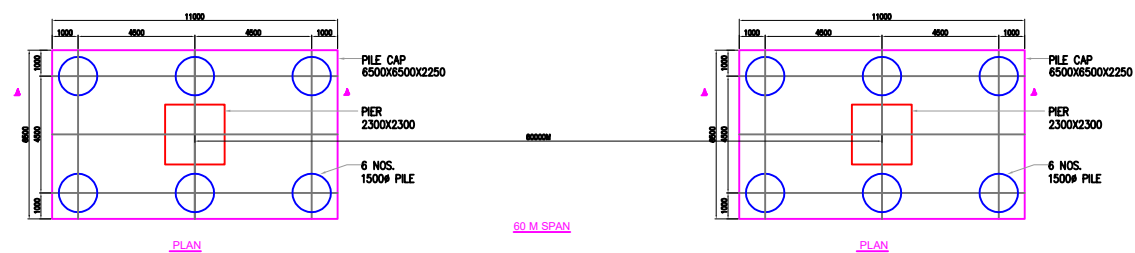
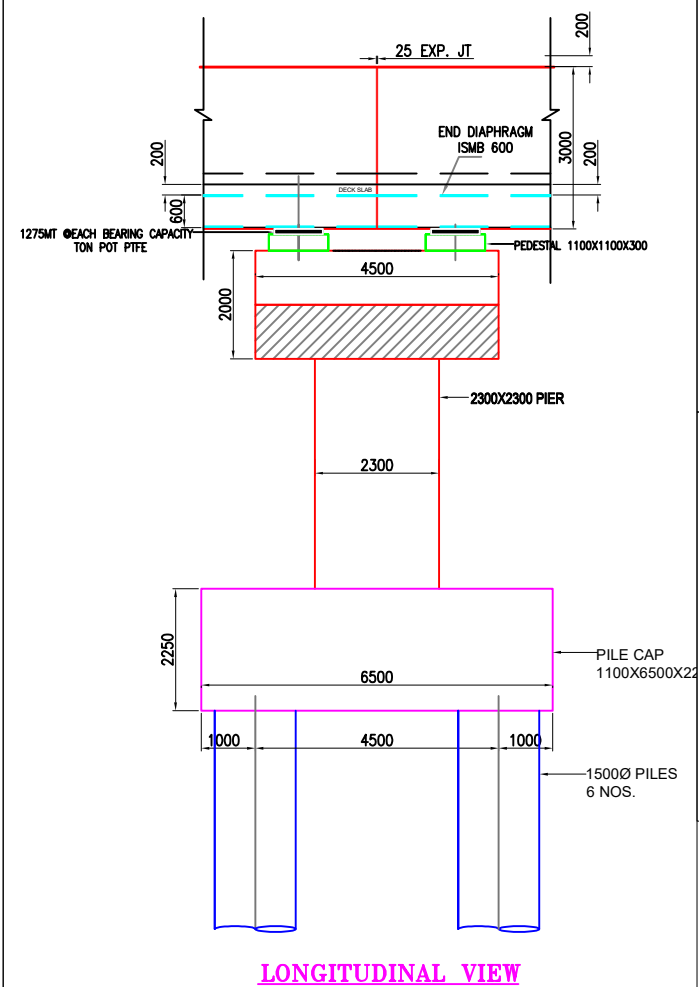
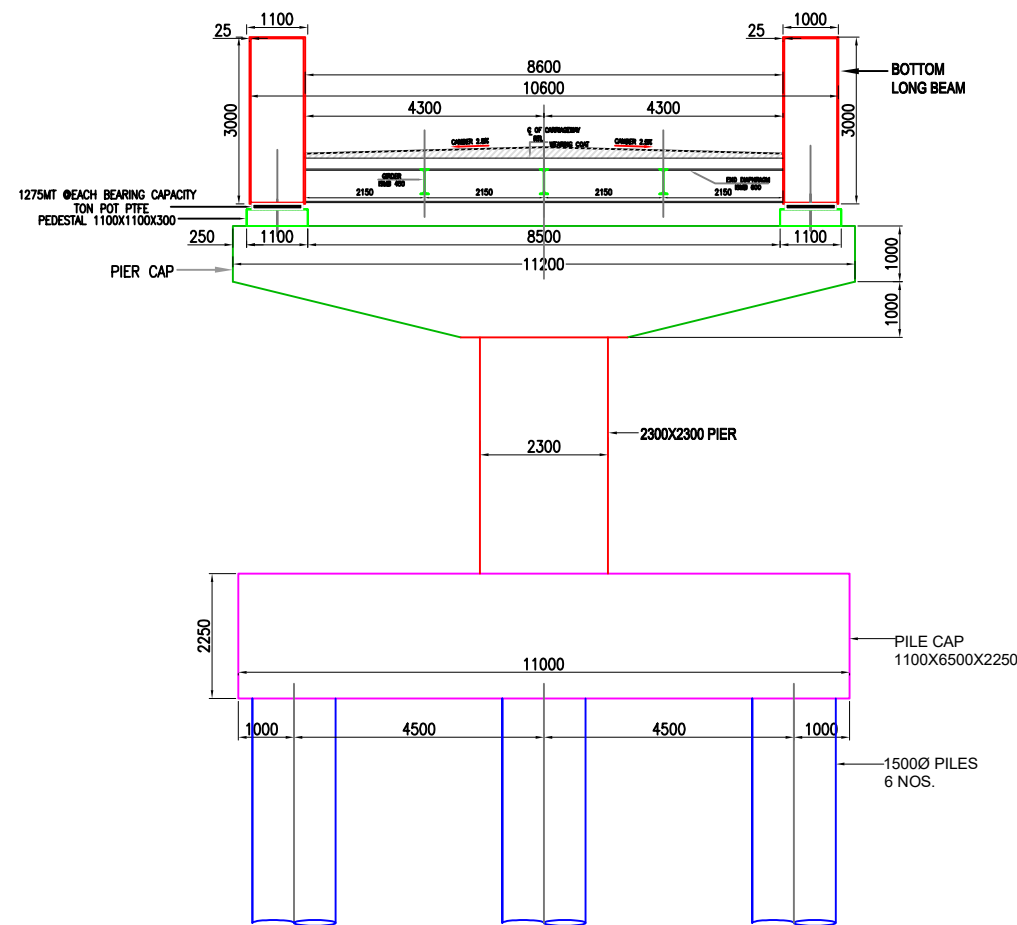
TUSPL/BMC/EEH/STR/03

SCALE:- NTS



21-10-2023

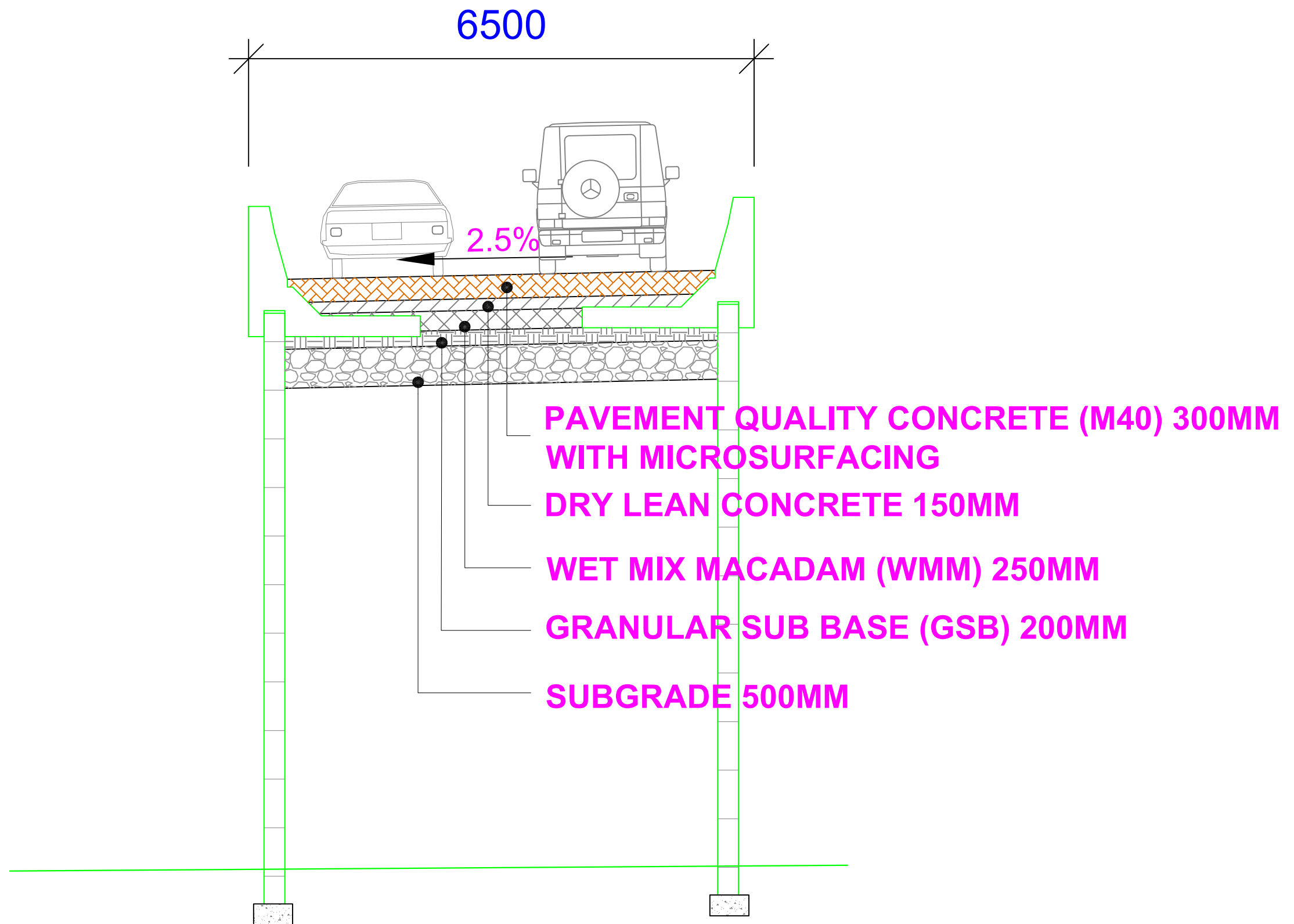
Ravindra S.

TENDER PURPOSE ONLY



- NOTES:-

NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT			
GA DRAWING FOR 8.5M WIDTH & 60M SPAN FOR SINGLE SUPPORT	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	 <p>BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)</p>	 <p>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</p>			
TENDER PURPOSE ONLY			DRG NO	SCALE	DATE	DRN BY
			TUSPL/BMC/EEH/STR/02	SCALE:- NTS	21-10-2023	Ravindra S.



TYPICAL CROSS SECTION OF 6.5M WIDE REINFORCED SOIL (RS) RAMP

NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

TYPICAL DRAWING FOR 6.5M WIDE RS RAMP

BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)



TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

Telefax : +91 22 26655335

contact@tandonandassociaies.com|www.tandonandassociates.com

DRG NO

SCALE

DATE

DRN BY

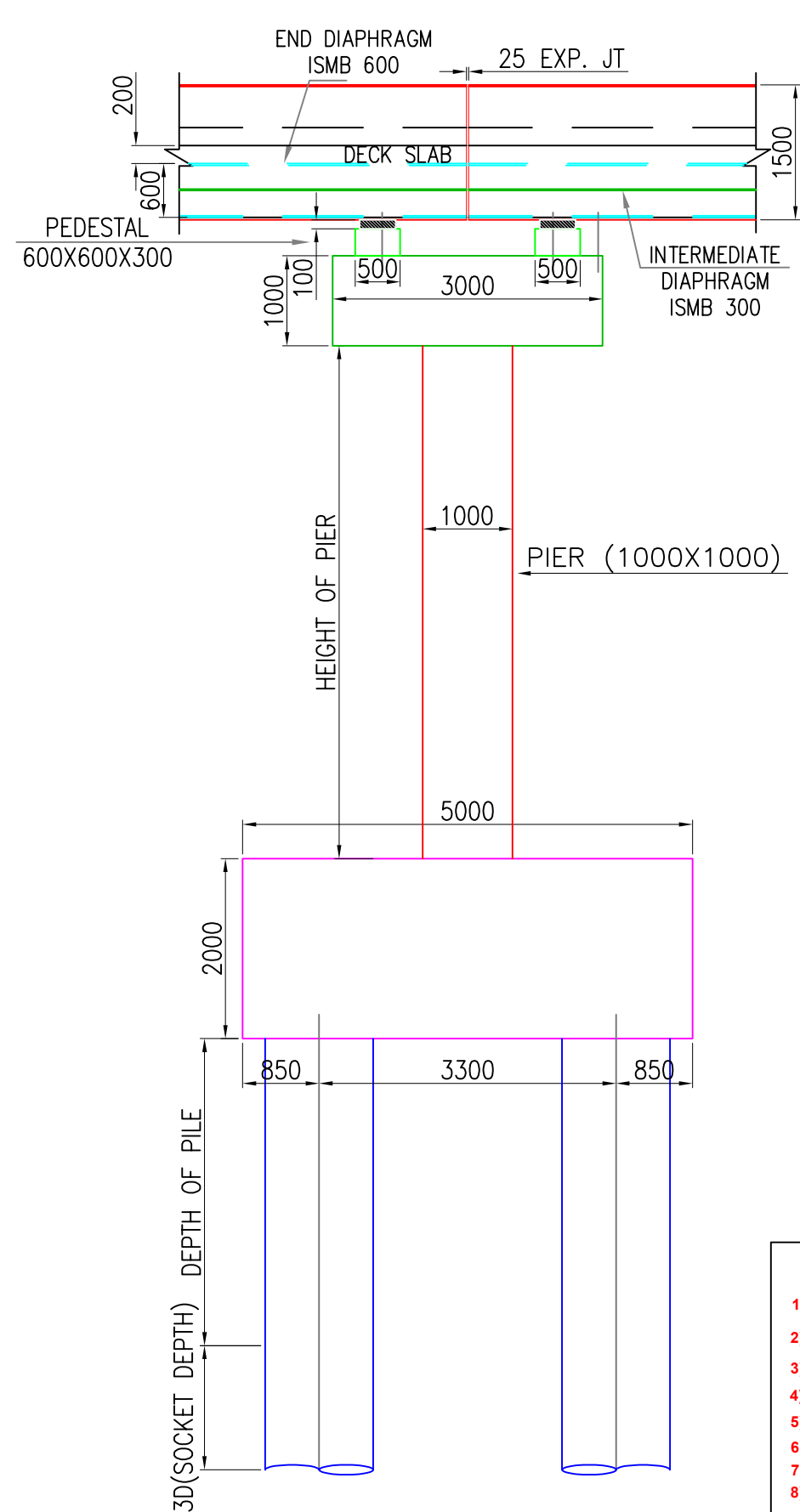
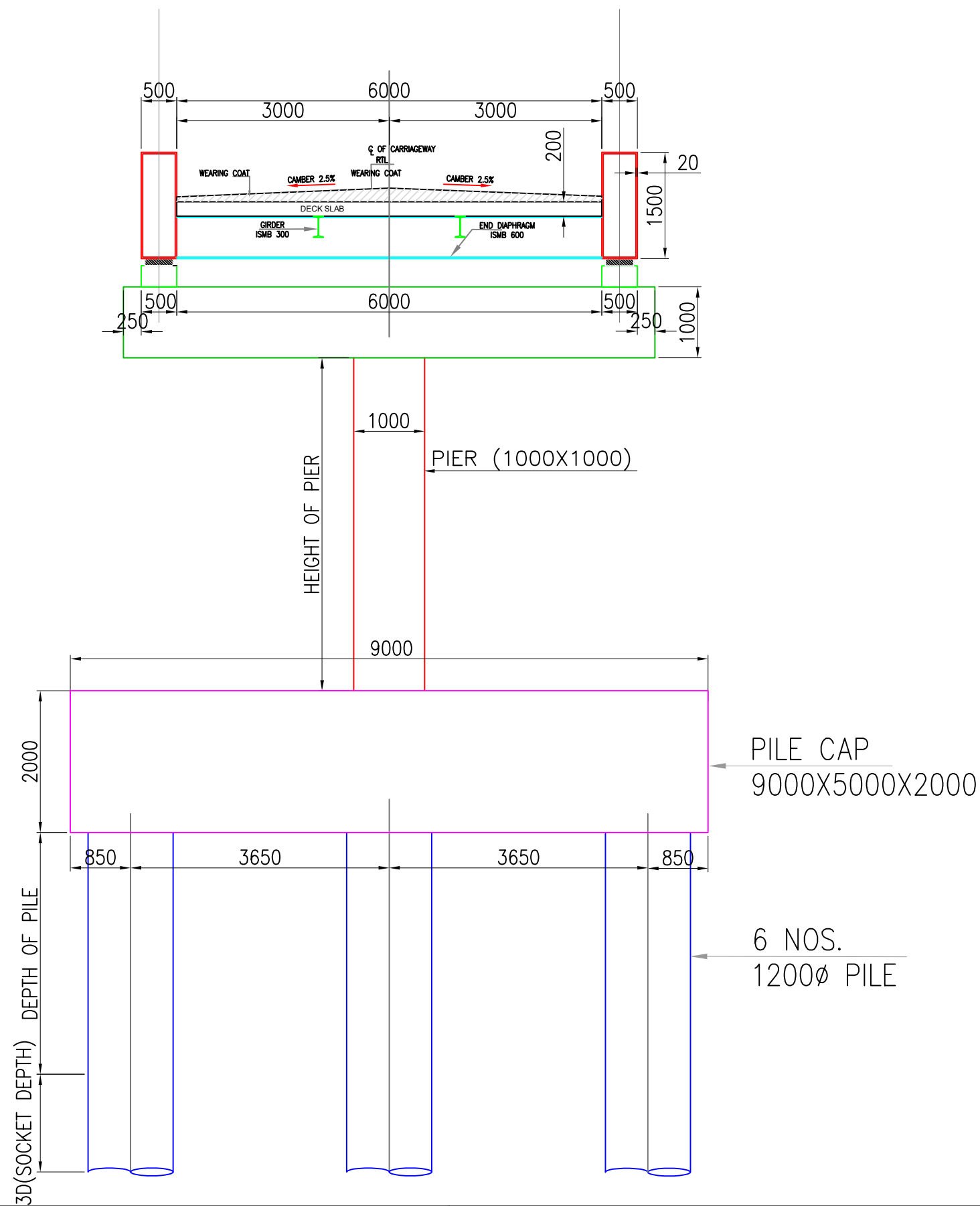
TUSPL/BMC/EG/TCS/14

SCALE:- NTS

11-10-2022

Ravindra .S

TENDER PURPOSE ONLY



NOTES:-

- 1) ALL DIMENSION ARE IN MILLIMETERS.
- 2) GRADE OF CONCRETE SHALL BE M40 FOR ALL RCC WORK.
- 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
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- 5) DEVELOPMENT LENGTH 50D
- 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

GA DRAWING FOR
6.0M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

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DRG NO

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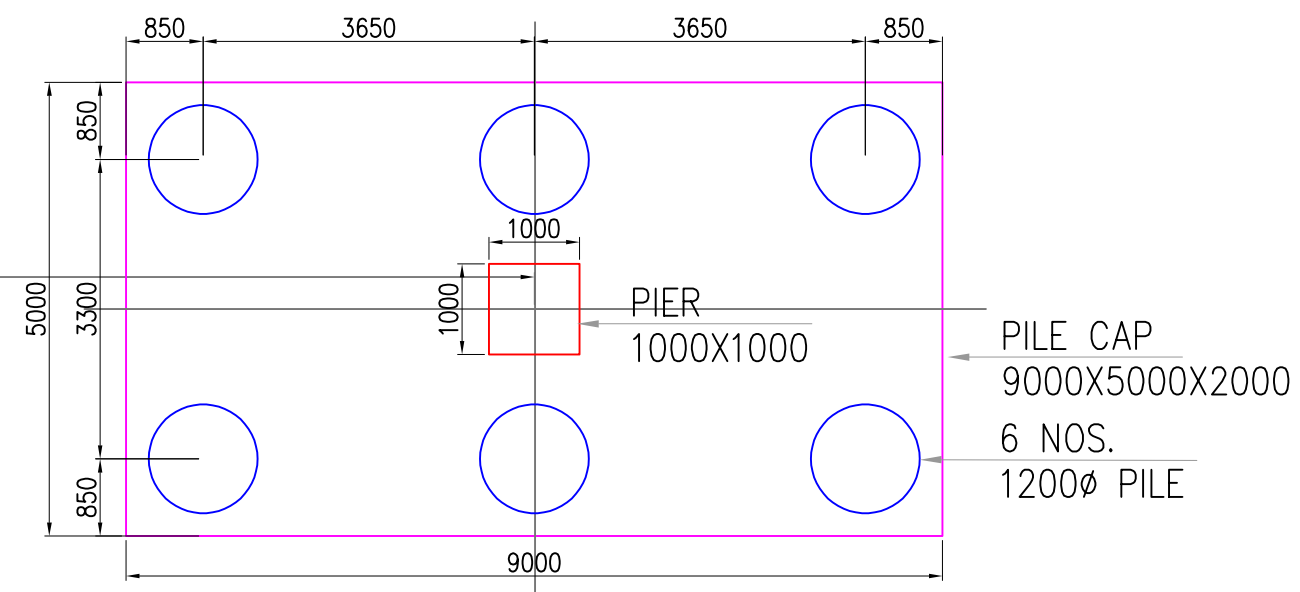
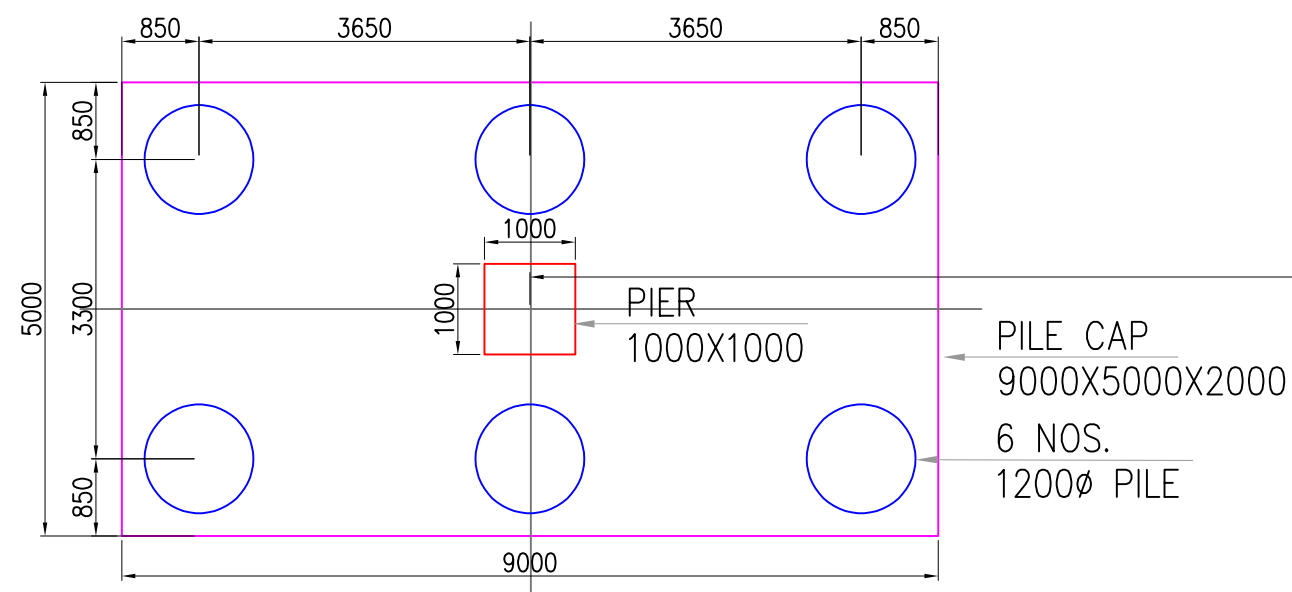
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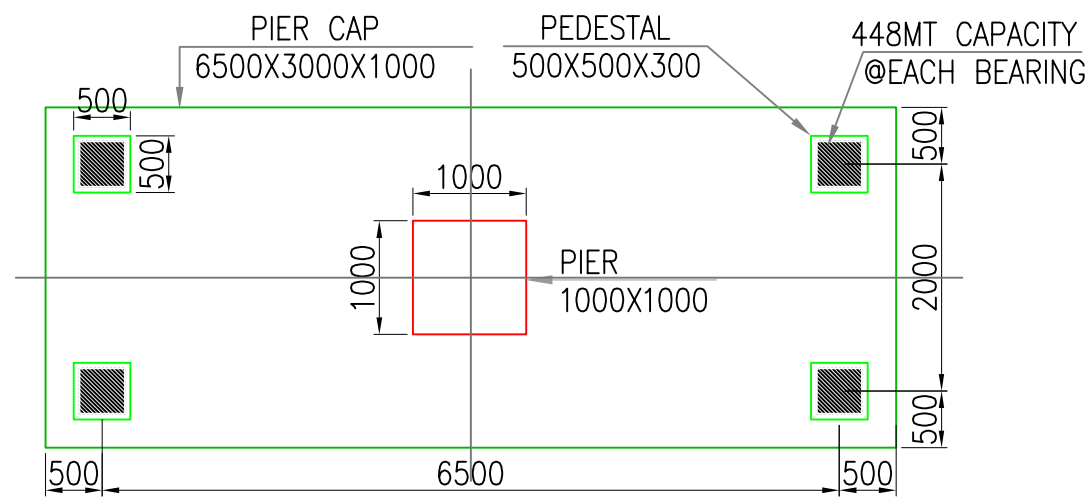
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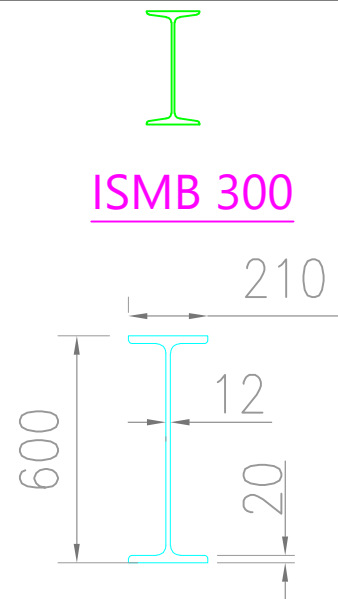
28-10-2023



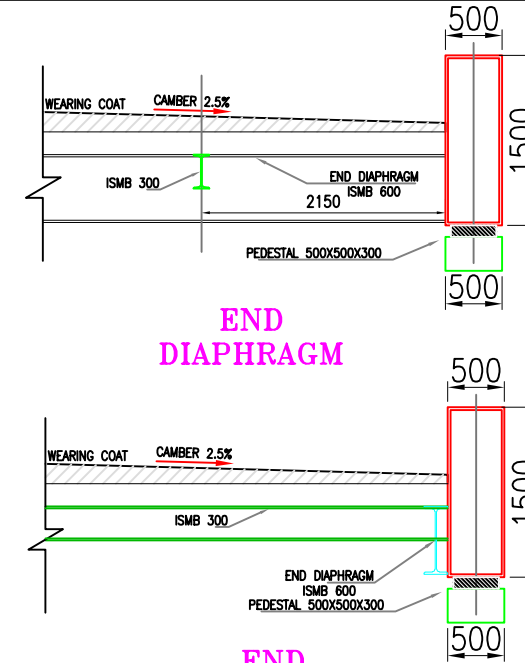
PILE CAP PLAN FOR 30 M SPAN



PIER CAP PLAN



END DIAPHRAGM



END

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NAME OF DRAWING

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GA DRAWING FOR
6.0M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

**BRIHANMUMBAI MUNICIPAL
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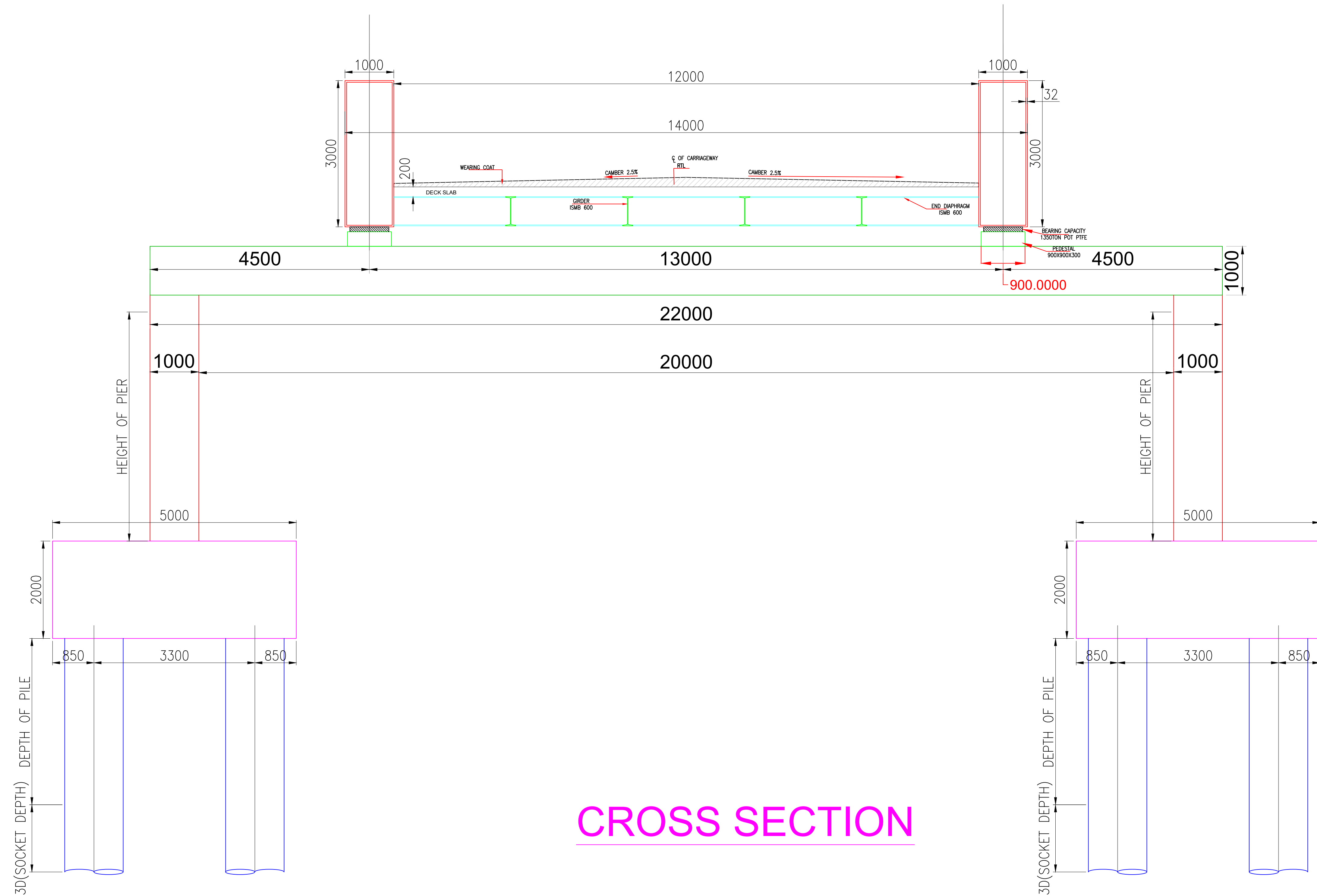
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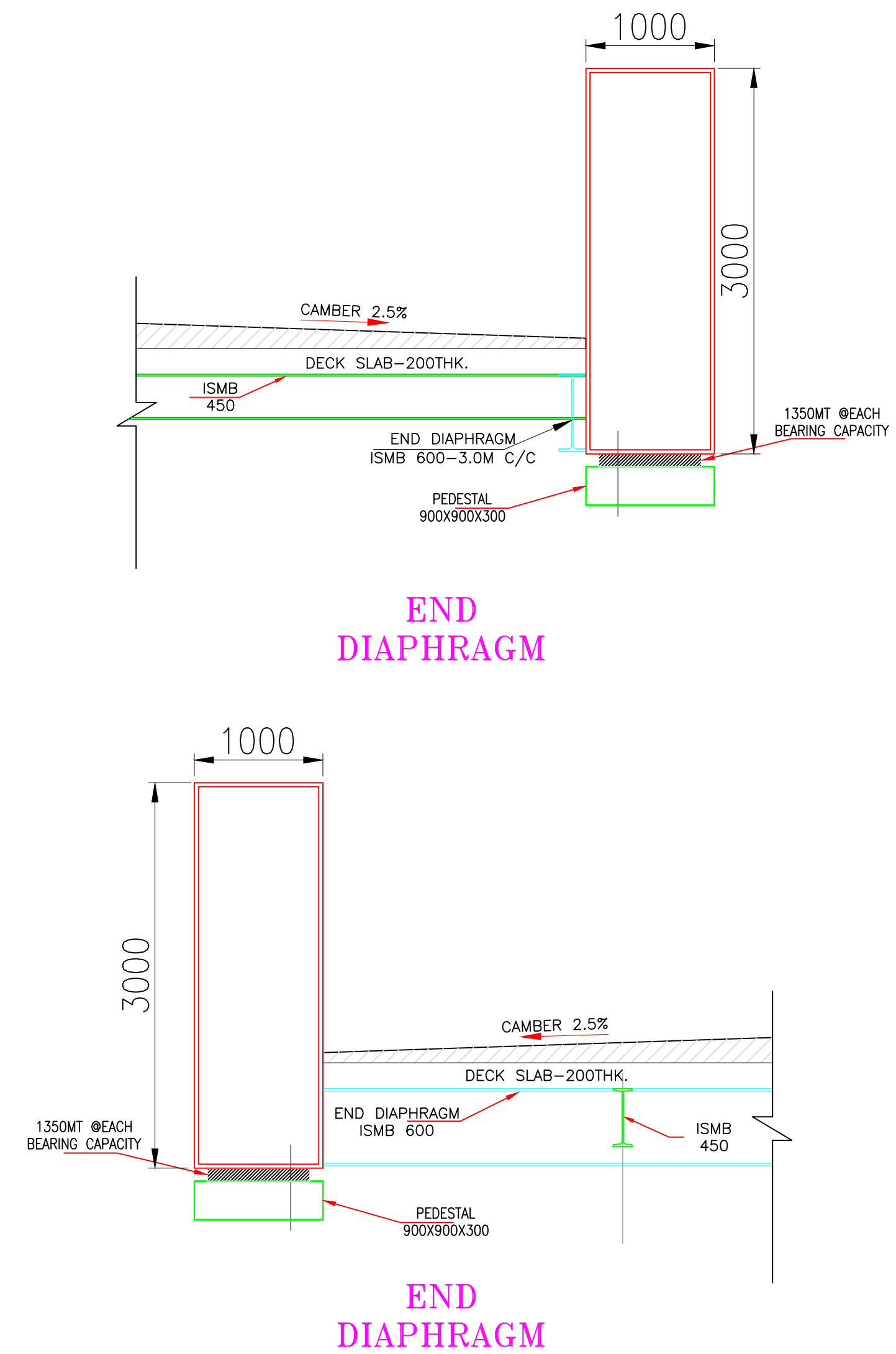
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SCALE:-

28-10-2023



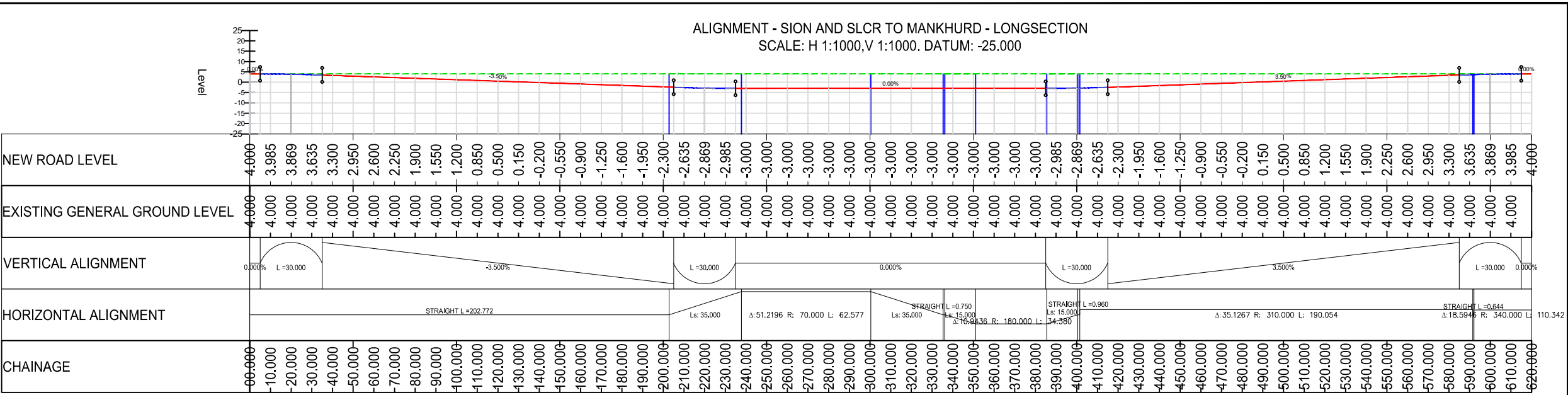
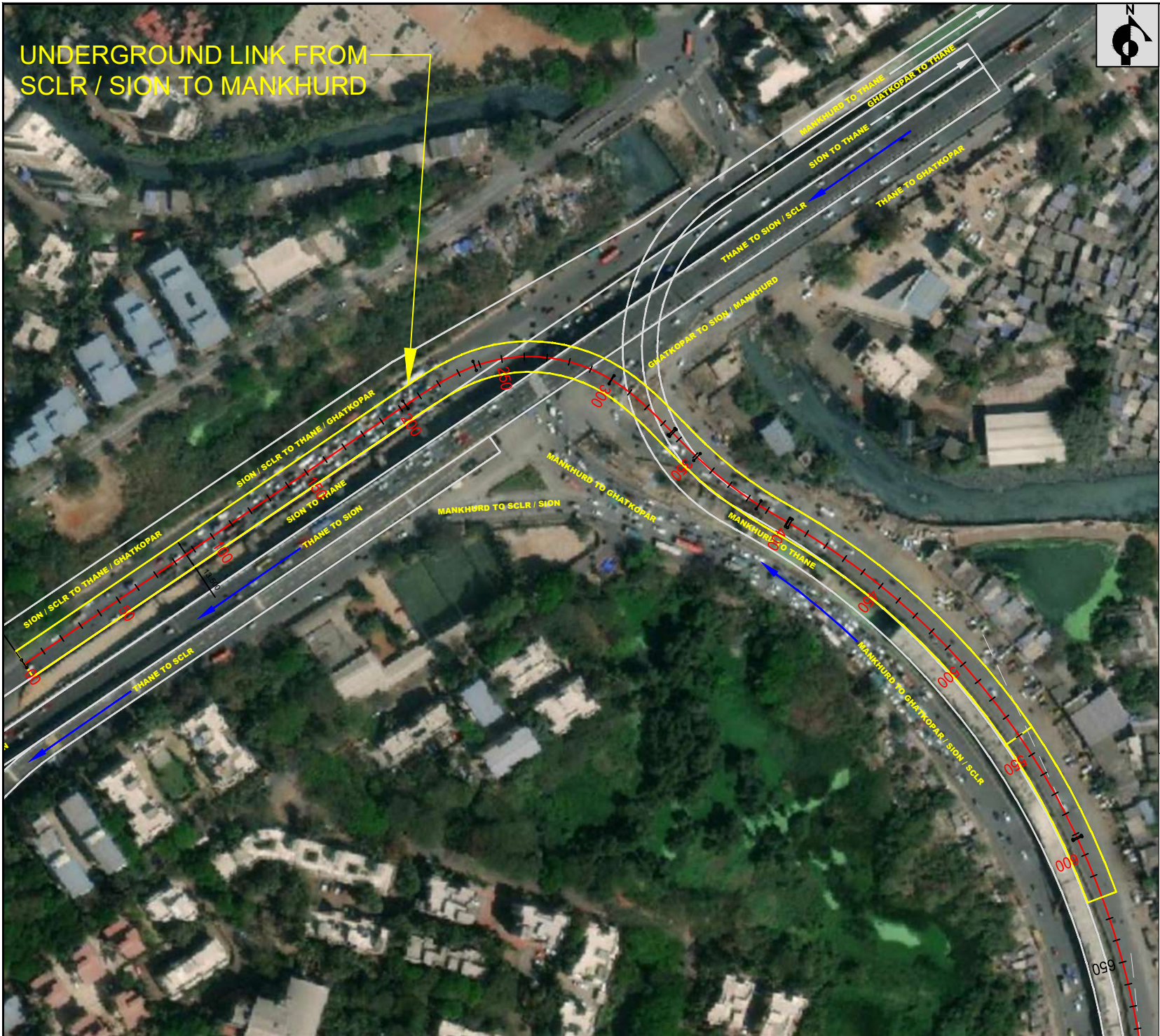
CROSS SECTION



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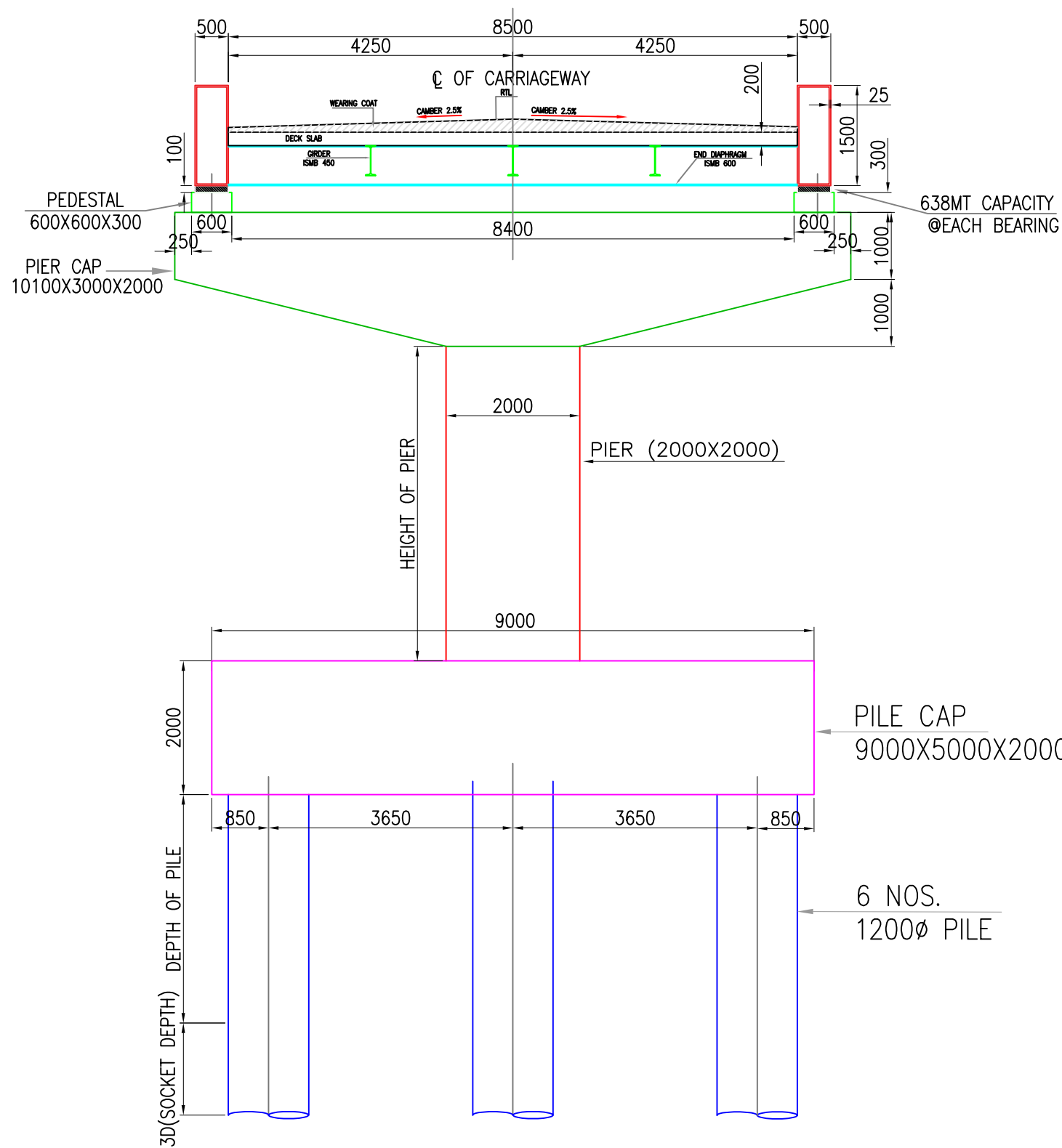
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GA DRAWING FOR 20M PORTAL FRAME-12M WIDTH & 30M SPAN		BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) 	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/WSJ/GAD/01	SCALE:- -	28-10-2023	



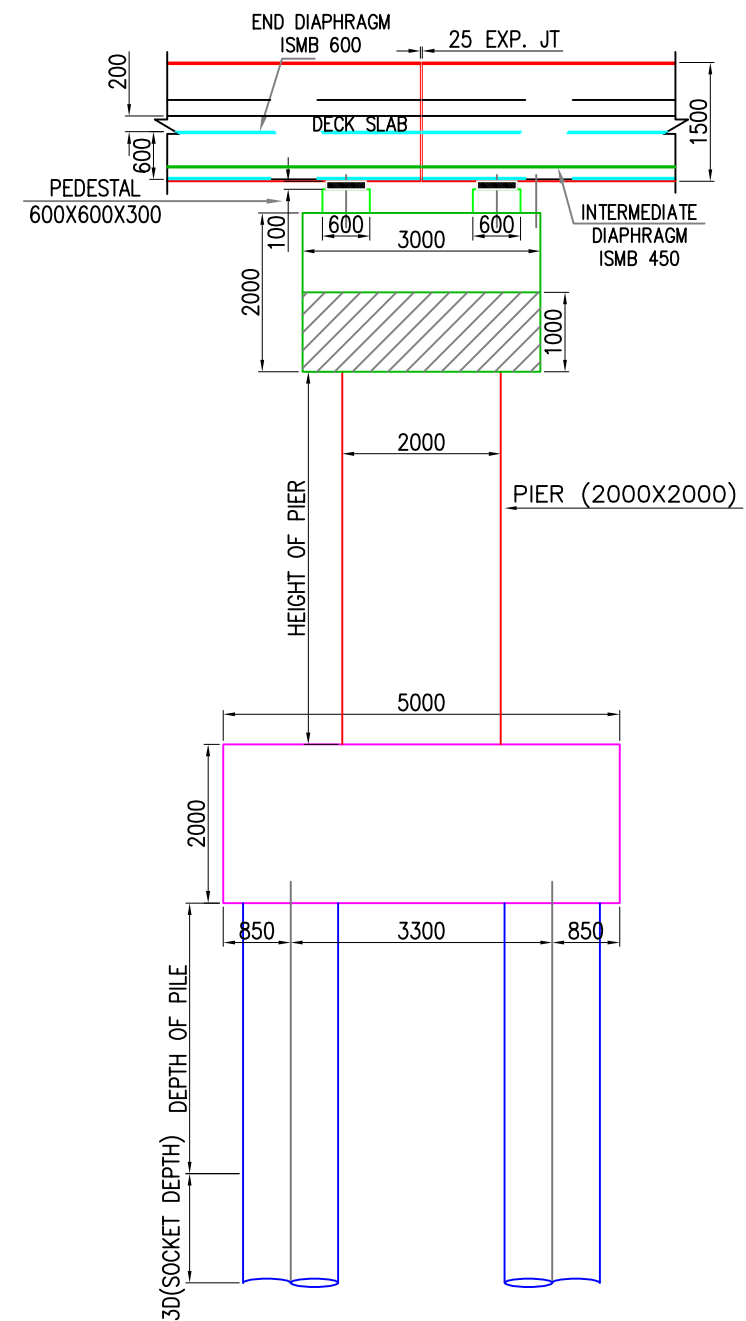
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NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
SION AND SCLR TO MANKHURD ON EASTERN EXPRESS HIGHWAY PLAN & PROFILE FROM CH.0+00 TO CH.0+620	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div><div>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com www.tandonandassociates.com</div></div>								
TENDER PURPOSE ONLY		<div></div>	<table><tr><td>DRG NO</td><td>SCALE</td><td>DATE</td><td>DRN BY</td></tr><tr><td>TUSPL/BMC/EEH/P&F/01</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr></table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/EEH/P&F/01	SCALE:- NTS	21-10-2023	Ravindra S.								



CROSS SECTION



LONGITUDINAL VIEW

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NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

**GA DRAWING FOR
8.5M WIDTH & 30M SPAN
FOR SINGLE SUPPORT**

**BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)**



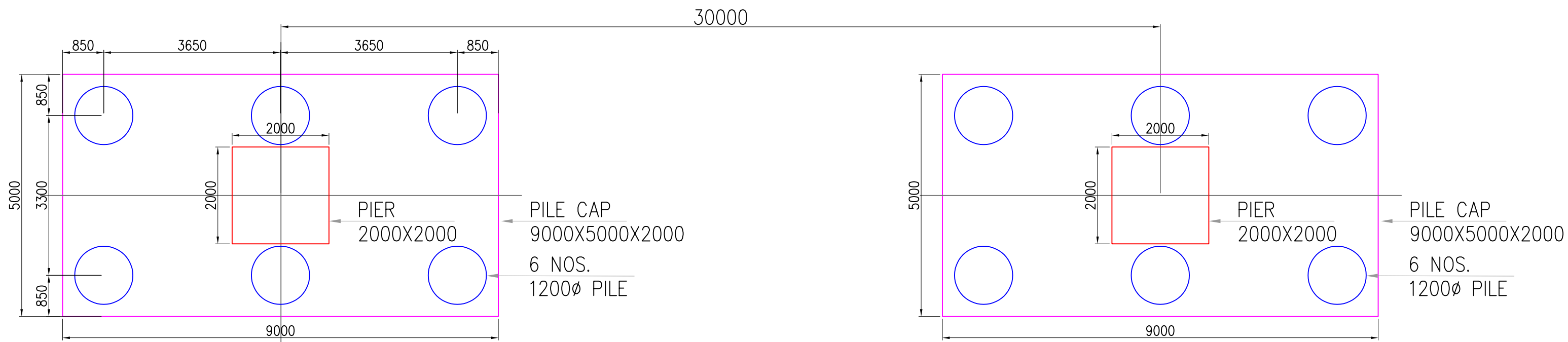
TUSPL

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VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

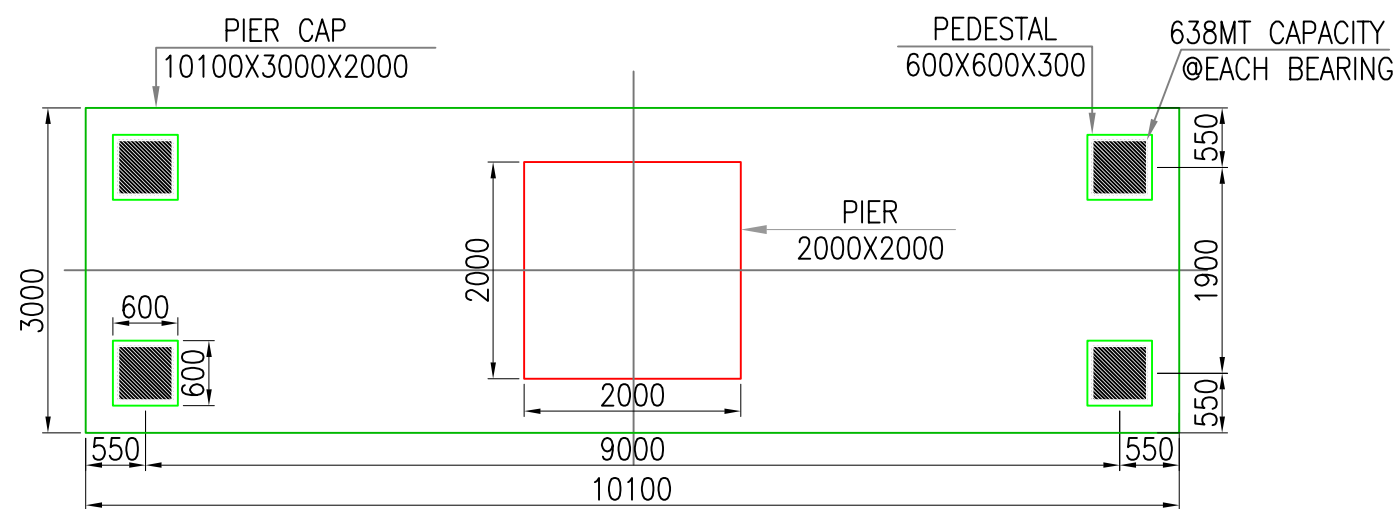
Telefax : +91 22 26655335

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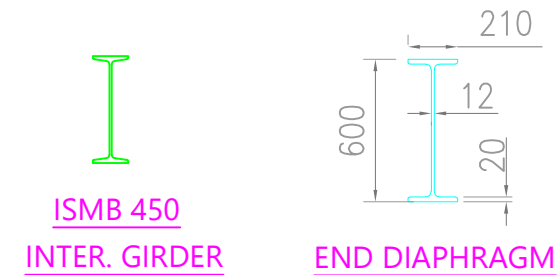
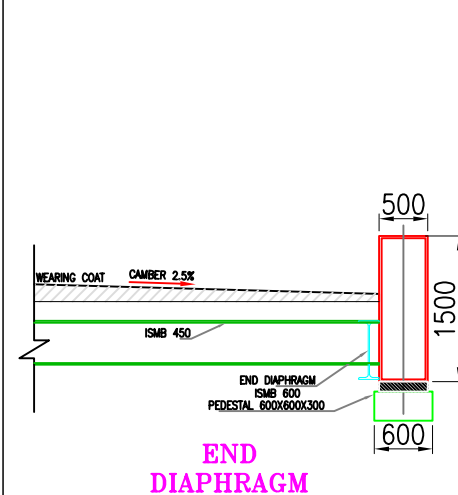
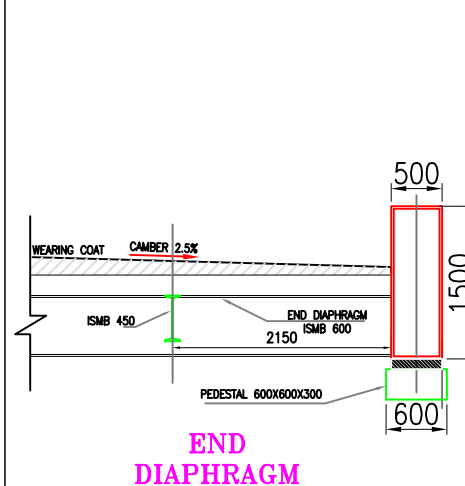
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/WSJ/GAD/01	SCALE:-	28-10-2023	



PILE CAP PLAN FOR 30 M SPAN



PIER CAP PLAN



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NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

GA DRAWING FOR
8.5M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



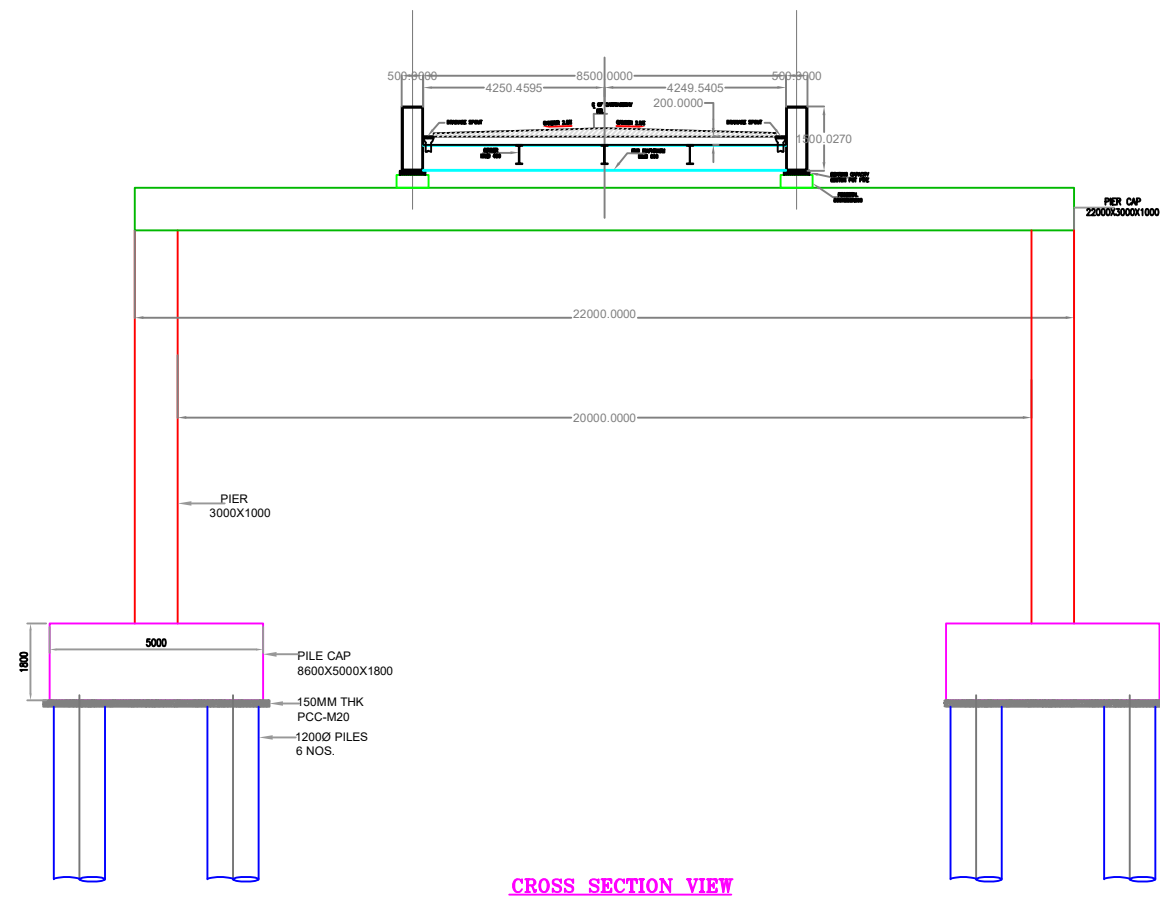
TUSPL

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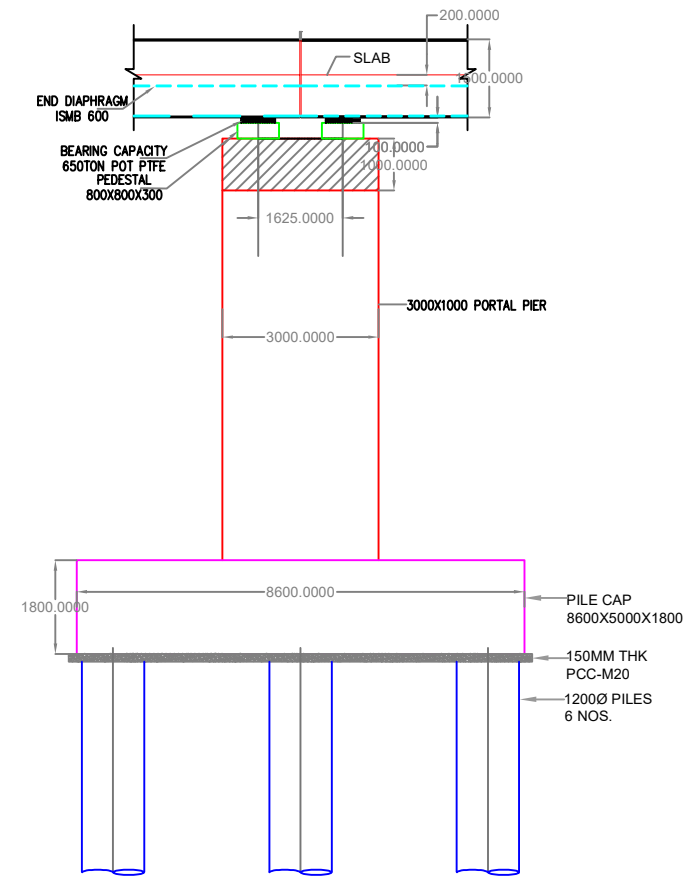
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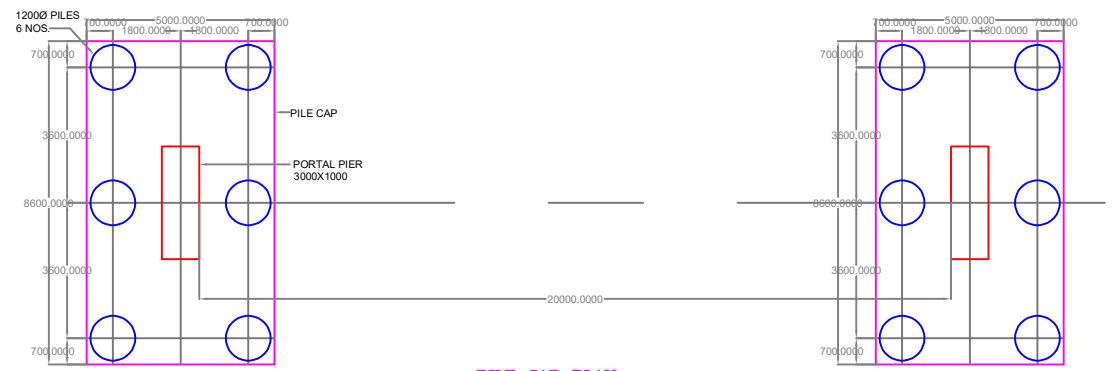
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TUSPL/BMC/WSJ/GAD/01	SCALE:-	28-10-2023	



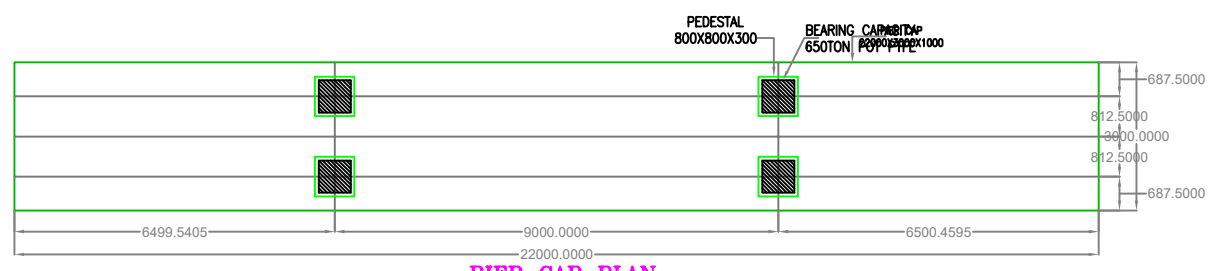
CROSS SECTION VIEW



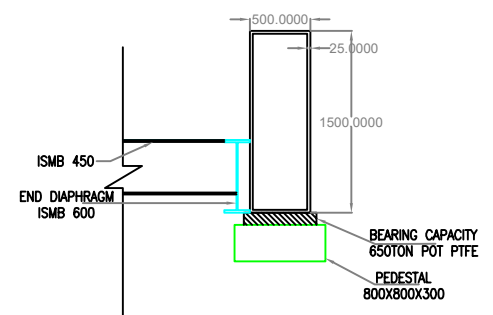
LONGITUDINAL VIEW



PILE CAP PLAN



PIER CAP PLAN



END DIAPHRAGM

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NAME OF DRAWING

PROJECT NAME


NAME OF THE CLIENT

NAME OF THE CONSULTANT

PORTAL FOR 30M SPAN 8.5M
WIDTH FOR 2 LANE BRIDGE (20M
SPAN)

JUNCTION IMPROVEMENT FOR
ACCESS CONTROL

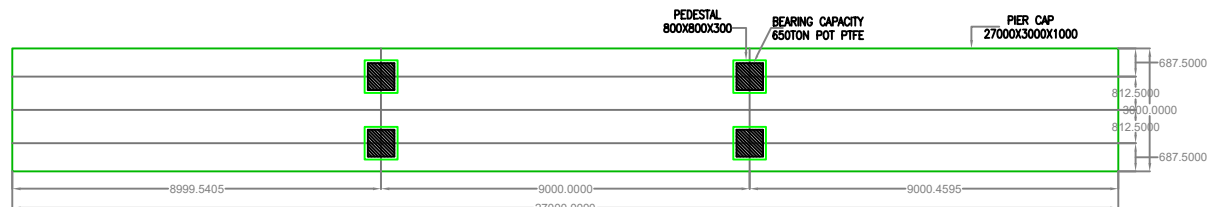
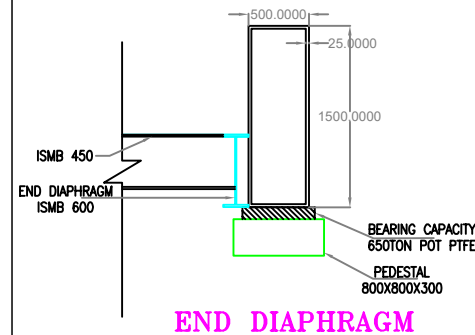
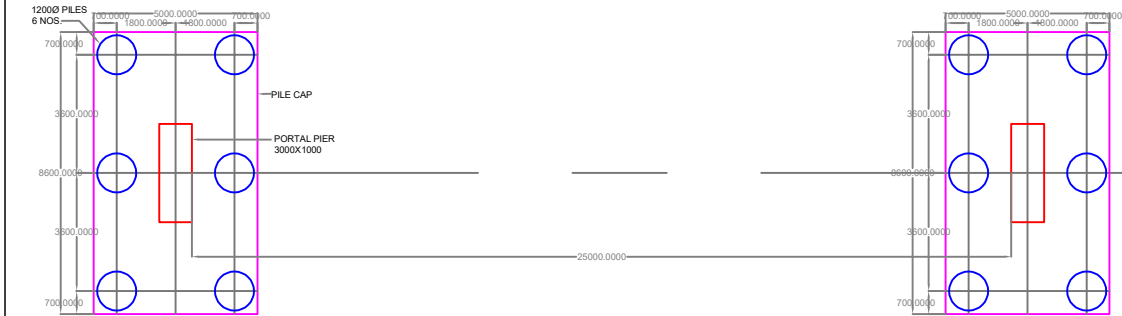
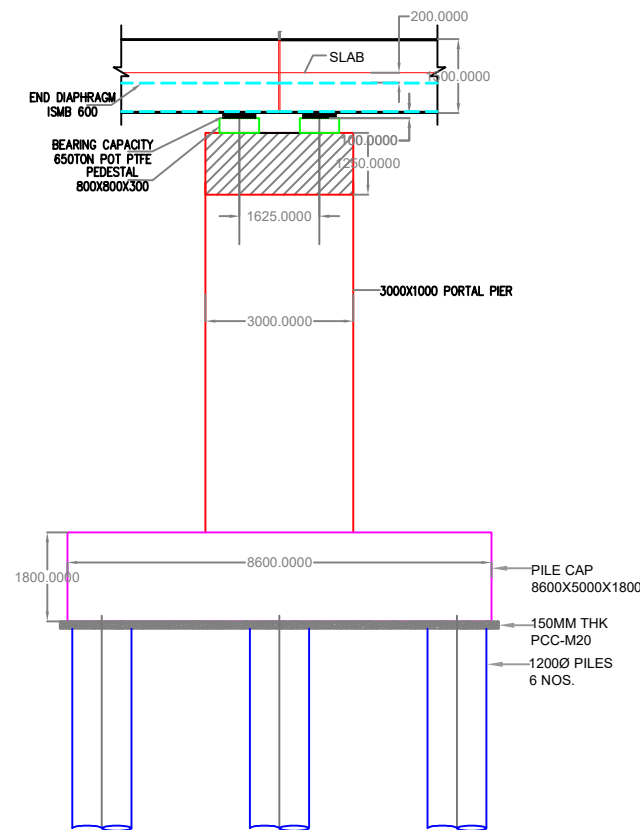
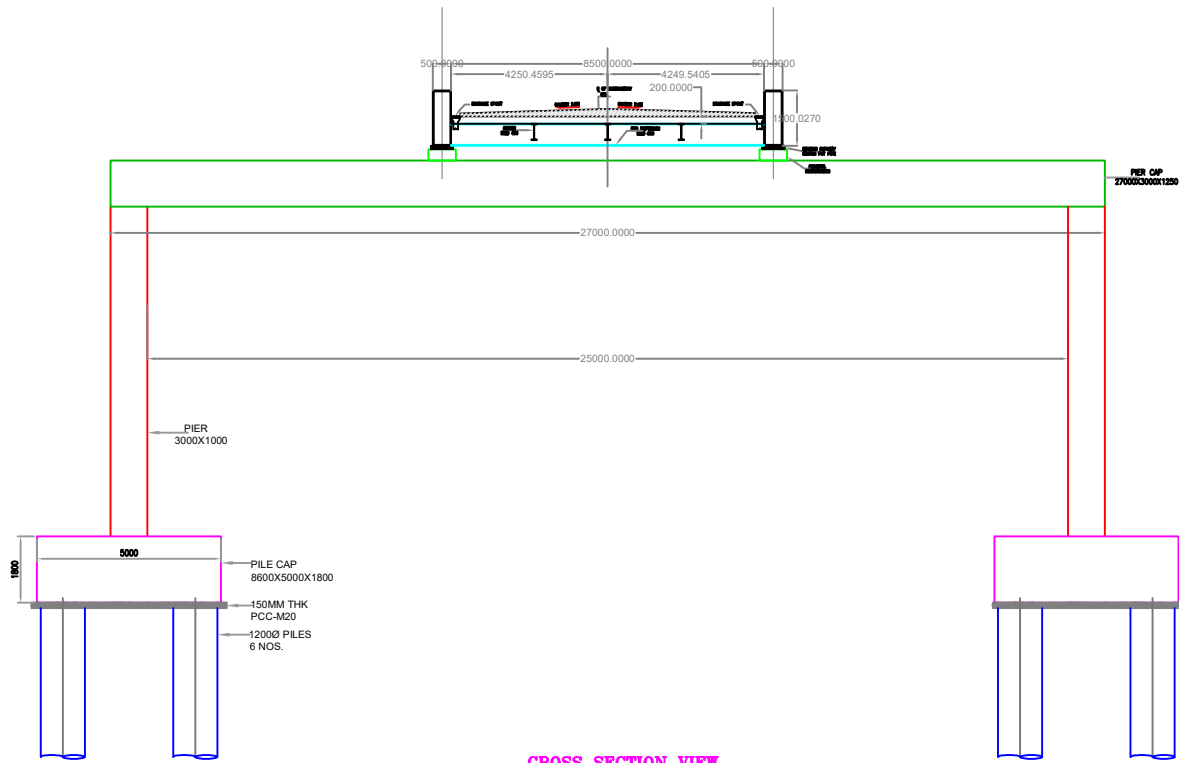
BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



TUSPL
701, HARBHAJAN, CST RD,
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TENDER PURPOSE ONLY

DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/EEH/STR/03	SCALE:- NTS	21-10-2023	Ravindra S.



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NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

PORTAL FOR 30M SPAN 8.5M
WIDTH FOR 2 LANE BRIDGE (25M
SPAN)

JUNCTION IMPROVEMENT FOR
ACCESS CONTROL

BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)



TUSPL

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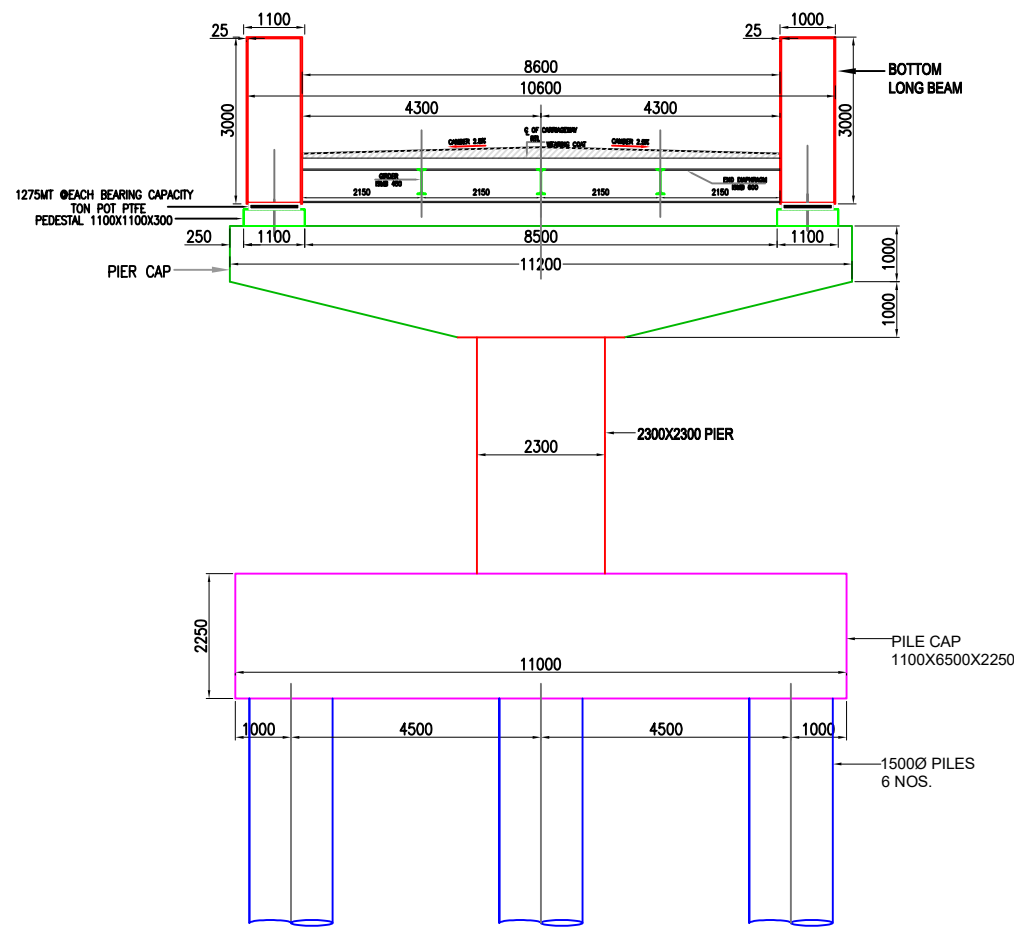
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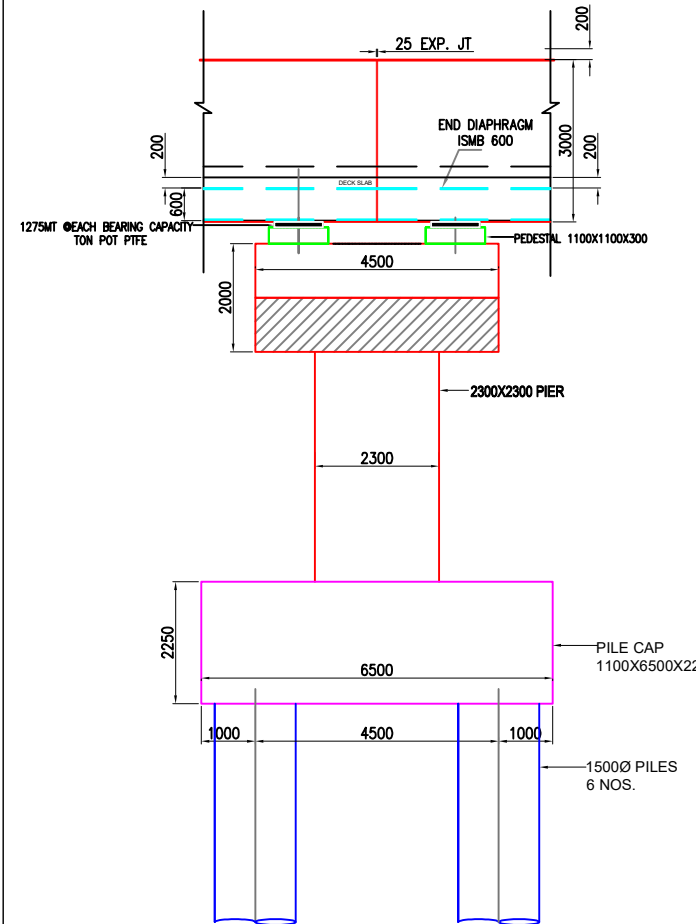
21-10-2023

Ravindra S.

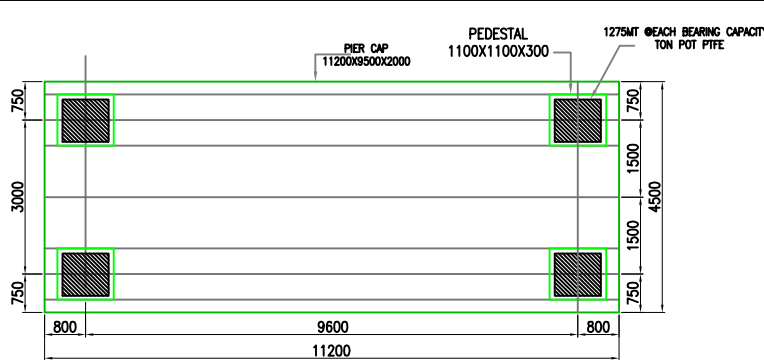
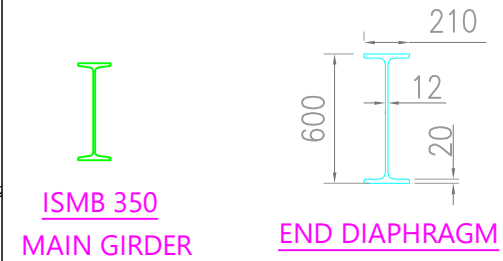
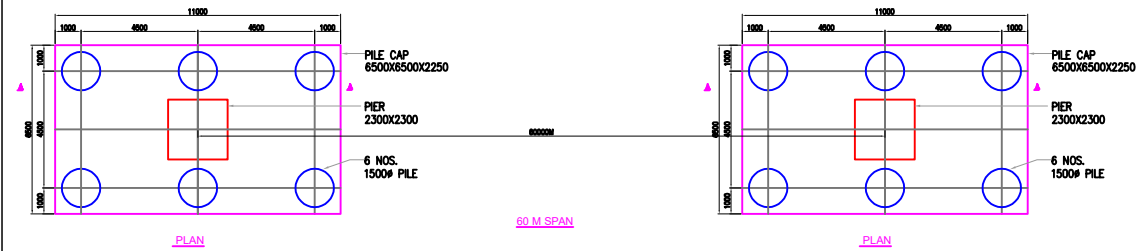
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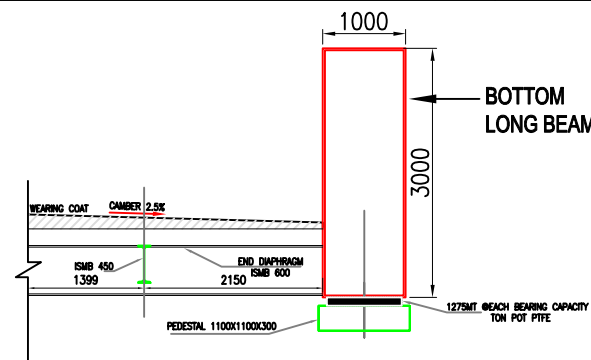
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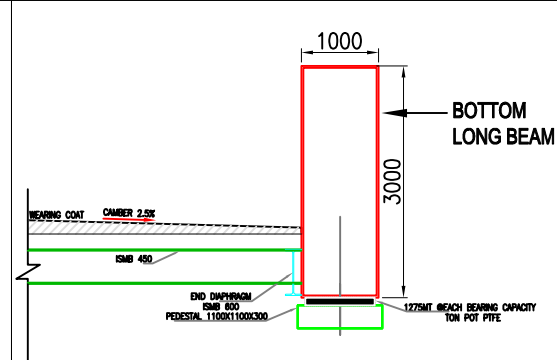
LONGITUDINAL VIEW



PIER CAP PLAN



END DIAPHRAGM



END DIAPHRAGM

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NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

GA DRAWING FOR 8.5M WIDTH & 60M SPAN FOR SINGLE SUPPORT

JUNCTION IMPROVEMENT FOR ACCESS CONTROL

BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)



TUSPL

701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098.

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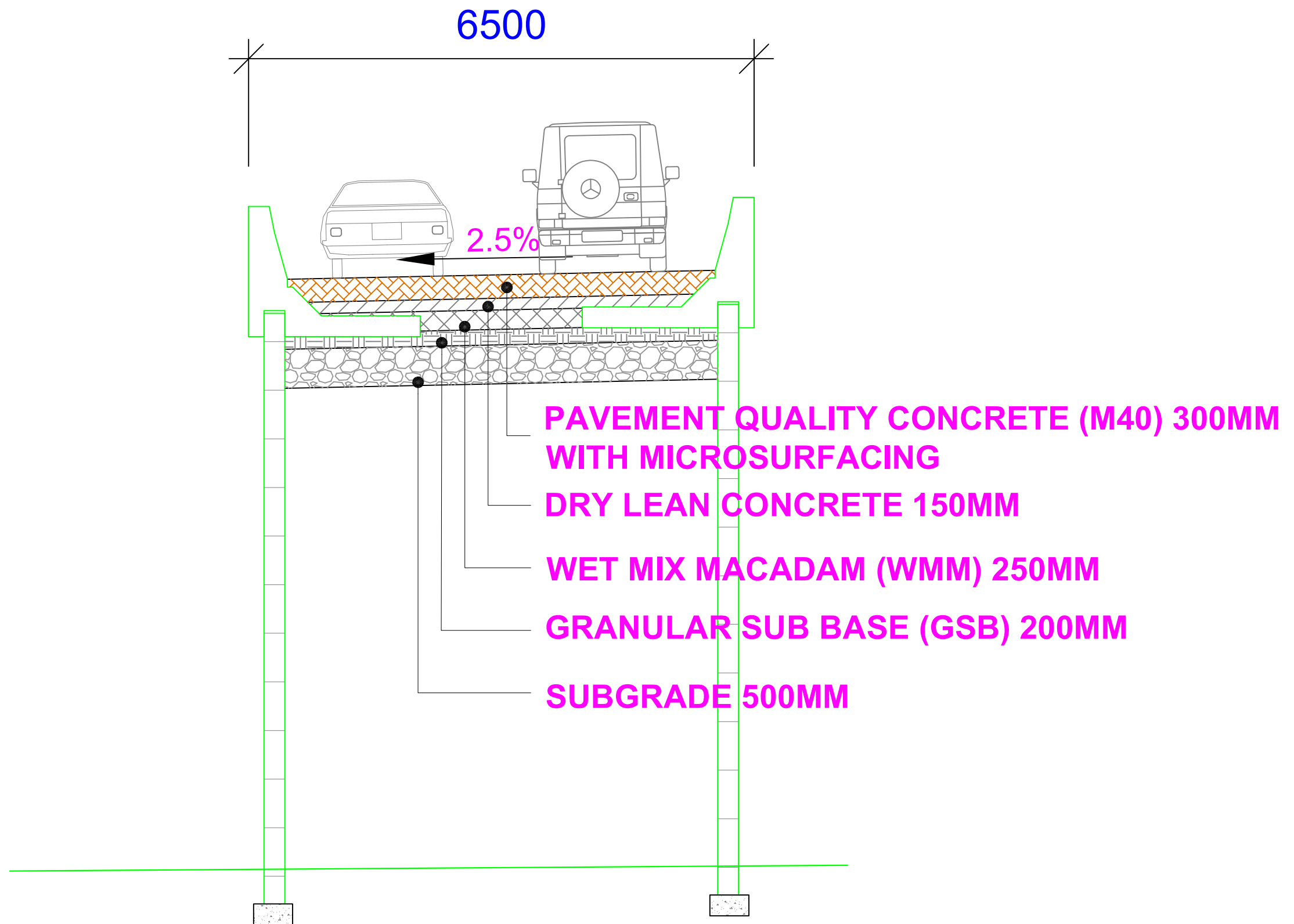
TUSPL/BMC/EEH/STR/02

SCALE:- NTS

21-10-2023

Ravindra S.

TENDER PURPOSE ONLY



TYPICAL CROSS SECTION OF 6.5M WIDE REINFORCED SOIL (RS) RAMP

NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

TYPICAL DRAWING FOR 6.5M WIDE RS RAMP

BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)



TUSPL

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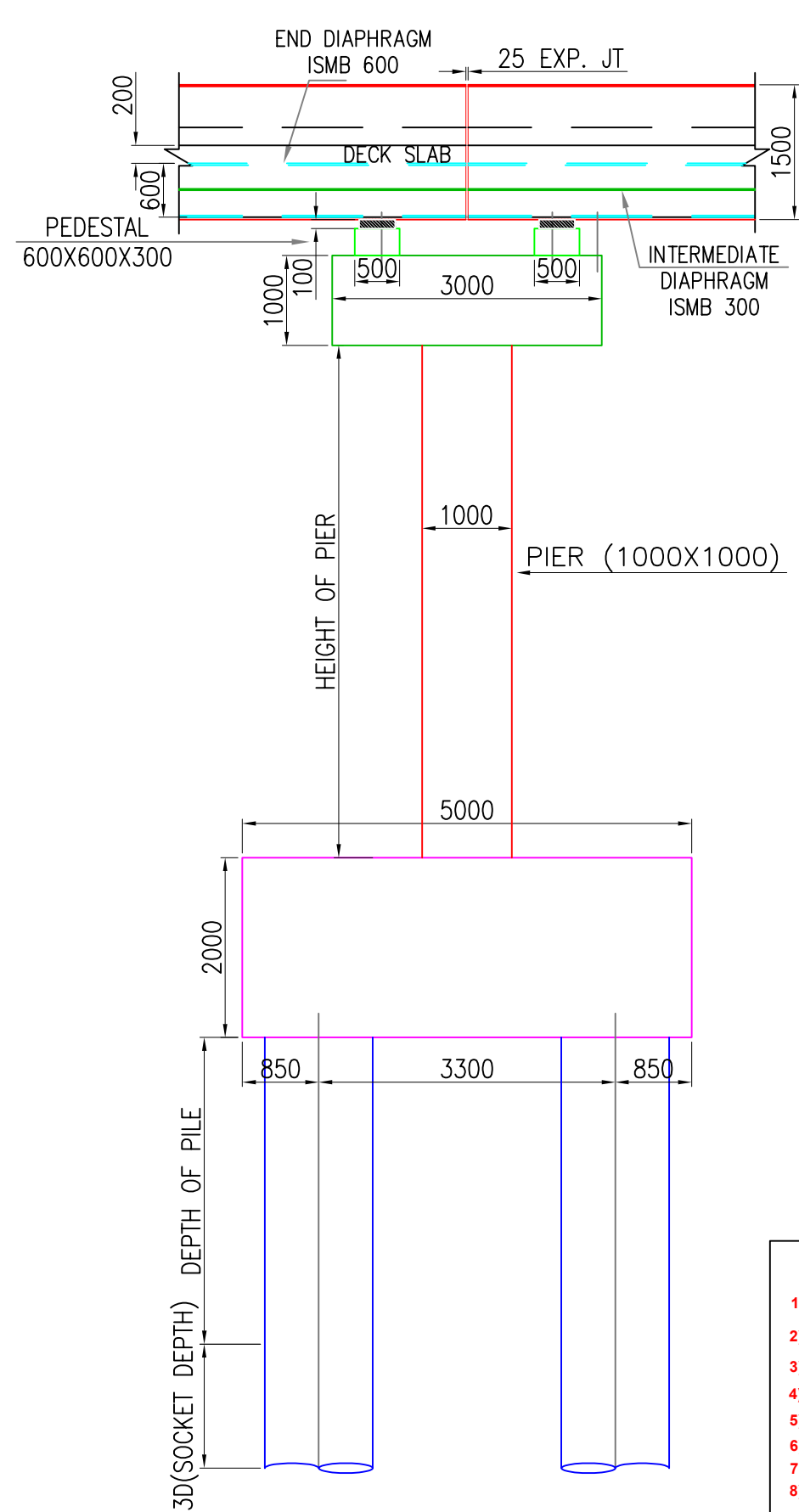
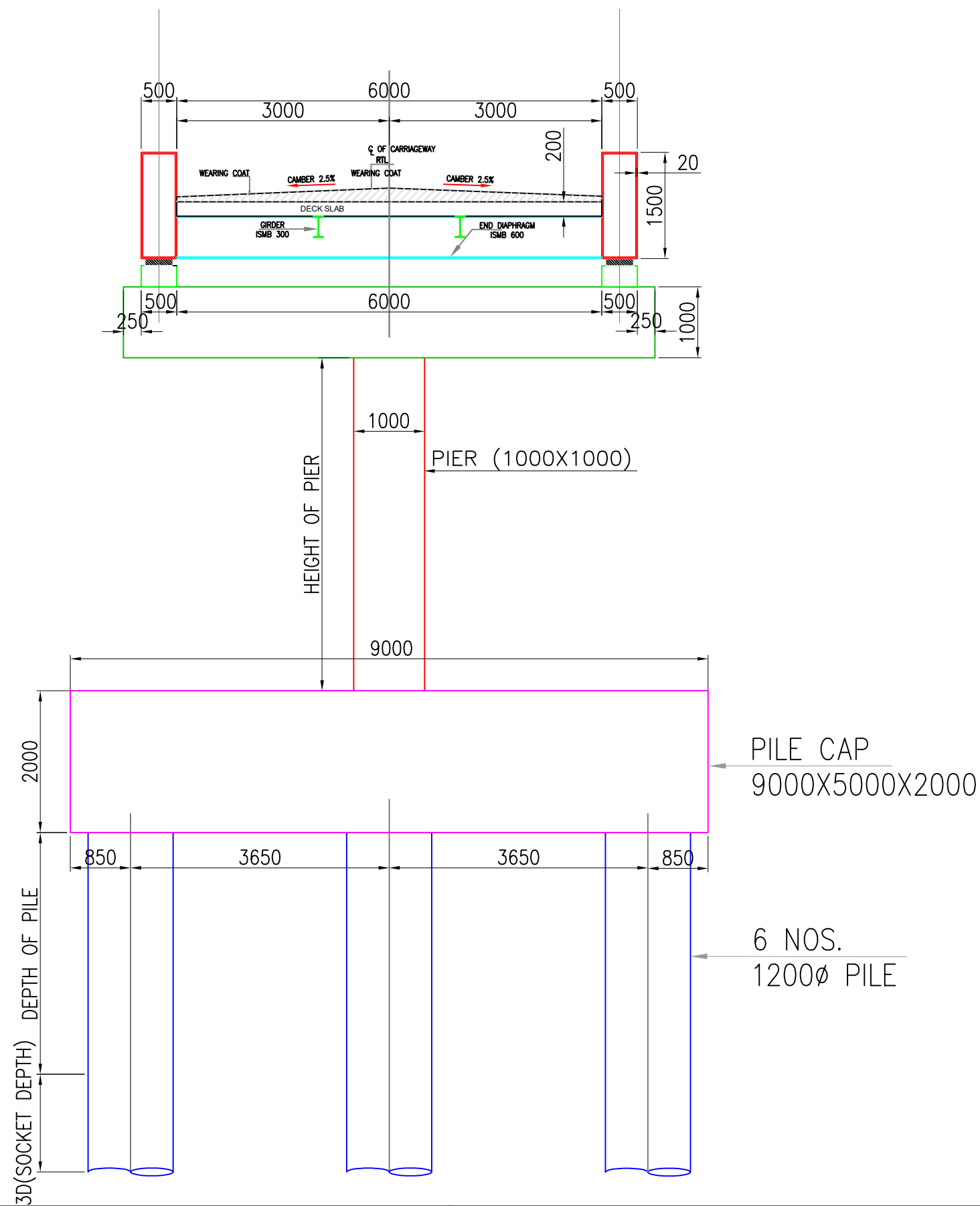
TUSPL/BMC/EG/TCS/14

SCALE:- NTS

11-10-2022

Ravindra .S

TENDER PURPOSE ONLY



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NAME OF DRAWING

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GA DRAWING FOR
6.0M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

BRIHANMUMBAI MUNICIPAL
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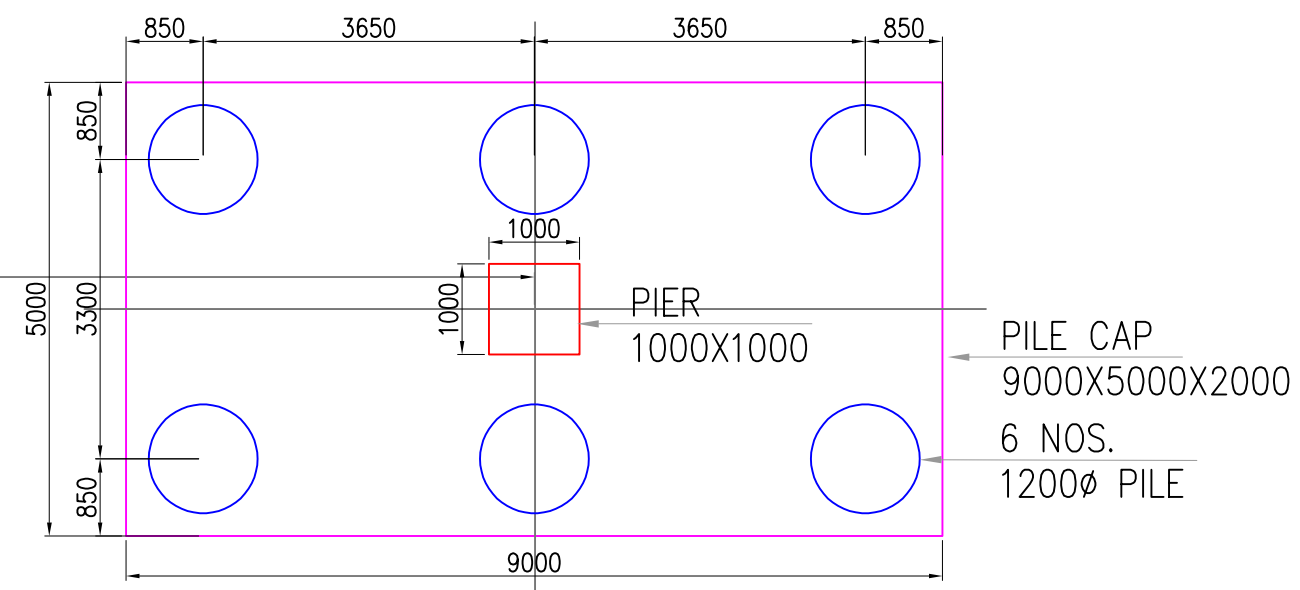
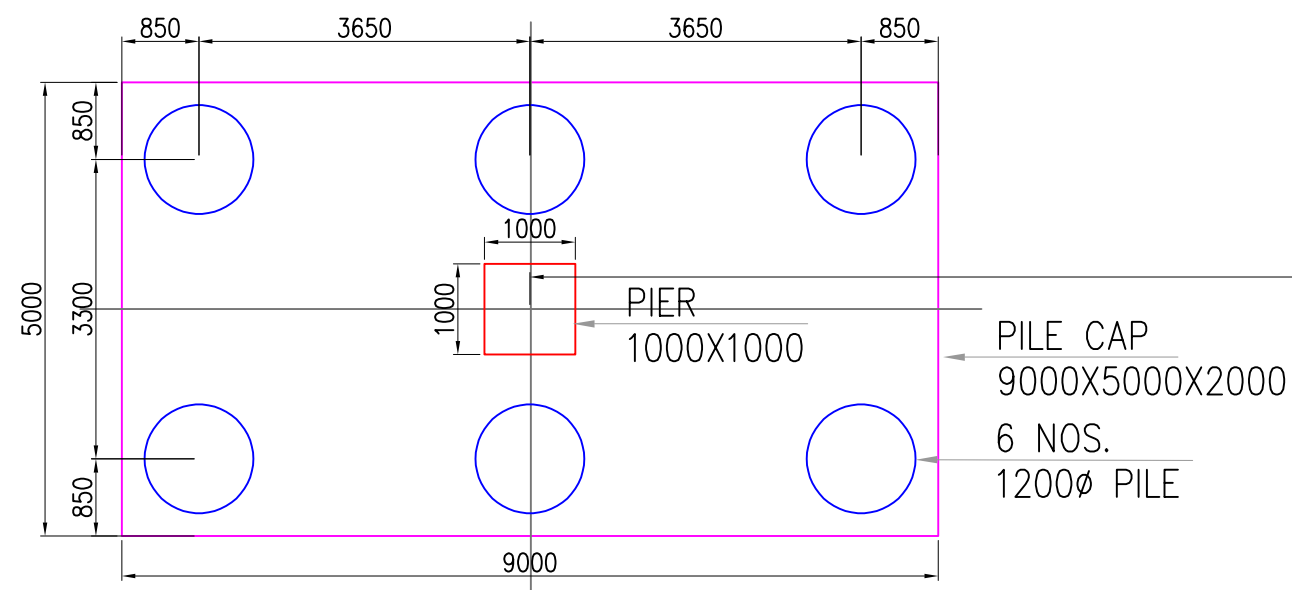
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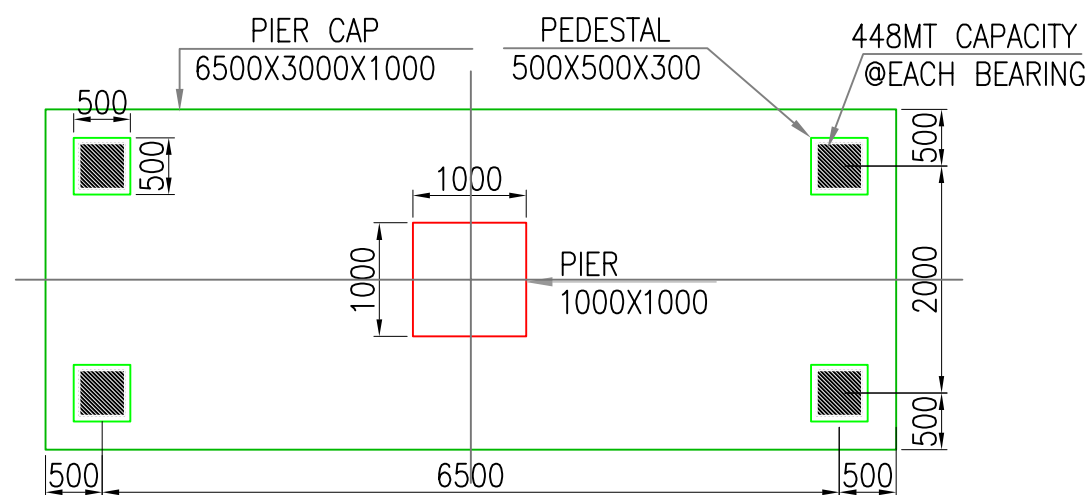
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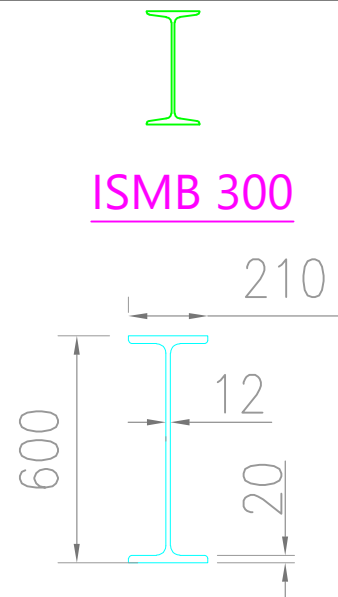
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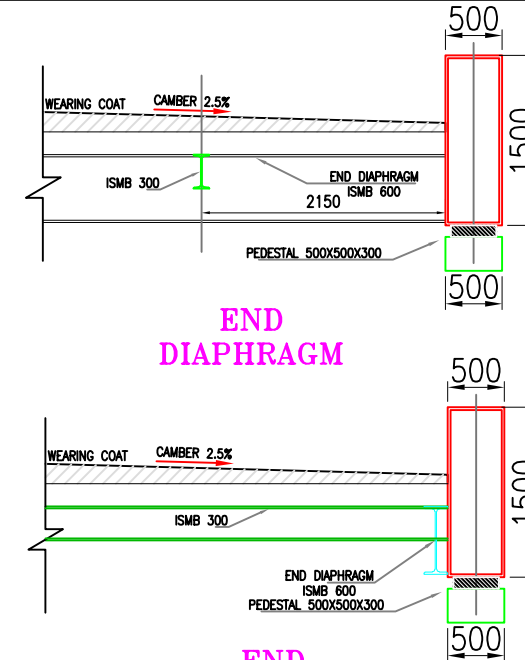
PILE CAP PLAN FOR 30 M SPAN



PIER CAP PLAN



END DIAPHRAGM



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- 3) GRADE OF PCC & THICKNESS SHALL BE M20 150THK .
- 4) GRADE OF STEEL TO BE USED FE-500D
- 5) DEVELOPMENT LENGTH 50D
- 6) ALL WELDING SHALL CONFIRM TO IS : 816 AND IS : 1323
- 7) ALL FABRICATION SHALL CONFIRM TO IS : 800
- 8) ALL STRUCTURAL STEEL SHALL BE OF TESTED QUALITY CONFIRM TO IS : 2062

NAME OF DRAWING

PROJECT NAME

NAME OF THE CLIENT

NAME OF THE CONSULTANT

GA DRAWING FOR
6.0M WIDTH & 30M SPAN
FOR SINGLE SUPPORT

**BRIHANMUMBAI MUNICIPAL
CORPORATION
(BMC)**



TUSPL

701, HARBHAJAN, CST RD,
VIDYANAGARI MARG, KALINA ,
SANTACRUZ (E), MUMBAI - 400 098.

Telefax : +91 22 26655335

contact@tandonandassociates.com/www.tandonandassociates.com

DRG NO

SCALE

DATE

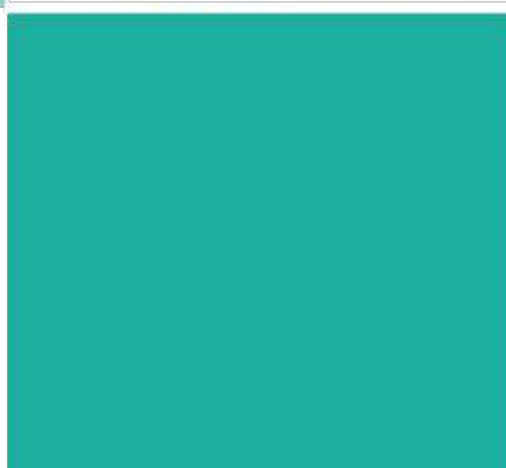
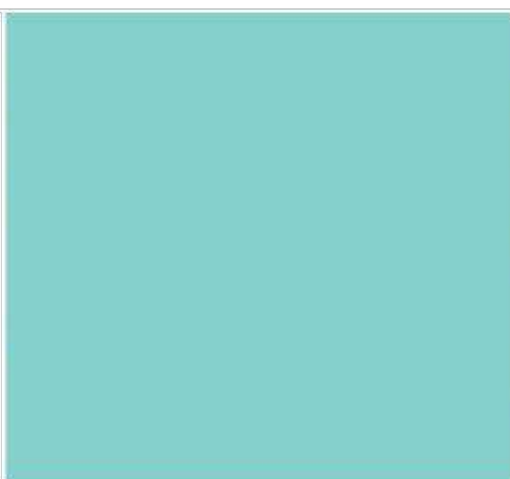
DRN BY

TUSPL/BMC/WSJ/GAD/01

SCALE:-

28-10-2023

Draft Presentation



Making Mumbai traffic free

*Access Control to Western Express Highway
and Eastern Express Highway*

To

*Dr. Iqbal Singh Chahal, I.A.S.,
Municipal Commissioner, BMC*

by

Tandon Urban Solutions Pvt. Ltd.



Project Estimates

Sr. No.	Location	Proposed Solution	Hurdles	Contract Period (in Months)
1	Airoli Junction	Underpasses	Permission from competent authorities, Shifting of HT lines	30
		Double Elevated Flyover		
2	Kanjurmarg U-Turn for Dumping Vehicles	U-turn Flyover	Traffic management Shifting of utilities, Precaution for metro works and other utilities	24
3	JVLR Powai Junction	Underpass	Permission from competent authorities	18
4	Ghatkopar Junction	Flyover	Traffic Management	24
5	Chheda Nagar Junction	Underpass	Traffic Management, Coordination with existing works	18
6	BKC Connector Extension	U-turn Flyover	Traffic Management, Shifting of utilities	18
7	Milan Subway	Underpass & Road Raising	Traffic management, Shifting of utilities, Precaution for metro works and other utilities	12
8	Parla Hanuman Road			12
9	Sudhir Phadke Flyover			12

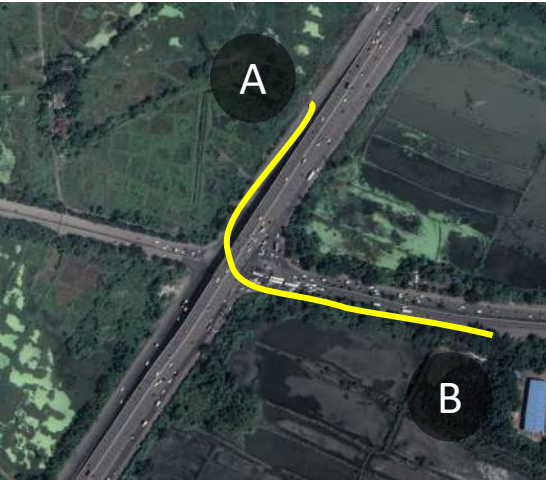


Proposed Solutions at Eastern Express Highway

1. **Underpass at Airoli Junction – Solution 1**
2. **Underpass at Airoli Junction – Solution 2**
3. **Double Elevated Flyover at Airoli Junction – Solution 3**
4. **U-turn flyover at Kanjurmarg for Waste Dumping Vehicles**
5. **Underpass at JVLR Powai Junction**
6. **Flyover at Ghatkopar Junction**
7. **Underpass at Chheda Nagar Junction**
8. **U-Turn Flyover at BKC Connector**

Underpass at Airoli Junction – Solution 1

Proposed solution – Underpass - 1



Reference photo of underpass

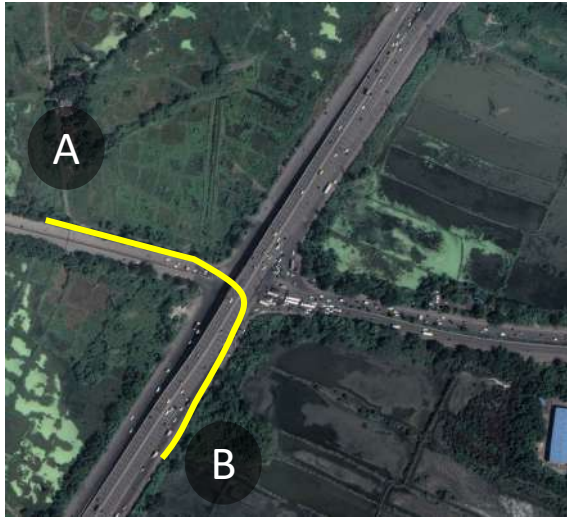


Existing condition



Underpass at Airoli Junction – Solution 2

Proposed solution – Underpass - 2



Reference photo of underpass

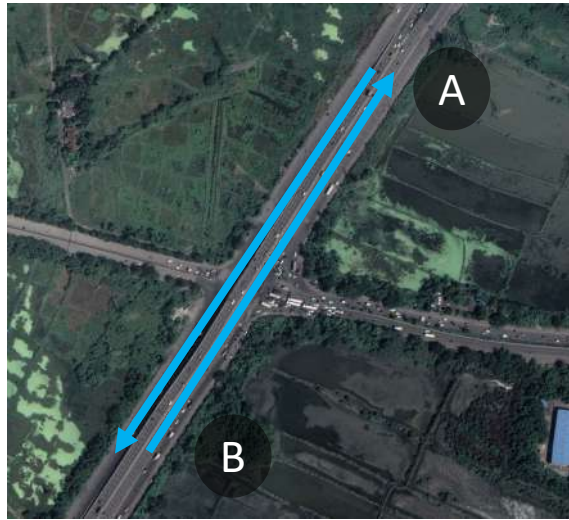


Existing condition



Double Elevated Flyover at Airoli Junction – Solution 3

Proposed solution – Double Elevated Flyover

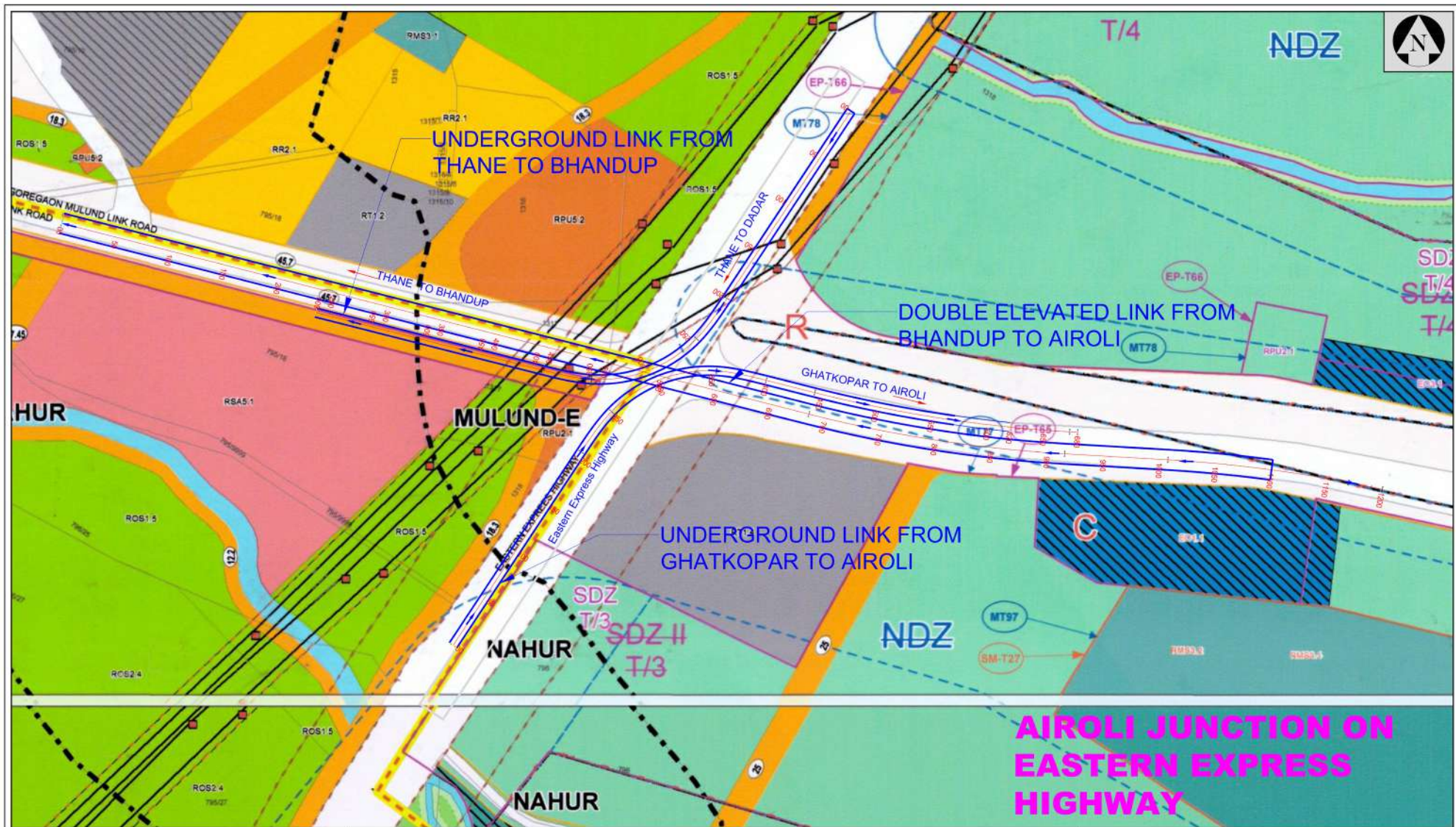


Reference photo of Double Elevated Flyover



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT					
GHATKOPAR TO AIROLI AND THANE TO BHANDUP (AIROLI JUNCTION) ON EASTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) 	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociaies.com/www.tandonandassociates.com	DRG NO	SCALE	DATE	DRN BY

U-Turn flyover at Kanjurmarg for Waste Dumping Vehicles

Proposed solution – U-Turn flyover

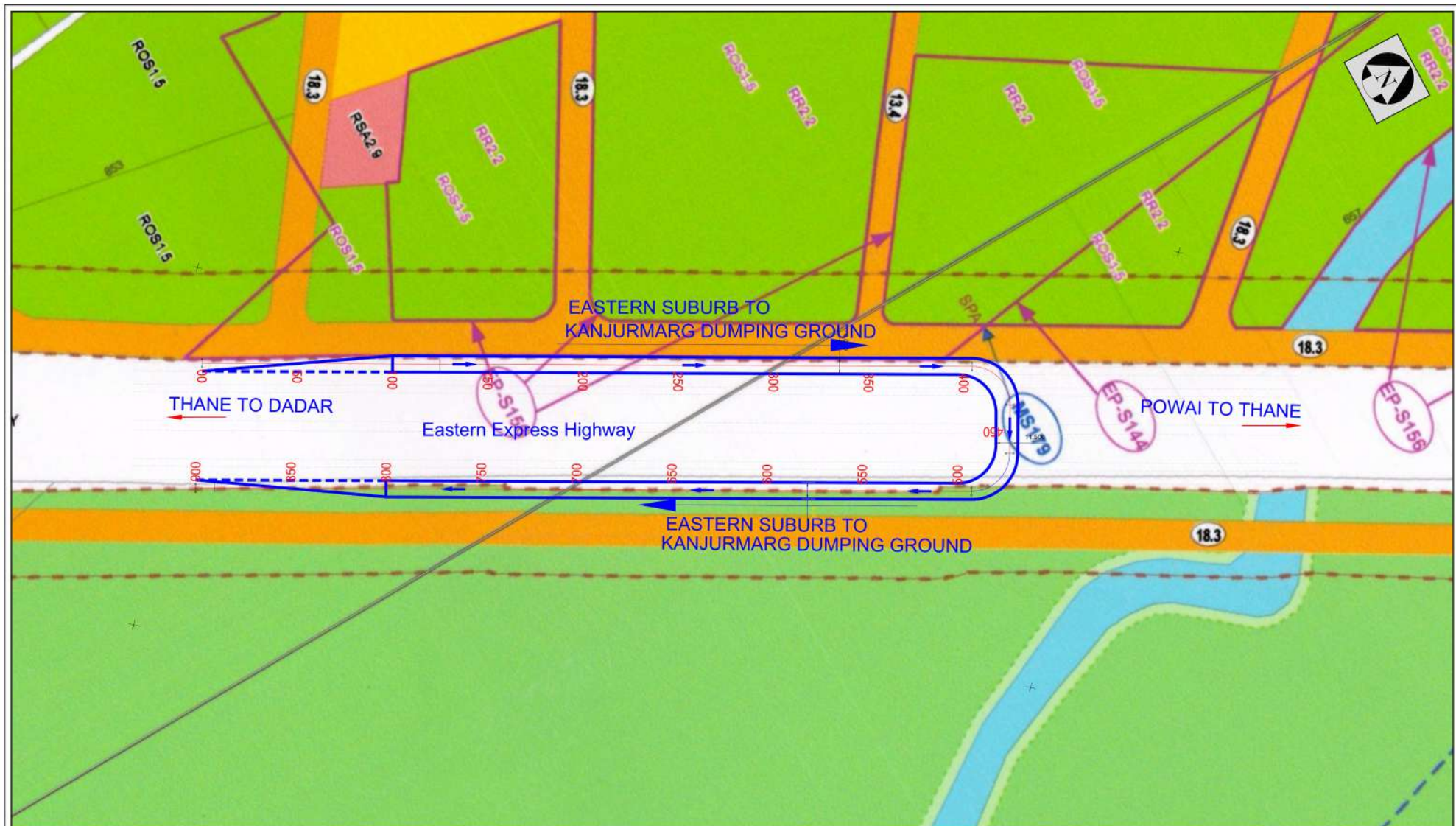


Reference photo of U-Turn flyover



Existing condition

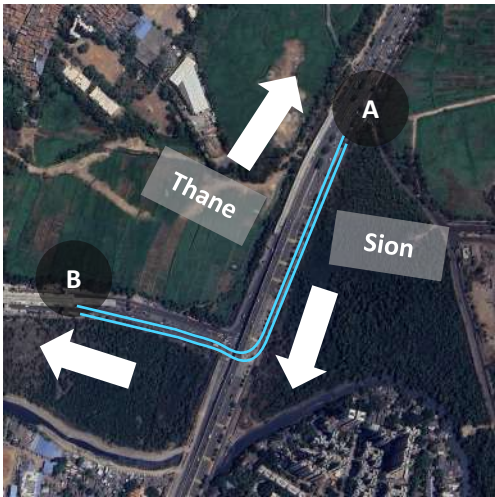




NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
U-TURN FOR KANJURMARG ON EASTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) 	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/JN/DP/06	SCALE:- NTS	21-10-2023	AM

Underpass at JVLR Powai Junction

Proposed solution – Underpass

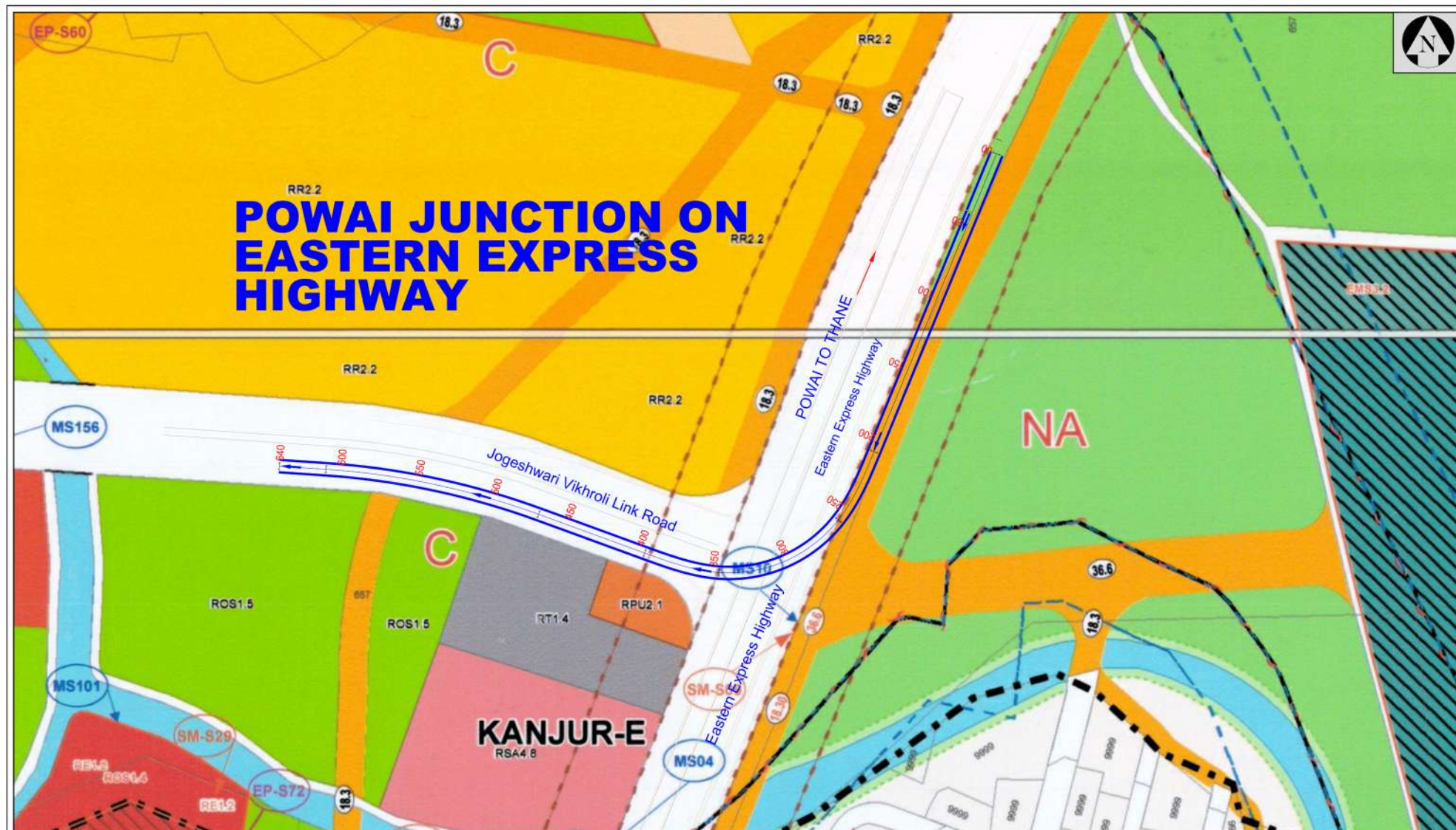


Reference photo of Underpass



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
THANE TO POWAI JUNCTION ON EASTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com
DRG NO TUSPL/BMC/JN/DP/05	SCALE SCALE:- NTS	DATE 21-10-2023	DRN BY Ravindra S.

Flyover at Ghatkopar Junction

Proposed solution – Flyover

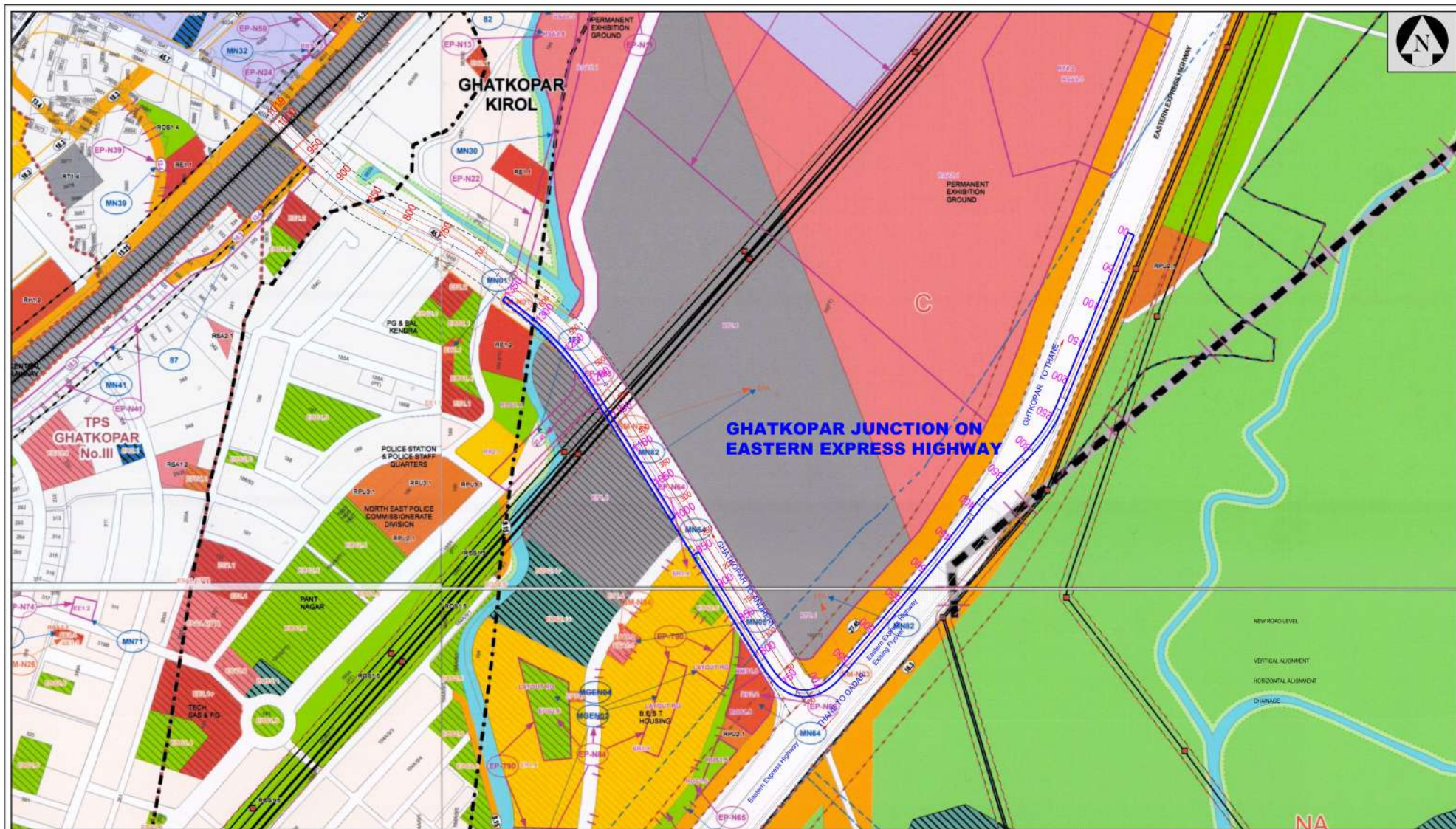


Reference photo of Flyover



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
THANE TO GHATKOPAR ON EASTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/JN/DP/07	SCALE:- NTS	21-10-2023	Ravindra S.

Underpass at Chheda Nagar Junction

Proposed solution – Underpass



Reference photo of Underpass



Existing condition

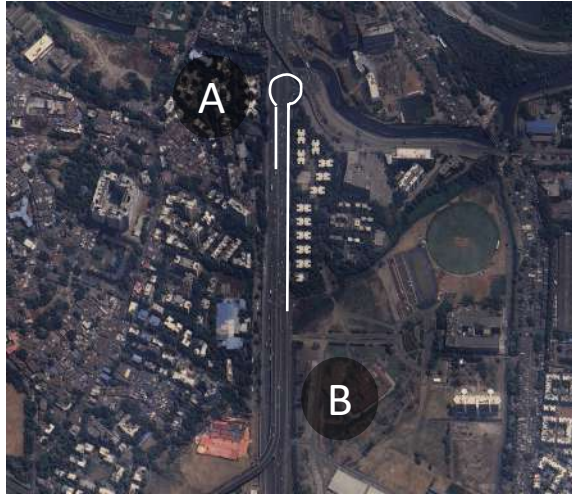




NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
SION AND SLCR TO MANKHURD ON EASTERN EXPRESS HIGHWAY SUPERIMPOSED ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/JN/DP/09	SCALE:- NTS	21-10-2023	Ravindra S.

U-Turn Flyover at BKC Connector

Proposed solution – U Turn Flyover



Reference photo of U turn Flyover



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
THANE TO GHATKOPAR ON EASTERN EXPRESS HIGHWAY SUPERIMPOSED ON DP MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com
DRG NO TUSPL/BMC/JN/DP/08	SCALE SCALE:- NTS	DATE 21-10-2023	DRN BY Ravindra S.



Proposed Solutions at Western Express Highway

1. Vehicular underpass and road rising at Milan Subway
2. Vehicular underpass and road rising at Hanuman Circle
3. Vehicular underpass and road rising at Sudhir Phadke Flyover

Vehicular underpass and road rising at Milan Subway

Proposed solution – vehicular underpass - 1

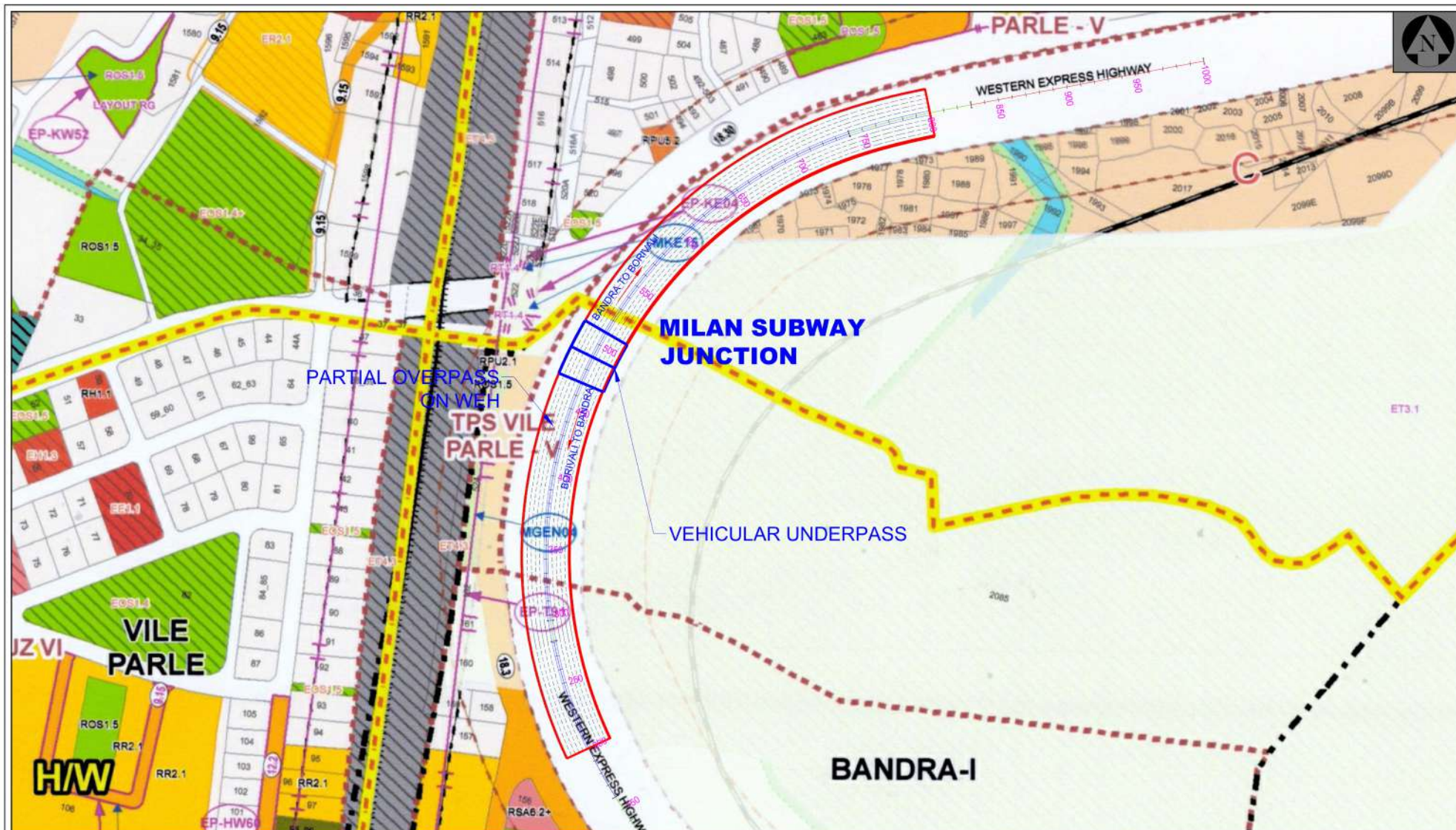


Reference photo of vehicular underpass



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
MILAN SUBWAY JUNCTION ON WESTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>  <p>TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com</p> </div>
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/JN/DP/03	SCALE:- NTS	21-10-2023	Ravindra S.

Vehicular underpass and road rising at Hanuman Circle

Proposed solution – underpass

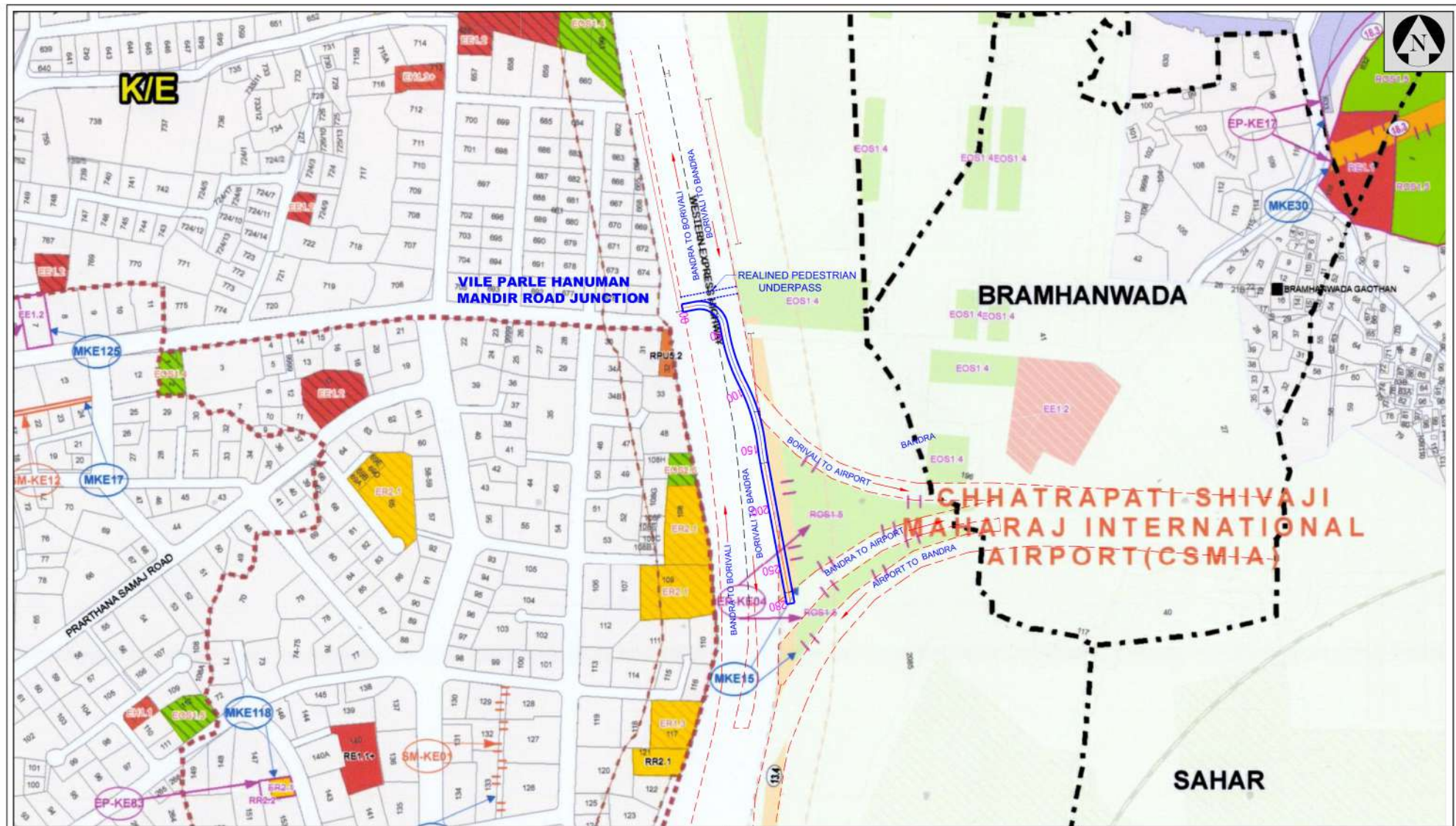


Reference photo of underpass



Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT
VILE PARLE HANUMAN MANDIR ROAD JUNCTION ON WESTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	<div>  TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA , SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com </div>
DRG NO	SCALE	DATE	DRN BY
TUSPL/BMC/JN/DP/02	SCALE:- NTS	21-10-2023	Ravindra S.

Vehicular underpass and road rising at Sudhir Phadke Flyover

Proposed solution – vehicular underpass - 1

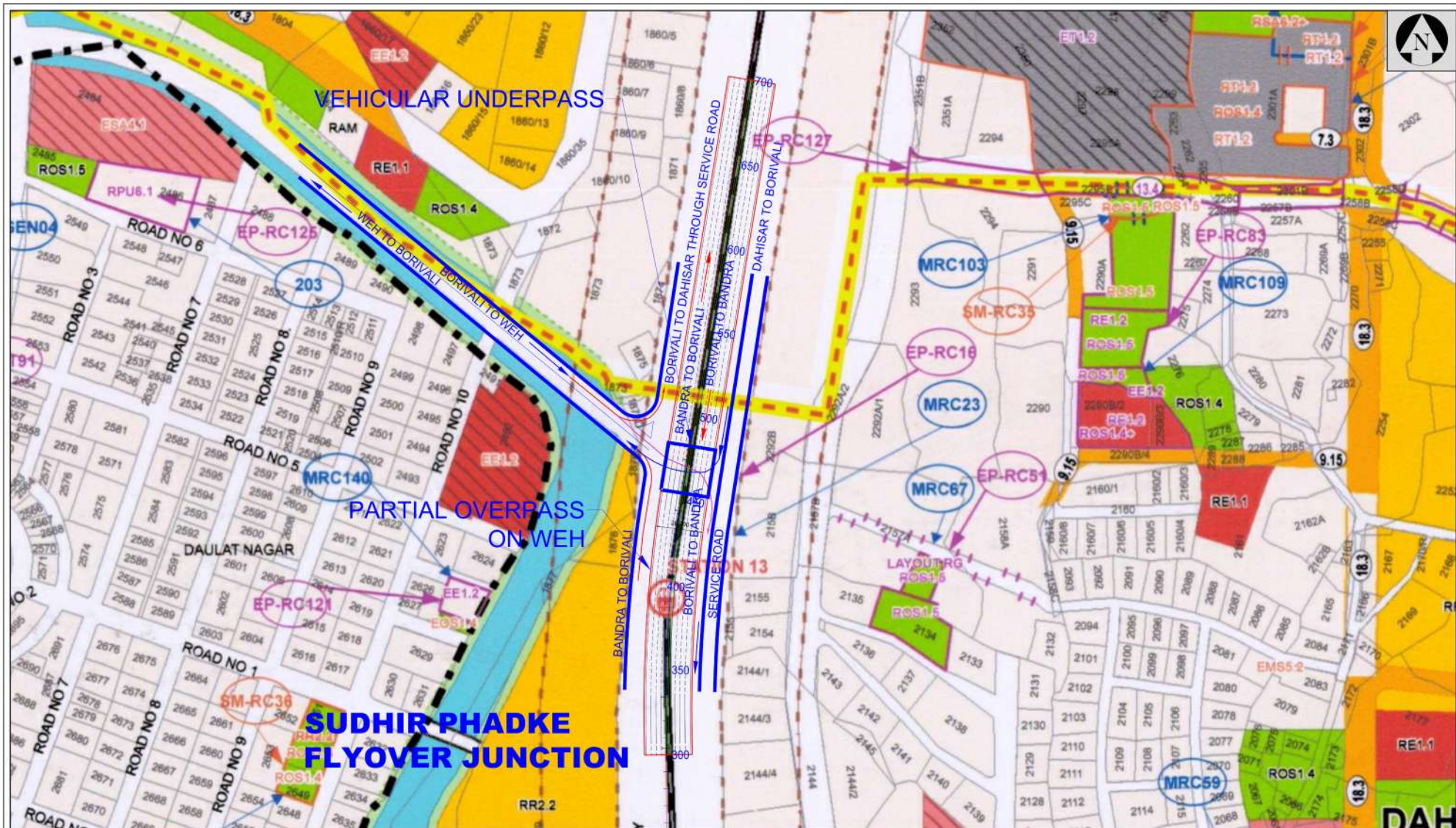


Reference photo of vehicular underpass

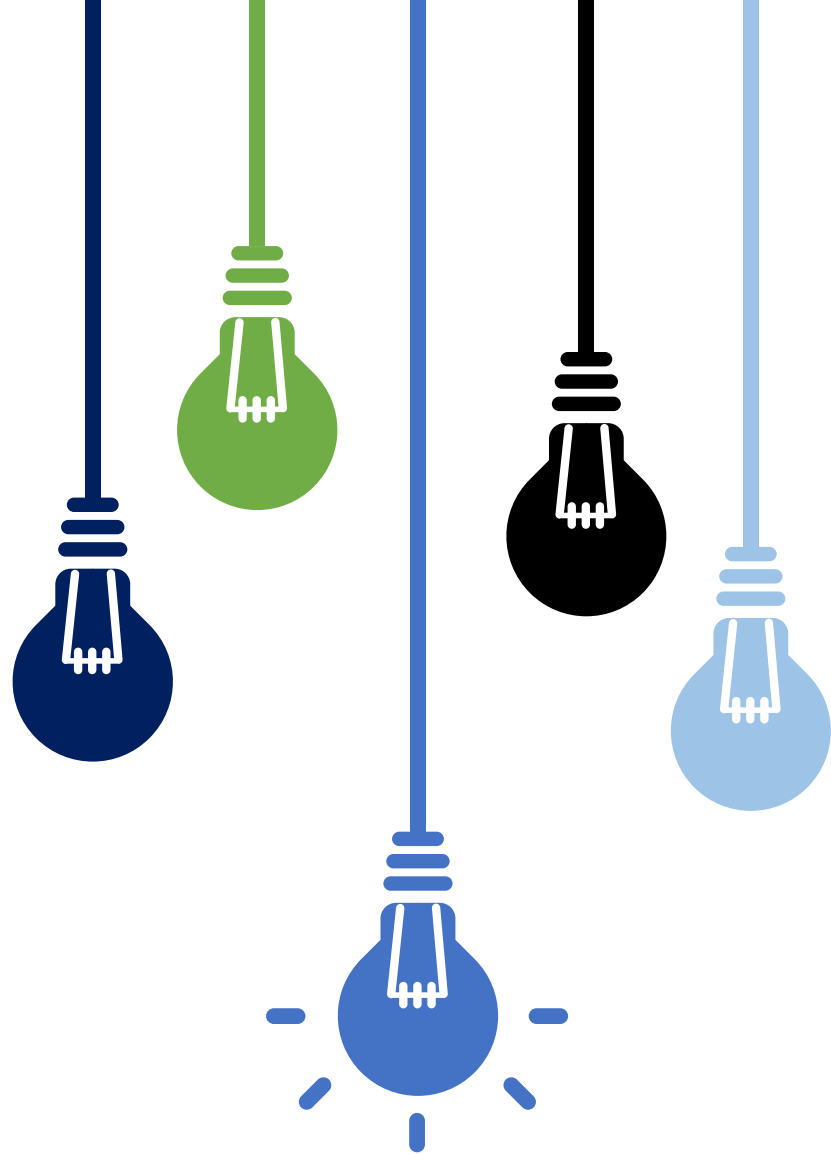


Existing condition





NAME OF DRAWING	PROJECT NAME	NAME OF THE CLIENT	NAME OF THE CONSULTANT								
SUDHIR PHADKE FLYOVER JUNCTION ON WESTERN EXPRESS HIGHWAY SUPERIMPOSE ON DP SHEET MAP	JUNCTION IMPROVEMENT FOR ACCESS CONTROL	BRIHANMUMBAI MUNICIPAL CORPORATION (BMC)	 TUSPL 701, HARBHAJAN, CST RD, VIDYANAGARI MARG, KALINA, SANTACRUZ (E), MUMBAI - 400 098. Telefax : +91 22 26655335 contact@tandonandassociates.com/www.tandonandassociates.com								
			<table> <tr> <th>DRG NO</th><th>SCALE</th><th>DATE</th><th>DRN BY</th></tr> <tr> <td>TUSPL/BMC/JN/DP/01</td><td>SCALE:- NTS</td><td>21-10-2023</td><td>Ravindra S.</td></tr> </table>	DRG NO	SCALE	DATE	DRN BY	TUSPL/BMC/JN/DP/01	SCALE:- NTS	21-10-2023	Ravindra S.
DRG NO	SCALE	DATE	DRN BY								
TUSPL/BMC/JN/DP/01	SCALE:- NTS	21-10-2023	Ravindra S.								



Thank you