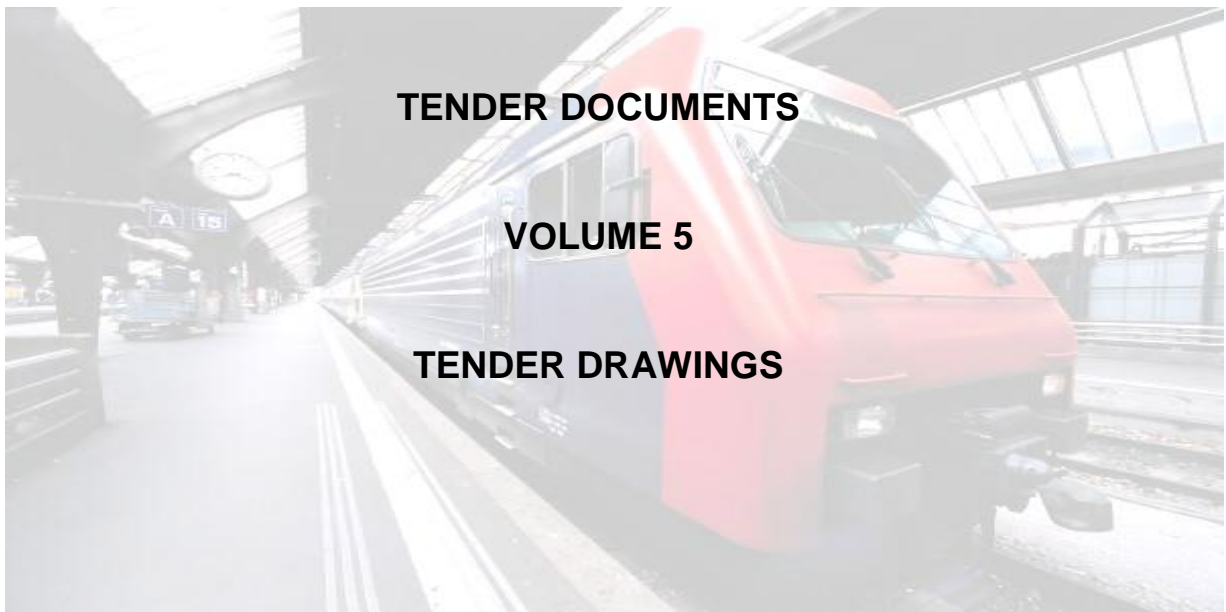




**KOLKATA METRO RAIL CORPORATION LIMITED
EAST WEST METRO PROJECT**

CONTRACT RS (3R)

**DESIGN, MANUFACTURE, SUPPLY, TESTING,
COMMISSIONING AND INTEGRATION OF PASSENGER
ROLLING STOCK (ELECTRICAL MULTIPLE UNITS), AND
TRAINING OF PERSONNEL**



Date of Issue: January 9, 2015

**KOLKATA METRO RAIL CORPORATION LIMITED
KMRCL Bhawan (HRBC Office Complex),
Munshi Premchand Sarani,
Kolkata 700 021
India**

**KOLKATA METRO RAIL CORPORATION LIMITED
EAST WEST METRO PROJECT**

**DESIGN, MANUFACTURE, SUPPLY, TESTING,
COMMISSIONING AND INTEGRATION OF PASSENGER
ROLLING STOCK (ELECTRICAL MULTIPLE UNITS), AND
TRAINING OF PERSONNEL**

CONTRACT RS (3R)

SUMMARY OF TENDER DOCUMENTS

Volume 1

- Notice of Invitation to Tender
- Instructions to Tenderers (including Annexures)
- Eligibility Criteria Documents
- Form of Tender (including Appendices)

Volume 2

- General Conditions of Contract
- Special Conditions of Contract (including Schedules)

Volume 3

- Employer's Requirements – General Specification
- Employer's Requirements – Technical Specification

Volume 4

- Schedule of Dimensions (SOD)

Volume 5

- **Tender Drawings**

Volume 6

- Pricing Documents

Volume 7

- Safety, Health and Environment (SHE) Manual
- SHE Conditions of Contract

**KOLKATA METRO RAIL CORPORATION LIMITED
EAST WEST METRO PROJECT**

**CONTRACT RS (3R)
TENDER DOCUMENTS
VOLUME 5**

TENDER DRAWINGS

- **CENTRAL PARK DEPOT (CPD)**
- **KMRCL E-W CORRIDOR ALLIGNMENT**

**KOLKATA METRO RAIL CORPORATION LIMITED
KMRCL Bhawan (HRBC Office Complex),
Munshi Premchand Sarani,
Kolkata 700 021
India**

**KOLKATA METRO RAIL CORPORATION LIMITED
EAST WEST METRO PROJECT**

**CONTRACT RS (3R)
TENDER DOCUMENTS
VOLUME 5**

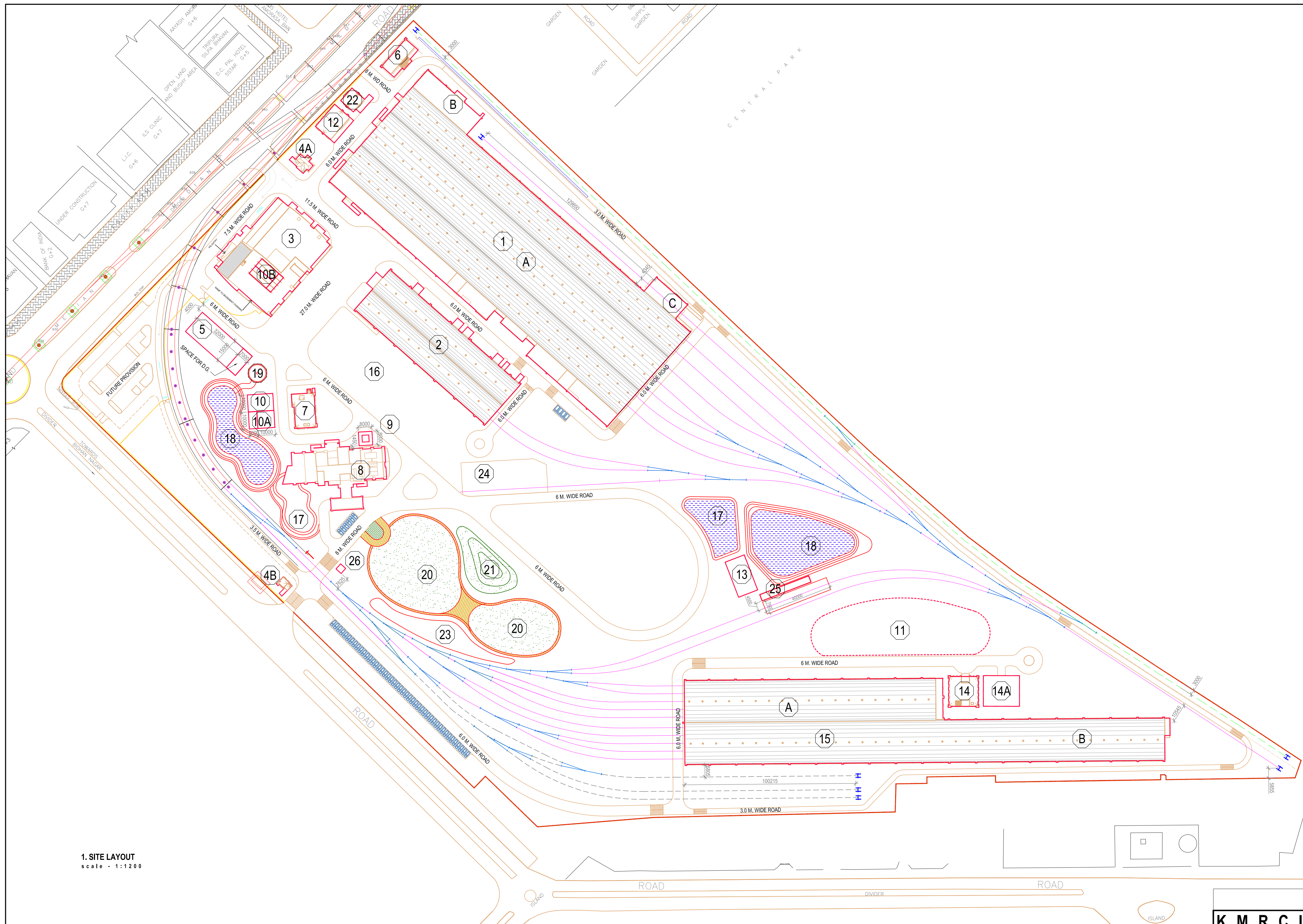
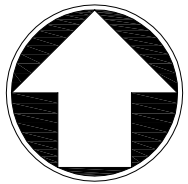
TENDER DRAWINGS

- **CENTRAL PARK DEPOT (CPD)
DRAWINGS**

**KOLKATA METRO RAIL CORPORATION LIMITED
KMRCL Bhawan (HRBC Office Complex),
Munshi Premchand Sarani,
Kolkata 700 021
India**

List of CPD Drawings & Documents

Sl. No	Description of drawings	Drawing No.	Rev
1	Site Plan	282954-CPD-D-AR-SPN-2101	D1
2	Workshop Floor Plan	282954-CPD-C-AR-WKS-2214	C0
3	Stabling Yard Floor Plan (Part 1)	282954/CPD/C/ST/STB/6317	C0
4	Stabling Yard Floor Plan (Part 2)		
5	ETU Floor Plan	282954-CPD-C-AR-ETU-2412	C0
6	Track Geometry & Drawings	Depot – East Bound Line (Ch. 1865.00m to Ch. 2795.499m)	
		Depot – West Bound Line (Ch. 2484.9m to Ch. 2789.191m)	
		Depot East Bound – Vertical Alignment Report	
		Depot West Bound – Vertical Alignment Report	
		Horizontal Alignment Report of Test Track	
		Cant Report	
7	CPD Track Layout (Combined to Depot Entry/Exit Tracks)	KRJV/TWR/CVD/DRG/ALG/1121	C10
8	Alignment Details of CPD Track Layout	KRJV/TWR/CVD/DRG/ALG/1126	C03
9	Conceptual Drainage Scheme within the CPD Track Layout	KRJV/TWR/CPD/DRG/DR/4301	C02



1. SITE LAYOUT
scale - 1:1200

NO.	DESCRIPTION	SYMBOL	AREA
1	BOUNDARY		38.972 ACRE
2	DEPOT TRACKS		
3	FUTURE EXPANSION TRACKS		
4	CROSS OVER		

REVISIONS	DATE	DESCRIPTION	APPROVED
D1	26.07.2013.	REF. G.C. COMMENTS DT. 27.05.13., C.E.-S&T COMMENTS DT. 14.06.13. & C.E.E. COMMENTS DT. 01.07.13.	ARC
D0	07.09.2011.	DEFINITIVE DRAWING FIRST ISSUE	HB
MKD.			

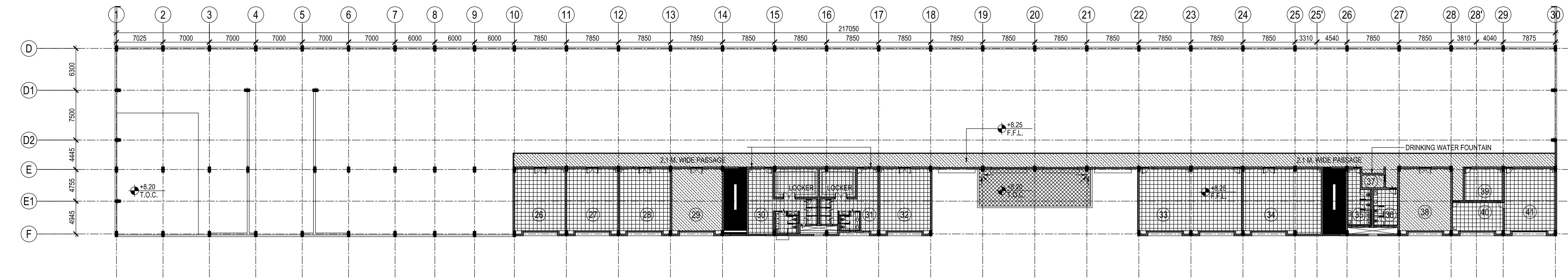
CLIENT	Kolkata Metro Rail Corporation Limited 4th Floor, HRBC Bhawan, Munshi Premchand Sarani, Kolkata 700021.
PROJECT TITLE	CONTRACT CPD DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION AND COMMISSIONING OF CENTRAL PARK DEPOT

CONTRACTOR	CONSOLIDATED CONSTRUCTION CONSORTIUM LTD. Infracons Division
	Signed on behalf of CCCL

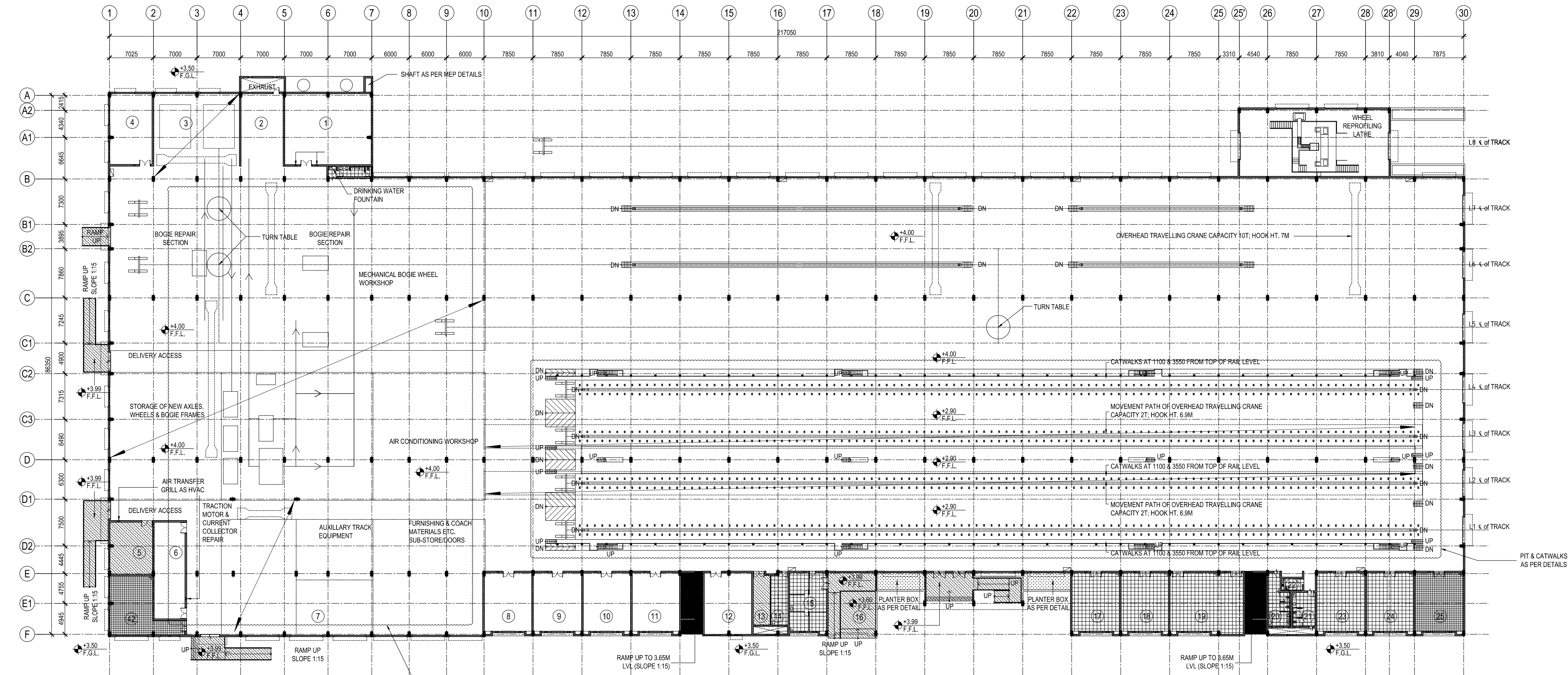
CONSULTANT FOR CONTRACTOR	CHARBAAGH
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Drawn		Issue Record	Approved for Issue
Designed		As Built	
Checked		Working Drawing	
Approved		Construction Reference Drawing	
		Definitive Design	
		Preliminary Design	

DEFINITIVE DESIGN			
K M R C L			
Accepted	Chief Engineer	Chief Electrical Engineer	Chief Signal & Telecommunication Engineer
Recommended	Executive Engineer		
M Y C E L General Consultants			
Proof Checked			
Recommended for Acceptance			
Drawing Title	CENTRAL PARK DEPOT - SITE LAYOUT		
Drawing Number	282954-CPD-D-AR-SPN-2101	REV	D1
CAD File	KMRC-C-SITE-040713.dwg	Date	26.07.13.



2. FIRST FLOOR PLAN
scale - 1:400



1. GROUND FLOOR PLAN
scale - 1:400

ROOM SCHEDULE

ROOM NO.	ROOM NAME
1	COMPRESSOR ROOM
2	PAINT ROOM
3	BOGIE WASHING AREA
4	CHEMICAL, OIL & GREASE
5	DISTRIBUTION PANEL
6	GENERAL STORE
7	MACHINE TOOL CENTRE
8	WELDING ROOM
9	TRACTION EQUIPMENT
10	CABLE & CONNECTOR STORE ROOM
11	COACH GLASS STORE
12	BEARING SECTION
13	BOGIE SPARE
14	WATER HUT
15	FIRST AID ROOM
16	AMBULANCE PARKING
17	ATP/ATO
18	TECHNICAL ROOM
19	PPO
20	TOILET (G)
21	TOILET (L)
22	PH. TOILET
23	INSPECTION ROOM
24	SUPERVISOR ROOM
25	BATTERY RECHARGE
26	LIBRARY
27	LAB
28	ERS
29	PNEUMATIC SEC.
30	AMENITIES (GENTS)
31	AMENITIES (LADIES)
32	ELECTRICAL & ELECTRONICS SEC.
33	SUPERVISOR & OFFICE STAFF ROOM
34	SPEEDOMETER TEST BENCH SEC.
35	TOILET (G)
36	TOILET (L)
37	STORE
38	LIGHT, HORN & VALVES
39	MEETING ROOM
40	DINING
41	SUPERVISOR ROOM
42	UPS ROOM / SWITCH ROOM

LEGEND (REF: DWG. NO. 282954-CPD-C-AR-WKS-2217 & 282954/CPD/C/AR/DET/3803)

LOCATION	FLOORING	SKIRTING	SYMBOL
STAIRCASE-1, STAIRCASE-2	25mm THK. KOTA STONE	25mm THK. KOTA STONE	
FIRST AID ROOM, INSPECTION ROOM, SUPERVISOR ROOM, LIBRARY, LAB, SUPERVISOR & OFFICE STAFF ROOM, SPEEDOMETER TEST BENCH, MEETING ROOM, DINING, SUPERVISOR ROOM, ATP/ATO, PPO, TECHNICAL ROOM, ELECTRICAL & ELECTRONICS SEC., ERS	600X600 POLISHED VITRIFIED TILES	POLISHED VITRIFIED TILES	
WATER HUT, TOILETS, AMENITIES (GENTS), AMENITIES (LADIES)	600X600 SLIP RESISTANT VITRIFIED TILES OVER WATER PROOFING TREATMENT	SLIP RESISTANT VITRIFIED TILES	
ENTRANCE STEPS, RAMPS, DISTRIBUTION PANEL ROOM, BOGIE SPARE, PNEUMATIC SEC., STORE, LIGHT, HORN & VALVES, CORRIDOR	52mm THK. HARDENED CEMENT CONCRETE FLOORING AS PER TECH. SPEC.	10mm THK. CEMENT PLASTER (1 CEMENT : 3 COARSE SAND) SKIRTING WITH A FLOATING COAT OF NEAT CEMENT	
BATTERY RECHARGE, UPS ROOM / SWITCH ROOM	10mm THK. ACID / ALKALI RESISTANT TILE	10mm THK. ACID / ALKALI RESISTANT TILE	
TERRACE (OVER CANOPY)	WATERPROOFING AS PER SPECIFICATION	-	
PLANTER	EARTH/FILL AS PER DETAIL	-	

CONSTRUCTION REFERENCE DRAWING

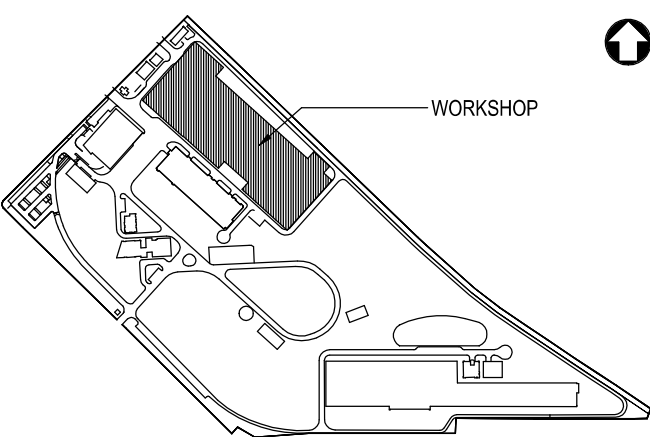
K M R C L

Accepted	Chief Engineer
Recommended	Executive Engineer
M Y C E L General Consultants	
Proof Checked	
Recommended for Acceptance	
Drawing Title	CENTRAL PARK DEPOT - WORKSHOP - FLOORING PLAN DETAIL
Drawing Number	282954-CPD-C-AR-WKS-2214
CAD File	WKS-FLRNG-TEMP.dwg
Date	28.10.14.

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS.
- ALL LEVELS ARE IN METERS.
- GROUND LEVELS, WHERE SHOWN, ARE INDICATIVE; IT SHALL BE CONFIRMED AT SITE.
- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, PLUMBING & FIRE FIGHTING, ELECTRICAL & TRAFFIC MANAGEMENT DRAWINGS.
- ACTUAL SIZE OF CUTOUT AND OPENING AS PER E&M / HVAC DRAWING.
- DIMENSIONS NOT TO BE SCALED.
- DOOR THRESHOLDS TO BE MADE OF POLISHED RAW SILK GRANITE, FLUSHED WITH F.F.L.
- FLOORING FOR BALANCE ROOM & WORKSHOP FLOOR TO BE DONE AS PER 282954/CPD/C/ST/WKS/6229 (SH. 1 OF 2).
- KMRC MAY ALTER IDENTIFIED USE OF THE ROOMS AS SHOWN HERE TO SUIT FUTURE REQUIREMENT.

START TITLE



KEY PLAN
not to scale

C0	28.10.2014.	CRD FIRST ISSUE	ARC
MKD.	DATE	DESCRIPTION	APPROVED
REVISIONS			

CLIENT
Kolkata Metro Rail Corporation Limited
4th Floor, HRBC Bhawan, Munshi Premchand Sarani, Kolkata 700021.

PROJECT TITLE
CONTRACT CPD
DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION AND COMMISSIONING OF CENTRAL PARK DEPOT

CONTRACTOR
CONSOLIDATED CONSTRUCTION CONSORTIUM LTD.
Infracons Division

Signed on behalf of CCCL

CONSULTANT FOR CONTRACTOR
CHARBAAGH

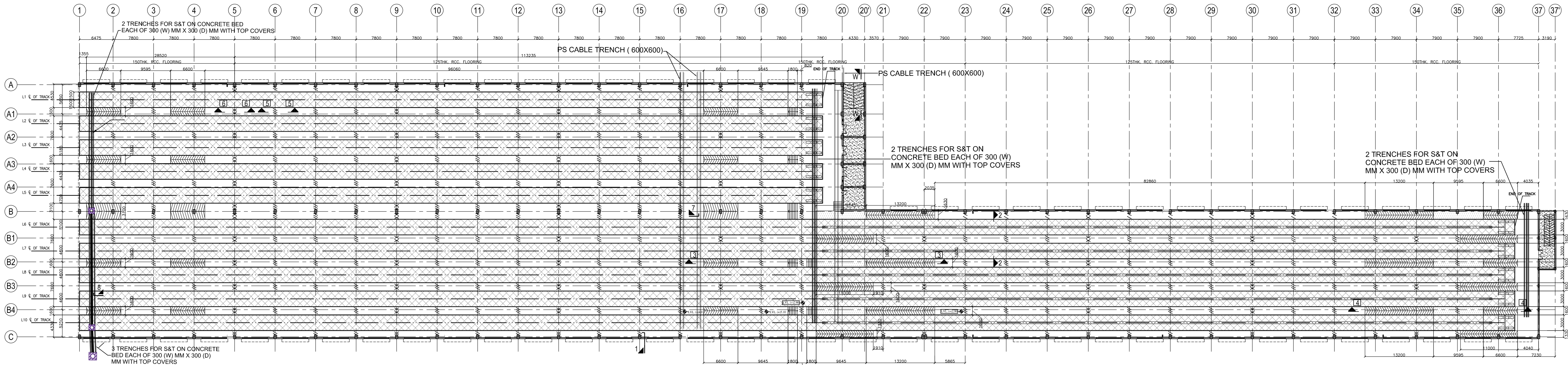
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Drawn
S. PAL

Checked & Approved
ARNAB ROYCHOUDHURY

Issue Record
As Built
Working Drawing
Construction Reference Drawing
Definitive Design
Preliminary Design

Approved for Issue
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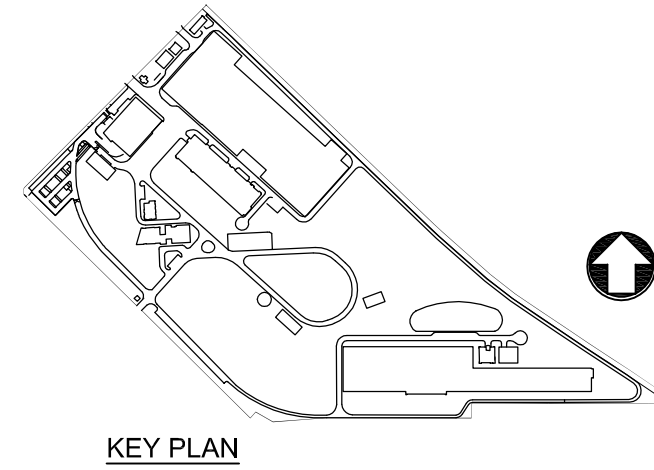
NOTE :-

1. ALL DIMENSION ARE IN mm & LEVEL ARE IN METER.
2. FOR DETAIL REFER DRG. NO. 282954/CPD/C/ST/STB/ 6317 SH:- 2 OF 2
3. THE MAIN FLOOR SLABS SHALL BE VACCUM DEWATERED & APPLIED WITH NON FERROUS HARDNER OF APPROVED MAKE AS PER MANUFACTURER'S SPECIFICATION
4. THIS DRG. SHALL BE READ IN CONJUNCTION WITH ALL SERVICES DRG. FOR PIPES, CONDUITS, BOXES ETC.TO BE LAID IN GRADE SLAB.
5. BEFORE EXECUTION OF FLOOR AS PER THIS DWG. PLEASE CONSULT MECHANICAL AND ELECTRICAL CONDUIT DWG. CAREFULLY
6. ALL REINFORCEMENT ARE Fe 500 GRADE, GARDE OF DOWEL BAR Fe250.
7. P.C.C SHALL BE OF M10 GRADE.
8. ALL R.C.C. SHALL BE M35 GRADE
9. ALL CLEAR COVER SHALL BE 25 MM
10. THE TOP OF THE FLOOR TO BE FINISHED WITH A SLOPE OF 1 IN 1000 FOR PROPER DRAINAGE (REFER DRAINAGE DRAWING FOR FURTHER CLARITY)
11. ALL COMPRESSIBLE FILLER SHALL BE EITHER THERMOKOL OR SALTIX BOARD.
12. FOR SPECIFIC SURFACE TREATMENT WHICH MAY BE REQUIRED AS PER TECHNICAL SPECIFICATION IN SELECTED AREA REFER ARCHITECTURAL DRAWING.
13. CONSTRUCTION SHOULD BE DONE WITH RESPECT TO CENTER OF TRACK.
14. BEFORE TAKING UP ANY CIVIL CONSTRUCTION ALONG THE LINE OF TRACK,THE DEPOT CIVIL CONTRACTOR WILL GET THE ALIGNMENT OF THE SAME CHECKED BY THE TRACK WORK CONTRACTOR.
15. REFER DRAWINGS NO. - (1) SRCA/CCCL/CPD/D/CSD/SPN/4121
(2) 282954/CPD/C/ST/STB/ 6317 SH. - 2 OF 2

PLAN
SCALE :-1:300

LEGEND:

- ***** CONTRACTION JOINT FREE
- ***** CONTRACTION JOINT TIED
- JOB TO BE DONE AS PER TRACK CONTRACTOR DRAWING.
- ROOM INSIDE FLOORING



CONSTRUCTION REFERENCE DRAWING				
KMRCL				
Accepted		Chief Engineer		
Recommended		Executive Engineer		
MYCEL General Consultants				
Proof Checked				
Recommended For Acceptance				
Drawing Title		STABLING YARD BUILDING - GROUND FLOOR FLOORING DETAIL.		
Drawing Number		282954/CPD/C/ST/STB/ 6317 SH:- 1 OF 2		REV C0
CAD FILE				Date 20.11.14

CLIENT			
Kolkata Metro Rail Corporation Limited 4th Floor, HRBC Bhawan, Munshii Premchand Sarani,Kolkata 700021			
PROJECT TITLE			
CONTRACT CPD DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION AND COMMISSIONING OF CENTRAL PARK DEPOT			
MKD.	DATE	DESCRIPTION	APPROVED
REVISIONS			

CONTRACTOR	
	CONSOLIDATED CONSTRUCTION CONSORTIUM LTD.
	Infracons Division
	Signed on behalf of CCCL

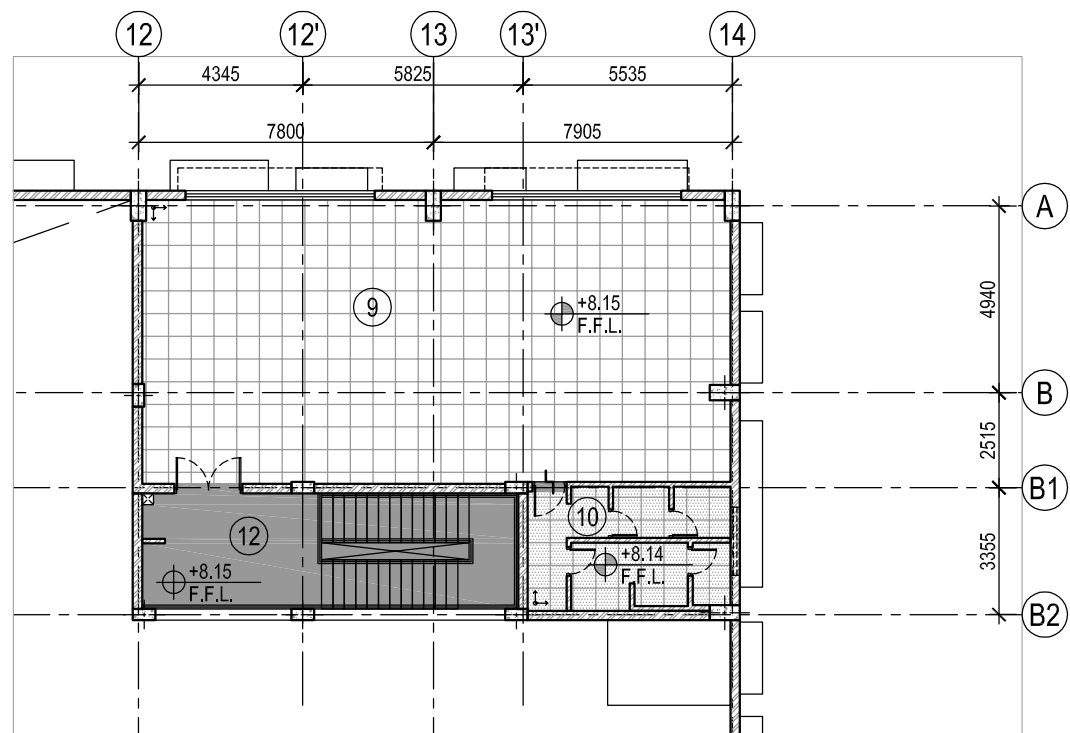
CONSULTANT FOR CONTRACTOR	
	INTEGRATED PROJECT MANAGEMENT AND SERVICES
	74, NEHRU COLONY KOLKATA - 40

Drawn	S.S	29.10.2014	Issue Record	Approved for Issue
Designed	A.D	29.10.2014	As Built	
Checked	M.S	29.10.2014	Working Drawing	
Approved	A.C	29.10.2014	Construction Reference Drawing	✓
			Definitive Design	
			Preliminary Design	

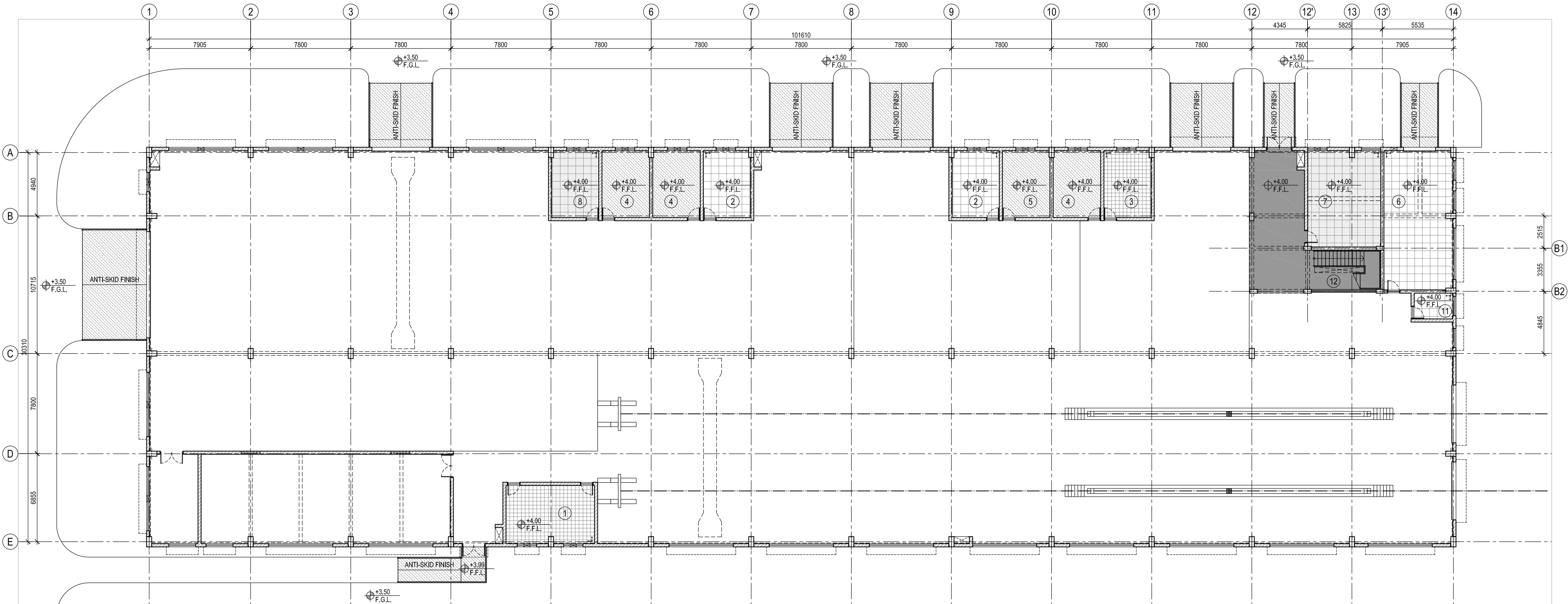


ROOM SCHEDULE

ROOM NO.	ROOM NAME
1	BATTERY CHARGER ROOM FOR SHUNTING LOCO
2	SUPERVISOR ROOM
3	BATTERY CHARGER ROOM FOR FLT ETC
4	STORE ROOM
5	MTS
6	TECHNICAL ROOM
7	AMENITIES
8	WATER HUT
9	MEETING ROOM
10	TOILET
11	TERMINATION AND DISTRIBUTION OF TELECOM & DATA CABLES
12	STAIRCASE / LOBBY



2. FLOORING PLAN - FIRST FLOOR
scale - 1:100



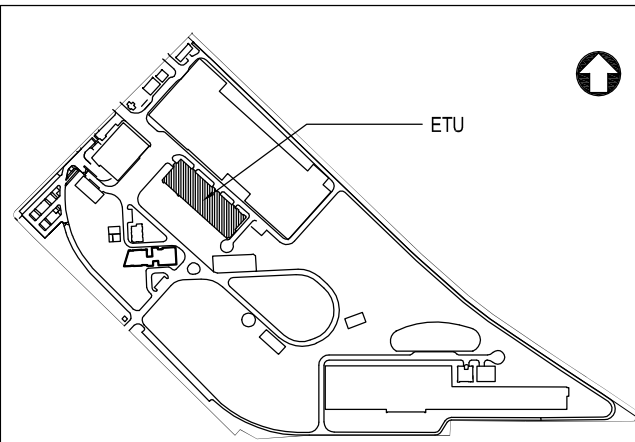
1. FLOORING PLAN - GROUND FLOOR
scale - 1:100

LEGEND (REF: DWG. NO. 282954/CPD/C/AR/ETU/2415 & 282954/CPD/C/AR/DET/3803)			
LOCATION	FLOORING	SKIRTING	SYMBOL
RAMP, STAIRCASE	25mm THK. KOTA STONE	25mm THK. KOTA STONE	
MTS, TECHNICAL ROOM, SUPERVISOR ROOM, STORE ROOM, MEETING ROOM	600X600 POLISHED VITRIFIED TILES OVER	POLISHED VITRIFIED TILES	
WATER HUT, AMENITIES, TOILET	600X600 SLIP RESISTANT VITRIFIED TILES OVER WATER PROOFING TREATMENT	SLIP RESISTANT VITRIFIED TILES	
TERMINATION AND DISTRIBUTION OF TELECOM & DATA CABLES	52mm THK. HARDENED CEMENT CONCRETE FLOORING AS PER TECH. SPEC.	19mm THK. CEMENT PLASTER (1 CEMENT : 3 COARSE SAND) SKIRTING WITH A FLOATING COAT OF NEAT CEMENT	
BATTERY CHARGER ROOM FOR SHUNTING LOCO, BATTERY CHARGER ROOM FOR FLT ETC	10mm THK. ACID / ALKALI RESISTANT TILE	10mm THK. ACID / ALKALI RESISTANT TILE	

START TILE

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS.
- ALL LEVELS ARE IN METERS.
- GROUND LEVELS, WHERE SHOWN, ARE INDICATIVE; IT SHALL BE CONFIRMED AT SITE.
- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, PLUMBING & FIRE FIGHTING, ELECTRICAL & TRAFFIC MANAGEMENT DRAWINGS.
- ACTUAL SIZE OF CUTOUT AND OPENING AS PER E&M / HVAC DRAWING.
- DIMENSIONS NOT TO BE SCALED.
- DOOR THRESHOLDS TO BE MADE OF 25MM THK. KOTA STONE, FLUSHED WITH F.F.L.



KEY PLAN
not to scale

CONSTRUCTION REFERENCE DRAWING

K M R C L

Accepted Chief Engineer

Recommended Executive Engineer

MYCEL

General Consultants

Proof Checked

Recommended for Acceptance

Drawing Title CENTRAL PARK DEPOT - ETU - FLOORING PLAN DETAIL

Drawing Number 282954-CPD-C-AR-ETU-2412

REV C0

CAD File ETU-FLRNG.dwg

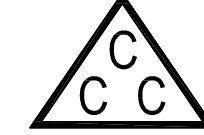
Date 22.10.14.

CO	DATE	DESCRIPTION	APPROVED
C0	22.10.2014.	CRD FIRST RELEASE	ARC
MKD.	DATE	DESCRIPTION	APPROVED
REVISIONS			

CLIENT
Kolkata Metro Rail Corporation Limited
4th Floor, HRBC Bhawan, Munshi Premchand Sarani, Kolkata 700021.

PROJECT TITLE
CONTRACT CPD
DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION AND COMMISSIONING OF CENTRAL PARK DEPOT

CONTRACTOR
CONSOLIDATED CONSTRUCTION CONSORTIUM LTD.
Infracons Division



Signed on behalf of CCCL

CONSULTANT FOR CONTRACTOR
CHARBAAGH

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which CHARBAAGH was commissioned. CHARBAAGH accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

Drawn

Signed

S. PAL

Issue Record

As Built

Working Drawing

Construction Reference Drawing

Definitive Design

Preliminary Design

Approved for Issue

✓

Checked & Approved

ARNAB ROYCHOUDHURY

Track Geometry & Drawings

DEPOT- EAST BOUND LINE Ch: 1865.00m To Ch:2795.499m									
Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Remarks
Tangent	Take Off at Ch:	1865	53513.76	55388.13					
Tangent	TP1 at Ch:	2130.465	53508.774	55122.712					
Arc	TP1 at Ch:	2130.465	53508.774	55122.712					
Arc	PI	2179.922	53507.845	55073.264	120	93.8226	44°47'49.184"	Left	
Arc	CC		53388.795	55124.966					
Arc	TP2 at Ch:	2224.287	53472.345	55038.83					
Tangent	TP2 at Ch:	2224.287	53472.345	55038.83					
Tangent	TP1 at Ch:	2544.629	53242.403	54815.792					
Arc	TP1 at Ch:	2544.629	53242.403	54815.792					Curve at approach for Depot Yard
Arc	PI	2667.743	53154.032	54730.075	124.2	194.0016	89°29'47.630"	Left	
Arc	CC		53155.929	54904.943					
Arc	TP2 at Ch:	2738.631	53067.541	54817.689					
Tangent	TP2 at Ch:	2738.631	53067.541	54817.689					
Tangent	DE at Ch:	2795.499	53027.59	54858.16					

DEPOT- WEST BOUND LINE Ch: 2484.9m To Ch:2789.191m

Element	Point	Station	Northing	Easting	Radius	Length	Delta /	Rotation	Remarks
	Type						Theta	Direction	
Tangent	Take Off at Ch:	2484.9	53285.278	54857.38					
Tangent	TP1 at Ch:	2500.386	53272.749	54848.278					
Arc	TP1 at Ch:	2500.386	53272.749	54848.278					Turn-In curve for the Take- off
Arc	PI	2514.6	53261.249	54839.924	200	28.3795	8°07'48.429"	Right	
Arc	CC		53390.296	54686.468					
Arc	TP2 at Ch:	2528.766	53251.046	54830.028					
Tangent	TP2 at Ch:	2528.766	53251.046	54830.028					
Tangent	TP1 at Ch:	2544.881	53239.479	54818.807					
Arc	TP1 at Ch:	2544.881	53239.479	54818.807					
Arc	PI	2663.831	53154.096	54735.988	120	187.4413	89°29'47.849"	Left	Curve at approach for Depot Yard
Arc	CC		53155.929	54904.944					
Arc	TP2 at Ch:	2732.322	53070.53	54820.64					
Tangent	TP2 at Ch:	2732.322	53070.53	54820.64					
Tangent	DE at Ch:	2789.191	53030.579	54861.111					

Depot East Bound - Vertical Alignment Report

	Grade (%)	Grade Length	Station	Elevation	Northing	Easting	Vertical curve Length	Vertical curve Radius
Element: Linear								
Take Off at Ch:	0.000	636.883	1865	11.4	0	0		
PVC			2501.88	11.4	53273.086	54845.554		
Element: Circular								
PVC			2501.88	11.4	53273.086	54845.554		
PVI			2525.6	11.4	53256.062	54829.042	47.422	1500
PVT			2549.31	10.65	53238.986	54812.601		
Element: Linear								
PVT	-3.163	140.833	2549.31	10.65	53238.986	54812.601		
PVC			2690.14	6.196	53107.402	54790.616		
Element: Circular								
PVC			2690.14	6.196	53107.402	54790.616		
PVI			2709.68	5.578	53090.091	54799.63	39.081	2594.169
PVT			2729.22	5.254	53074.401	54811.248		
Element: Linear								
PVT	-1.655	63.364	2729.22	5.254	53074.401	54811.248		
PVC			2792.58	4.205	53029.639	54856.085		
Element: Circular								
PVC			2792.58	4.205	53029.639	54856.085		
PVI			2804.99	4	0	0	24.824	1500
PVT			2817.41	4	0	0		
Element: Linear								
PVT	0.000		2817.41	4	0	0		
DE at Ch:			2840.27	4	0	0		

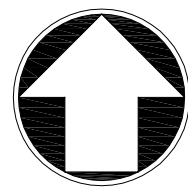
Depot West Bound - Vertical Alignment Report								
	Grade (%)	Grade Length	Station	Elevation	Northing	Easting	Vertical curve Length	Vertical curve Radius
Element: Linear								
Take Off at Ch:	0.000	16.446	2484.9	11.4	53285.278	54857.38		
PVC			2501.346	11.4	53271.973	54847.712		
Element: Symmetrical Parabola								
PVC			2501.346	11.4	53271.973	54847.712		
PVI			2525.79	11.4	53253.198	54832.084	48.887	1500
PVT			2550.233	10.603	53235.555	54815.168		
Element: Linear								
PVT	-3.261	133.534	2550.233	10.603	53235.555	54815.168		
PVC			2683.767	6.249	53110.615	54793.828		
Element: Symmetrical Parabola								
PVC			2683.767	6.249	53110.615	54793.828		
PVI			2704.353	5.578	53092.311	54803.195	41.172	2595
PVT			2724.939	5.233	53075.875	54815.549		
Element: Linear								
PVT	-1.673	61.199	2724.939	5.233	53075.875	54815.549		
PVC			2786.138	4.21	53032.723	54858.939		
Element: Symmetrical Parabola								
PVC			2786.138	4.21	53032.723	54858.939		
PVI			2798.681	4	0	0	25.086	1500
PVT			2811.224	4	0	0		
Element: Linear								
PVT	0.000		2811.224	4	0	0		
DE at Ch:			2833.955	4	0	0		

Horizontal Alignment Report of Test Track

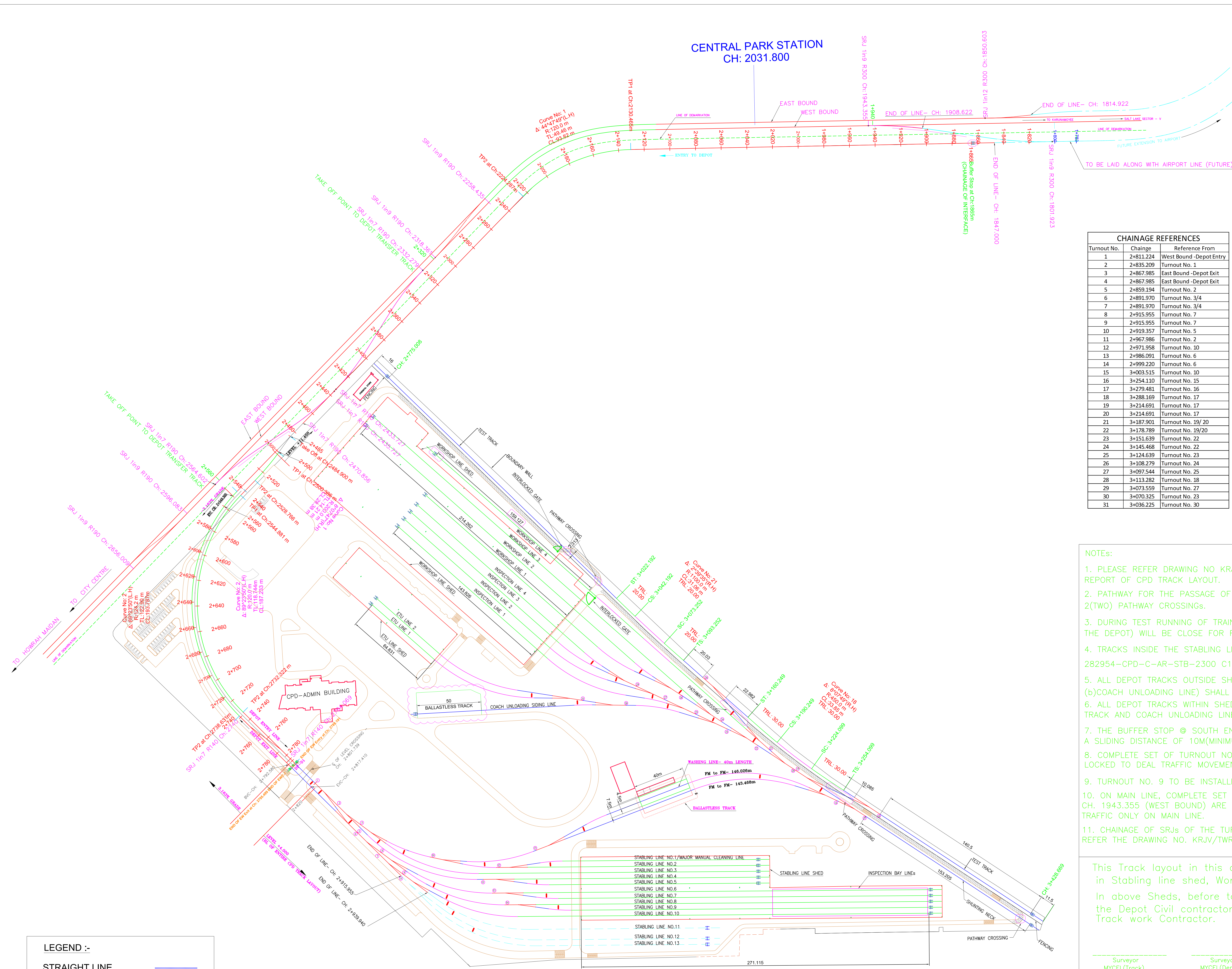
Curve No.	Element	Point	Station	Northing	Easting	Radius	Length	Delta /	Rotation
		Type						Theta	Direction
18		TS	3+254.099	53009.673	55288.58				
		SC	3+224.099	53026.414	55263.687				
		PI		53036.175	55249.848	450	33.854		
		CS	3+190.249	53046.949	55236.782				
		ST	3+160.249	53066.543	55214.066				
21		TS	3+093.252	53110.862	55163.824				
		SC	3+073.252	53124.138	55148.866				
		PI		53134.519	55137.312	1100	31.064		
		CS	3+042.192	53145.222	55126.055				
		ST	3+022.192	53159.09	55111.645				

Cant Report

Curve No.	Radius in M	speed in Kmph	Transition Length in M	Ca in mm	Cd in mm	Cant Gradient in mm	Rate of Change of Cant (mm/sec)
18	450	65	30	55	56.63	545.45	33
21	1100	65	20	20	25.67	1000	18.06



CENTRAL PARK STATION
CH: 2031.800



CHAINAGE REFERENCES		
Turnout No.	Chainage	Reference From
1	2+811.224	West Bound - Depot Entry
2	2+835.209	Turnout No. 1
3	2+867.985	East Bound - Depot Exit
4	2+867.985	East Bound - Depot Exit
5	2+859.194	Turnout No. 2
6	2+891.970	Turnout No. 3/4
7	2+891.970	Turnout No. 3/4
8	2+915.955	Turnout No. 7
9	2+915.955	Turnout No. 7
10	2+919.357	Turnout No. 5
11	2+967.986	Turnout No. 2
12	2+971.958	Turnout No. 10
13	2+986.091	Turnout No. 6
14	2+999.220	Turnout No. 6
15	3+003.515	Turnout No. 10
16	3+254.110	Turnout No. 15
17	3+279.681	Turnout No. 16
18	3+288.169	Turnout No. 17
19	3+214.691	Turnout No. 17
20	3+214.691	Turnout No. 17
21	3+187.901	Turnout No. 19/ 20
22	3+178.789	Turnout No. 19/20
23	3+151.639	Turnout No. 22
24	3+145.468	Turnout No. 22
25	3+124.639	Turnout No. 23
26	3+108.279	Turnout No. 24
27	3+097.544	Turnout No. 25
28	3+113.282	Turnout No. 18
29	3+073.559	Turnout No. 27
30	3+070.325	Turnout No. 23
31	3+036.225	Turnout No. 30

CLEAR AVAILABLE LENGTH OF TRACKS IN CPD			
SL. NO.	Name	Length in 'm'	Chainage of Face of the Buffer Stop
1	STABLING LINE NO. 1	160.756	3+174.763
2	STABLING LINE NO. 2	160.412	3+174.463
3	STABLING LINE NO. 3	278.031	3+177.548
4	STABLING LINE NO. 4	171.273	3+180.856
5	STABLING LINE NO. 5	171.283	3+181.155
6	STABLING LINE NO. 6	297.974	3+326.136
7	STABLING LINE NO. 7	297.985	3+326.453
8	STABLING LINE NO. 8	288.811	3+329.585
9	STABLING LINE NO. 9	288.823	3+329.884
10	STABLING LINE NO. 10	378.664	3+333.551
11	STABLING LINE NO. 11	198.125	3+163.299
12	STABLING LINE NO. 12	181.541	3+167.420
13	STABLING LINE NO. 13	183.404	3+170.436
14	ETU LINE NO. 1	147.115	2+848.724
15	ETU LINE NO. 2	143.313	2+852.303
16	INSPECTION LINE NO. 1	243.427	2+845.23
17	INSPECTION LINE NO. 2	208.563	2+848.661
18	INSPECTION LINE NO. 3	183.114	2+851.068
19	INSPECTION LINE NO. 4	182.498	2+852.232
20	WORKSHOP LINE NO. 1	215.156	2+854.283
21	WORKSHOP LINE NO. 2	285.931	2+785.350
22	WORKSHOP LINE NO. 3	319.628	2+785.954
23	WORKSHOP LINE NO. 4	294.148	2+841.792
24	TEST TRACK	653.661	2+775.008/3+428.669
24	a) TURNOUT NO 28 TO BUFFER	338.274	
24	b) TURNOUT NO 18 TO BUFFER	140.5	
25	SHUNTING NECK(SRJ of T.O no 17 to Buffer)	153.205	3+432.686
26	SHUNTING NECK(SRJ of T.O no 18 to Buffer)	140.5	3+428.669
27	DEPOT TRANSFER TRACK(F.M TO DEAD END)	515	
28	COACH UNLOADING SIDING LINE	124.974	2+907.428

NOTES:

- PLEASE REFER DRAWING NO KRJV/TWR/CVD/DRG/ALG/1126-C02 DATED 22.10.2014 FOR THE ALIGNMENT REPORT OF CPD TRACK LAYOUT.
- PATHWAY FOR THE PASSAGE OF SECURITY PATROLING CARS, WILL CROSS THE TEST TRACK BY MEANS OF 2(TWO) PATHWAY CROSSINGS.
- DURING TEST RUNNING OF TRAINS ON TEST TRACK, ALL THE GATES(INTERLOCKED & KEY AVAILABLE WITH THE DEPOT) WILL BE CLOSE FOR ROAD TRAFFIC.
- TRACKS INSIDE THE STABLING LINE SHED ARE RENAMED AS PER THE DRAWING NO 282954-CPD-C-AR-STB-2300 C1 DATED 02/05/2014
- ALL DEPOT TRACKS OUTSIDE SHEDS (EXCEPT (a)WASHING LINE & ITS NEIGHBOURING TRACK AND (b)COACH UNLOADING LINE) SHALL BE BALLASTED TRACK INCLUDING THE TEST TRACK.
- ALL DEPOT TRACKS WITHIN SHEDS SHALL BE BALLASTLESS TRACK. ALSO, WASHING LINE & ITS NEIGHBOURING TRACK AND COACH UNLOADING LINE SHALL BE BUILT AS BALLASTLESS TRACK.
- THE BUFFER STOP @ SOUTH END(END OF STABLING LINE SHED) OF TEST TRACK IS DESIGNED TO HAVE A SLIDING DISTANCE OF 10M(MINIMUM).
- COMPLETE SET OF TURNOUT NO. 7&8 ARE TO BE INSTALLED. THESE TURNOUT NO. 7&8 ARE TO BE SUITABLY LOCKED TO DEAL TRAFFIC MOVEMENT ONLY ON STABLING LINE 10.
- TURNOUT NO. 9 TO BE INSTALLED ALONG WITH STABLING LINE 11,12&13(FUTURE LINES)
- ON MAIN LINE, COMPLETE SET OF TURNOUTS WITH THEIR SRJs @ CH. 1850.603(EAST BOUND) & CH. 1943.355 (WEST BOUND) ARE TO BE LAID. THESE TURNOUTS ARE TO BE SUITABLY LOCKED TO DEAL TRAFFIC ONLY ON MAIN LINE.
- CHAINAGE OF SRJs OF THE TURNOUTS ARE INDICATIVE. FOR THE LOCATION DETAILS OF TURNOUTS, PLEASE REFER THE DRAWING NO. KRJV/TWR/CVD/DRG/ALG/1126-C03(SHOWN WITH THE DETAILS OF CO-ORDINATES).

This Track layout in this drawing has been validated with respect to As-Built Columns in Stabling line shed, Workshop line shed & ETU shed.

In above Sheds, before taking up any Civil construction along the line of track, the Depot Civil contractor will get the Alignment of the same checked by the Track work Contractor.

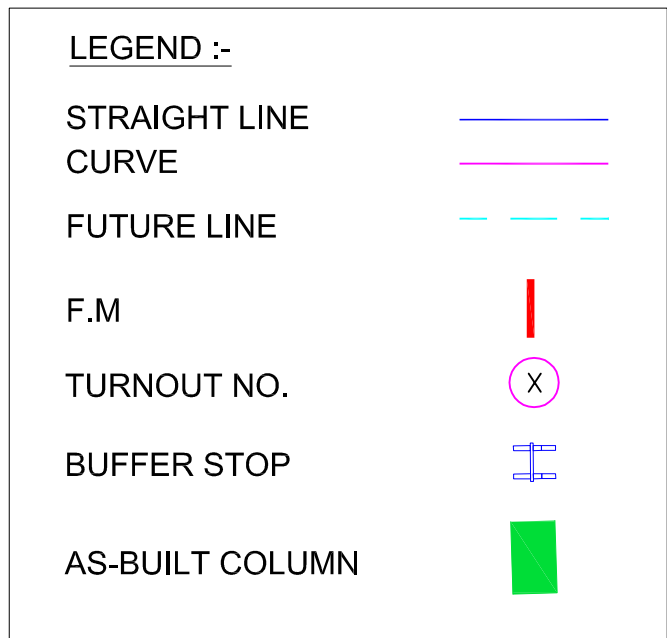
LEGEND :-	
STRAIGHT LINE	—
CURVE	—
FUTURE LINE	- - -
F.M	—
TURNOUT NO.	⊗
BUFFER STOP	—
AS-BUILT COLUMN	■

Notes:			
1.	THE TRACK LAYOUTS ARE BASED ON THE SAME SURVEY REFERENCE POINTS AS OF THE VIADUCT STRUCTURE. THE DRAWING HAS BEEN PREPARED AFTER SURVEYING & VALIDATING THE STRUCTURES ALREADY BUILT AS ON DATE.		
2.	MODIFICATION IN DEPOT TRACK LAYOUT (TOWARDS) TO THAT IN DEPOT SITE LAYOUT LEADING TO STABLING LINE & WORKSHOP LINES, HAS BEEN MADE TO MEET THE OPERATIONAL REQUIREMENTS.		
3.	THE CPD TRACK LAYOUT IS LAID WITH TURNOUT OF TYPE 1 IN 7 R/40.		
4.	IF THE GAP BETWEEN SRJ (OR BACK OF CROSSING & SRJ) IS LESS THAN 4m, THE TURNOUT MANUFACTURER-M/A VOSSLOH COOPER- WILL LENGTHEN EITHER THE STOCK RAIL OR BACK LEG OF THE CROSSING TO FILL THE GAP.		
5.	TO MINIMISE THE WELDED JOINTS IN THE TRACK LAYOUTS, THE SRJ AND THE BACK LEG OF CROSSINGS WILL BE LENGTHENED SUITABLY.		
6.	REFER THE CHANGE OF MAINLINE TRACKS (ABOVE THE LINE OF DEMARKATION) AS PER APPROVED DRAWING OF NO. KRJV/TWR/SV/SLS/DRG /1101 TO 1116 -C08 DATED 24.07.13.		
7.	REFER THE CHANGE OF DEPOT ENTRY & EXIT / DEPOT TRACKS (BELOW THE LINE OF DEMARKATION) AS PER DRAWING OF NO. KRJV/TWR/CVD/DRG/ALG/1121, THE TURNOUT WITH ITS SRJ AT CH: 1801.923 HAS BEEN TRANSFERRED FROM WEST BOUND AND BASED ON IT, CHAINAGE ARE CONTINUED FURTHER TOWARDS THE CPD TRACK LAYOUT.		
8.	CHANGE OF SRJ OF THE TURNOUTS ON WEST BOUND ARE AS PER THE HORIZONTAL CONTROL LINE OF MAIN LINE.		
9.	CHANGE OF THE FACE OF BUFFERS ARE TENTATIVE AND SUBJECT TO MINOR VARIATION ON THE BASIS OF FINAL DESIGN OF BUFFER STOPPS AND DETAIL LAYOUT WITHIN THE SHEDS.		
10.	THE DISTANCE SHOWN BETWEEN CENTER LINE OF TEST TRACK AND INNER FACE OF THE BOUNDARY WALL IS MEASURED AT THE RAIL LEVEL.		
11.	LAYOUT OF ROAD SHOWN IN THIS DRAWING IS TENTATIVE. A SEPARATE DRAWING WILL BE ISSUED TO SHOW THE LOCATION AND DETAILS OF THE LEVEL CROSSING.		
12.	DO NOT READ FROM DRAWING.		
THIS DRAWING IS THE PROPERTY OF KOLKATA METRO RAIL CORPORATION LTD.			
REV	PARTICULARS	DATE	
C10	REVISION OF THE HOLDING CAPACITY OF WORKSHOP LINE NO. 4 & COACH UNLOADING LINE WITH BUFFER	21.11.2014	
C09	TRAVEL AFTER DISCUSSION WITH THE INTERVISING CONTRACTORS DURING THE WORKSHOP WHICH WERE IN THE WAY & IN THE WAY	21.10.2014	
C08	ADJUSTMENT OF TEST TRACK HAS BEEN REVERSED BASED ON THE TRACK & RC DRAWINGS	11.10.2014	
C07	ALIGNMENT OF TEST TRACK & CURVE ON COACH UNLOADING LINE HAVE BEEN REVERSED	09.07.2014	
C06	CENTRE LINE OF THE TRACKS INSIDE THE SHEDS HAS BEEN MADE PARALLEL TO THE COLUMN AND OPTIMISED TO MEET THE SDO	05.03.2014	
C01-C05	MODIFICATION IN DEPOT TRACK LAYOUT (TOWARDS) TO THAT IN DEPOT SITE LAYOUT LEADING TO STABLING LINES & WORKSHOP LINES HAS BEEN MADE TO MEET THE OPERATIONAL REQUIREMENTS THROUGH INTERACTION WITH S&T, POWER & DEPOSITS & IF CONTRACTORS.	22.02.2014	

General Consultants :	
MYCEL Kolkata Metro East West Line : General Consultant	
KMRC Building, Level 1, Murali Premchand Sarani, Hasnang, Kolkata 700 021	
MAUNSELL AECOM yec E egs Rail LHPA	
REFERENCE DRAWINGS	
Dwg. No.	Description
282954-CPD-D/AR/SPN/2101	CENTRAL PARK DEPOT SITE LAYOUT
282954-CPD-C-AR-STB-2300 C1	CPD STABLING YARDS, SECTION & ELEVATION
DATED 02/05/2014	

Certified that this document has been designed and checked	
TRACK DESIGNER (AYESA) (Authorised) Signatory for DDC (AYESA).	PROJECT MANAGER (KALINDEE-RAHEE JV)
This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior written permission of KMRC.	
Contractor :	
2nd Floor, BUILDING No.9A, CYBER CITY, DLF PHASE-III GURGOAN-122002, (HARYANA), Tel: 0124-4674800, E-mail: kalindee.rahee.kmrc@gmail.com	
KALINDEE RAHEE JV	




DESIGNATION CE / KMRC CE S&T / KMRC CE E / KMRC	SIGNATURE	DATE	DESIGNATION PROJECT MANAGER KALINDEE-RAHEE JV C.E (Design & Technical Support) KALINDEE-RAHEE JV TRACK DESIGNER AYESA	SIGNATURE	DATE
Project Director P.M (TRACK) MYCEL (DEPOT) P.M (SIGNAL) P.M (SYSTEM)					
KOLKATA METRO RAIL CORPORATION LTD.					
CONTRACT PACKAGE TW (R) (SALT LAKE SECTOR V - HOWRAH MAIDAN INCLUDING WITH CENTRAL PARK DEPOT)					
CPD TRACK LAYOUT (Combined to Depot Entry/Exit Tracks)					
KRJV/TWR/CVD/DRG/ALG/1121	REV. C10	SCALE 1:1000	SHEET 1 of 1	STATUS FOR APPROVAL	




Curve Detail of CPD Track Layout							
Curve no	Chainage		Tangent Length -TL	Deflection Angle - Δ	Radius -R	Curve Length - CL	Remarks
	TP1	TP2					
1	2+868.593	2+962.986	43.791	45.069	120.000	94.393	
2	2+883.340	2+900.368	8.528	8.130	120.000	17.028	
3	2+902.329	2+919.357	8.528	8.130	120.000	17.028	
4	2+883.589	2+960.954	40.081	36.939	120.000	77.365	
5	2+925.709	2+986.091	30.845	28.830	120.000	60.382	
6	2+917.916	2+934.944	8.528	8.130	120.000	17.028	
7	2+938.838	2+999.220	30.845	28.830	120.000	60.382	
8	2+952.625	3+013.007	30.845	28.830	120.000	60.382	
9	3+033.708	3+050.736	8.528	8.130	120.000	17.028	
10	3+020.579	3+037.607	8.528	8.130	120.000	17.028	
11	3+002.474	3+019.502	8.528	8.130	120.000	17.028	
12	2+945.676	2+971.958	13.194	12.549	120.000	26.282	
13	2+948.407	3+000.929	25.688	25.077	120.000	52.522	
14	3+006.473	3+023.501	8.528	8.130	120.000	17.028	
15	3+047.902	3+064.930	8.528	8.130	120.000	17.028	
16	3+135.376	3+215.248	41.479	38.135	120.000	79.872	
17	3+133.185	3+230.084	51.265	46.266	120.000	96.899	
18			For details, Please see the Alignment Report				Revised for 65 Kmph
19	3+112.141	3+078.077	17.147	16.265	120.000	34.064	
20	3+100.911	3+083.063	8.528	8.130	120.000	17.028	
21			For details, Please see the Alignment Report				Revised for 65 Kmph
22	3+084.822	3+057.466	13.678	0.313	5000.000	27.356	
23	3+080.675	3+063.581	8.562	8.162	120.000	17.094	
24	3+066.326	3+032.204	17.177	16.292	120.000	34.122	
25	3+042.469	3+025.370	8.564	8.164	120.000	17.099	
26	3+038.756	3+004.629	17.179	16.294	120.000	34.127	
27	3+050.459	2+999.305	25.972	24.424	120.000	51.154	
28	3+067.843	2+999.661	35.039	32.554	120.000	68.182	
29	3+033.439	3+008.847	12.296	0.282	5000.000	24.592	
30	3+043.714	3+029.891	6.914	3.960	120.000	13.823	
31	2+998.079	2+913.078	44.371	40.585	120.000	85.001	
32	2+984.521	2+916.548	34.925	32.455	120.000	67.793	

Note: All the Curves (except Curve no-18& 21) detailed above, are Non- Transitioned Curves & will be laid with zero Cant

 Kalindee-Rahee JV

DESIGNATION	SIGNATURE	DATE	DESIGNATION	SIGNATURE	DATE
CE / KM/RCL			PROJECT MANAGER		21/10/2014
CE S&T / KM/RCL			KALINDEE - RAHEE JV		
CE E / KM/RCL			C.E.(Design & Technical Support)		21/10/2014
Project Director			KALINDEE - RAHEE JV		
P.M (Director)			TRACK DESIGNER		
MYCEL			AYESA		21/10/2014
P.M (SIGNAL)					
P.M (SYSTEM)					



KOLKATA METRO RAIL CORPORATION LTD.

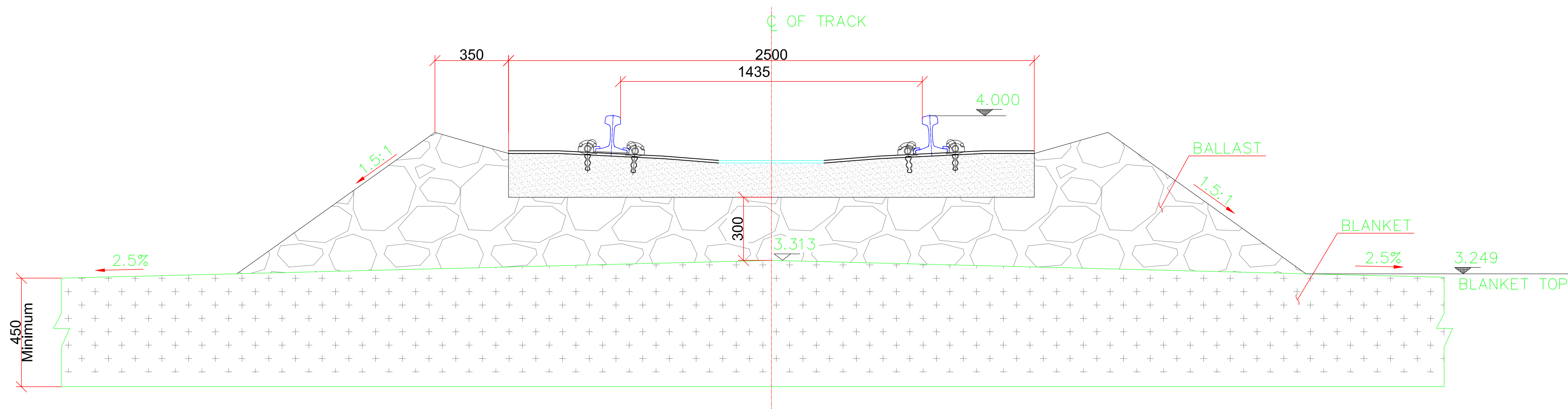
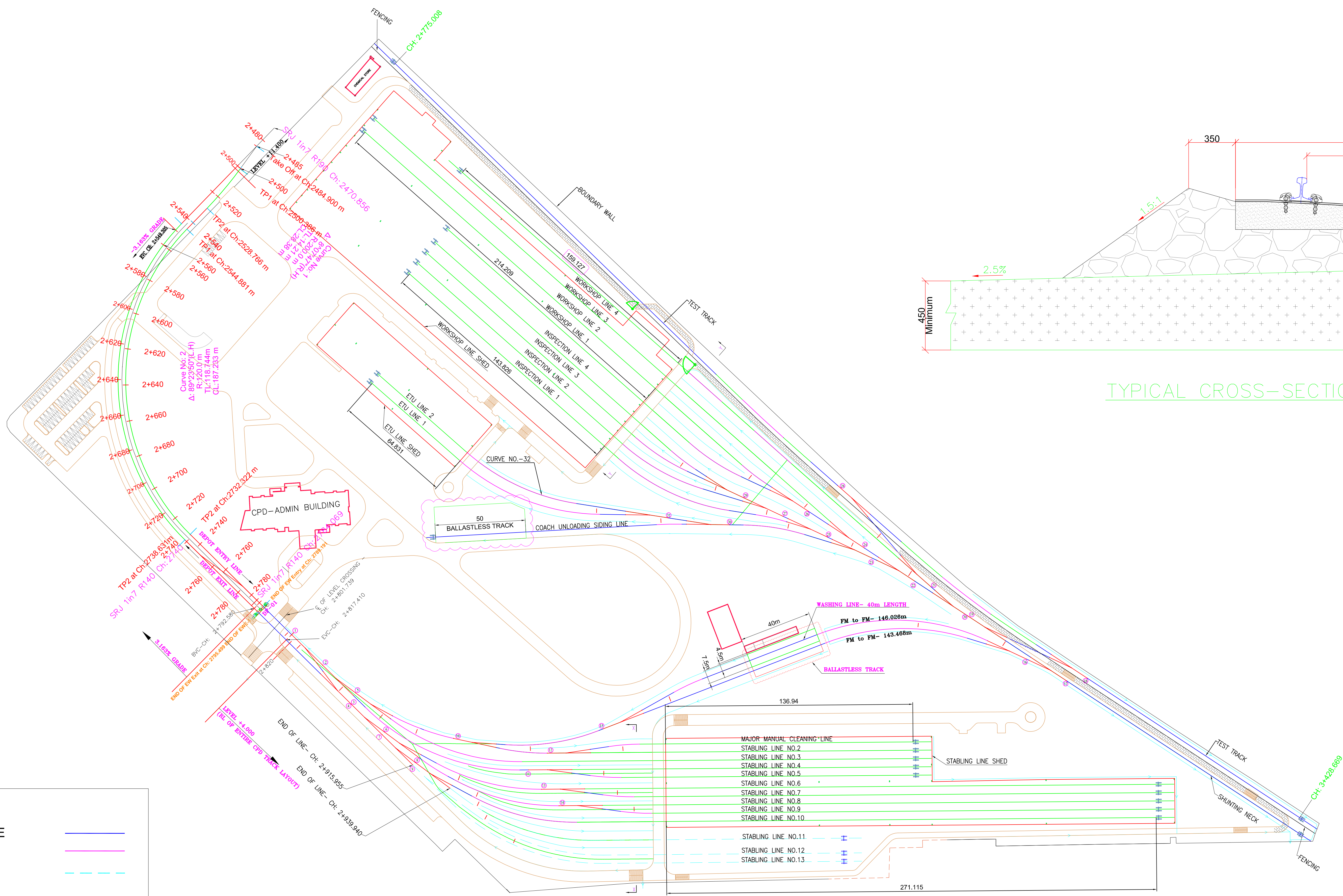
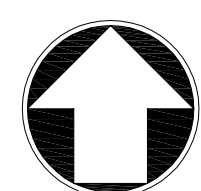
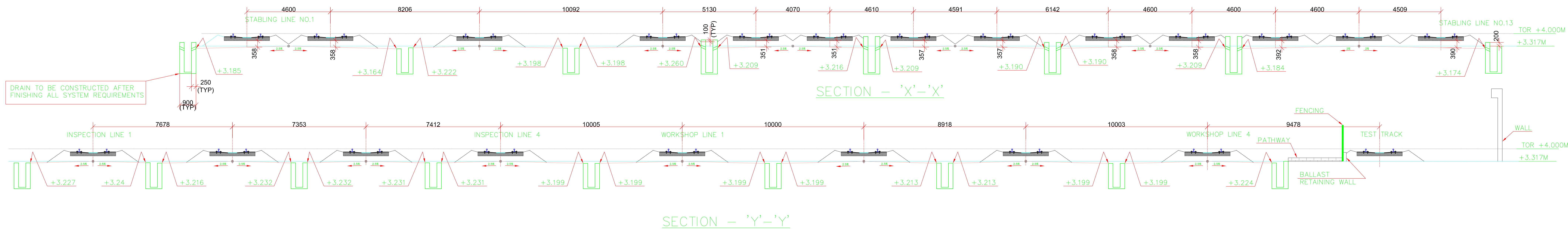
CONTRACT PACKAGE TW (R) (SALT LAKE SECTOR V – HOWRAH MAIDAN INCLUDING WITH CENTRAL PARK DEPOT)

DRAWING TITLE :

ALIGNMENT DETAILS OF CPD TRACK LAYOUT

DEFINITIVE DRG

REV	NO	CRJ/JW/TWR/CVD/DRG/ALG/1126	REV	SCALE	SHEET	STATUS
			103	1:1000	1 of 1	FOR APPROVAL



NOTES:

- FOR DETAILS OF DRAINAGE SYSTEM OF ENTIRE CENTRAL PARK DEPOT, PLEASE REFER DRAWING NO SRCA/CCCL/CPD/D/CSD/SPN/4121-Rev D5 DATED 14.10.2014.
- THIS IS A CONCEPTUAL DRAWING WHICH REFERRED TO THE SECTIONS @ GIVEN SECTION LINE.
- TO GET OPTIMUM RESULTS OF DRAINAGE OF THE CPD TRACK LAYOUT, CROSS SECTIONS ARE TO BE GENERATED @ EVERY 20M(MINIMUM) ALONG THE ENTIRE LENGTH OF FORMATION OF BALLAST TRACK. BASED ON SUCH CROSS SECTIONS, HANDING OVER & TAKING OVER BETWEEN CIVIL CONTRACTOR & TW(R) SHOULD BE CARRIED OUT.
- IT IS MANDATORY THAT WHEREVER THE BALLAST PROFILE IS FOULING WITH THE EDGE OF THE DRAIN, THE WALL OF THE DRAIN TO BE RAISED ABOVE THE BALLAST LEVEL.
- AS FAR AS POSSIBLE, THE DRAINS WHICH ARE FALLING INSIDE THE CPD TRACK LAYOUT ARE TO BE CONSTRUCTED BEFORE SPREADING THE BALLAST ON THE FORMATION.
- WEEP POLES ARE TO BE PROVIDED AT APPROPRIATE DEPTH AS PER THE PRACTICE.

LEGEND :-

STRAIGHT LINE	—
CURVE	—
FUTURE LINE	- - -
F.M	—
TURNOUT NO.	(X)
BUFFER STOP	—
AS-BUILT COLUMN	■
Drain	—
Ridge	—

Notes:

- THE DRAINAGE SCHEME SHOWN IN THIS DRAWING IS ONLY FOR THE TRACK LAYOUT PORTION.
- DO NOT SCALE FROM DRAWINGS.
- ALL DIMENSIONS ARE IN MILLIMETER, UNLESS OTHERWISE NOTED ALL DIMENSIONS TO BE VERIFIED ON SITE & APPROVED BY 'THE ENGINEER'.

General Consultants :

MYCEL Kolkata Metro East West Line : General Consultant
KMRC Building, Level 1, Murali Prasad Sarani, Hastings
Kolkata 700 021

MAUNSELL | AECOM | yec | egs Rail | LHPA

Drw. No.	Description
KRV/TWR/CPD/DRG/ALG/1121	CPD TRACK LAYOUT (Combined to Depot Entry/Exit Tracks)

Certified that this document has been designed and checked

TRACK DESIGNER/AYESA (Authorised)
Signatory for DDC(AYESA).

PROJECT MANAGER (KALINDEE-RAHEE JV)

Contractor : 2nd Floor,BUILDING No.9A,CYBER CITY, DLF PHASE-III
GURGOAN-122002,(HARYANA), Tel: 0124-4674800,
E-mail: kalindee.rahee.kmrc@gmail.com

Marie Curie, 2
41092 Sevilla, Spain
Tel: 0034954467046

ayesa

DRAWN BY
SILVA R.

TRACK DESIGNER/AYESA
FERNANDO GV

CHECKED BY
FRANCISCO L.

DATE OF ISSUE
21/10/2014

DESIGNATION	SIGNATURE	DATE	DESIGNATION	SIGNATURE	DATE
CE / KMRC			PROJECT MANAGER		21/10/2014
CE S&T / KMRC			KALINDEE-RAHEE JV		
CE E / KMRC			C.E.(Design & Technical Support)		21/10/2014
Project Director			KALINDEE-RAHEE JV		
P.M (TRACK)			TRACK DESIGNER		21/10/2014
P.M (SIGNAL)			AYESA		
P.M (SYSTEM)					

KOLKATA METRO RAIL CORPORATION LTD.

CONTRACT PACKAGE TW (R)(SALT LAKE SECTOR V - HOWRAH MAIDAN INCLUDING WITH CENTRAL PARK DEPOT)

DRAWING TITLE : CONCEPTUAL DRAINAGE SCHEME WITHIN THE CPD TRACK LAYOUT

DRW. NO.	REV.	SCALE	SHEET	STATUS
KRV/TWR/CPD/DRG/DR/4301	C02	NTS	1 of 1	FOR APPROVAL

**KOLKATA METRO RAIL CORPORATION LIMITED
EAST WEST METRO PROJECT**

**CONTRACT RS (3R)
TENDER DOCUMENTS
VOLUME 5**

TENDER DRAWINGS

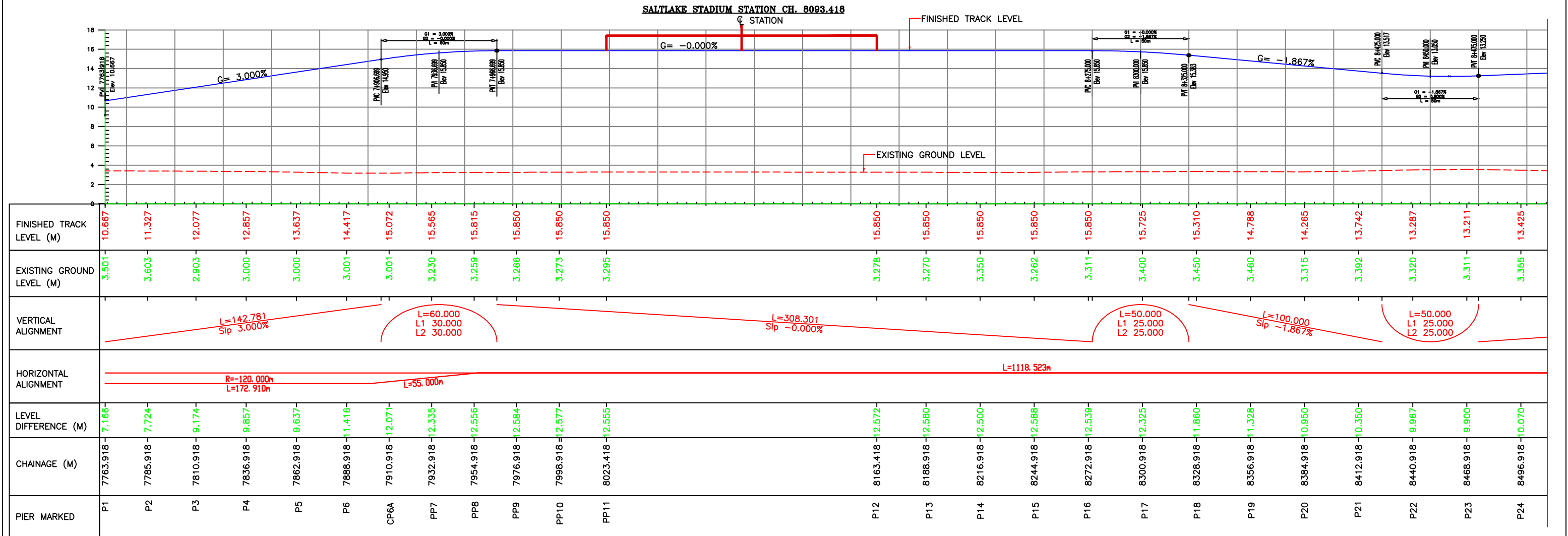
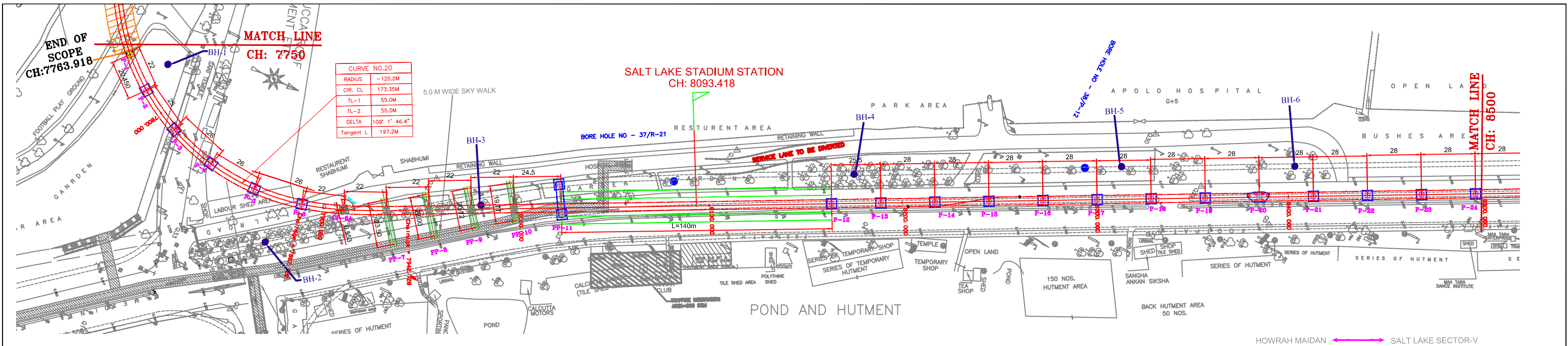
- **KMRCL E-W CORRIDOR ALIGNMENT
DRAWINGS**

**KOLKATA METRO RAIL CORPORATION LIMITED
KMRCL Bhawan (HRBC Office Complex),
Munshi Premchand Sarani,
Kolkata 700 021
India**

LIST OF TENDER DRAWINGS

Sl. No.	Drawing No.	Revision No.
1.	279/EWE1/GAD-01	R2
2.	279/EWE1/GAD-02	R2
3.	279/EWE1/GAD-03	R3
4.	279/EWE1/GAD-04	R3
5.	279/EWE1/GAD-05	R2
6.	279/EWE1/GAD-06	R1
7.	279/EWE1/GAD-07	R1
8.	279/EWE1/GAD-08	R1
9.	279/EWE1/GAD-18	R0
10.	279/EWE1/GAD-19	R0
11.	279/EWE1/GAD-20	R1
12.	TW/ST/VIA/T/1801	-
13.	DMRC/GFC/KOL/814/SUP/SD/33	0
14.	UG/CIV/ALG/R/1000	B
15.	UG/CIV/ALG/R/1001	A
16.	UG/CIV/ALG/R/1002	A
17.	UG/CIV/ALG/R/1003	A
18.	UG/CIV/ALG/R/1004	A
19.	UG/CIV/ALG/R/1005	A
20.	UG/CIV/ALG/R/1006	B
21.	UG/CIV/ALG/R/1007	A
22.	UG/CIV/ALG/R/1008	A
23.	UG/CIV/ALG/R/1009	B
24.	UG/CIV/ALG/R/1010	A
25.	UG/CIV/ALG/R/1011	A
26.	UG/CIV/ALG/R/1012	A
27.	UG/CIV/ALG/R/1013	A
28.	UG/CIV/ALG/R/1014	A
29.	UG/CIV/ALG/R/1021	B
30.	UG/CIV/ALG/R/1051	A
31.	UG/CIV/ALG/R/1052	A
32.	UG/CIV/ALG/R/1053	A
33.	UG/CIV/ALG/R/1054	A
34.	UG/CIV/ALG/R/1055	A
35.	UG/CIV/ALG/R/1056	B
36.	UG/CIV/ALG/R/1057	B
37.	UG/CIV/ALG/R/1058	A
38.	UG/CIV/ALG/R/1059	B
39.	UG/CIV/ALG/R/1060	A

Sl. No.	Drawing No.	Revision No.
40.	UG/CIV/ALG/R/1061	A
41.	UG/CIV/ALG/R/1062	A
42.	UG/CIV/ALG/R/1063	A
43.	UG/CIV/ALG/R/1064	A



LEGEND							
SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION
1.	Road	ROAD	8.	Lamp Post	↑	15.	Palm Tree
2.	Railway-Track	+++++	9.	Signal Post	↑	16.	Drain
3.	Traverse Point	▽	10.	Embankment Wall	—	17.	Nala
4.	Telephone Junction Box	☐	11.	Boundary Wall	—	18.	Building
5.	Electric Junction Box	☐	12.	Tree	☐	19.	Shop(Pucca)
6.	Electric Mast (E.M.)	↑	13.	Dewdar Tree	☐	20.	Pond
7.	Electric Post	↑	14.	Coconut Tree	☐	21.	Shed
						22.	Hutment
						23.	Tap-Well
						24.	Tube-Well
						25.	Telephone Post
						26.	Fencing
						27.	Culvert Cable
						28.	Proposed Alignment

REV	DATE	DESCRIPTION	APPROVED
R2	11.05.10	ISSUED FOR CONSTRUCTION	
R1	25.06.09	DRAWING UPDATED	

CLIENT: KOLKATA METRO RAIL CORPORATION LTD.
HRBC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARANI,
KOLKATA-700021

PROJECT: CONSTRUCTION OF VIADUCT FROM 7.763 Km TO 13.328 Km
ON SUBHASH SAROVAR TO SALT LAKE SECTOR-V
OF EAST WEST CORRIDOR OF KOLKATA METRO

CONTRACTORS: GAMMON INDIA LIMITED

GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

CONSULTANTS: Sinclair Knight Merz Consulting (India) Pvt. Ltd.

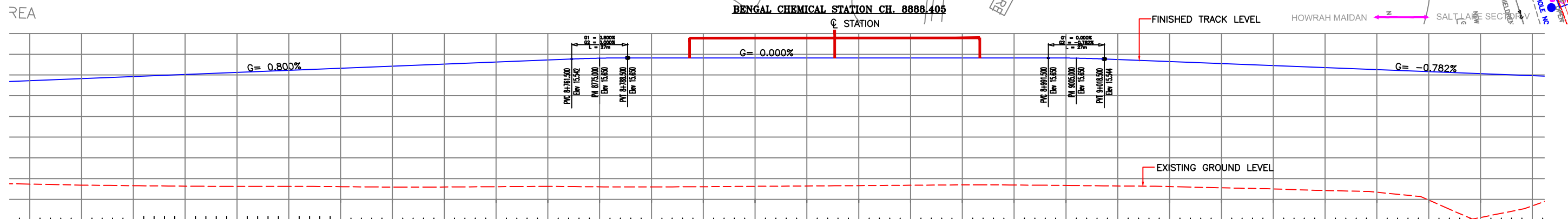
202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: http://www.skmconsulting.com

DRAWN: ISH
DESIGNED: PARAG
CHECKED: ANAND PANDEY
APPROVED: MOHIT KUMAR

NOTES:
1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.

KMRC
ACCEPTED CHIEF ENGINEER
RECOMMENDED EXECUTIVE ENGINEER
MYCEL
GENERAL CONSULTANTS
PROOF CHECKED D. PAUL
RECOMMENDED FOR ACCEPTANCE D. PAUL

TITLE: ALIGNMENT PLAN (SHEET-1)
DRAWING NO. 279/EWE1/8AD-01
SCALE - AS SHOWN
DATE : 17.06.2009



FINISHED TRACK LEVEL (M)	13.425	13.649	13.873	14.097	14.321	14.545	14.769	14.993	15.217	15.441	15.630	15.650	15.650	15.650	15.650	15.548	15.352	15.133	14.938	14.742	14.547	14.351	14.156	13.960
EXISTING GROUND LEVEL (M)	3.355	3.362	3.340	3.322	3.302	3.296	3.300	3.311	3.322	3.301	3.299	3.336	3.208	3.403	3.401	3.305	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
VERTICAL ALIGNMENT	<div><div><div>L=286.500 Slp 0.800%</div><div>L=27.000 L1 13.500 L2 13.500</div><div>L=203.000 Slp 0.000%</div><div>L=27.000 L1 13.500 L2 13.500</div><div>L=310.200 Slp -0.782%</div></div></div>																							
HORIZONTAL ALIGNMENT	<div><div>L=1118.523m</div><div>L=55.000m</div><div>R=150.000m L=130.920m</div></div>																							
LEVEL DIFFERENCE (M)	-10.070	-10.287	-10.533	-10.775	-11.019	-11.249	-11.469	-11.682	-11.895	-12.140	-12.331	-12.314	-12.442	-12.247	-12.249	-12.243	-12.352	-12.133	-11.938	-11.742	-11.547	-11.351	-11.156	-10.960
CHAINAGE (M)	8496.918	8524.918	8552.918	8580.918	8608.918	8636.918	8664.918	8692.918	8720.918	8748.918	8776.918	8801.918	8818.405	8958.405	8987.051	9018.051	9043.051	9071.051	9096.051	9121.051	9146.051	9171.051	9196.051	9221.051
PIER MARKED	P24	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34	P35	P36	P37	PP38	CP39	P40	P41	P42	P43	P44	P45	P46	P47

L E G E N D											
SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL
1.	Road		8.	Lamp Post		15.	Palm Tree		22.	Hutment	
2.	Railway—Track		9.	Signal Post		16.	Drain		23.	Tap—Well	
3.	Traverse Point		10.	Embankment Wall		17.	Nala		24.	Tube—Well	
4.	Telephone Junction Box		11.	Boundary Wall		18.	Building		25.	Telephone Post	
5.	Electric Junction Box		12.	Tree		19.	Shop(Pucca)		26.	Fencing	
6.	Electric Mast (E.M.)		13.	Dewdar Tree		20.	Pond		27.	Culvert Cable	
7.	Electric Post		14.	Coconut Tree		21.	Shed		28.	Proposed Alignment	

R2	11.03.10	DRAWING REJECTED DUE TO REQUIRED ALIGNMENT DRAWING BEHOLD VISE WHEEL LETTER NO. 1181/16/VOL/540 SIGNED : 27.01.2010			
R1	29.09.08	SPAN & PORTAL WIDTH MODIFIED FOR P37-PP38			
MKD.	DATE	DESCRIPTION			APPROVED
REVISIONS					

DETAILS GIVEN IN THIS DRAWING ARE BASED ON KMRC
ALIGNMENT PLAN DRAWINGS AND IT SHOULD
BE CONFIRMED AT SITE. ANY DISCREPANCY MUST BE
BROUGHT TO THE NOTICE OF KMRC / GC. / CONSULTANT

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL ETC. HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBASH SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO.

1. KOLKATA/E-W/ALIGNMENT/DRG NO.-15, REV-02
[DATED JULY-2008]

FURTHER REVISIONS BY MYCEL/KMRC:

2. REVISED RAIL LEVEL OF STATIONS DATED 08 SEP 2009 & 12 SEP 2009 AS PROVIDED VIDE EMAIL BY MYCEL/KMRC

3. GROUND LEVELS ARE AS PER JOINT SURVEY BY GIL & MYCEL DATED 10 SEP-2009

4. REVISED ALIGNMENT DRAWING ISSUED VIDE MYCEL LETTER NO. 1121/10/GIL/040 DATED : 27.01.2010

NOTES:


1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.

KMRCL		
ACCEPTED	CHIEF ENGINEER	
RECOMMENDED	EXECUTIVE ENGINEER	
M Y C E L		
GENERAL CONSULTANTS		
PROOF CHECKED	D. PAUL	
RECOMMENDED FOR ACCEPTANCE	D. PAUL	

CLIENT:
KOLKATA METRO RAIL CORPORATION LTD
HRBC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARANI,
KOLKATA-700021

PROJECT:
CONSTRUCTION OF VIADUCT FROM 7.763 Km TO 13.328 Km
ON SUBHASH SAROBAR TO SALT LAKE SECTOR-V
OF EAST WEST CORRIDOR OF KOLKATA METRO

CONTRACTORS:
GAMMON INDIA LIMITED

 GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

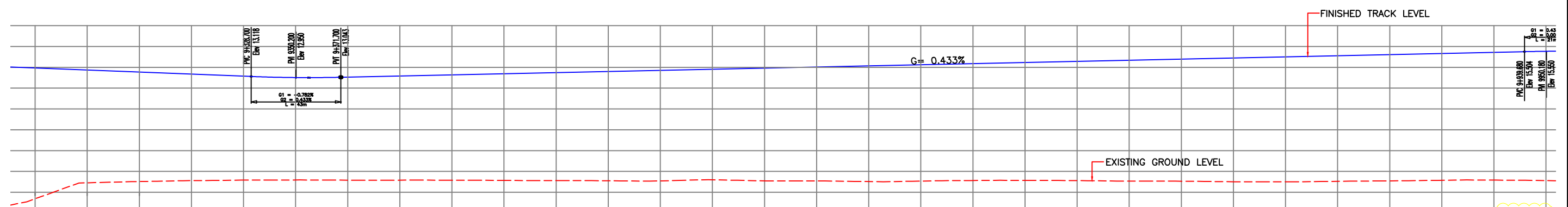
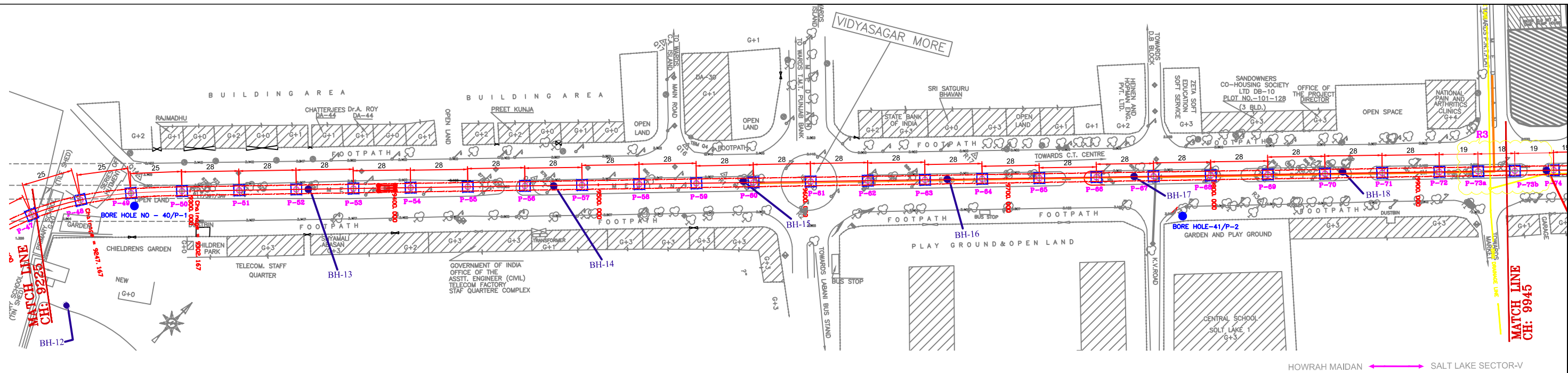
CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

SKM 202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: <http://www.skmconsulting.com>

DRAWN	ISH
DESIGNED	PARAG
CHECKED	ANAND PANDEY
APPROVED	MOHIT KUMAR

TITLE **ALIGNMENT PLAN
(SHEET-2)**

DRAWING NO.		R2
279/EWE1/GAD-02		
SCALE -- AS SHOWN	DATE : 17.06.2008	



FINISHED TRACK LEVEL (M)	13.960	13.765	13.569	13.374	13.155	13.013	13.079	13.201	13.322	13.443	13.565	13.686	13.807	13.929	14.050	14.171	14.293	14.414	14.535	14.657	14.778	14.899	15.021	15.142	15.263	15.385	15.467	15.536	
EXISTING GROUND LEVEL (M)	3.000	3.000	3.296	3.263	3.265	3.272	3.268	3.275	3.288	3.296	3.306	3.293	3.311	3.326	3.348	3.338	3.362	3.331	3.377	3.388	3.382	3.388	3.399	3.402	3.418	3.386	3.420	3.422	
VERTICAL ALIGNMENT	<div><div><div>L=43.000</div><div>L1 21.500</div><div>L2 21.500</div></div><div><div>L=567.980</div><div>Sip 0.433%</div></div><div><div>L=21.000</div><div>L1 10.500</div><div>L2 10.500</div></div></div>																												
HORIZONTAL ALIGNMENT	<div><div>L=55.000m</div><div>L=1433.666m</div></div>																												
LEVEL DIFFERENCE (M)	-10.960	-10.765	-10.273	-10.111	-9.890	-9.741	-9.811	-9.926	-10.034	-10.147	-10.259	-10.393	-10.496	-10.603	-10.702	-10.833	-10.931	-11.083	-11.158	-11.269	-11.396	-11.511	-11.622	-11.740	-11.845	-11.999	-12.047	-12.114	
CHAINAGE (M)	9221.051	9246.051	9271.051	9296.051	9324.051	9352.051	9380.051	9408.051	9436.051	9464.051	9492.051	9520.051	9548.051	9576.051	9604.051	9632.051	9660.051	9688.051	9716.051	9744.051	9772.051	9800.051	9828.051	9856.051	9884.051	9912.051	9931.051	9949.051	
PIER MARKED	P47	P48	P49	P50	P51	P52	P53	P54	P55	P56	P57	P58	P59	P60	P61	P62	P63	P64	P65	P66	P67	P68	P69	P70	P71	P72	P73a	P73b	

L E G E N D											
SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL
1.	Road		8.	Lamp Post		15.	Palm Tree		22.	Hutment	
2.	Railway-Track		9.	Signal Post		16.	Drain		23.	Tap-Well	
3.	Traverse Point		10.	Embankment Wall		17.	Nala		24.	Tube-Well	
4.	Telephone Junction Box		11.	Boundary Wall		18.	Building		25.	Telephone Post	
5.	Electric Junction Box		12.	Tree		19.	Shop(Pucca)		26.	Fencing	
6.	Electric Mast (E.M.)		13.	Dewdar Tree		20.	Pond		27.	Culvert Cable	
7.	Electric Post		14.	Coconut Tree		21.	Shed		28.	Proposed Alignment	

REV	DATE	DESCRIPTION	APPROVED
R3	25.03.10	REVISED AS NOTED	
R2	11.03.10	ISSUED REVISION DUE TO REVISION ALIGNMENT DRAWING ISSUED BY MYCEL LETTER NO. 1121/10/GIL/040 DATED : 27.01.2010	
R1	25.03.09	DRAWING UPDATED	

CLIENT:
KOLKATA METRO RAIL CORPORATION LTD.
HRBC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARANI,
KOLKATA-700021

CONTRACTOR:
GAMMON INDIA LIMITED

PROJECT:
CONSTRUCTION OF VIADUCT FROM 7.763 Km TO 13.328 Km
ON SUBHASH SAROVAR TO SALT LAKE SECTOR-V
OF EAST WEST CORRIDOR OF KOLKATA METRO

CONTRACTORS:
GAMMON INDIA LIMITED

GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: <http://www.skmconsulting.com>

DRAWN: ISH
DESIGNED: PARAG
CHECKED: ANAND PANDEY
APPROVED: MOHIT KUMAR

NOTES:
1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.

KMRC
ACCEPTED CHIEF ENGINEER
RECOMMENDED EXECUTIVE ENGINEER

MYCEL
GENERAL CONSULTANTS

PROOF CHECKED: D. PAUL
RECOMMENDED FOR ACCEPTANCE: D. PAUL

TITLE: **ALIGNMENT PLAN (SHEET-3)**

DRAWING NO. **279/EWE1/040-03**

SCALE - AS SHOWN DATE : 17.06.2009



DETAILS GIVEN IN THIS DRAWING ARE BASED ON KMRC
ALIGNMENT PLAN DRAWINGS AND IT SHOULD
BE CONFIRMED AT SITE. ANY DISCREPANCY MUST BE
BROUGHT TO THE NOTICE OF KMRC / GC. / CONSULTANT

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL ETC. HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBASH SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO.

1. KOLKATA/E-W/ALIGNMENT/DRG NO.-15, REV-02
[DATED JULY-2008]

FURTHER REVISIONS BY MYCEL/KMRC:

2. REVISED RAIL LEVEL OF STATIONS DATED 08 SEP 2009 & 12 SEP 2009 AS PROVIDED VIDE EMAIL BY MYCEL/KMRC

3. REVISED ALIGNMENT DRAWING FROM CITY CENTRE STATION (P76) TO KARUNAMOYEE STATION(P129)/DEPOT ACCESS LINE/FUTURE AIRPORT LINE ISSUED VIDE MYCEL LETTER NO. 1123/(EWE-1) 14.1.1-00245
[DATED 09 NOV.-2009]


4. GROUND LEVELS ARE AS PER JOINT SURVEY BY GIL & MYCEL DATED 10 SEP.-2009

5. REVISED ALIGNMENT DRAWING ISSUED VIDE MYCEL LETTER NO. 1121/10/GIL/040 DATED : 27.01.2010

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.


KMRCL		
ACCEPTED	CHIEF ENGINEER	
RECOMMENDED	EXECUTIVE ENGINEER	
M Y C E L		
GENERAL CONSULTANTS		
PROOF CHECKED	D. PAUL	
RECOMMENDED FOR ACCEPTANCE	D. PAUL	

TITLE		ALIGNMENT PLAN (SHEET-4)	
DRAWING NO.			
279/EWE1/GAD-04			
SCALE - AS SHOWN		DATE : 30.06.2008	

R3	18.03.10	REMOVED AS MISMATCH						
R2	25.03.10	REMOVED AS MISMATCH						
R1	11.03.10	STAMPING REMOVED DUE TO REMOVED ALIGNMENT STAMPING BEHIND VIDE VINCEL LETTER NO. 1121/10/VIN/040 DATED : 27.01.2010						
MKD.	DATE	DESCRIPTION						APPROVED
REVISIONS								

CLIENT:	KOLKATA METRO RAIL CORPORATION LTD HRCB HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARANI, KOLKATA-700021
PROJECT:	CONSTRUCTION OF VIADUCT FROM 7.783 Km TO 13.328 Km ON SUBHASH SAROBAR TO SALT LAKE SECTOR-V OF EAST WEST CORRIDOR OF KOLKATA METRO

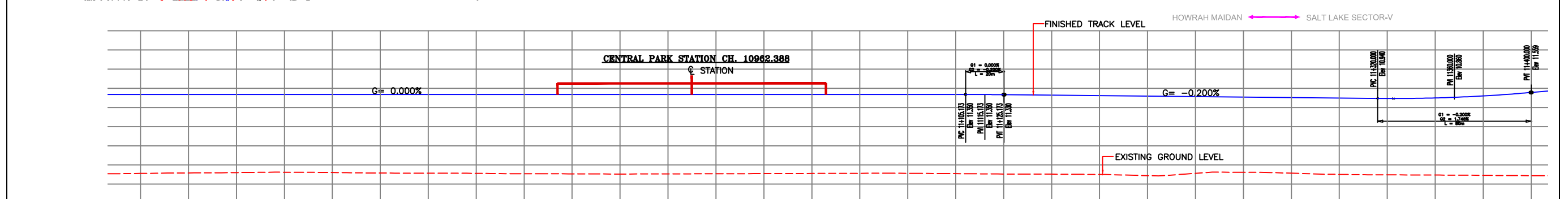
CONTRACTORS:
GAMMON INDIA LIMITED

 **GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025**

CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

SKM 202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: <http://www.skmconsulting.com>

DRAWN	ISH
DESIGNED	PARAG
CHECKED	ANAND PANDEY
APPROVED	MOHIT KUMAR



R#	10.06.10	REMOVED AS SHOWN			
R#	11.08.10	DRAWING CHANGED DUE TO REMOVED ALUMINUM BRACKET BEHIND ROSE STAIRS. LETTER NO. 1101/10/09-040 DATED : 27.01.2010			
M.D.	DATE	DESCRIPTION		APPROVED	
		C R E V I S I O N S			

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL ETC. HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBSAR SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO.

1. KOLKATA-E-W/ALIGNMENT/DRG NO.-15, REV-02
[DATED JULY-2008]

FURTHER REVISIONS BY MYCEL/KMRC:

2. REVISED RAIL LEVEL OF STATIONS DATED 08 SEP 2009 & 12 SEP 2009 AS PROVIDED VIDE EMAIL BY MYCEL/KMRC

3. REVISED ALIGNMENT DRAWING FROM CITY CENTRE STATION (P76) TO KARUNAMOYEY STATION(P129)/DEPOT ACCESS LINE/FUTURE AIRPORT LINE ISSUED VIDE MYCEL LETTER NO. 1123/(EWE-1) 14.1.1-00245
[DATED 09 NOV.-2009]

4. GROUND LEVELS ARE AS PER JOINT SURVEY BY GIL & MYCEL DATED 10 SEP.-2009

5. REVISED ALIGNMENT DRAWING ISSUED VIDE MYCEL LETTER NO. 1121/10/GIL/040 DATED : 27.01.2010

KMRCL		
ACCEPTED	CHIEF ENGINEER	
RECOMMENDED	EXECUTIVE ENGINEER	
MYCEL		
GENERAL CONSULTANTS		
PROOF CHECKED	D. PAUL	
RECOMMENDED FOR ACCEPTANCE	D. PAUL	
TITLE		
ALIGNMENT PLAN (SHEET - 5)		
DRAWING NO.		
270/ENE1/04D-05		(R2)
SCALE - AS SHOWN	DATE - 30.04.2008	

CONTRACTORS:
GAMMON INDIA LIMITED

 GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

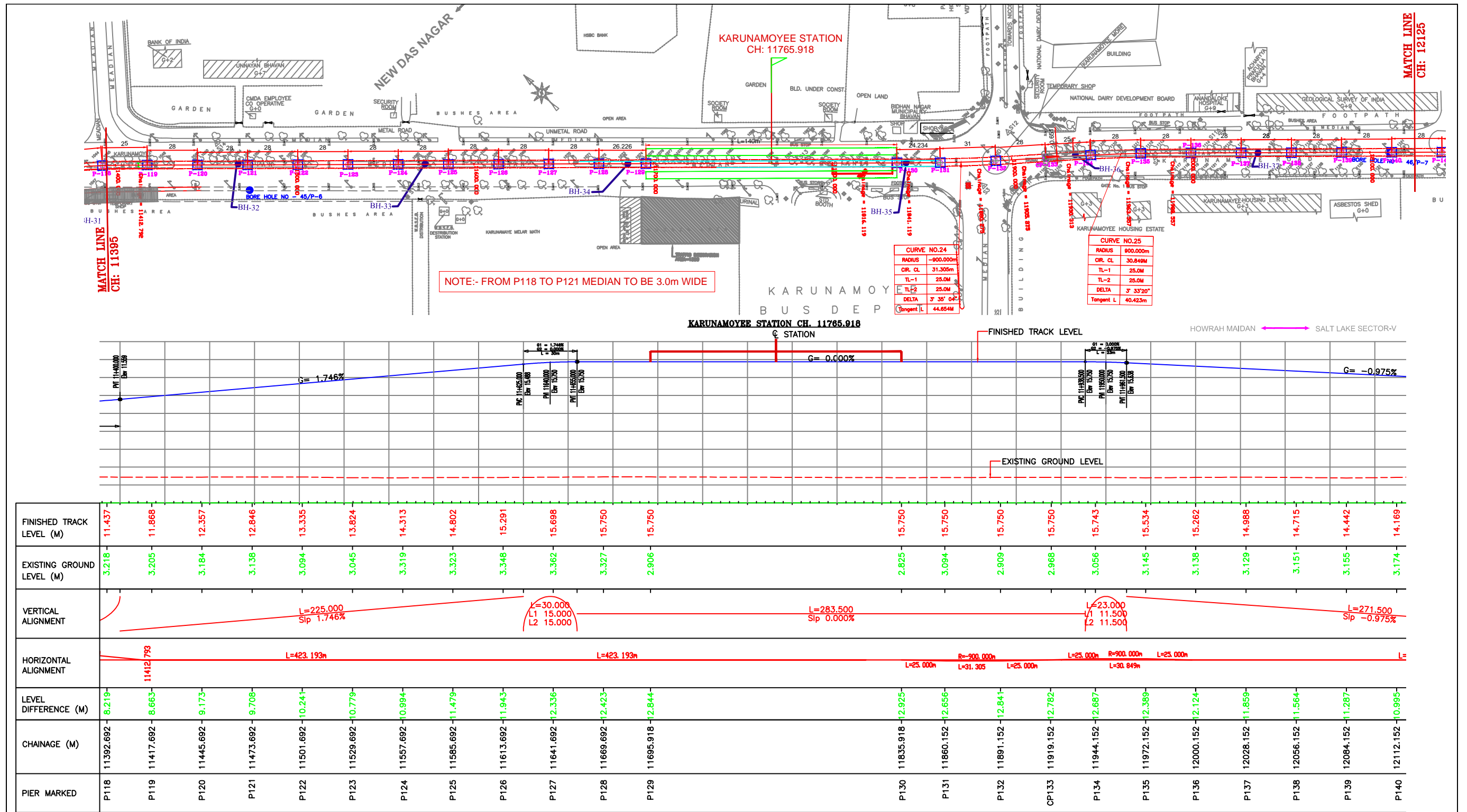
CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

SKM

202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: <http://www.skmconsulting.com>

DRAWN	ISH	
DESIGNED	PARAG	
CHECKED	ANAND PANDEY	
APPROVED	MOHIT KUMAR	

TITLE		ALIGNMENT PLAN (SHEET-5)	
DRAWING NO.			R2
278/EWE1/GAD-06			
SCALE - AS SHOWN		DATE : 30.06.2009	



L E G E N D											
SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL
1.	Road		8.	Lamp Post		15.	Palm Tree		22.	Hutment	
2.	Railway-Track		9.	Signal Post		16.	Drain		23.	Tap-Well	
3.	Traverse Point		10.	Embankment Wall		17.	Nala		24.	Tube-Well	
4.	Telephone Junction Box		11.	Boundary Wall		18.	Building		25.	Telephone Post	
5.	Electric Junction Box		12.	Tree		19.	Shop(Pucca)		26.	Fencing	
6.	Electric Mast (E.M.)		13.	Decid. Tree		20.	Pond		27.	Culvert Cable	
7.	Electric Post		14.	Coconut Tree		21.	Shed		28.	Proposed Alignment	

REV.	NO.	DATE	DESCRIPTION	APPROVED
R1	11.05.10		ISSUED UNDER THE 100% ALIGNED DRAWING UNDER THE ELEV. LETTER NO. 1123/10/04/040 DATED 1 SEP. 2009	
REVISIONS				

DETAILS GIVEN IN THIS DRAWING ARE BASED ON KMRC ALIGNMENT PLAN DRAWINGS AND IT SHOULD BE CONFIRMED AT SITE. ANY DISCREPANCY MUST BE BROUGHT TO THE NOTICE OF KMRC / GC. / CONSULTANT

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL ETC. HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBASH SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO.

1. KOLKATA/E-W/ALIGNMENT/DRG NO.-15, REV-02 [DATED JULY-2008]

FURTHER REVISIONS BY MYCEL/KMRC:

2. REVISED RAIL LEVEL OF STATIONS DATED 08 SEP 2009 & 12 SEP 2009 AS PROVIDED VIDE EMAIL BY MYCEL/KMRC

3. REVISED ALIGNMENT DRAWING FROM CITY CENTRE STATION (P76) TO KARUNAMOYEE STATION(P129)/DEPOT ACCESS LINE/FUTURE AIRPORT LINE ISSUED VIDE MYCEL LETTER NO. 1123/10/04/040 DATED 14.1.1-00245 [DATED 09 NOV.-2009]

4. GROUND LEVELS ARE AS PER JOINT SURVEY BY GIL & MYCEL DATED 10 SEP.-2009

5. REVISED ALIGNMENT DRAWING ISSUED VIDE MYCEL LETTER NO. 1121/10/04/040 DATED : 27.01.2010

NOTES:

- ALL DIMENSIONS AND LEVELS ARE IN METER.
- LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.

KMRCCL	
ACCEPTED	CHIEF ENGINEER
RECOMMENDED	EXECUTIVE ENGINEER
MYCEL	
GENERAL CONSULTANTS	
PROOF CHECKED	D. PAUL
RECOMMENDED FOR ACCEPTANCE	D. PAUL
TITLE	
ALIGNMENT PLAN (SHEET-6)	
DRAWING NO.	
270/EWE1/040-06	
SCALE - AS SHOWN	DATE - 30.05.2009

CLIENT:
KOLKATA METRO RAIL CORPORATION LTD.
HBC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARAH,
KOLKATA-700021

PROJECT:
CONSTRUCTION OF VIADUCT FROM 7.763 Km TO 13.328 Km
ON SUBHASH SAROVAR TO SALT LAKE SECTOR-V
OF EAST WEST CORRIDOR OF KOLKATA METRO





























CONTRACTORS:
GAMMON INDIA LIMITED

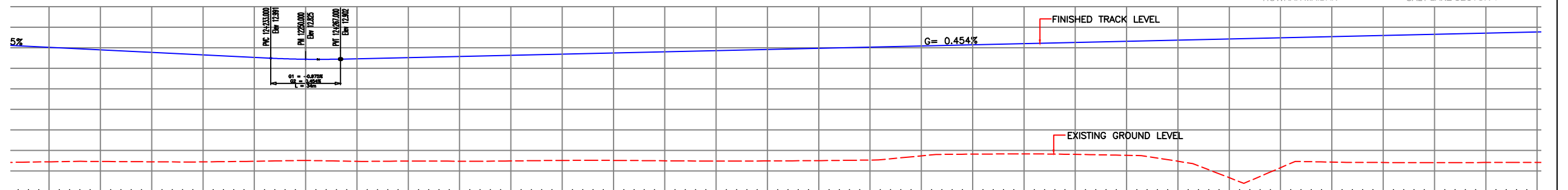
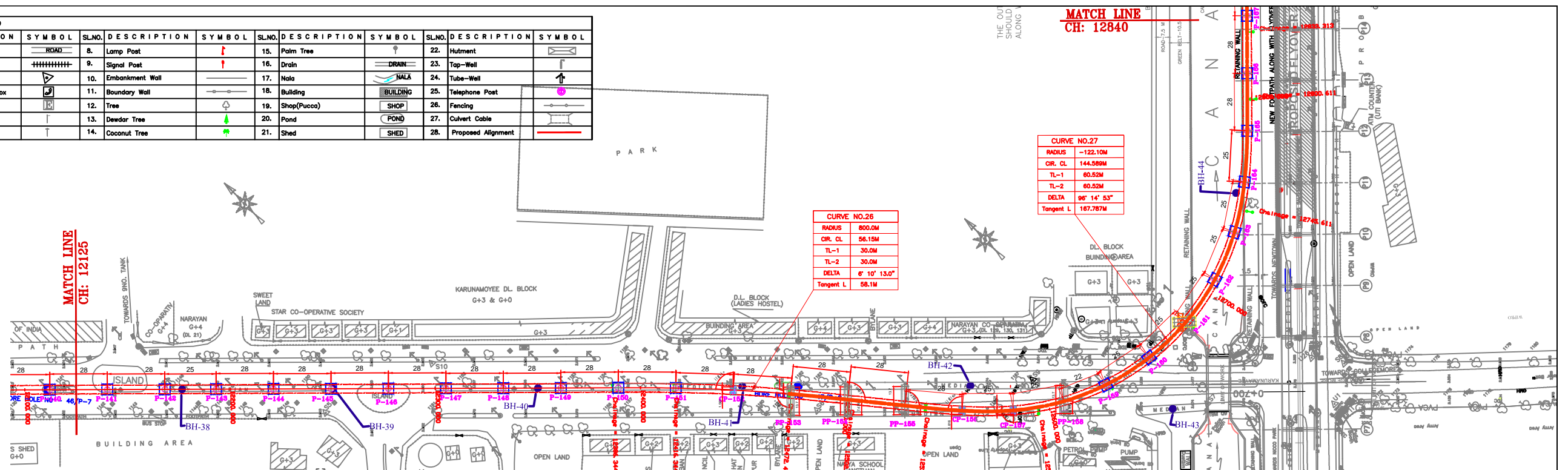
GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: http://www.skmcconsulting.com

DRWN	ISH
DESIGNED	PARAG
CHECKED	ANAND PANDEY
APPROVED	MOHT KUMAR

L E G E N D											
SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL	SL.NO.	DESCRIPTION	SYMBOL
1.	Road		8.	Lamp Post		15.	Palm Tree		22.	Hutment	
2.	Railway-Track		9.	Signal Post		16.	Drain		23.	Tap-Well	
3.	Traverse Point		10.	Embankment Wall		17.	Nala		24.	Tube-Well	
4.	Telephone Junction Box		11.	Boundary Wall		18.	Building		25.	Telephone Post	
5.	Electric Junction Box		12.	Tree		19.	Shop(Pucca)		26.	Fencing	
6.	Electric Mast (E.M.)		13.	Dewdar Tree		20.	Pond		27.	Culvert Cable	
7.	Electric Post		14.	Coconut Tree		21.	Shed		28.	Proposed Alignment	



FINISHED TRACK LEVEL (M)	14.169	13.896	13.623	13.379	13.106	12.888	12.948	13.075	13.202	13.329	13.456	13.584	13.711	13.838	13.965	14.092	14.219	14.332	14.446	14.546	14.659	14.773	14.886	14.999	15.113	15.226	15.353	15.481
EXISTING GROUND LEVEL (M)	3.174	3.141	3.158	3.168	3.147	3.138	3.105	3.111	3.160	3.124	3.147	3.080	3.072	3.121	3.143	3.072	3.141	3.129	3.136	3.098	3.576	2.726	0.795	0.795	2.840	2.817	2.821	2.828
VERTICAL ALIGNMENT	<div><div>0.5%</div><div>L=34.000 L1 17.000 L2 17.000</div><div>L=594.997 Sp 0.454%</div></div>																											
HORIZONTAL ALIGNMENT	<div><div>L=388.286m</div><div>L=30.000m</div><div>R=800.000m L=56.154m</div><div>L=30.000m</div><div>L=27.423m</div><div>L=60.520m</div><div>R=122.100m L=144.589m</div><div>L=60.520m</div></div>																											
LEVEL DIFFERENCE (M)	10.995	10.755	10.465	10.211	9.959	9.750	9.843	9.964	10.042	10.205	10.309	10.494	10.639	10.717	10.822	11.020	11.078	11.203	11.310	11.448	11.083	12.047	14.091	14.204	12.273	12.409	12.532	12.653
CHAINAGE (M)	12112.152	12140.152	12168.152	12193.152	12221.152	12249.152	12277.152	12305.152	12333.152	12361.152	12389.152	12417.152	12445.152	12473.152	12501.152	12529.152	12557.152	12582.152	12607.152	12629.152	12654.152	12679.152	12704.152	12729.152	12754.152	12779.152	12807.152	12835.152
PIER MARKED	P140	P141	P142	P143	P144	P145	P146	P147	P148	P149	P150	P151	CP152	PP153	PP154	PP155	CP156	CP157	PP158	P159	P160	P161	P162	P163	P164	P165	P166	P167

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBASH SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO. : 1 KOLKATA/E-W/ALIGNMENT/DRG NO.-15, REV-02 [DATED JULY-2008]
DRAWING NAME : 1 GAD WITH ALIGNMENT DRAWING.dwg
DRAWING NO. : KOLKATA/E-W/ALIGNMENT/DRG NO.-19
DATED : 28.04.2009

ALL THE RELEVANT DATA SUCH AS CHAINAGE, RAIL LEVEL ETC. HAS BEEN TAKEN FROM ALIGNMENT PLAN (ELEVATED SECTION) SUBASH SAROVAR-SALT LAKE SECTOR-V DRAWINGS NO. : 1 KOLKATA/E-W/ALIGNMENT/DRG NO.-15, REV-02 [DATED JULY-2008]
FURTHER REVISIONS BY MYCEL/KMRC:
2. REVISED RAIL LEVEL OF STATIONS DATED 08 SEP 2009 & 12 SEP 2009 AS PROVIDED VIDE EMAIL BY MYCEL/KMRC
3. GROUND LEVELS ARE AS PER JOINT SURVEY BY OIL & MYCEL DATED 10 SEP.-2009
4. REVISED ALIGNMENT DRAWING ISSUED VIDE MYCEL LETTER NO. 1121/10/GIL/O40 DATED : 27.01.2010

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.

KMRC

ACCEPTED CHIEF ENGINEER
RECOMMENDED EXECUTIVE ENGINEER

MYCEL

GENERAL CONSULTANTS

PROOF CHECKED D. PAUL

RECOMMENDED FOR ACCEPTANCE D. PAUL

TITLE **ALIGNMENT PLAN (SHEET-7)**

DRAWING NO. **270/TWE1/040-07**

SCALE - AS SHOWN

DATE : 30.04.2009

NO.	DATE	DESCRIPTION	APPROVED
1	11.05.10	ISSUED FOR CONSTRUCTION	
2	11.05.10	ISSUED FOR CONSTRUCTION	
3	11.05.10	ISSUED FOR CONSTRUCTION	
4	11.05.10	ISSUED FOR CONSTRUCTION	
5	11.05.10	ISSUED FOR CONSTRUCTION	
6	11.05.10	ISSUED FOR CONSTRUCTION	
7	11.05.10	ISSUED FOR CONSTRUCTION	
8	11.05.10	ISSUED FOR CONSTRUCTION	
9	11.05.10	ISSUED FOR CONSTRUCTION	
10	11.05.10	ISSUED FOR CONSTRUCTION	

CLIENT:
KOLKATA METRO RAIL CORPORATION LTD.
HRC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARAH,
KOLKATA-700021

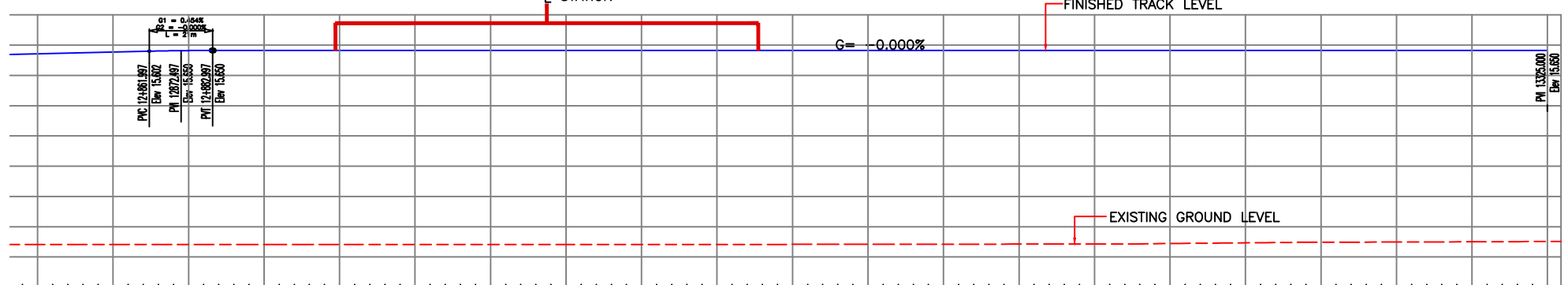
PROJECT:
CONSTRUCTION OF VIADUCT FROM 7.783 Km TO 13.328 Km
ON SUBASH SAROVAR TO SALT LAKE SECTOR-V
OF EAST WEST CORRIDOR OF KOLKATA METRO

CONTRACTORS:
GAMMON INDIA LIMITED
GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.
202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
Phones : 27943131, 27943660
Fax : 011-27948609
Web: http://www.skmcconsulting.com

DRAWN ISH
DESIGNED PARAG
CHECKED ANAND PANDEY
APPROVED MOHT KUMAR

R1



DETAILS GIVEN IN THIS DRAWING ARE BASED ON KMRC
ALIGNMENT PLAN DRAWINGS AND IT SHOULD
BE CONFIRMED AT SITE. ANY DISCREPANCY MUST BE
BROUGHT TO THE NOTICE OF KMRC / GC. / CONSULTANT

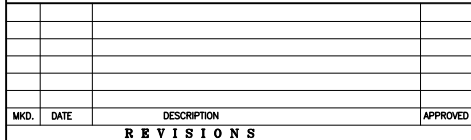
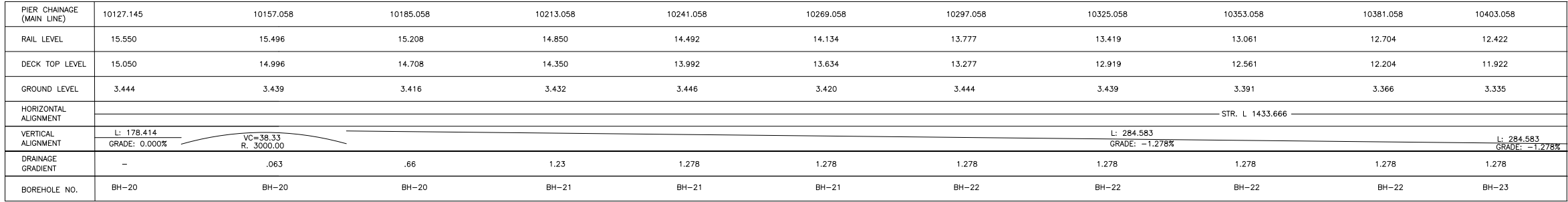
NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METER.
2. LENGTH OF SPAN, CHAINAGE AND L-SECTION HAS BEEN GENERATED ALONG CENTER LINE OF ALIGNMENT.


TITLE		ALIGNMENT PLAN (SHEET-8)	
DRAWING NO.			(R)
270/EWE1/QAD-08			
SCALE - AS SHOWN		DATE : 30.08.2008	

Rt	11.03.10	DRIVERS WANTED DUE TO RECENT ALLEGED DRIVERS WANTED VOC IMPROV LEXTER NO. 1121/76/08/040 SHED : 27.01.2010			
MKD.	DATE	DESCRIPTION			APPROVED
P E T R O L I U M S					

CONSULTANTS: <i>Sinclair Knight Merz Consulting (India) Pvt. Ltd.</i>  202, Balaji Plaza, Sector-8, Rohini, Delhi-110085 Phones : 27943131, 27943660 Fax : 011-27948609 Web : www.skmconsulting.com	DRAWN	ISH
	DESIGNED	PARAG
	CHECKED	ANAND PANDEY
	APPROVED	MOHIT KUMAR



CONTRACTORS:
GAMMON INDIA LIMITED

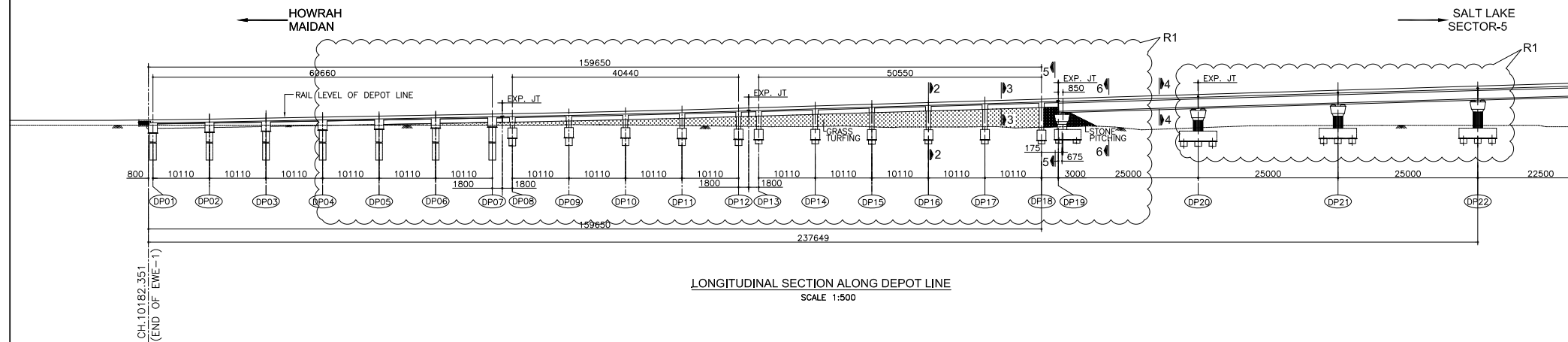
 GAMMON HOUSE,
VEER SAVARKAR MARG,
PRABHADEVI, MUMBAI-400025

CONSULTANTS:
Sinclair Knight Merz Consulting (India) Pvt. Ltd.

202, Balaji Plaza, Sector-8,
Rohini, Delhi-110085
SKM
Phones : 27943131, 27943660
Fax : 011-27948609
Web: <http://www.skmconsulting.com>

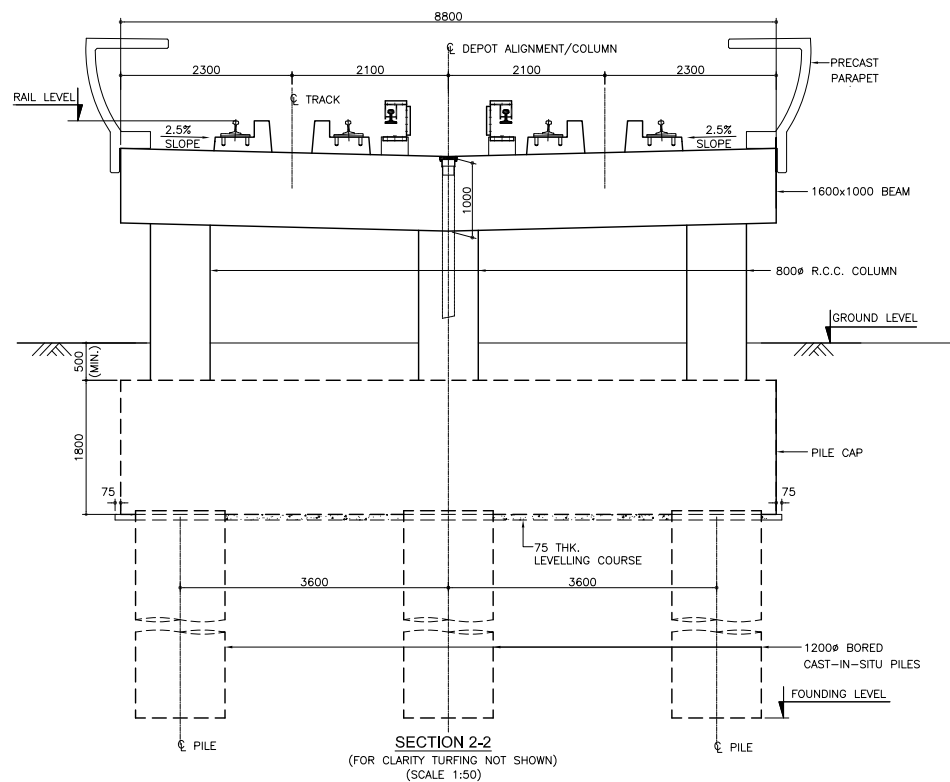
DRAWN	ISH
DESIGNED	PARAG
CHECKED	ANAND PANDEY
APPROVED	MOHIT KUMAR

KMRCL	
ACCEPTED	CHIEF ENGINEER
RECOMMENDED	EXECUTIVE ENGINEER
M Y C E L	
GENERAL CONSULTANTS	
PROOF CHECKED	D. PAUL
RECOMMENDED FOR ACCEPTANCE	D. PAUL
TITLE GENERAL ARRANGEMENT FOR DEPOT LINE & MAIN LINE FROM PIER P76 TO P86 (SHEET 2 OF 3)	
DRAWING NO.	279/EW1/GAD-19 <div style="float: right; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> RO </div>
SCALE=AS SHOWN	DATE - 03.11.2009

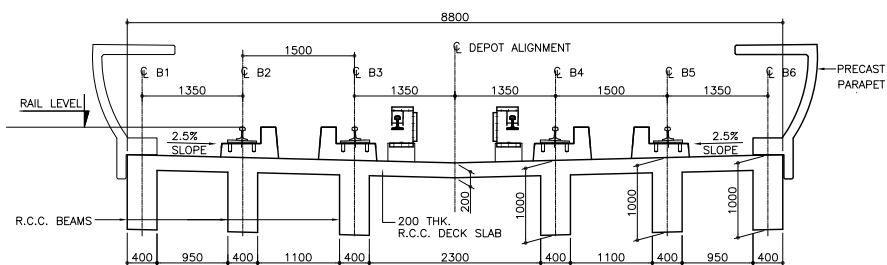


LONGITUDINAL SECTION ALONG DEPOT LINE
SCALE 1:500

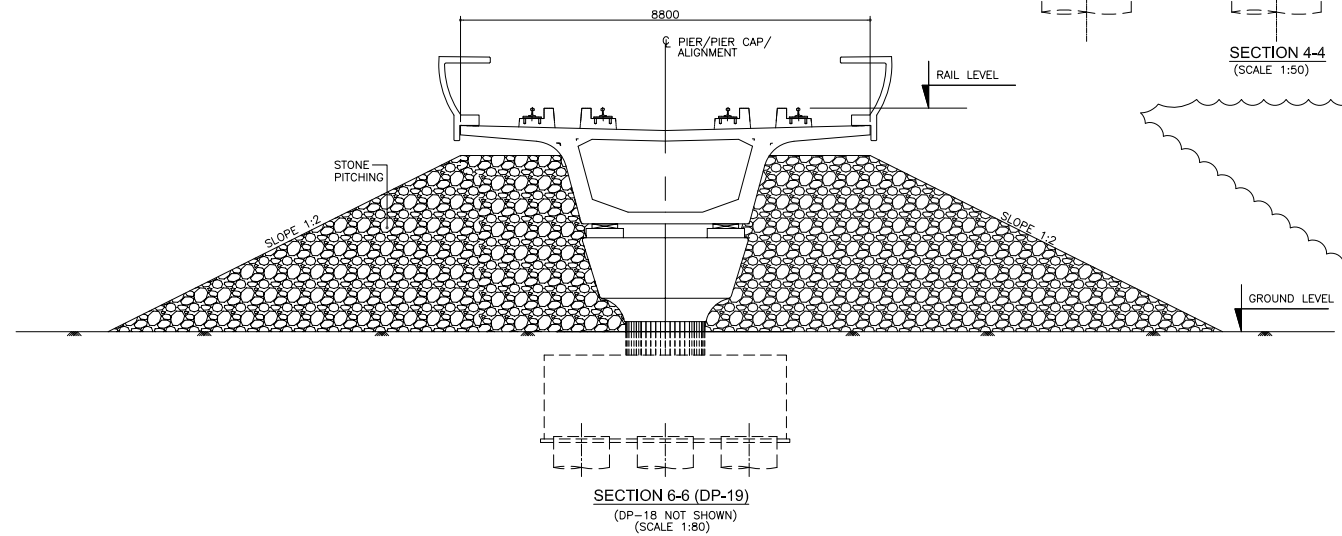
PIER CHAINAGE (DEPOT LINE)	10183.151	10193.261	10203.371	10213.481	10223.591	10233.701	10243.811 10247.411	10257.521	10267.631	10277.741	10287.851 10291.451	10301.561	10311.671	10321.781	10331.891	10342.001 10345.001	10370.001	10395.000	10420.000			
RAIL LEVEL	4.071	4.215	4.397	4.579	4.761	4.943	5.125 5.190	5.385	5.611	5.867	6.154 6.262	6.565	6.869	7.172	7.445	7.779 7.869	8.619	9.369	10.119			
DECK TOP LEVEL	3.571	3.715	3.897	4.079	4.261	4.443	4.625 4.690	4.885	5.111	5.367	5.654 5.762	6.065	6.369	6.672	6.945	7.279 7.369	8.119	8.869	9.619			
GROUND LEVEL	APPROXIMATE GROUND LEVEL=3.0M																	3.358				
HORIZONTAL ALIGNMENT	STR. L 160.220							RAD 124.200 ARC 194.614										RAD 124.200 ARC 194.614				
VERTICAL ALIGNMENT	VC=23.40 R. 1300.00		L: 55.208 GRADE: 1.800%										VC=40.00 R. 3333.33		L: 152.855 GRADE: 3.000%							
DRAINAGE GRADIENT	1.44	1.82	1.80	1.80	1.80	1.80	1.80 1.80	1.93	2.20	2.50	2.84	3.00	3.00	3.00	3.00	3.00 3.00	3.00	3.00	3.00			
BOREHOLE NO.	BH-21/BH-22															BH-22			BH-23		BH-23	



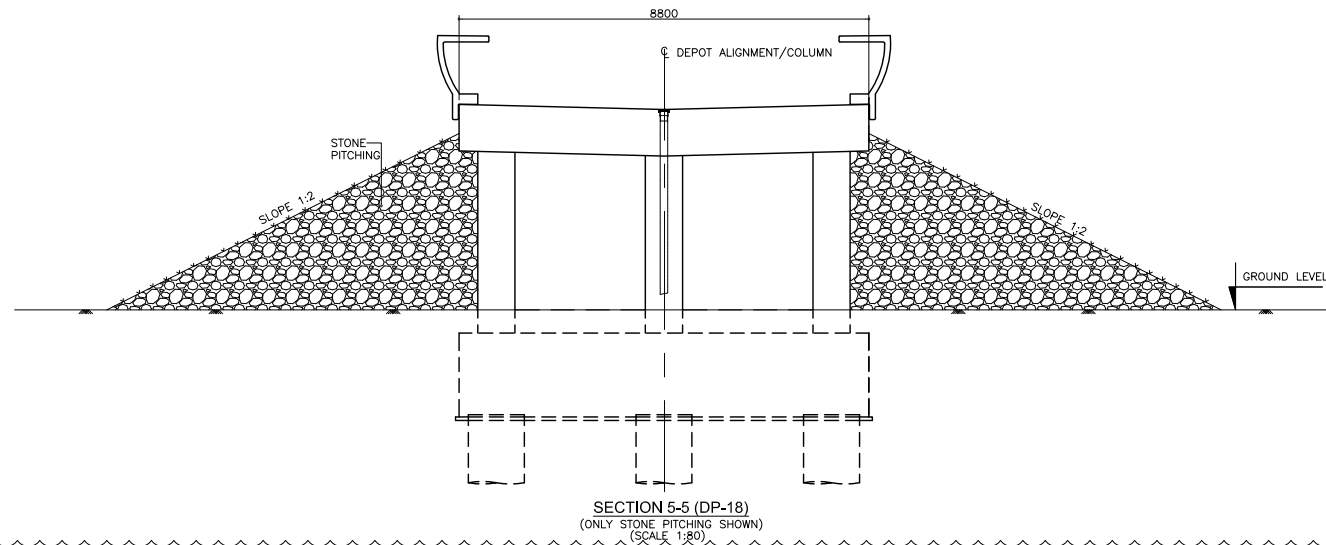
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(FOR CLARITY TURFING NOT SHOWN)
SCALE 1:50



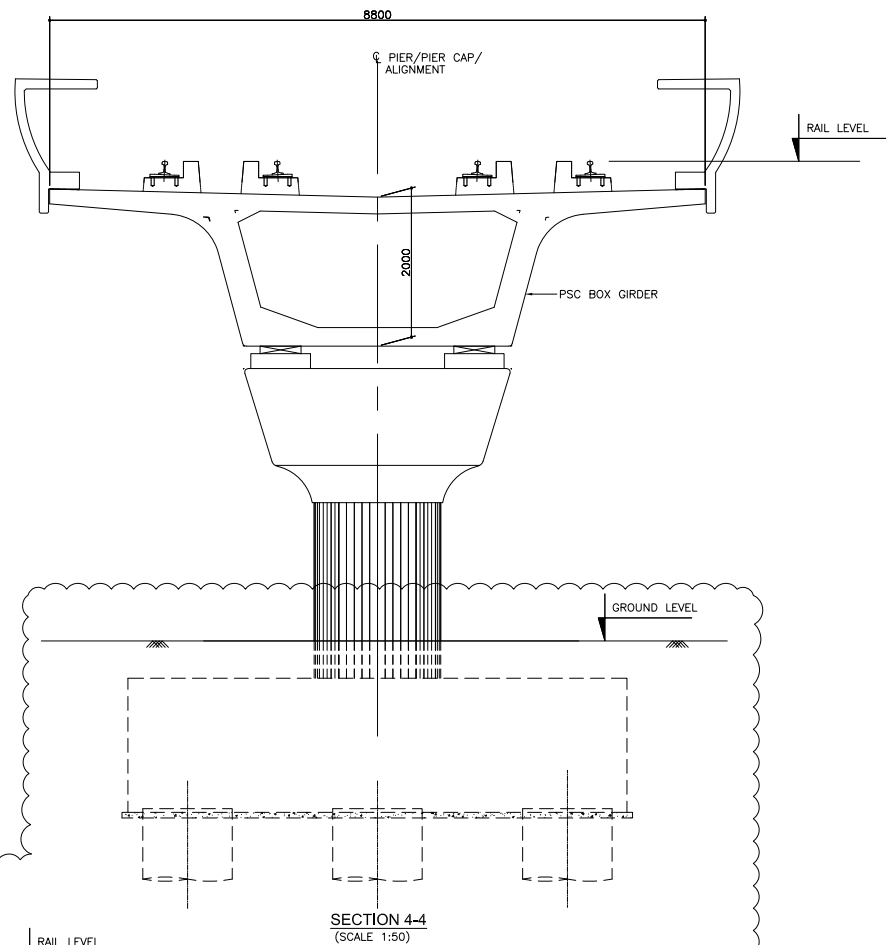
SECTION 3-3
(FOR CLARITY TURFING NOT SHOWN)
SCALE 1:50



SECTION 6-6 (DP-19)
(DP-18 NOT SHOWN)
SCALE 1:80



SECTION 5-5 (DP-18)
(ONLY STONE PITCHING SHOWN)
SCALE 1:80



SECTION 4-4
(SCALE 1:50)

REV.	DATE	DESCRIPTION	APPROVED
R1	07.02.11	EARTHWORK IN SLOPE ADDED	
REVISIONS			

CLIENT:	KOLKATA METRO RAIL CORPORATION LTD. HREC HOUSE, 4TH FLOOR, MUNSI PREM CHAND SARANI, KOLKATA-700021
CONTRACTORS:	GAMMON INDIA LIMITED GAMMON HOUSE, VEER SAVARKAR MARG, PRABHADEVI, MUMBAI-400025
CONSULTANTS:	Sinclair Knight Merz Consulting (India) Pvt. Ltd. 202, Balaji Plaza, Sector-8, Rohini, Delhi-110085 Phones : 27943131, 27943660 Fax : 011-27948609 Web: http://www.skmconsulting.com

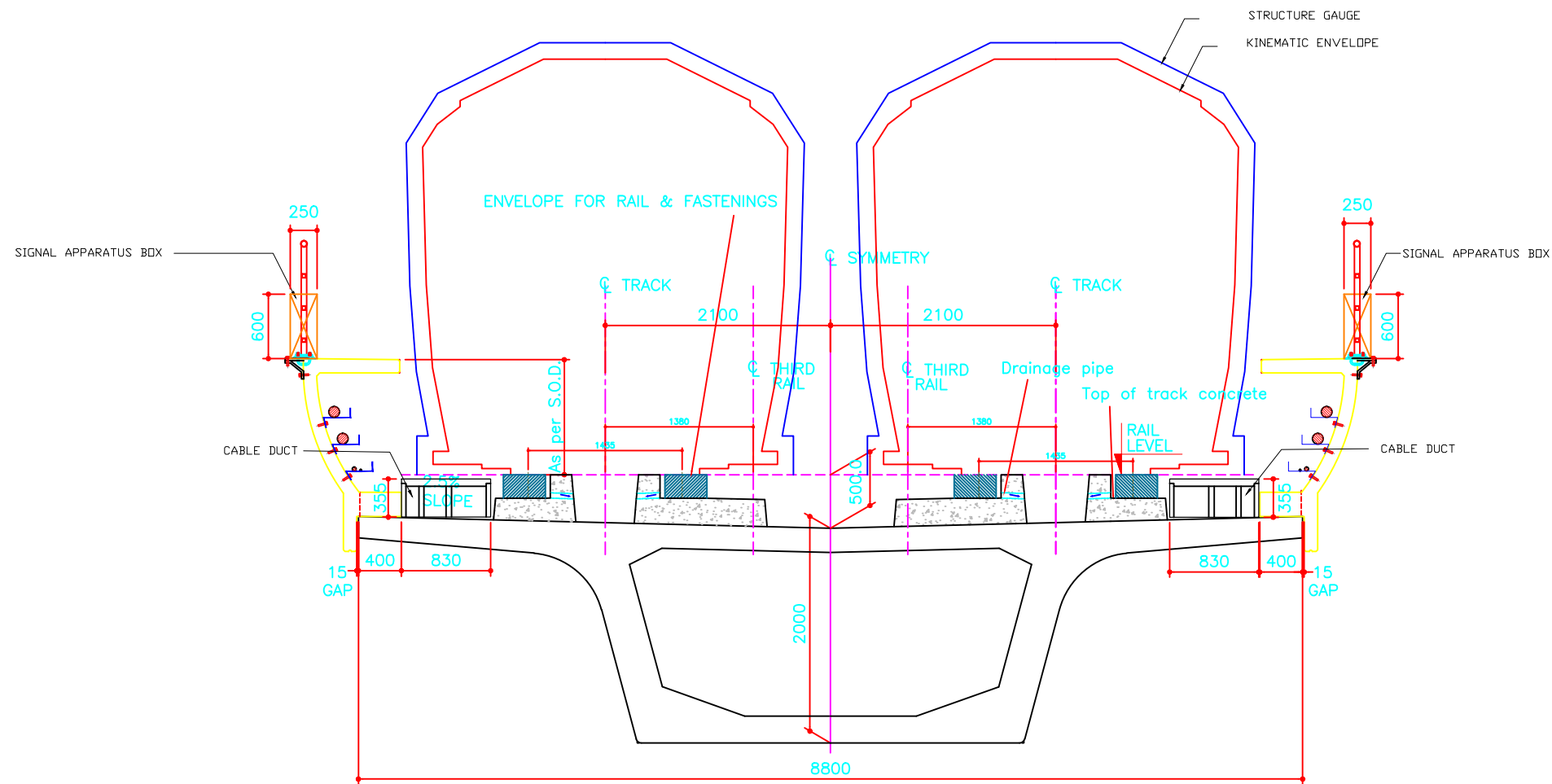
CONTRACTORS:	GAMMON INDIA LIMITED
CONSULTANTS:	Sinclair Knight Merz Consulting (India) Pvt. Ltd.

CONSULTANTS:	Sinclair Knight Merz Consulting (India) Pvt. Ltd.
DESIGNED:	PARAG
CHECKED:	ANAND PANDEY
APPROVED:	MOHIT KUMAR








DRAWN:	S.SOLANKI
DESIGNED:	PARAG
CHECKED:	ANAND PANDEY
APPROVED:	MOHIT KUMAR

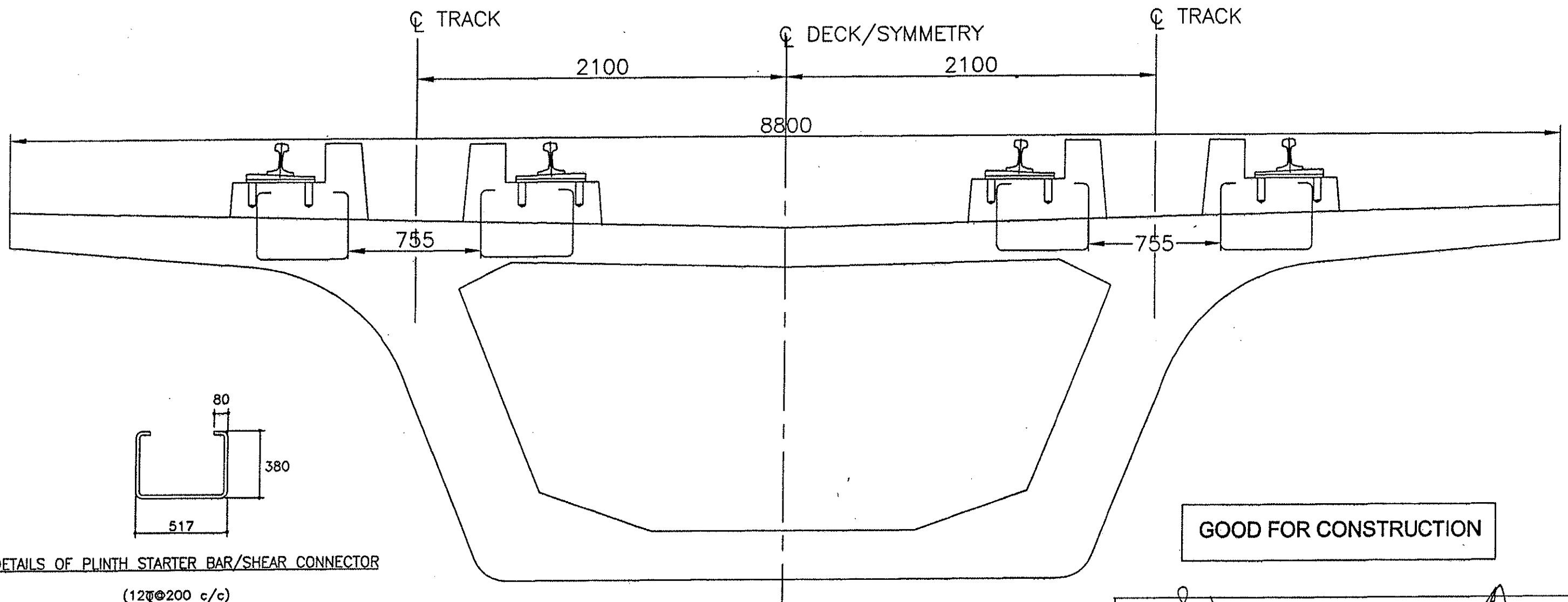
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KMRCL	ACCEPTED	CHIEF ENGINEER
RECOMMENDED	EXECUTIVE ENGINEER	
MYCEL	GENERAL CONSULTANTS	
PROOF CHECKED	D. PAUL	
RECOMMENDED FOR ACCEPTANCE	D. PAUL	
TITLE	GENERAL ARRANGEMENT FOR DEPOT LINE & MAIN LINE FROM PIER P76 TO P86 (SHEET 3 OF 3)	
DRAWING NO.	279/EWE1/GAD-20	
SCALE=AS SHOWN	DATE - 03.11.2009	



CONCEPTUAL DRAWING SHOWING VARIOUS SYSTEMS ON ELEVATED VIADUCT (with 4.2 m Track Centre)

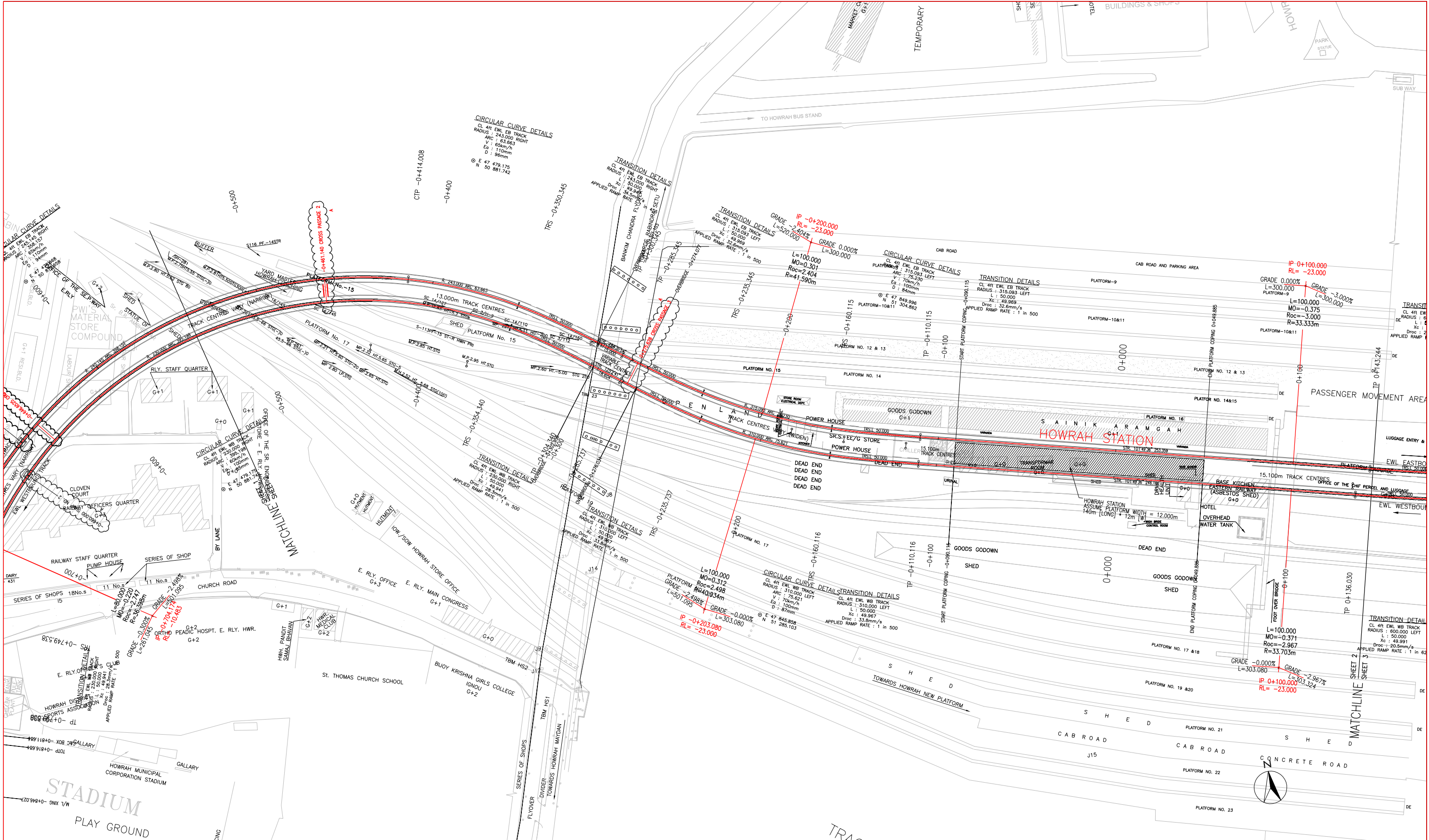
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							Consultants :						Drawing Title :									
							<div>     </div>						CONCEPTUAL DRAWING SHOWING VARIOUS SYSTEMS ON ELEVATED VIADUCT									
							Designed RM		Checked JMC		Approved LCL		Drawing No. : TW / SW / VIA / T / 1801				Rev. -					
							Scale NTS		Drawn SC		Date 28/05/10		CAD File Name : TW-1801									
Rev.	Date	By	Description				Checked	Approved														



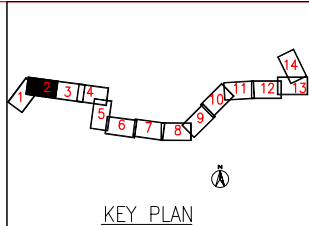
REFERENCE DRAWINGS Dwg. No. Description					OFFICE OF ORIGIN DELHI METRO RAIL CORPORATION LIMITED DESIGN DEPARTMENT 5th FLOOR, METRO BHAVAN, #13, FIRE BRIGADE LANE BARAKAMBA ROAD, NEW DELHI - 110001 PH. -011-23417910 -12 TELE FAX - 011-23417918				DRAWN BY : P. K.		KOLKATA METRO RAIL CORPORATION LIMITED DETAILS OF SHEAR CONNECTOR	
									CHECKED BY : RAJ SINGH			
REV. PARTICULARS DRN. CHD. VER. DATE					DESIGNED BY : V. P. SINGH		SCALE : 1:100		DATE : 01/05/10		GOOD FOR CONSTRUCTION	
							SCALE : AS MARKED		DATE : 01/05/10			

DMRC/GFC/KOL/814/SUP/SC/33


GOOD FOR CONSTRUCTION




NOTES:



Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

**KOLKATA METRO RAIL CORPN. LTD.**

Project Title :
EAST-WEST METRO PROJECT

Consultants :


Drawing Title :
**ALIGNMENT ENLARGED PLAN
SHEET 2**

Drawing No. :
UG/CIV/ALG/R/1002

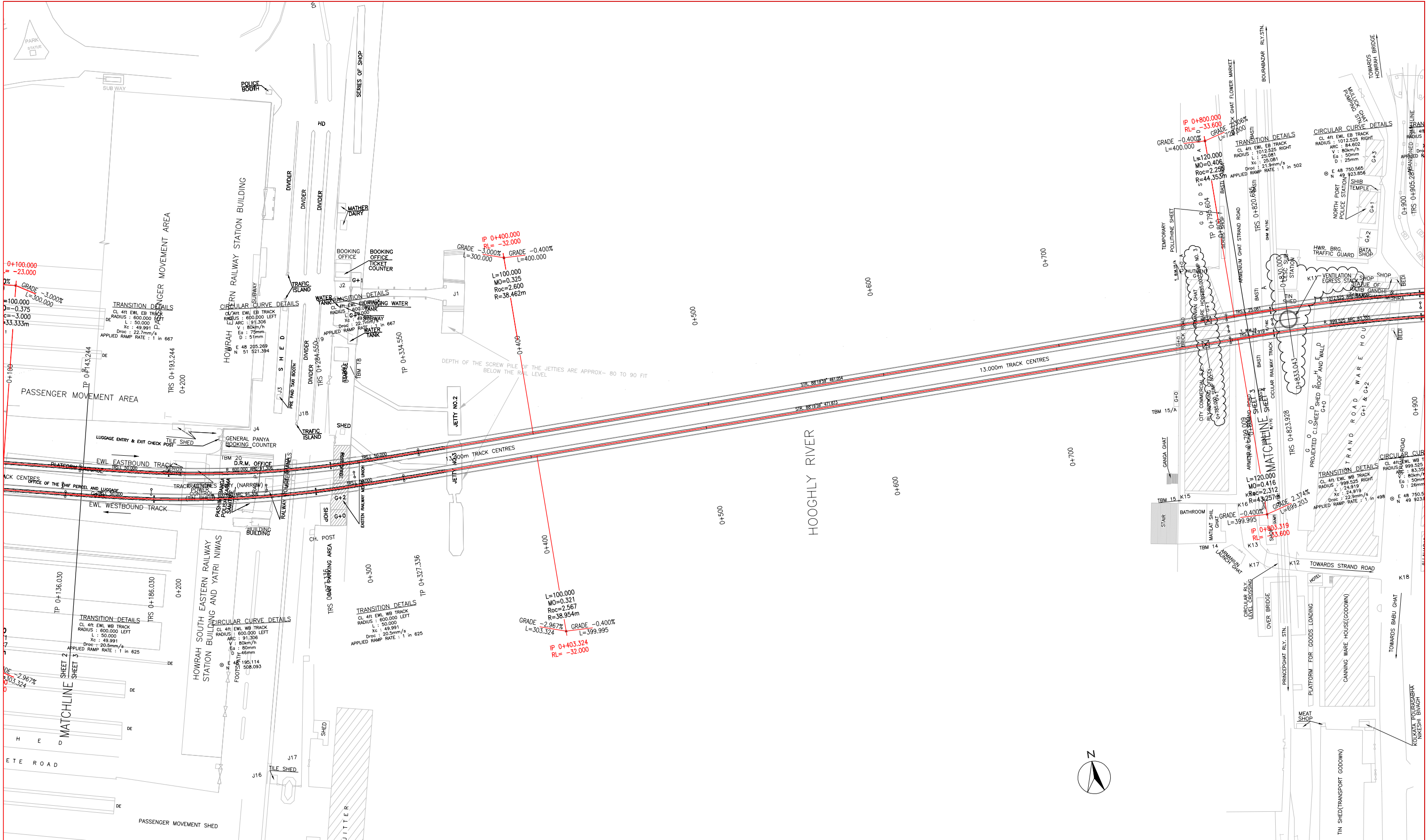
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Designed MB
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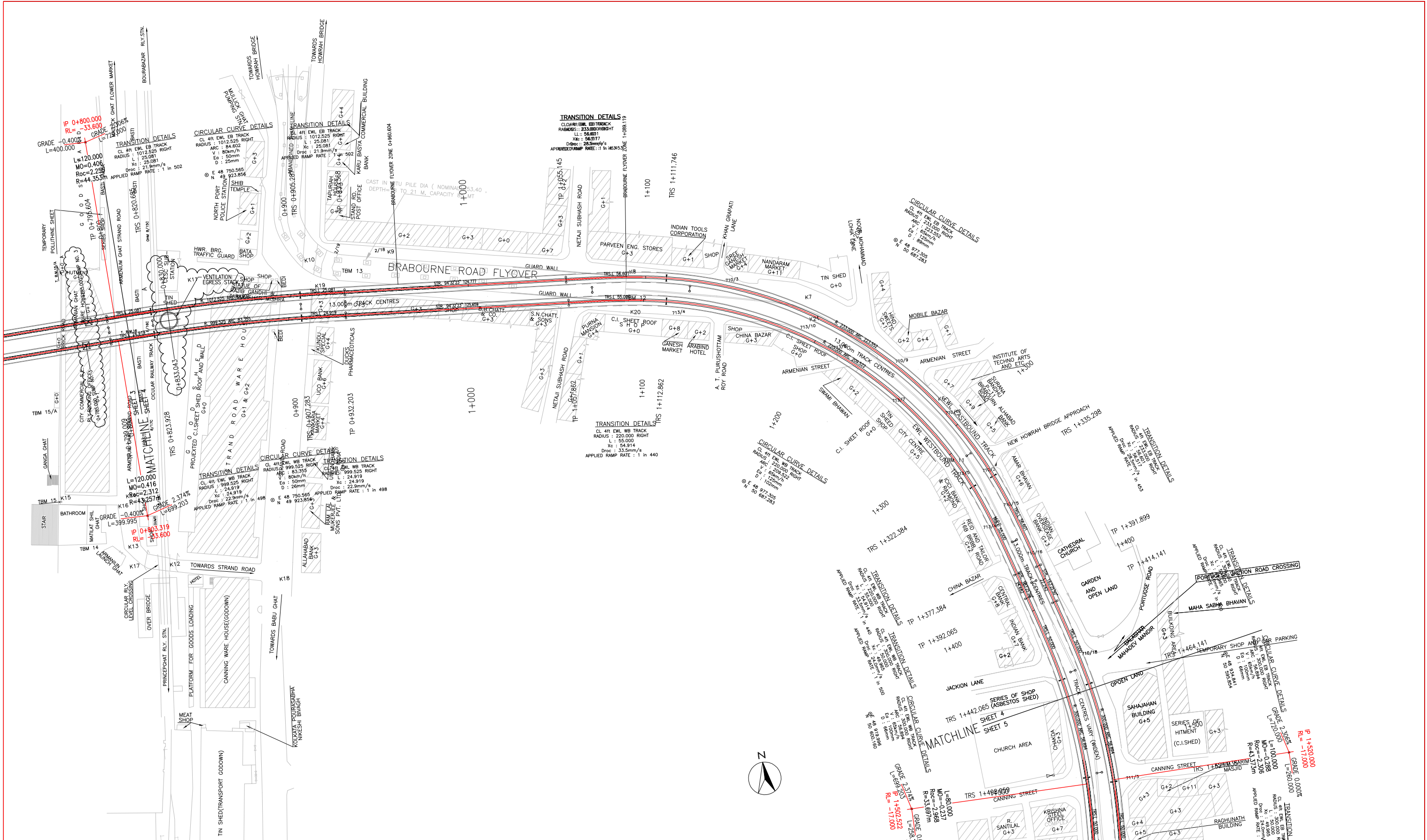
Checked RT
Drawn SNG

Approved JTH
Date Aug.09

Rev. A



GRAPHIC SCALE 10 0 5 10 20 30 40m		NOTES:		KEY PLAN		Project Title : EAST-WEST METRO PROJECT	
A		12/9/2009		SNG		KOLKATA METRO RAIL CORPN. LTD.	
Rev.		Date		By		Consultants : MAUNSELL AECOM yec H E 2 egis Rail LHPA	
A		12/9/2009		SNG		Designed MB	
Rev.		Date		By		Checked RT	
A		12/9/2009		SNG		Approved JTH	
Rev.		Date		By		Scale 1:1000	
A		12/9/2009		SNG		Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 3	
Rev.		Date		By		Drawing No. : UG/CIV/ALG/R/1003	
A		12/9/2009		SNG		CAD File Name : UG-R1003A.dwg	



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec H E egis Rail LHPA

Designed MB

Scale 1:1000

Checked RT

Drawn SNG

Approved JTH

Date Aug.09

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 4

Drawing No. : UG/CIV/ALG/R/1004

CAD File Name : UG-1004A.dwg

Rev. A



NOTES:

GRAPHIC SCALE
10 0 5 10 20 30 40m

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec H E egis Rail LHPA

Designed MB

Scale 1:1000

Checked RT

Drawn SNG

Approved JTH

Date Aug.09

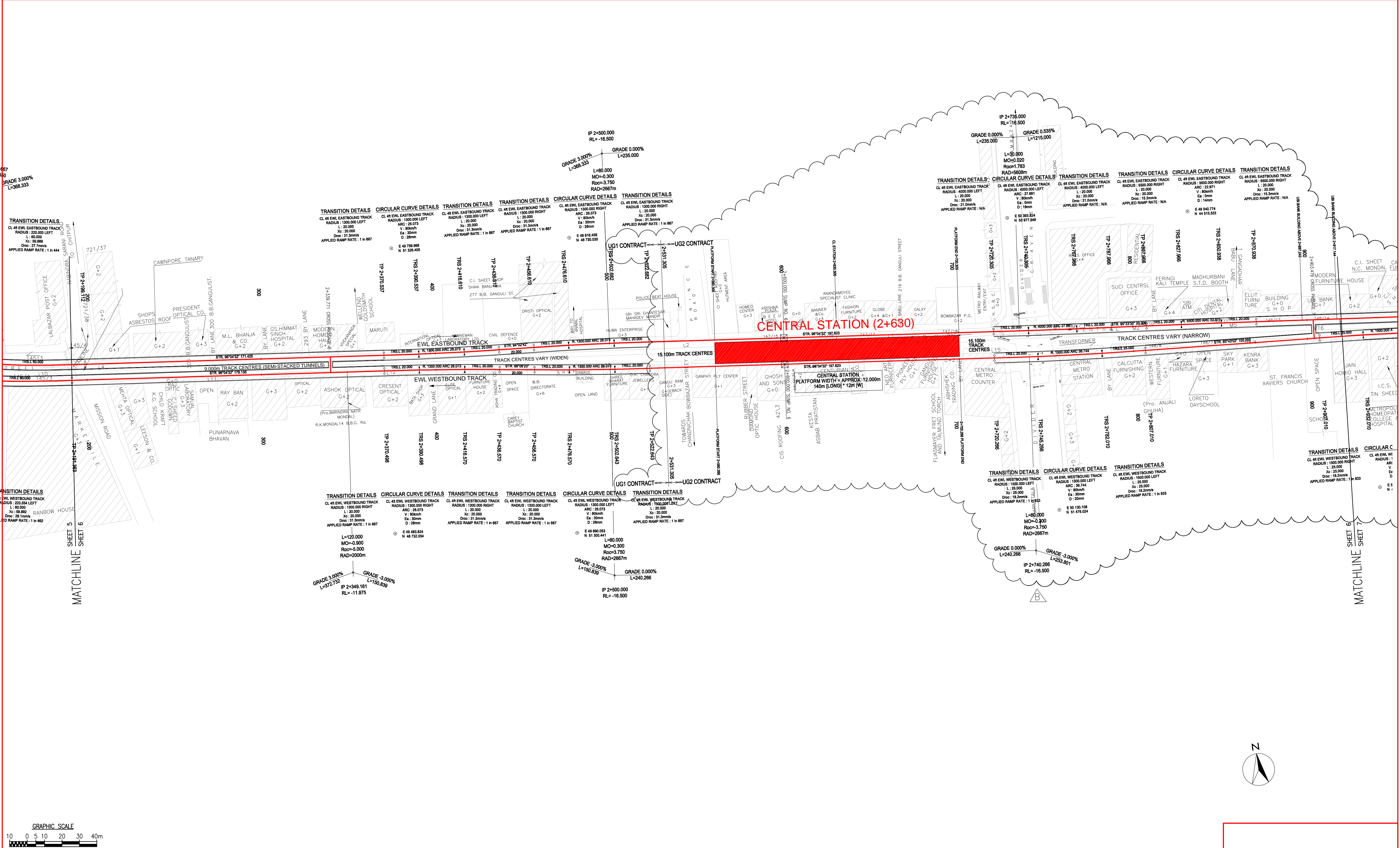
Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 5

Drawing No. : UG/CIV/ALG/R/1005

CAD File Name : UG-1005A.dwg

Rev. A



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
B	27/10/2009	SNG	Alignment Revised	RT	JTH
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec IEG egis Rail LHPA

Designed MB

Scale 1:1000

Checked RT

Drawn SNG

Approved JTH

Date Aug.09

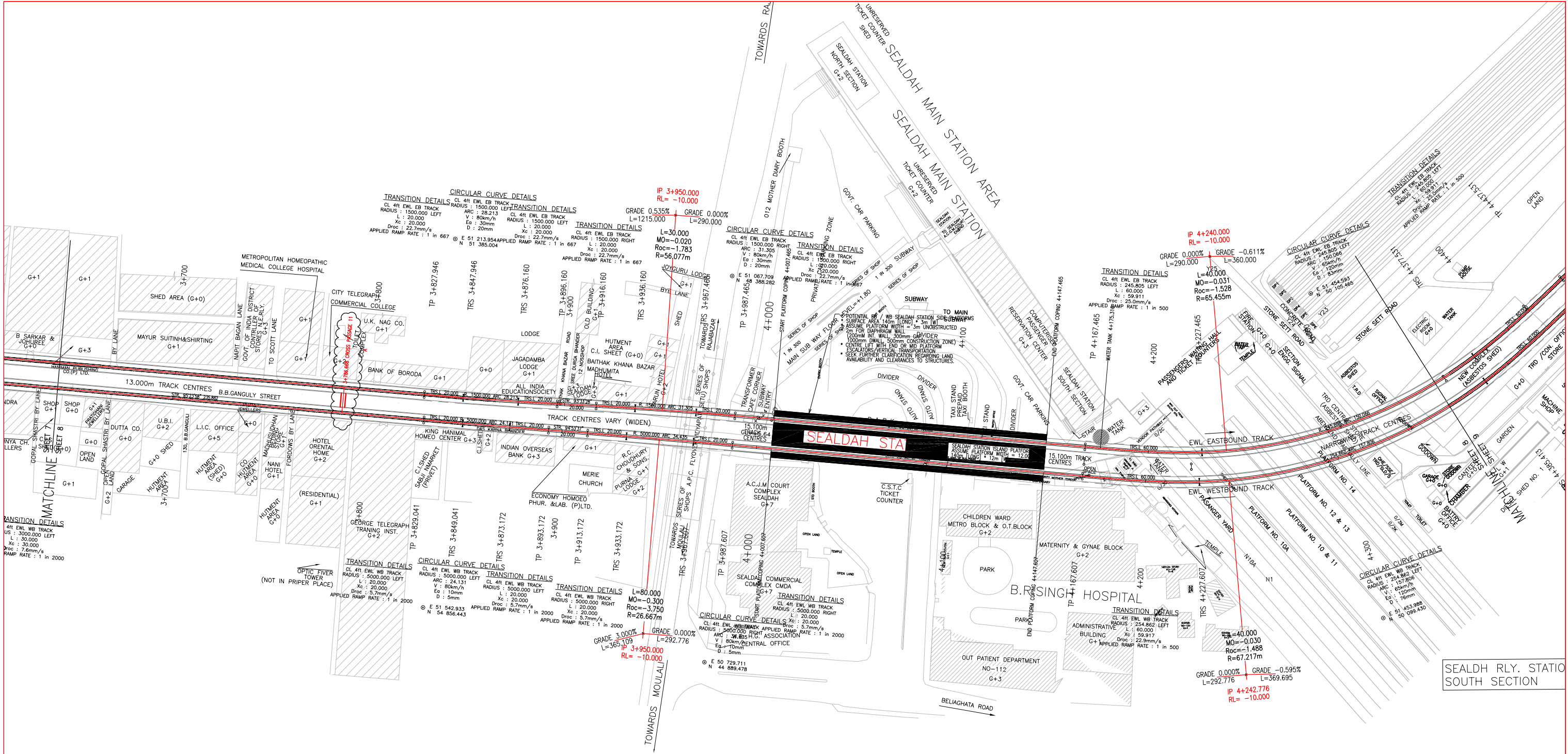
Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 6

Drawing No. : UG/CIV/ALG/R/1006

CAD File Name : UG-1006B.dwg

Rev. B



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec H E @egis Rail LHPA

Designed MB

Scale 1:1000

Checked RT

Drawn SNG

Approved JTH

Date Aug.09

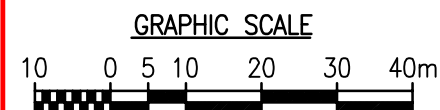
Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 8

Drawing No. : UG/CIV/ALG/R/1008

CAD File Name : UG-1008A.dwg

Rev. A



KEY PLAN



Results

yec



LHPA

Project Title :

EAST-WEST METRO PROJECT

Drawing Title :

ALIGNMENT ENLARGED PLAN
SHEET 9

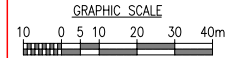
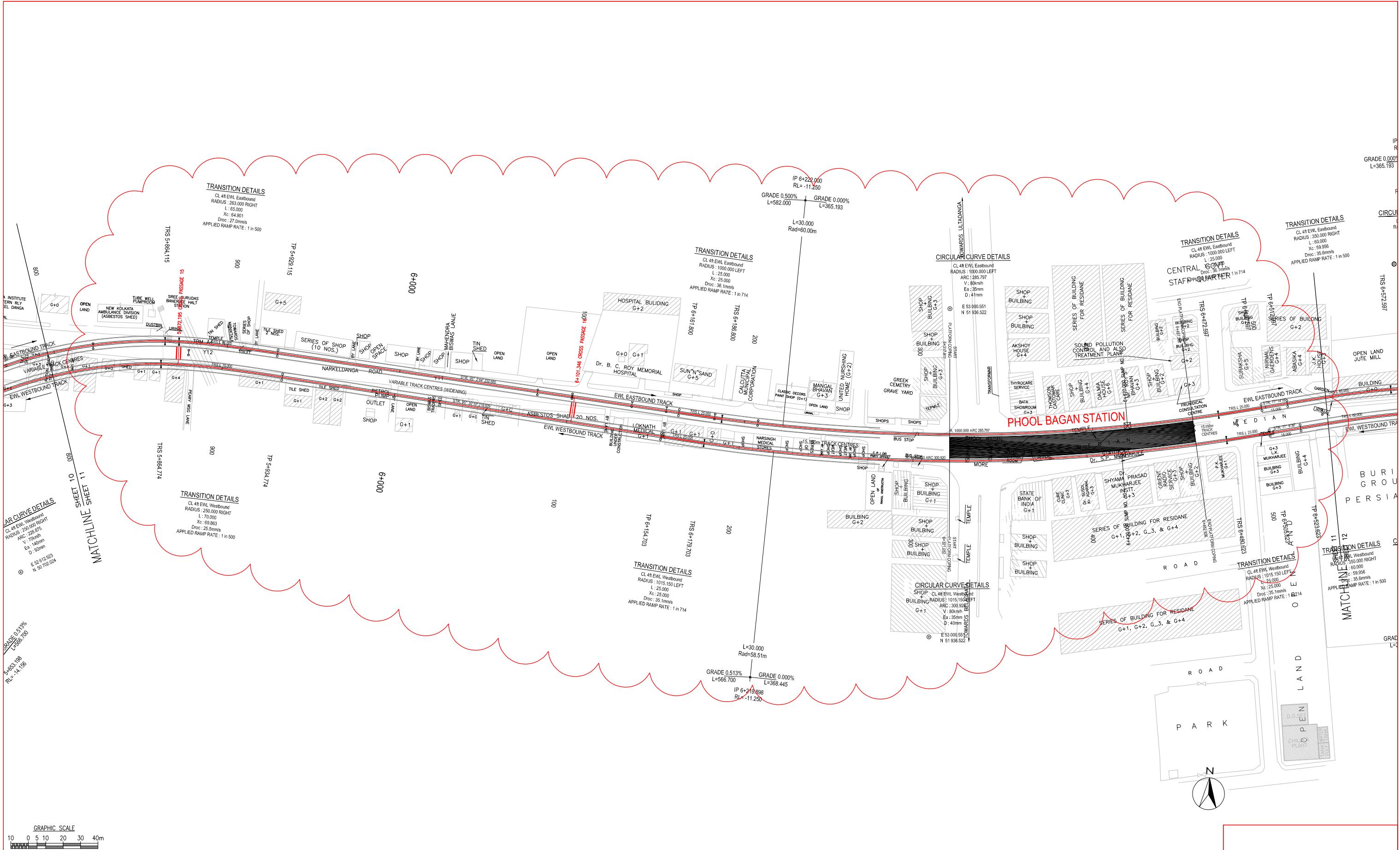
Drawing No. :

UG/CIV/ALG/R/1009

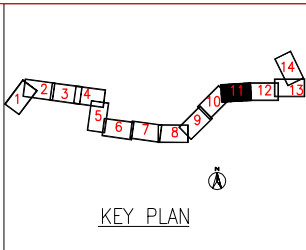
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Rev

B



NOTES:



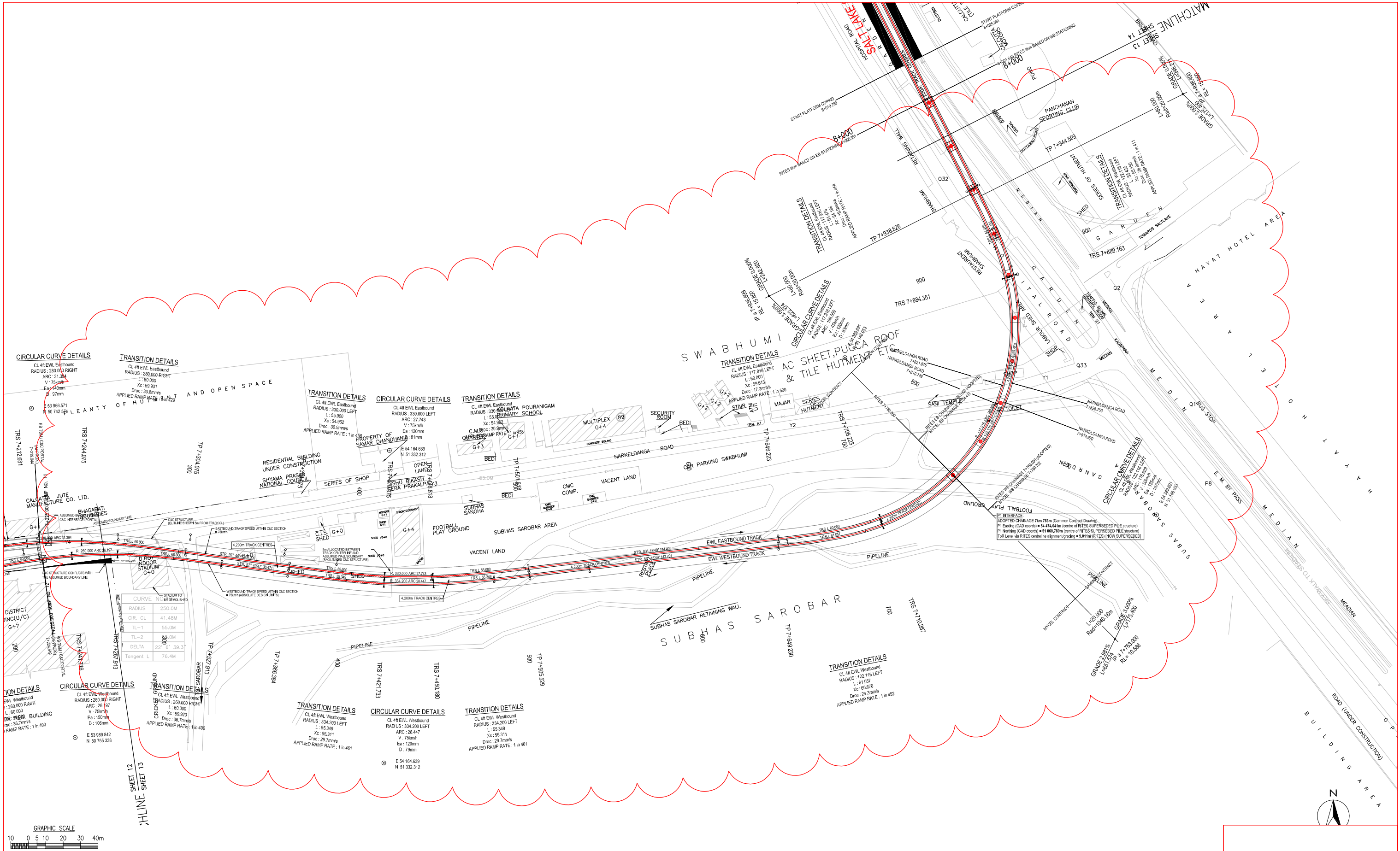
Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants : MAUNSELL AECOM yec H E egis Rail LHPA

Designed MB
Scale 1:1000
Checked RT
Drawn SNG
Approved JTH
Date Aug.09

Project Title : EAST-WEST METRO PROJECT
Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 11
Drawing No. : UG/VIC/ALG/R/1011
CAD File Name : UG-1011A.dwg
Rev. A



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec H E 2 egis Rail LHPA

Designed MB

Scale 1:1000

Checked RT

Drawn SNG

Approved JTH

Date Aug.09

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT ENLARGED PLAN SHEET 13

Drawing No. : UG/CIV/ALG/R/1013

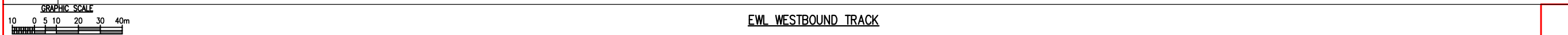
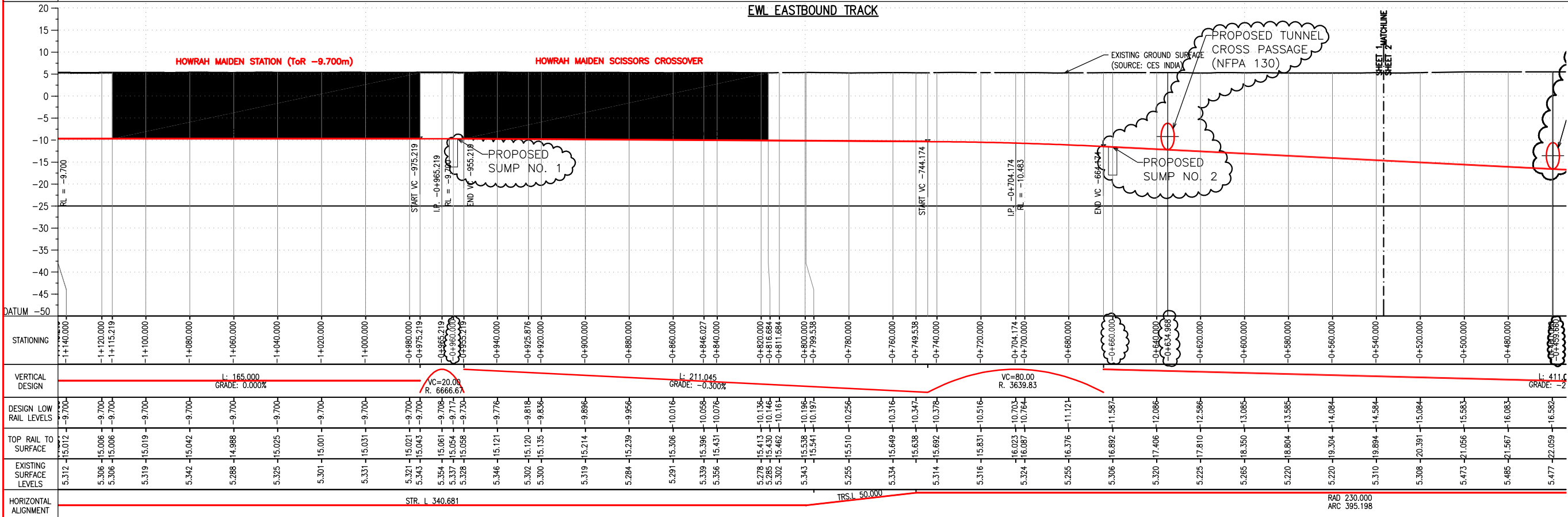
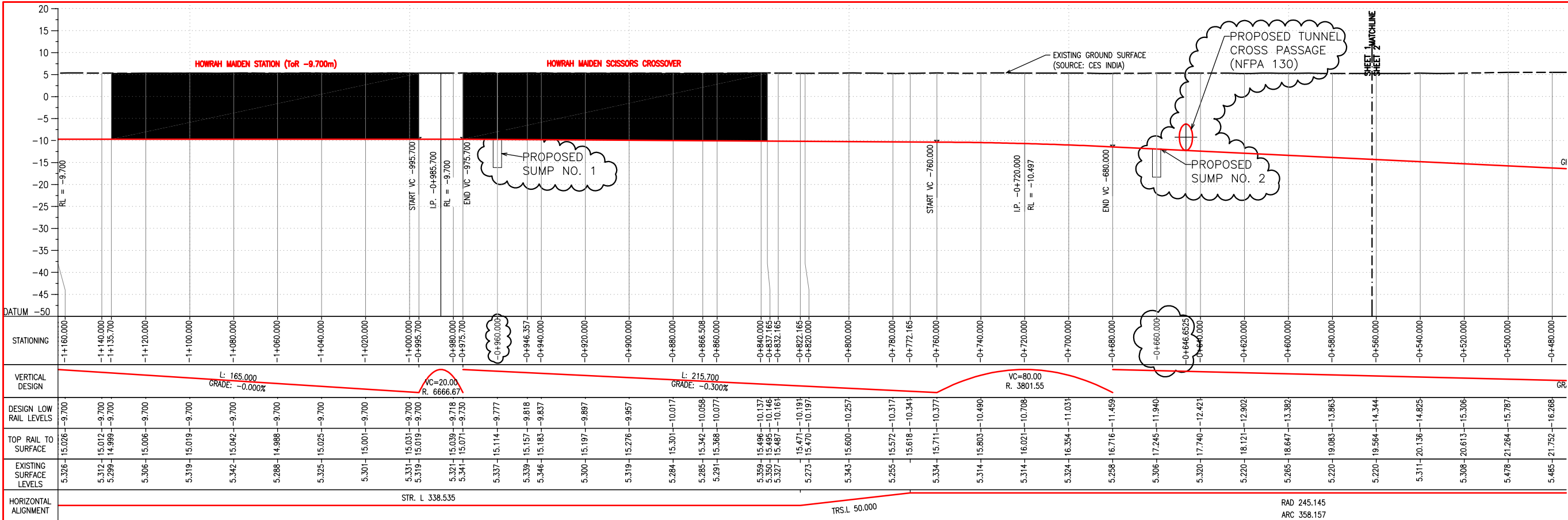
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Rev. A

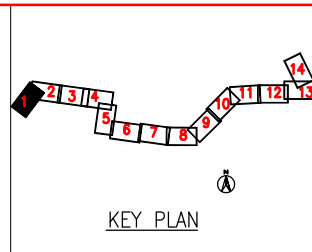
SCHEDULE OF COORDINATED HORIZONTAL ALIGNMENT POINTS KOLKATA EWL METRO - EASTBOUND TRACK					
RADIUS	POINT	STATIONING (km)	CENTRELINE	LOCAL GAD COORDINATES	
				EASTING [GAD]	NORTHING [GAD]
245.145 RIGHT	POB (TP)	-1.160 700	KOLKATA EWL - EASTBOUND CL	47 151.729	50 587.140
	TP	-0.822 165	KOLKATA EWL - EASTBOUND CL	47 234.434	50 915.417
	TRS	-0.772 165	KOLKATA EWL - EASTBOUND CL	47 248.283	50 963.437
	CENTRE			47 478.668	50 879.658
	CTP	-0.414 008	KOLKATA EWL - EASTBOUND CL	47 536.698	51 117.835
243.000 RIGHT	CENTRE			47 479.175	50 881.742
	TRS	-0.350 345	KOLKATA EWL - EASTBOUND CL	47 595.884	51 094.881
	TP	-0.300 345	KOLKATA EWL - EASTBOUND CL	47 637.971	51 067.930
	TP	-0.285 345	KOLKATA EWL - EASTBOUND CL	47 650.318	51 059.413
	TRS	-0.235 345	KOLKATA EWL - EASTBOUND CL	47 692.200	51 032.128
315.093 LEFT	CENTRE			47 849.996	51 304.862
	TRS	-0.160 115	KOLKATA EWL - EASTBOUND CL	47 761.176	51 002.547
	TP	-0.110 115	KOLKATA EWL - EASTBOUND CL	47 809.813	50 991.012
	TP	0.143 244	KOLKATA EWL - EASTBOUND CL	48 057.794	50 939.085
	TRS	0.193 244	KOLKATA EWL - EASTBOUND CL	48 106.866	50 929.519
600.000 LEFT	CENTRE			48 205.269	51 521.394
	TRS	0.284 550	KOLKATA EWL - EASTBOUND CL	48 197.726	50 921.442
	TP	0.334 550	KOLKATA EWL - EASTBOUND CL	48 247.716	50 922.202
	TP	0.795 604	KOLKATA EWL - EASTBOUND CL	48 708.575	50 935.614
	TRS	0.820 685	KOLKATA EWL - EASTBOUND CL	48 733.648	50 936.240
1012.525 RIGHT	CENTRE			48 750.565	49 923.856
	TRS	0.905 287	KOLKATA EWL - EASTBOUND CL	48 818.199	50 934.120
	TP	0.930 368	KOLKATA EWL - EASTBOUND CL	48 843.209	50 932.238
	TP	1.055 145	KOLKATA EWL - EASTBOUND CL	48 967.595	50 922.362
	TRS	1.111 746	KOLKATA EWL - EASTBOUND CL	49 023.753	50 915.606
233.000 RIGHT	CENTRE			48 977.305	50 687.283
	TRS	1.335 298	KOLKATA EWL - EASTBOUND CL	49 190.934	50 780.299
	TP	1.391 899	KOLKATA EWL - EASTBOUND CL	49 209.245	50 726.781
	TP	1.414 141	KOLKATA EWL - EASTBOUND CL	49 215.588	50 705.463
	TRS	1.464 141	KOLKATA EWL - EASTBOUND CL	49 228.507	50 657.176
300.000 RIGHT	CENTRE			48 934.841	50 595.854
	TRS	1.521 035	KOLKATA EWL - EASTBOUND CL	49 234.802	50 600.717
	TP	1.571 035	KOLKATA EWL - EASTBOUND CL	49 232.835	50 550.771
	TP	1.802 099	KOLKATA EWL - EASTBOUND CL	49 217.338	50 320.227
	TRS	1.862 099	KOLKATA EWL - EASTBOUND CL	49 216.038	50 260.291
220.000 LEFT	CENTRE			49 435.511	50 275.512
	TRS	2.139 112	KOLKATA EWL - EASTBOUND CL	49 382.703	50 061.944
	TP	2.199 112	KOLKATA EWL - EASTBOUND CL	49 441.967	50 052.897
	TP	2.370 537	KOLKATA EWL - EASTBOUND CL	49 612.429	50 034.753
	TRS	2.390 537	KOLKATA EWL - EASTBOUND CL	49 632.322	50 032.687
1300.000 LEFT	CENTRE			49 759.968	51 326.405
	TRS	2.416 610	KOLKATA EWL - EASTBOUND CL	49 658.292	50 030.387
	TP	2.436 610	KOLKATA EWL - EASTBOUND CL	49 678.239	50 028.925
	TP	2.456 610	KOLKATA EWL - EASTBOUND CL	49 698.189	50 027.514
	TRS	2.476 610	KOLKATA EWL - EASTBOUND CL	49 718.135	50 026.052
1300.000 RIGHT	CENTRE			49 616.459	48 730.035
	TRS	2.502 682	KOLKATA EWL - EASTBOUND CL	49 744.106	50 023.753
	TP	2.522 682	KOLKATA EWL - EASTBOUND CL	49 763.999	50 021.687
	TP	2.720 305	KOLKATA EWL - EASTBOUND CL	49 960.512	50 000.770
	TRS	2.740 305	KOLKATA EWL - EASTBOUND CL	49 980.401	49 998.670
4000.000 LEFT	CENTRE			50 393.824	53 977.248
	TRS	2.767 966	KOLKATA EWL - EASTBOUND CL	50 007.923	49 995.906
	TP	2.787 966	KOLKATA EWL - EASTBOUND CL	50 027.833	49 994.010
	TP	2.807 966	KOLKATA EWL - EASTBOUND CL	50 047.745	49 992.130
	TRS	2.827 966	KOLKATA EWL - EASTBOUND CL	50 067.655	49 990.238
5500.000 RIGHT	CENTRE			49 540.774	44 515.533
	TRS	2.850 938	KOLKATA EWL - EASTBOUND CL	50 090.516	49 987.990
	TP	2.870 938	KOLKATA EWL - EASTBOUND CL	50 110.414	49 985.967
	TP	3.263 863	KOLKATA EWL - EASTBOUND CL	50 501.299	49 945.982
	TRS	3.283 863	KOLKATA EWL - EASTBOUND CL	50 521.196	49 943.955
8000.000 LEFT	CENTRE			51 325.343	57 903.437
	TRS	3.325 470	KOLKATA EWL - EASTBOUND CL	50 562.603	49 939.880
	TP	3.345 470	KOLKATA EWL - EASTBOUND CL	50 582.513	49 937.990
	TP	3.827 947	KOLKATA EWL - EASTBOUND CL	51 062.850	49 892.590
	TRS	3.847 947	KOLKATA EWL - EASTBOUND CL	51 082.765	49 890.752
1500.000 LEFT	CENTRE			51 213.954	51 385.004
	TRS	3.876 160	KOLKATA EWL - EASTBOUND CL	51 110.892	49 888.549
	TP	3.896 160	KOLKATA EWL - EASTBOUND CL	51 130.851	49 887.264
	TP	3.916 160	KOLKATA EWL - EASTBOUND CL	51 150.812	49 886.023
	TRS	3.936 160	KOLKATA EWL - EASTBOUND CL	51 170.771	49 884.737
1500.000 RIGHT	CENTRE			51 067.709	48 388.282
	TRS	3.967 465	KOLKATA EWL - EASTBOUND CL	51 201.977	49 882.260
	TP	3.987 465	KOLKATA EWL - EASTBOUND CL	51 221.888	49 880.382
	TP	4.167 465	KOLKATA EWL - EASTBOUND CL	51 401.054	49 863.075
	TRS	4.227 465	KOLKATA EWL - EASTBOUND CL	51 480.922	49 859.741
245.805 LEFT	CENTRE			51 454.593	50 105.465
	TRS	4.377 531	KOLKATA EWL - EASTBOUND CL	51 600.648	49 907.758
	TP	4.437 531	KOLKATA EWL - EASTBOUND CL	51 645.820	49 947.188
	TP	4.662 106	KOLKATA EWL - EASTBOUND CL	51 808.862	50 101.626
	TRS	4.702 106	KOLKATA EWL - EASTBOUND CL	51 837.717	50 129.327

SCHEDULE OF COORDINATED HORIZONTAL ALIGNMENT POINTS KOLKATA EWL METRO - EASTBOUND TRACK					
RADIUS	POINT	STATIONING (km)	CENTRELINE	LOCAL GAD COORDINATES	
				EASTING [GAD]	NORTHING [GAD]
1000.000 LEFT	CENTRE			51 135.642	50 841.430
	TRS	4.763 682	KOLKATA EWL - EASTBOUND CL	51 880.208	50 173.880
	TP	4.803 682	KOLKATA EWL - EASTBOUND CL	51 906.510	50 204.016
	TP	5.299 049	KOLKATA EWL - EASTBOUND CL	52 229.749	50 579.388
	TRS	5.339 049	KOLKATA EWL - EASTBOUND CL	52 255.510	50 609.985
600.000 LEFT	CENTRE			51 788.055	50 986.131
	TRS	5.442 768	KOLKATA EWL - EASTBOUND CL	52 313.243	50 695.996
	TP	5.482 768	KOLKATA EWL - EASTBOUND CL	52 331.801	50 731.428
	TP	5.551 809	KOLKATA EWL - EASTBOUND CL	52 363.154	50 792.940
	TRS	5.616 809	KOLKATA EWL - EASTBOUND CL	52 395.009	50 849.548
263.000 RIGHT	CENTRE			52 612.819	50 702.144
	TRS	5.864 116	KOLKATA EWL - EASTBOUND CL	52 603.481	50 964.979
	TP	5.929 116	KOLKATA EWL - EASTBOUND CL	52 668.366	50 961.935
	TP	6.161 801	KOLKATA EWL - EASTBOUND CL	52 900.149	50 941.471
	TRS	6.186 801	KOLKATA EWL - EASTBOUND CL	52 935.061	50 939.376
1000.000 LEFT	CENTRE			53 000.551	51 936.522
	TRS	6.472 598	KOLKATA EWL - EASTBOUND CL	53 209.241	50 958.541
	TP	6.497 598	KOLKATA EWL - EASTBOUND CL	53 233.646	50 963.961
	TP	6.512 598	KOLKATA EWL - EASTBOUND CL	53 248.275	50 967.275
	TRS	6.572 598	KOLKATA EWL - EASTBOUND CL	53 307.128	50 978.848
350.000 RIGHT	CENTRE			53 354.936	50 632.128
	TRS	6.601 789	KOLKATA EWL - EASTBOUND CL	53 336.179	50 961.625
	TP	6.661 789	KOLKATA EWL - EASTBOUND CL	53 396.159	50 981.414
	TP	6.871 998	KOLKATA EWL - EASTBOUND CL	53 606.260	50 974.667
	TRS	6.926 998	KOLKATA EWL - EASTBOUND CL	53 661.246	50 974.162
400.000 LEFT	CENTRE			53 966.571	50 742.574
	TRS	6.961 787	KOLKATA EWL - EASTBOUND CL	53 695.912	50 976.946
	TP	7.016 787	KOLKATA EWL - EASTBOUND CL	53 750.113	50 986.220
	TP	7.152 682	KOLKATA EWL - EASTBOUND CL	53 883.501	51 012.201
	TRS	7.212 682	KOLKATA EWL - EASTBOUND CL	53 942.736	51 021.558
280.000 RIGHT	CENTRE			53 966.571	50 742.574
	TRS	7.244 076	KOLKATA EWL - EASTBOUND CL	53 974.100	51 022.473
	TP	7.304 076	KOLKATA EWL - EASTBOUND CL	54 033.780	51 016.586
	TP	7.364 076	KOLKATA EWL - EASTBOUND CL	54 093.242	51 008.568
	TRS	7.419 076	KOLKATA EWL - EASTBOUND CL	54 147.915	51 002.736
330.000 LEFT	CENTRE			54 164.639	51 332.312
	TRS	7.446 819	KOLKATA EWL - EASTBOUND CL	54 175.648	51 002.496
	TP	7.501 819	KOLKATA EWL - EASTBOUND CL	54 230.414	51 007.379
	TP	7.646 224	KOLKATA EWL - EASTBOUND CL	54 373.837	51 024.193
	TRS	7.706 224	KOLKATA EWL - EASTBOUND CL	54 432.455	51 036.164
117.916 LEFT	CENTRE			54 389.691	51 146.053
	TRS	7.884 351	KOLKATA EWL - EASTBOUND CL	54 504.275	51 173.886
	TP	7.938 826	KOLKATA EWL - EASTBOUND CL	54 483.496	51 224.103
	TP	9.057 410	KOLKATA EWL - EASTBOUND CL	53 977.618	52 221.759

NOTES:
1. COORDINATES ARE STRICTLY FOR INFORMATION PURPOSES ONLY
2. TRACK ALIGNMENT COORDINATES ARE BASED ON THE KMRC GAD COORDINATES (SPECIFIC DATUM UNKNOWN)
3. GAMMON CONTRACT COMMENCES AT CHAINAGE 7km 763m
4. FOR ALL ALIGNMENT INFORMATION BEYOND CHAINAGE 7km 763m REFER TO GAMMON



NOTES:



Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH



KOLKATA METRO RAIL CORPN. LTD.

Project Title :

EAST-WEST METRO PROJECT

Consultants :

MAUNSELL

AECOM

yec

LE

egis Rail

LHPA

Drawing Title :

ALIGNMENT LONGITUDINAL SECTION
SHEET 1

Drawing No. :

UG/CIV/ALG/R/1051

CAD File Name :

UG-1051A.dwg

Designed MB

Checked RT

Approved JTH

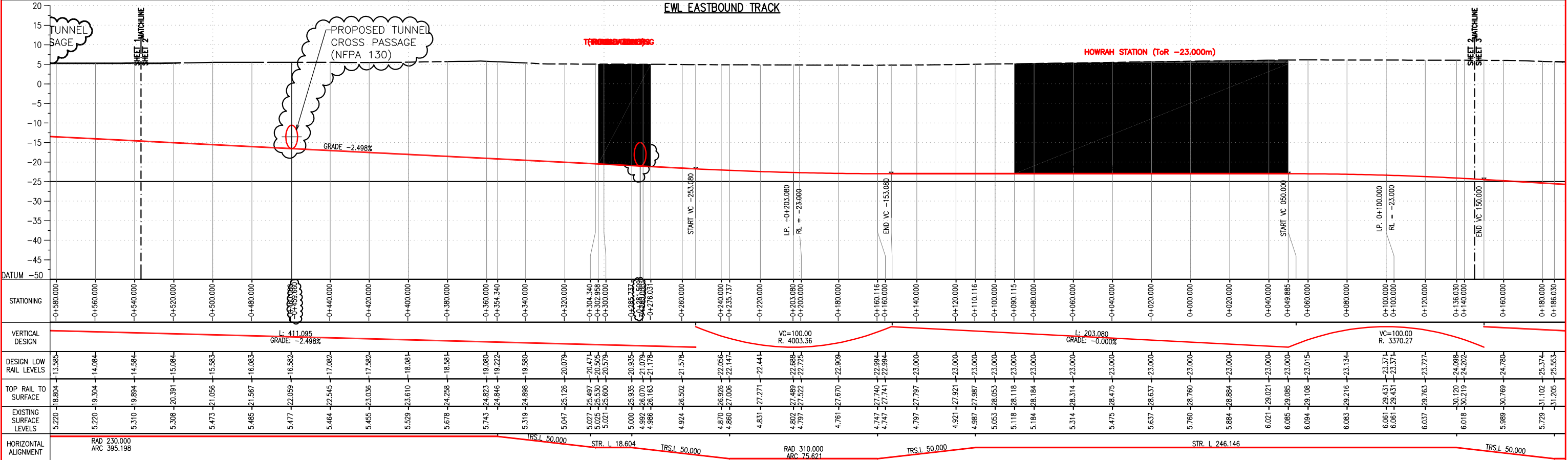
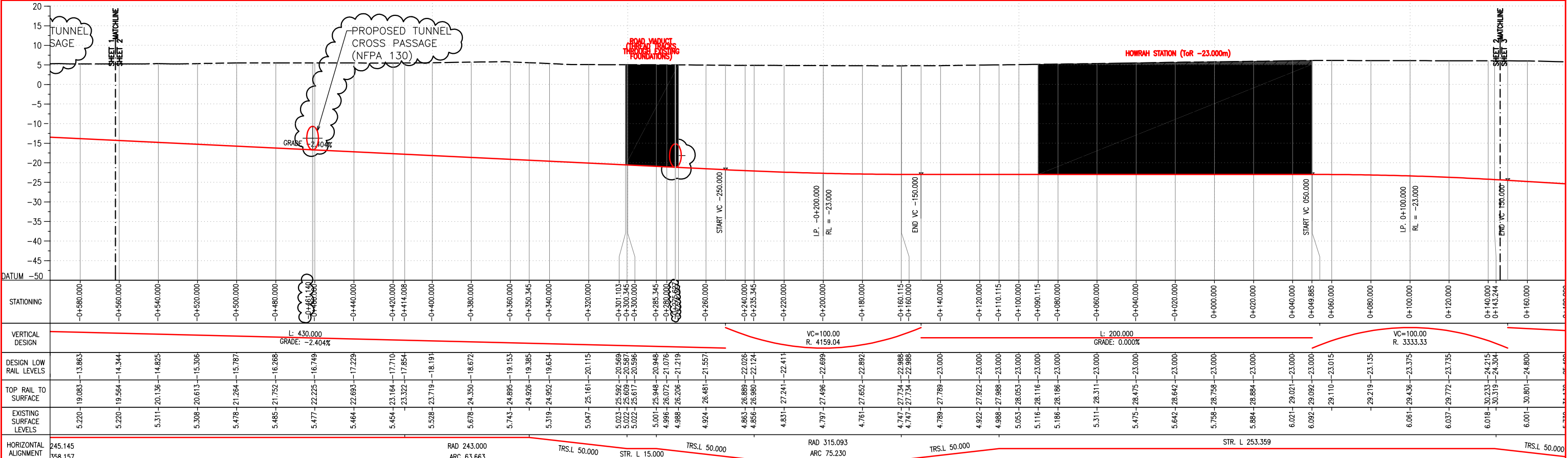
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Drawn SNG

Date Aug.09

Rev.

A



GRAPHIC SCALE

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NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

Designed MB	Checked RT	Approved JTH
Scale 1:1000	Drawn SNG	Date Aug.09

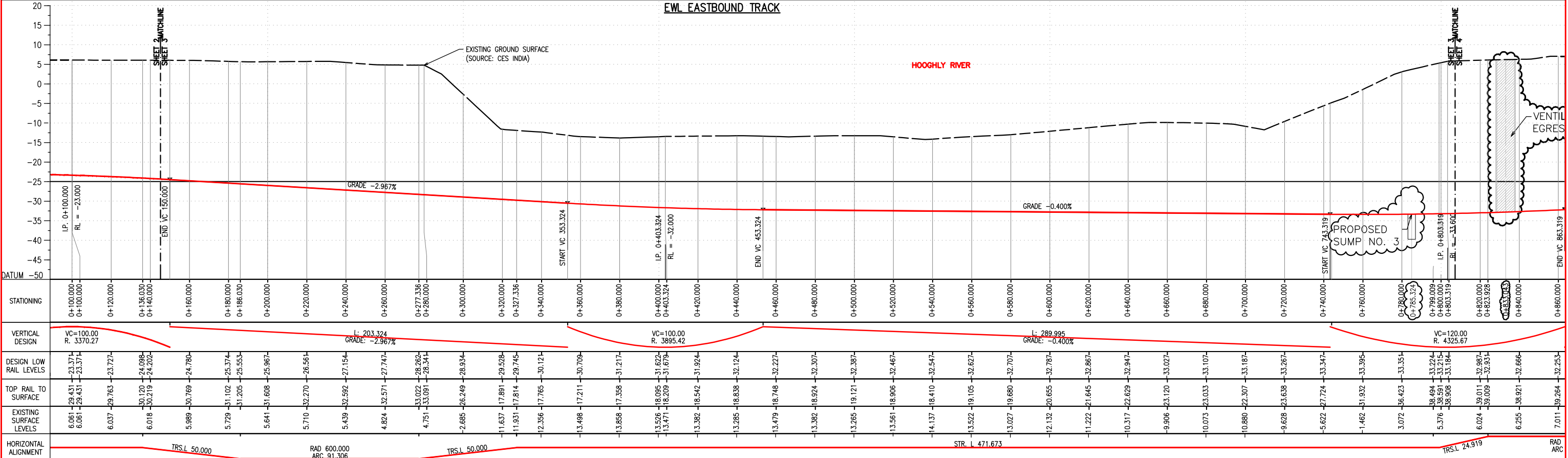
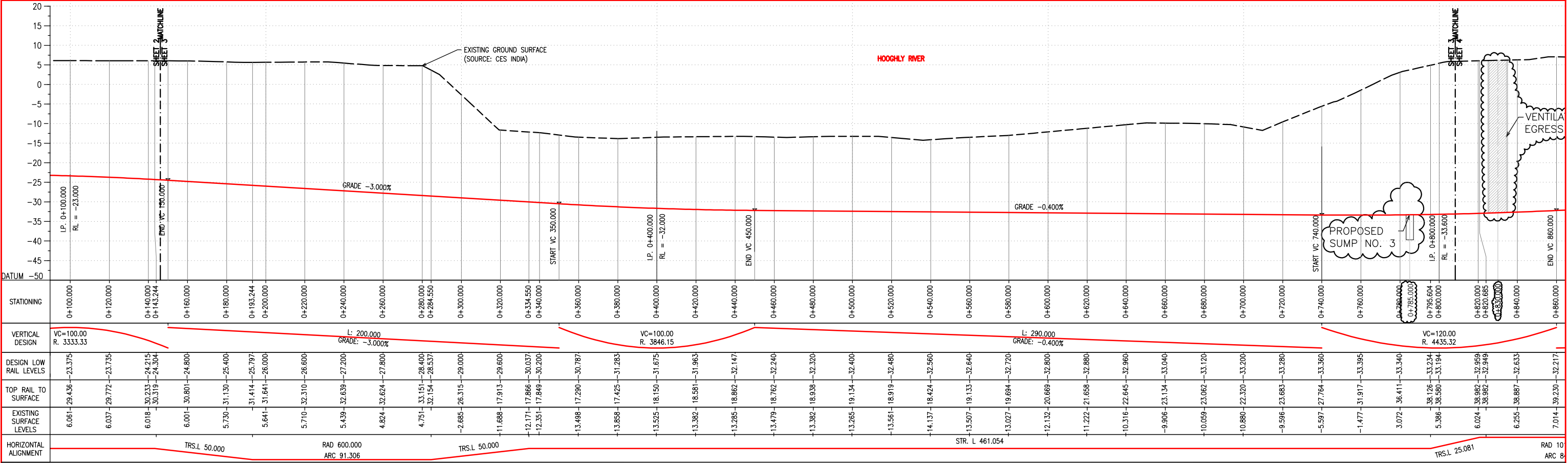
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Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 2

Drawing No. : UG/CIV/ALG/R/1052

CAD File Name : UG-1052A.dwg

Rev. A



GRAPHIC SCALE

10 0 5 10 20 30 40m

KEY PLAN

NOTES:

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 3

Drawing No. : UG/CIV/ALG/R/1053

CAD File Name : UG-1053A.dwg

Designed MB

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Checked RT

Drawn SNG

Approved JTH

Date Aug.09

Rev. A

12/9/2009

SNG

GENERAL REVISION

RT

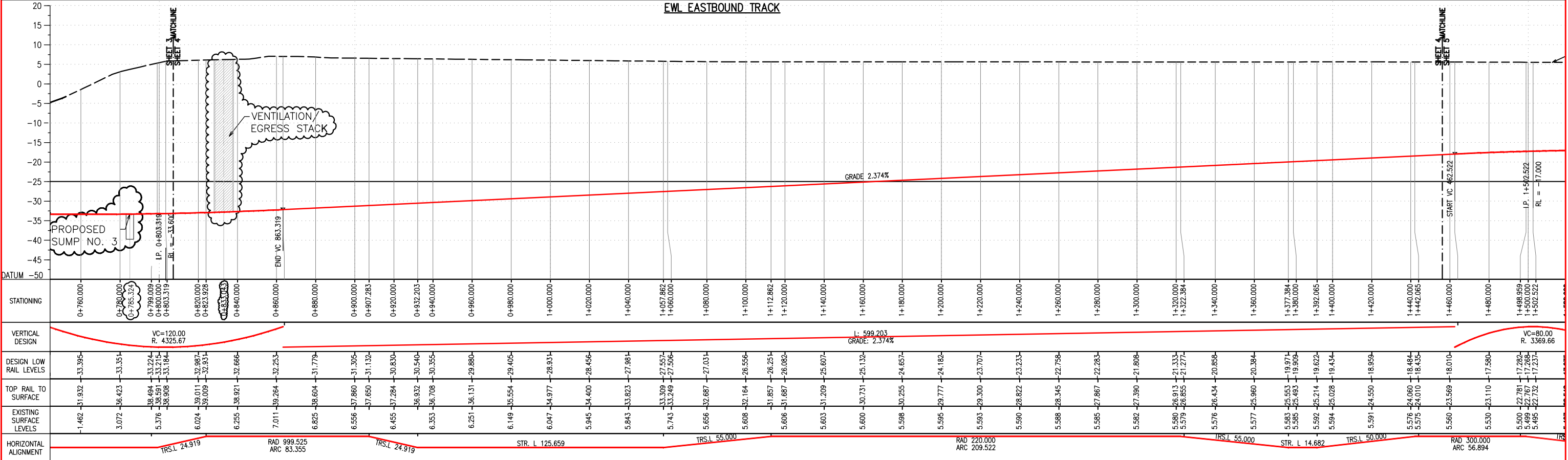
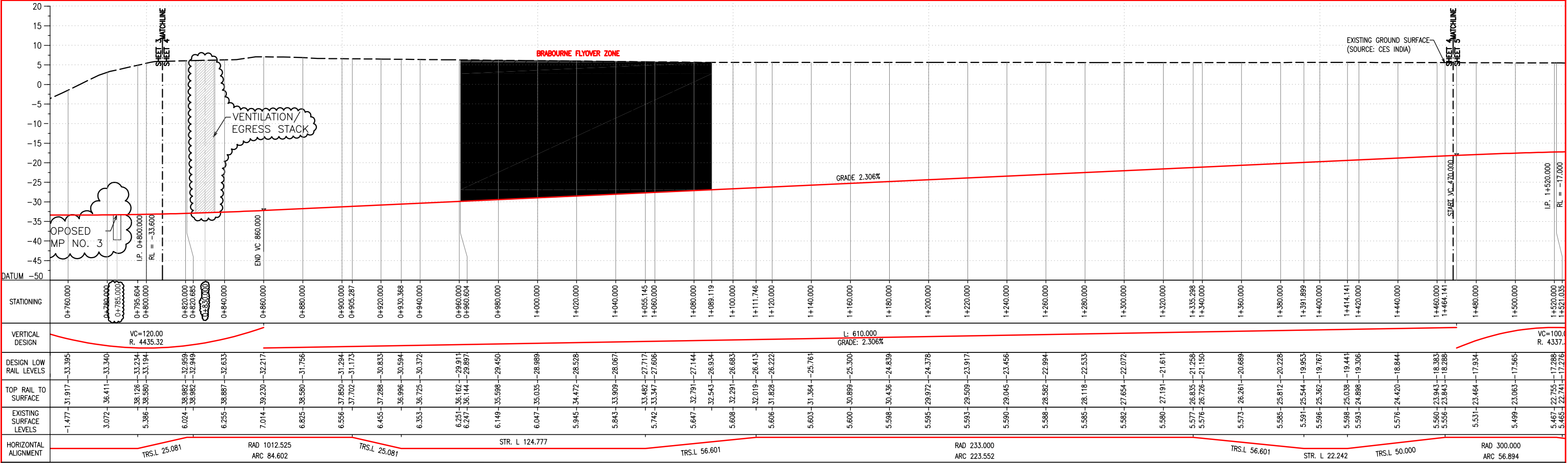
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Checked

Approved

KOLKATA METRO RAIL CORPN. LTD.

Consultants : MAUNSELL | AECOM | yec | egis Rail | LHPA



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

KEY PLAN

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Rev. Date By Description Checked Approved

A 12/9/2009 SNG GENERAL REVISION RT JTH

Scale 1:1000

Designed MB

Checked RT

Approved JTH

Scale 1:1000

Drawn SNG

Date Aug.09

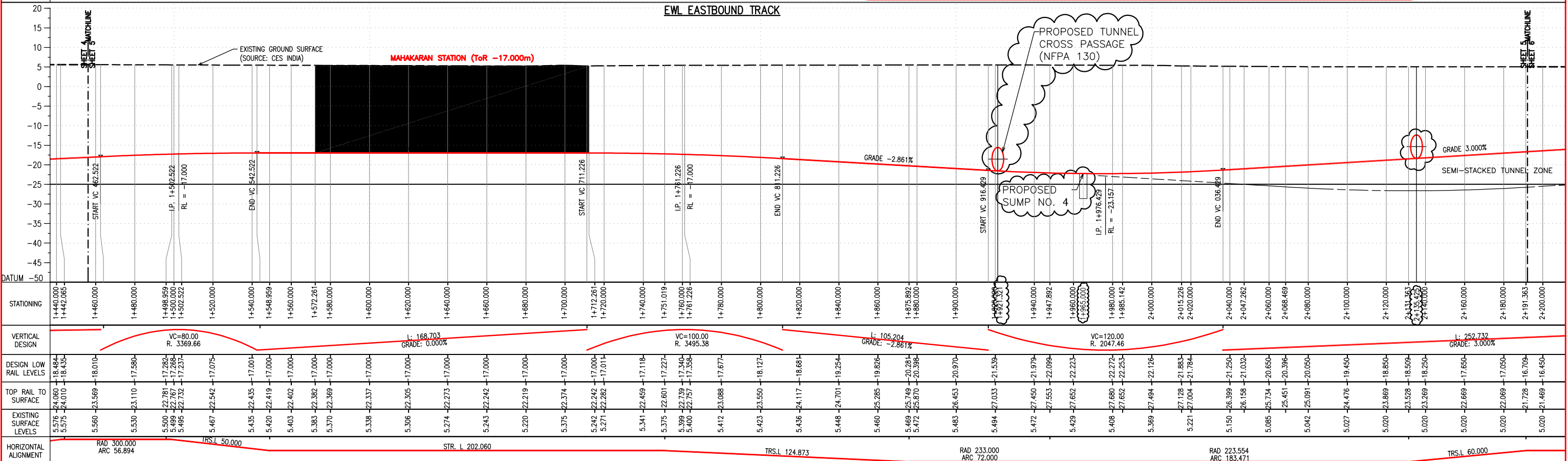
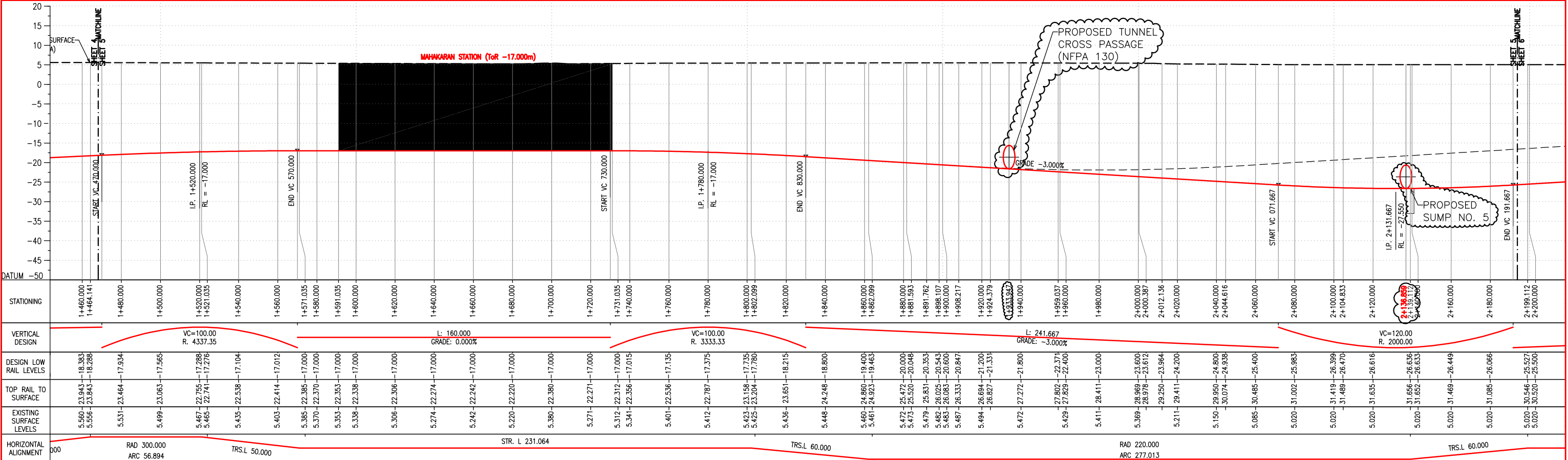
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Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 4

Drawing No. : UG/CIV/ALG/R/1054

CAD File Name : UG-1054A.dwg

Rev. A



NOTES:

GRAPHIC SCALE

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KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 5

Drawing No. : UG/CIV/ALG/R/1055

CAD File Name : UG-1055A.dwg

Designed MB Scale 1:1000

Checked RT

Approved JTH

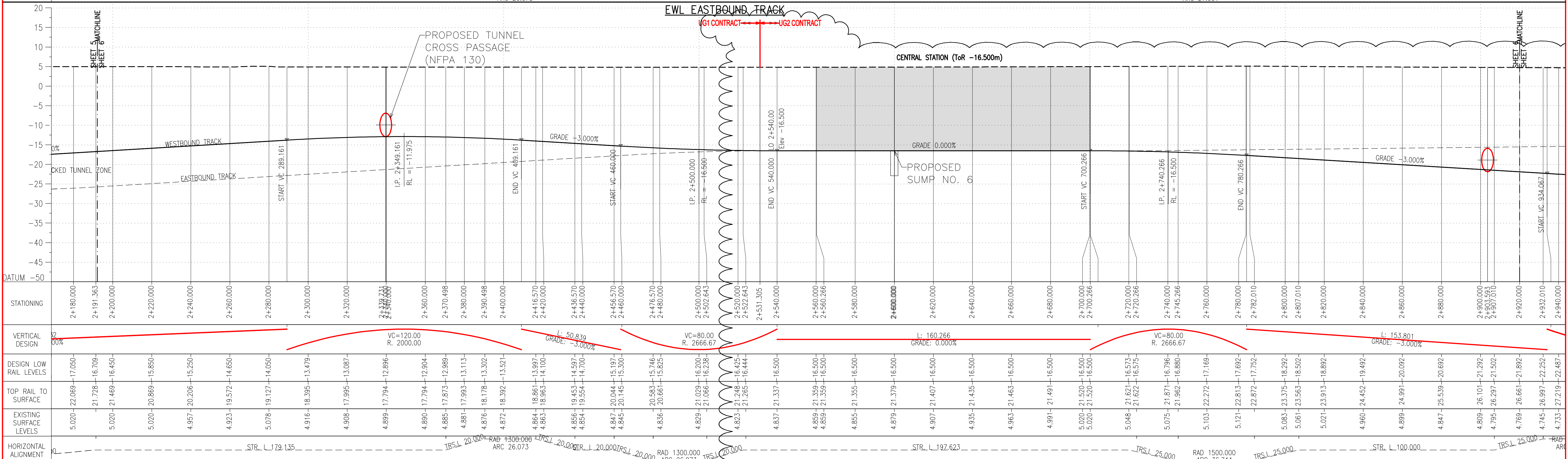
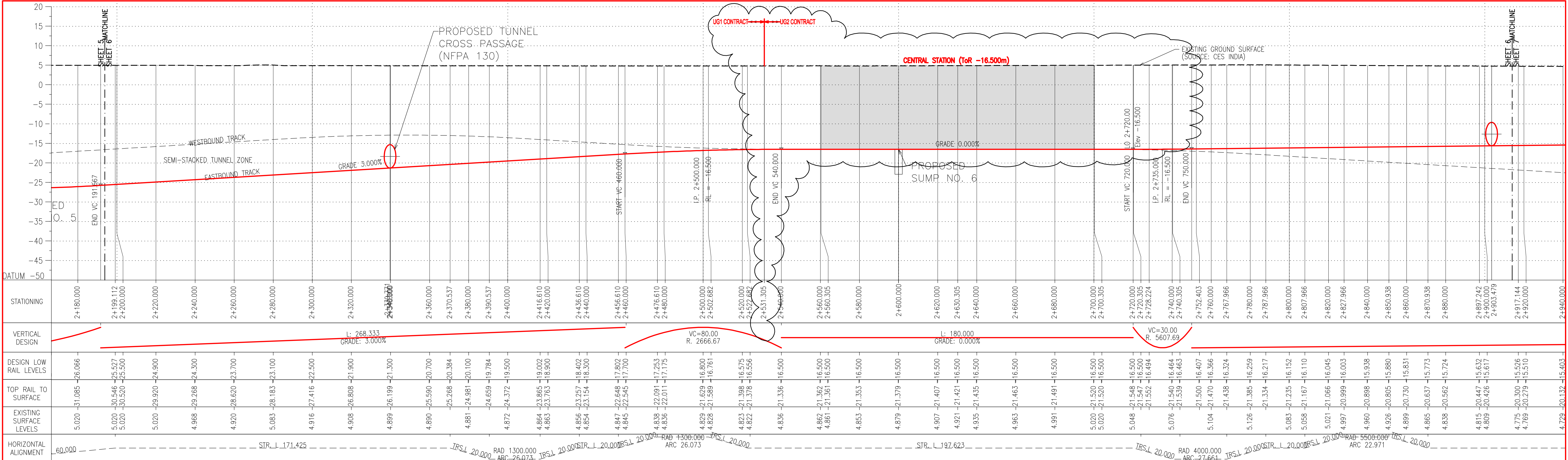
Drawn SNG

Date Aug.09

Rev. A

KOLKATA METRO RAIL CORPN. LTD.

Consultants : MAUNSELL AECOM yec egis Rail LHPA



GRAPHIC SCALE

10 0 5 10 20 30 40m

NOTES:

1 2 3 4 5 6 7 8 9 10 11 12 13 14

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
B	27/10/2009	SNG	Alignment Revised	RT	JTH
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL AECOM yec IFC egis Rail LHPA

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 6

Drawing No. : UG/CIV/ALG/R/1056

CAD File Name : UG-1056B.dwg

Designed MB

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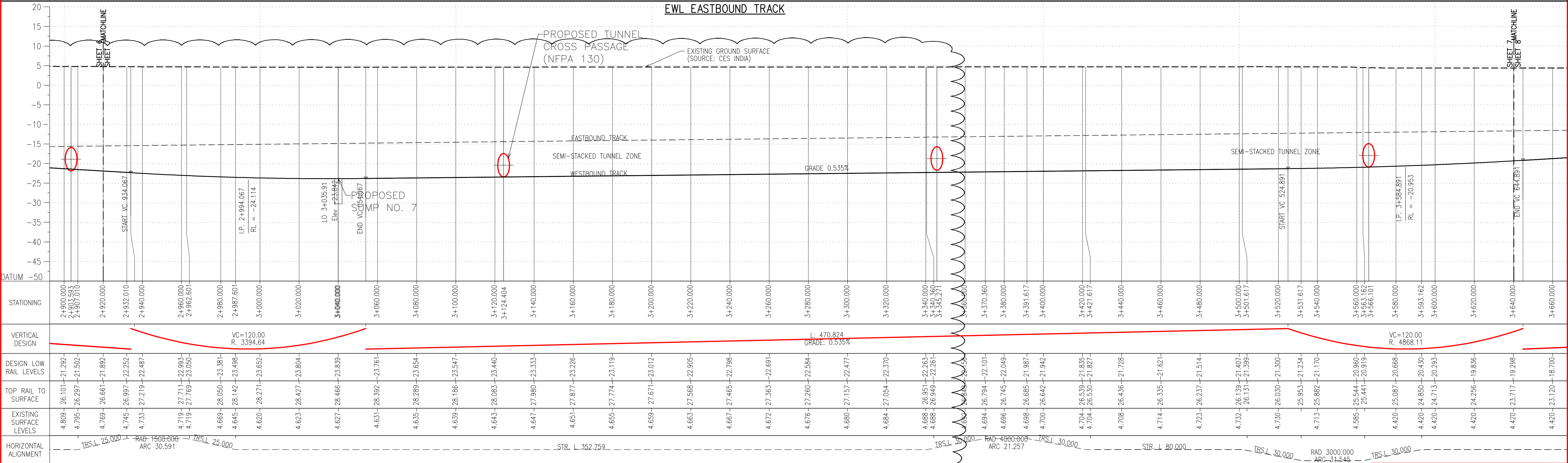
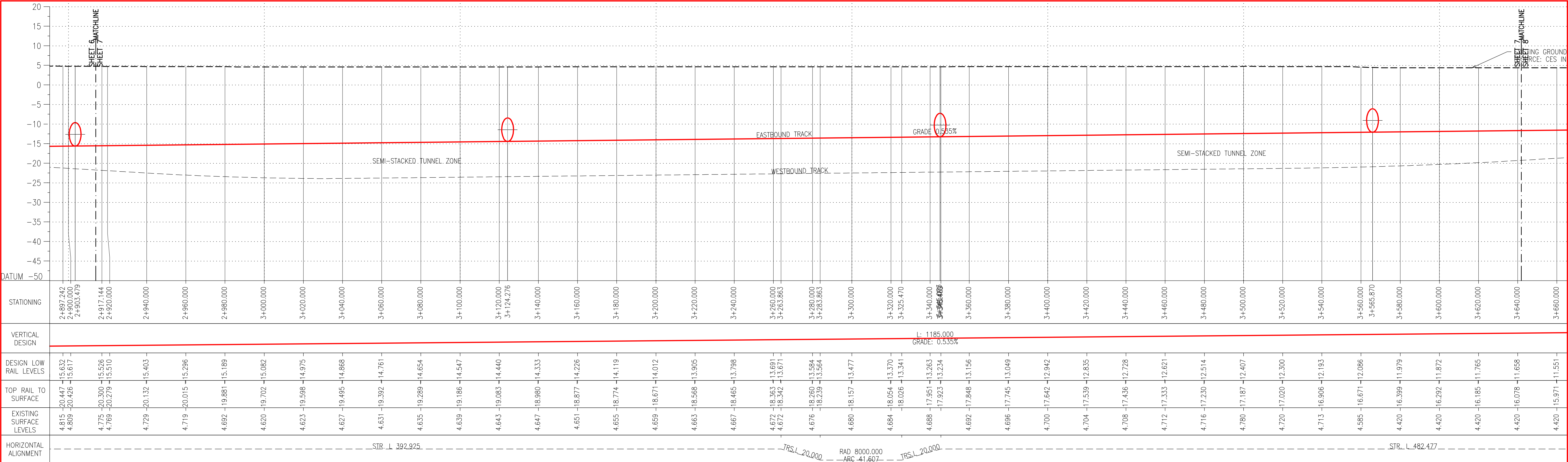
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Drawn SNG

Approved JTH

Date Aug.09

Rev. B



GRAPHIC SCALE

10 0 5 10 20 30 40m

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KEY PLAN

Rev.	Date	By	Description	Checked	Approved
B	27/10/2009	SNG	Alignment Revised	RT	JTH
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :
MAUNSELL AECOM yec IHE egs Rail LHPA

Project Title :
EAST-WEST METRO PROJECT

Drawing Title :
ALIGNMENT LONGITUDINAL SECTION
SHEET 7

Drawing No. :
UG/CIV/ALG/R/1057

CAD File Name :
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Designed MB

Checked RT

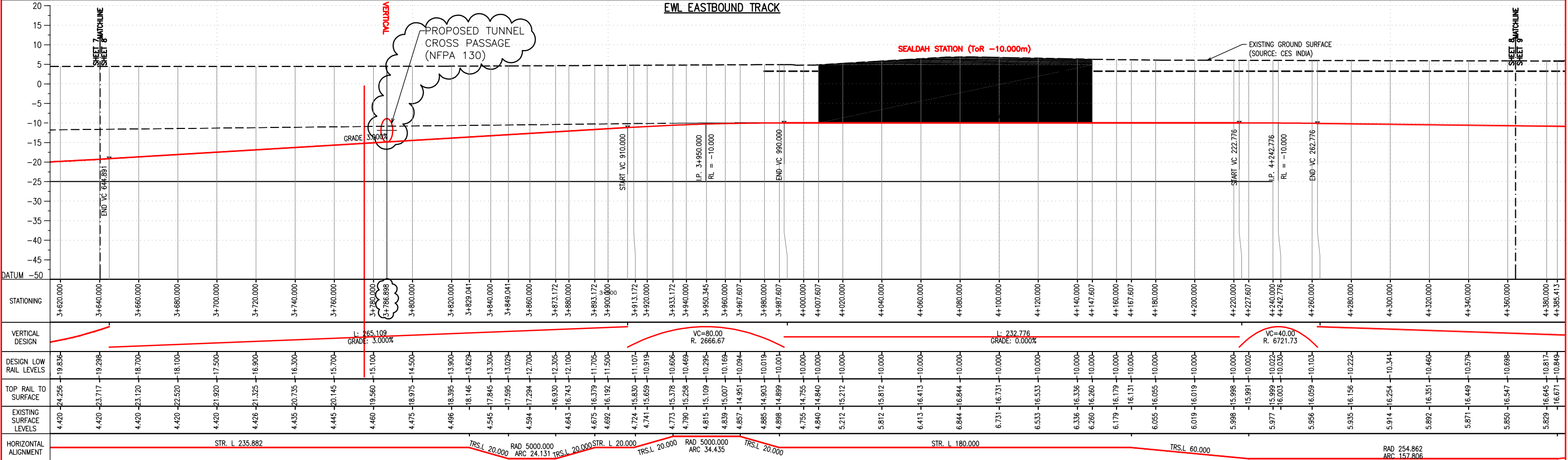
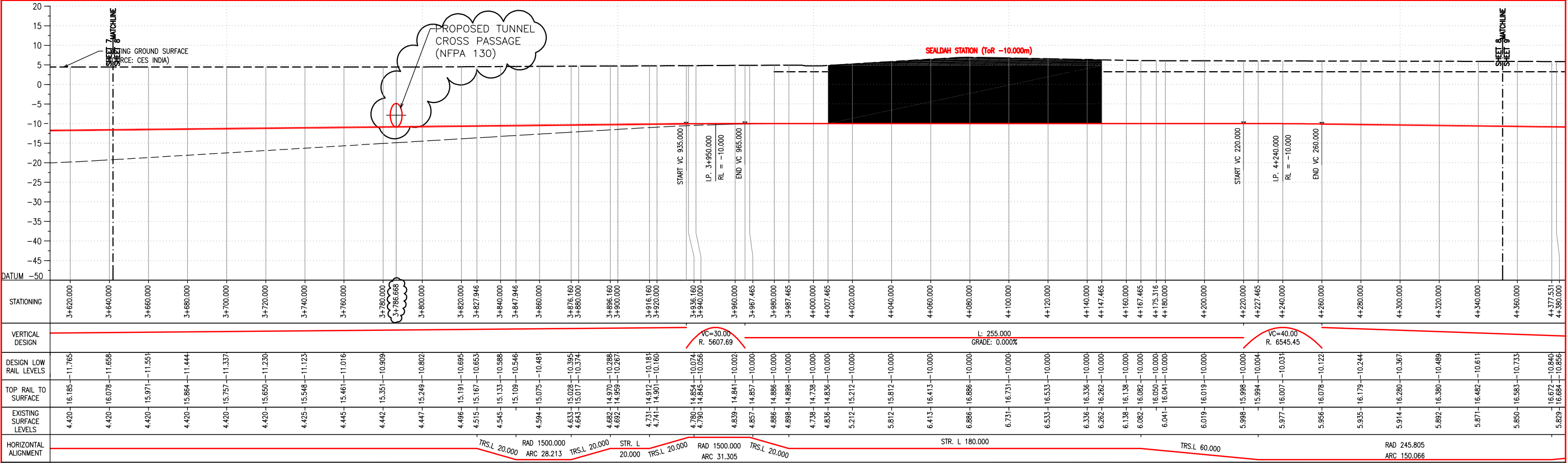
Approved JTH

Scale 1:1000

Drawn SNG

Date Aug.09

Rev. B



GRAPHIC SCALE

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NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL | AECOM | yec | egis Rail | LHPA

Designed MB	Checked RT	Approved JTH
Scale 1:1000	Drawn SNG	Date Aug.09

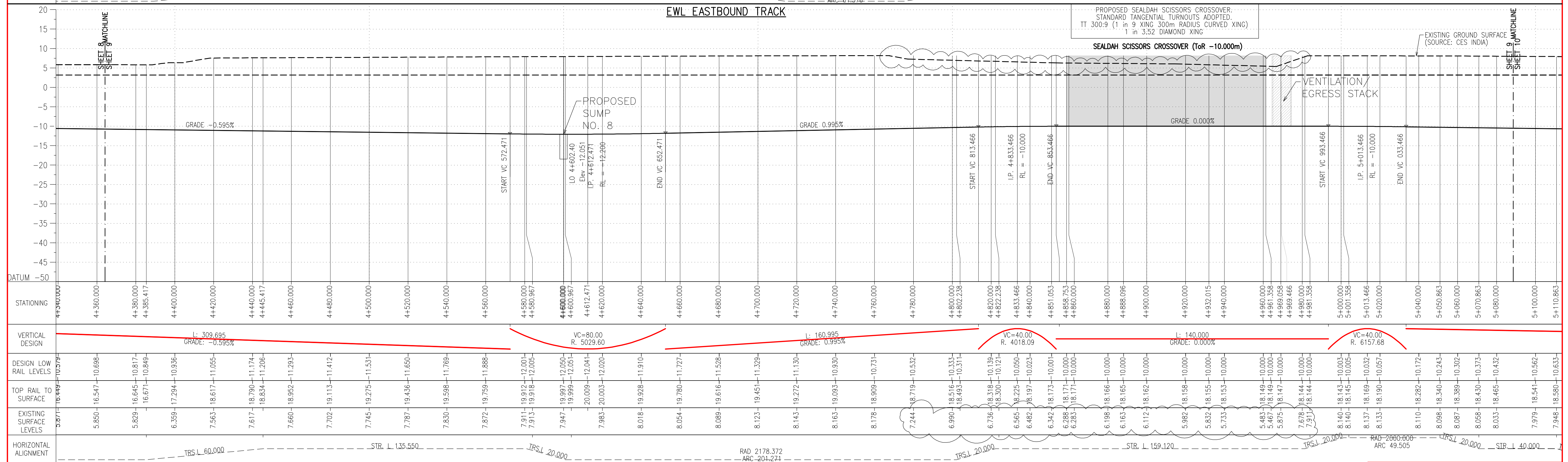
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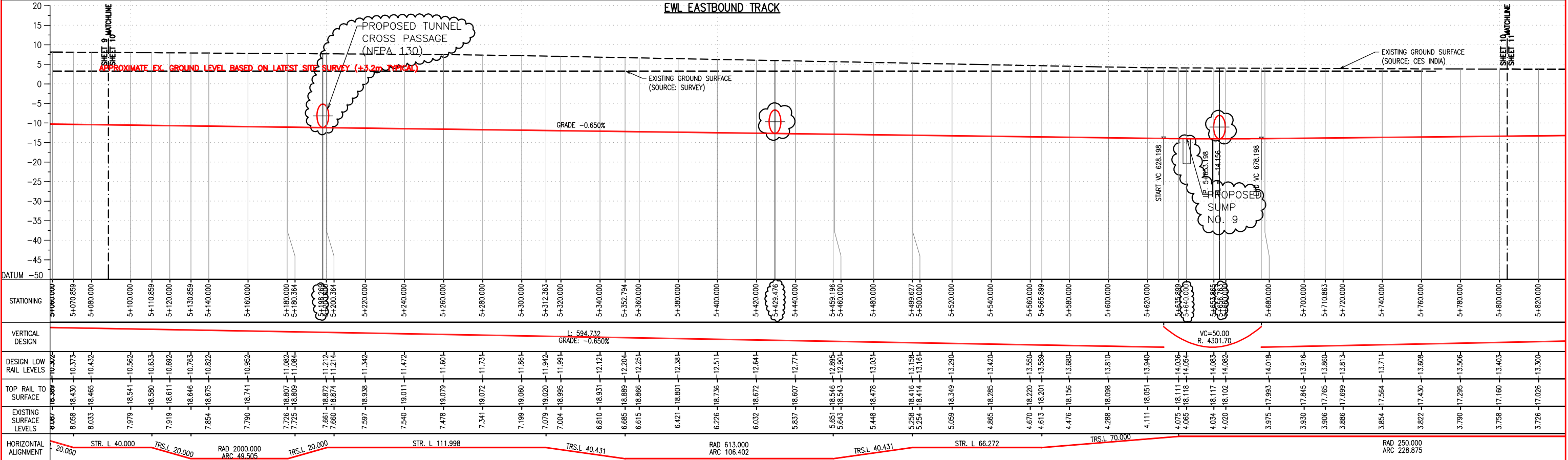
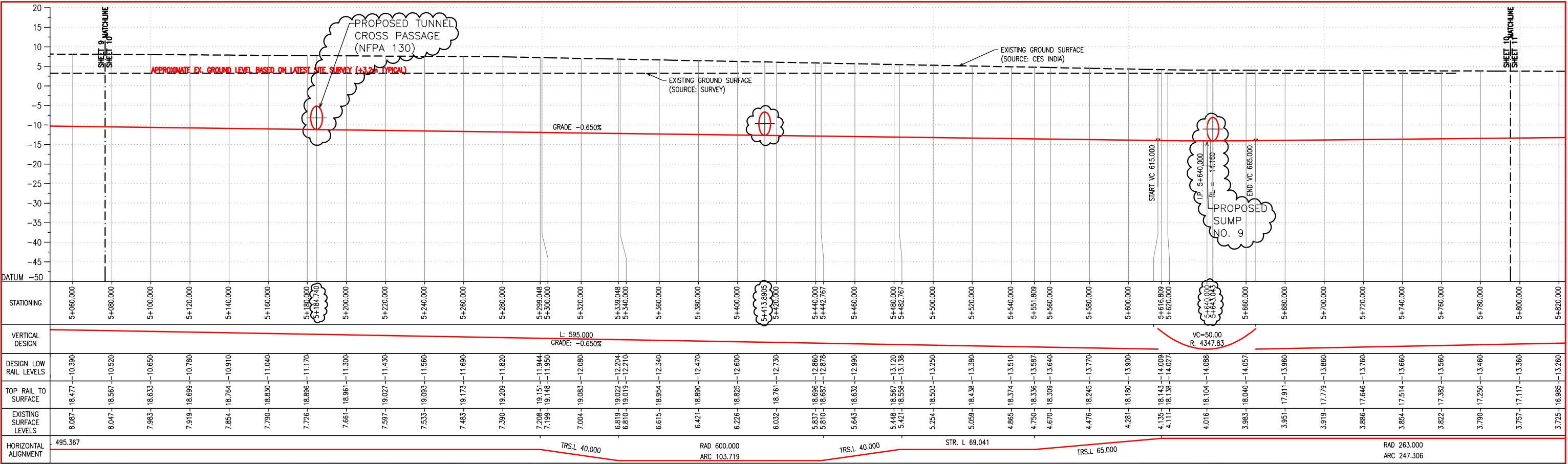
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Drawing No. : UG/CIV/ALG/R/1058

CAD File Name : UG-1058A.dwg

Rev. A

[illegible]



GRAPHIC SCALE

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NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL | AECOM | yec | LHPA

Designed MB	Checked RT	Approved JTH
Scale 1:1000	Drawn SNG	Date Aug.09

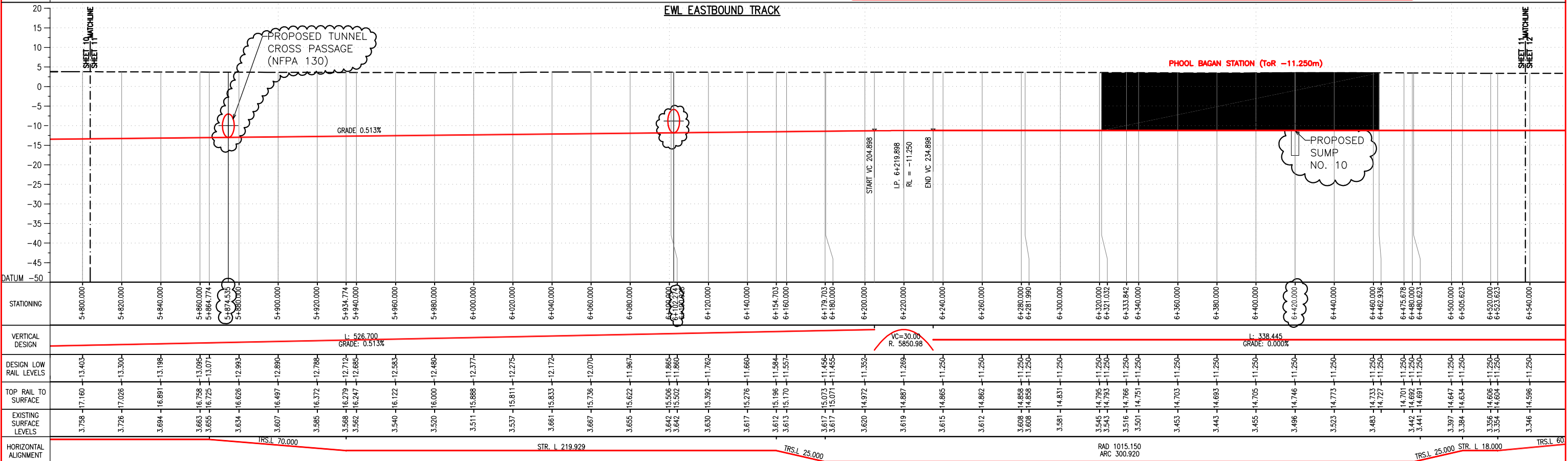
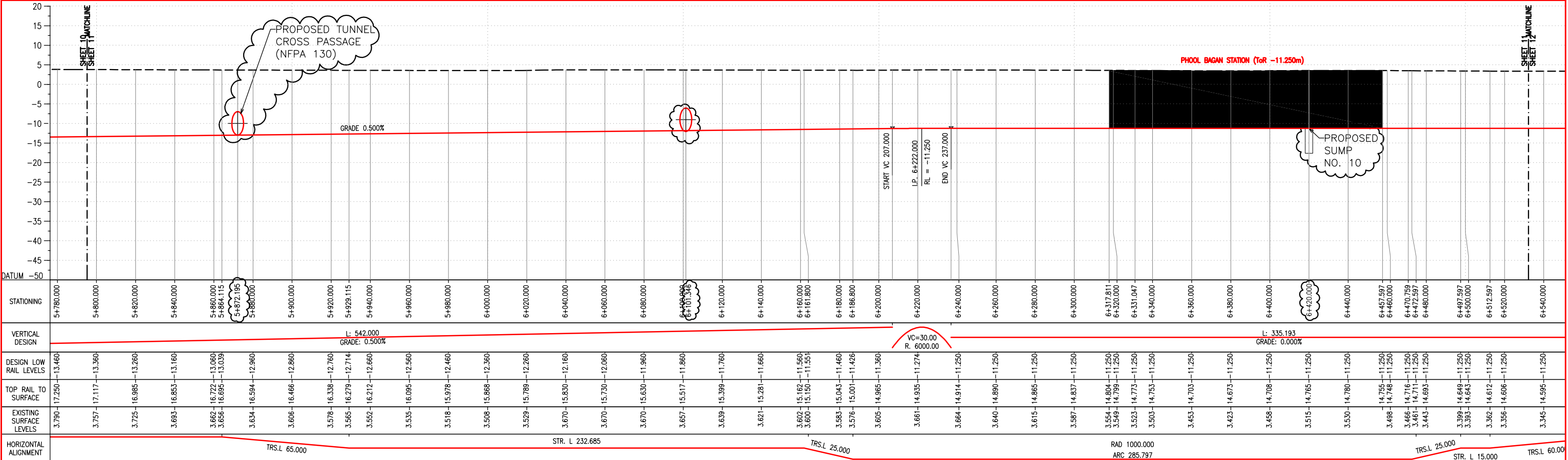
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Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 10

Drawing No. : UG/CIV/ALG/R/1060

CAD File Name : UG-1060A.dwg

Rev. A



GRAPHIC SCALE

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NOTES:

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

KOLKATA METRO RAIL CORPN. LTD.

Consultants :

MAUNSELL | AECOM | yec | egis Rail | LHPA

Designed MB	Checked RT	Approved JTH
Scale 1:1000	Drawn SNG	Date Aug.09

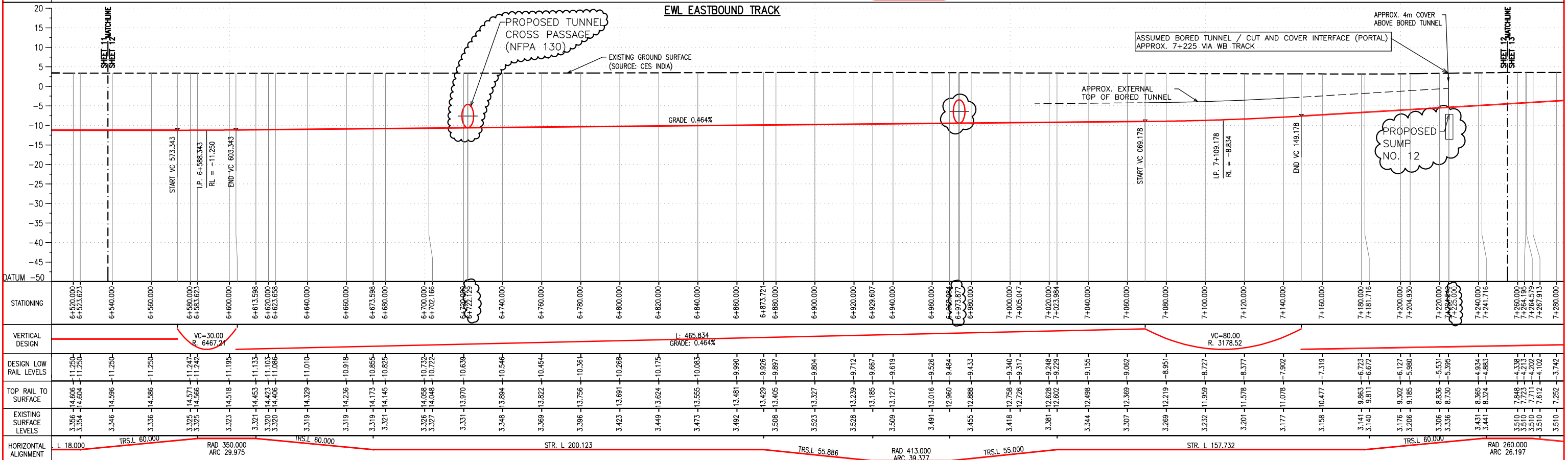
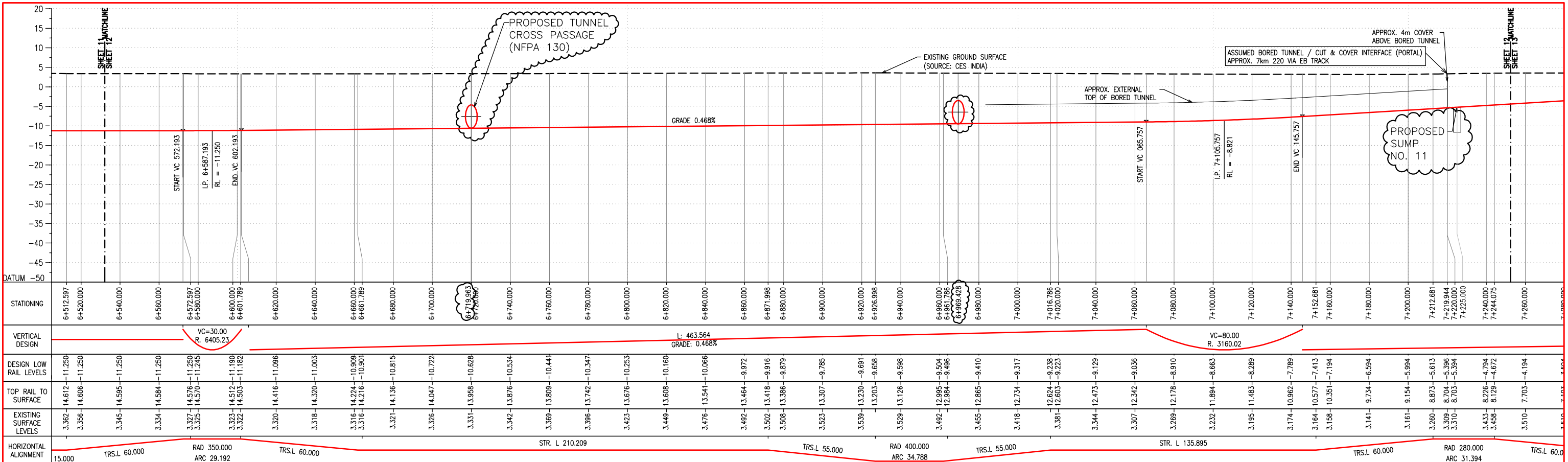
Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 11

Drawing No. : UG/CIV/ALG/R/1061

CAD File Name : UG-1061A.dwg

Rev. A



NOTES:

10 0 5 10 20 30 40m

KEY PLAN

Rev.	Date	By	Description	Checked	Approved
A	12/9/2009	SNG	GENERAL REVISION	RT	JTH

Project Title : EAST-WEST METRO PROJECT

Drawing Title : ALIGNMENT LONGITUDINAL SECTION SHEET 12

Drawing No. : UG/CIV/ALG/R/1062

CAD File Name : UG-1062A.dwg

KOLKATA METRO RAIL CORPN. LTD.

Consultants : MAUNSELL | AECOM | yec | egis Rail | LHPA

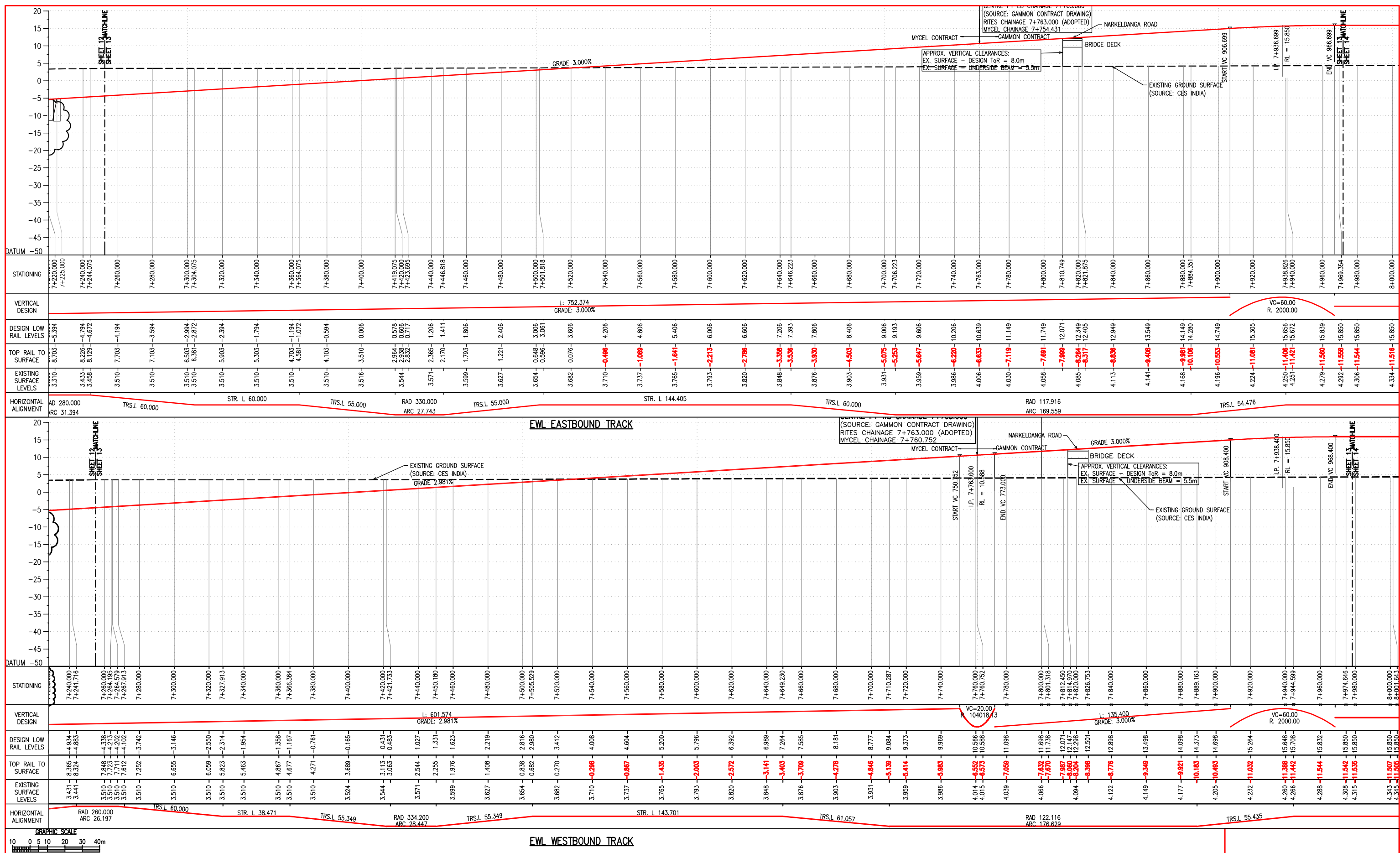
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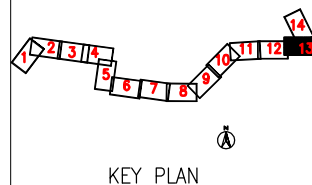
Approved JTH





Drawn SNG

Date Aug.09



NOTES:



						 KOLKATA METRO RAIL CORPN. LTD.	Project Title : EAST-WEST METRO PROJECT			
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A	12/9/2009	SNG	GENERAL REVISION	RT	JTH	Designed MB	Checked RT	Approved JTH		
Rev.	Date	By	Description	Checked	Approved	Scale 1:1000	Drawn SNG	Date Aug.09	CAD File Name : UG-1063A.dwg	

