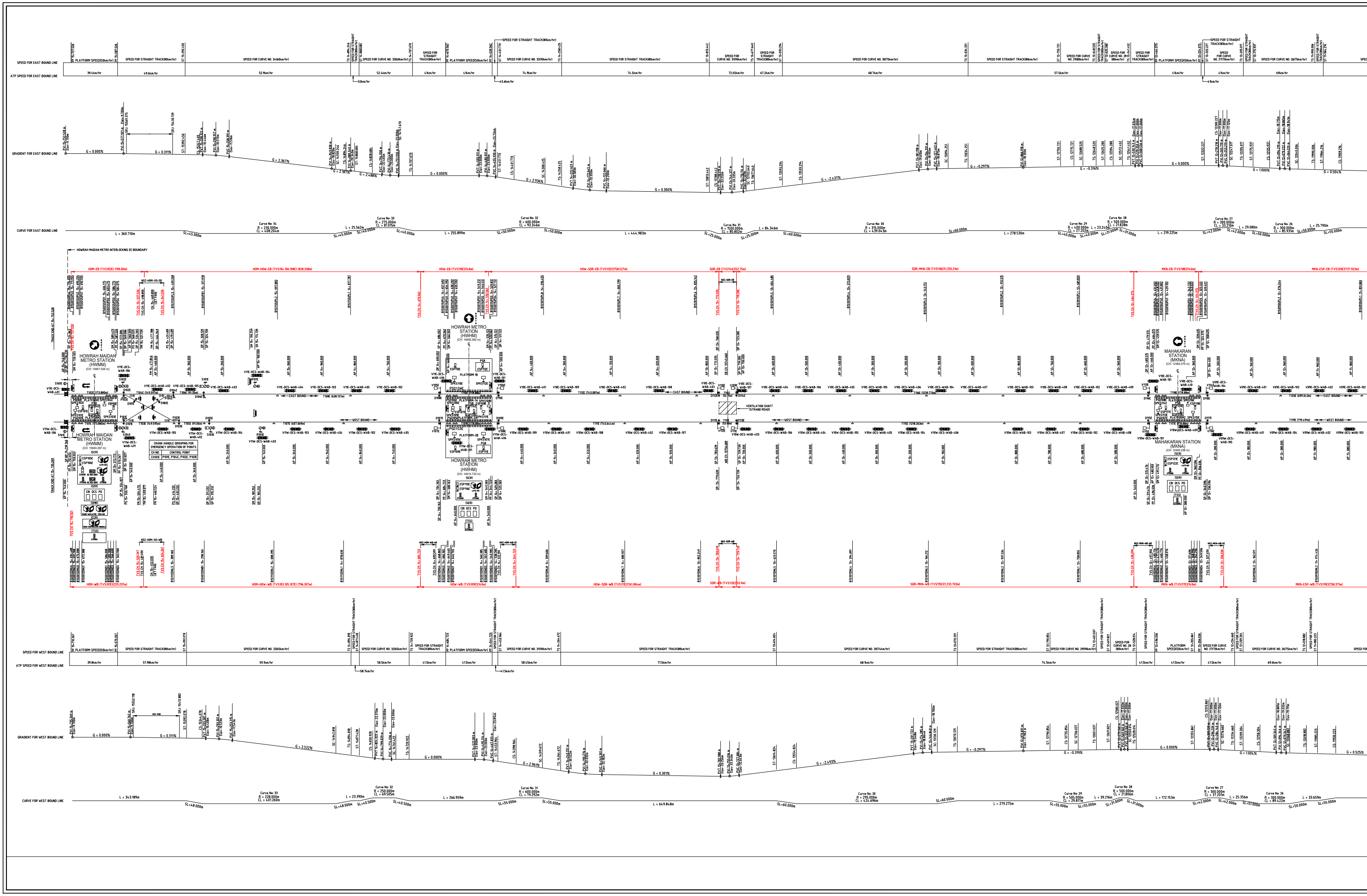
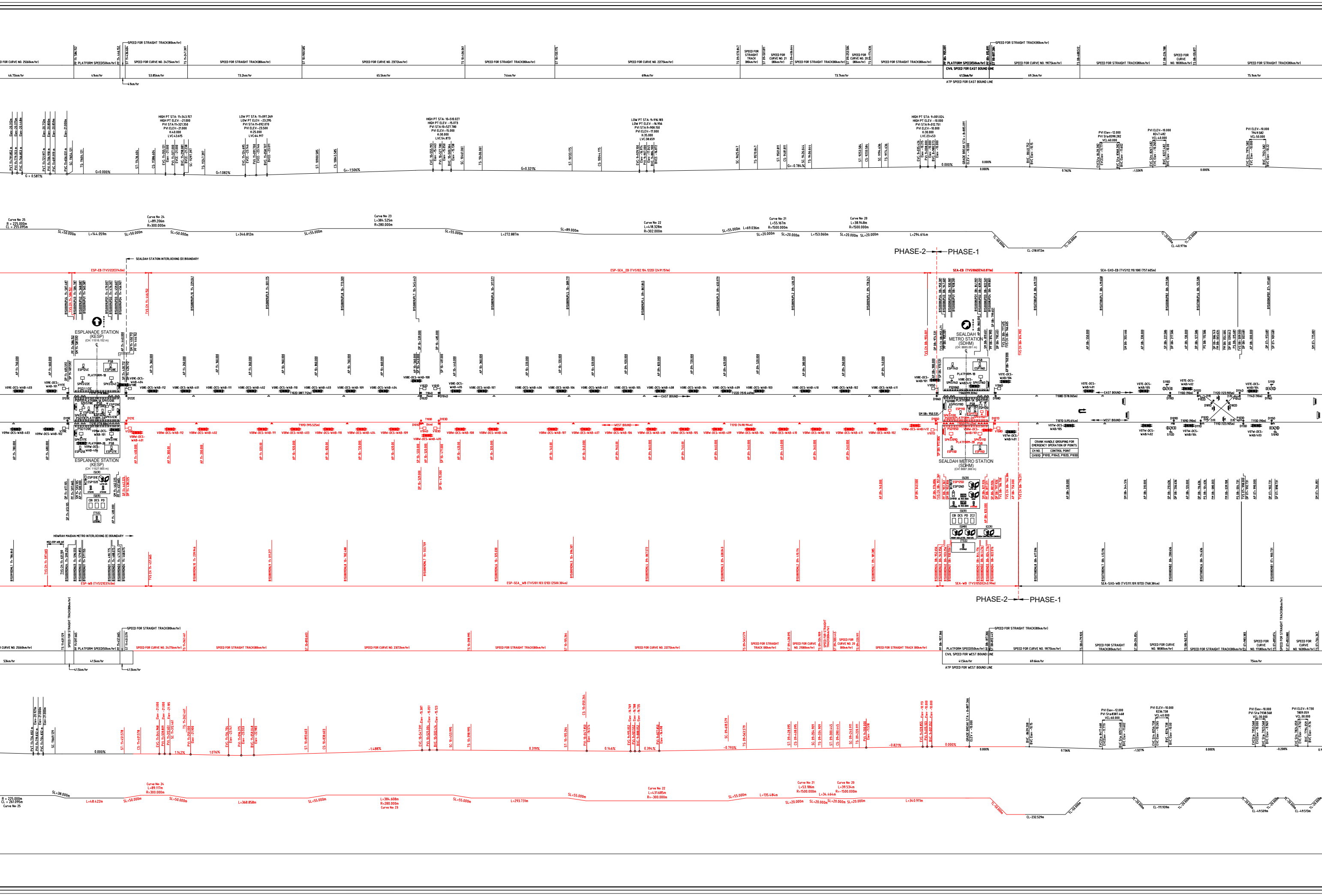
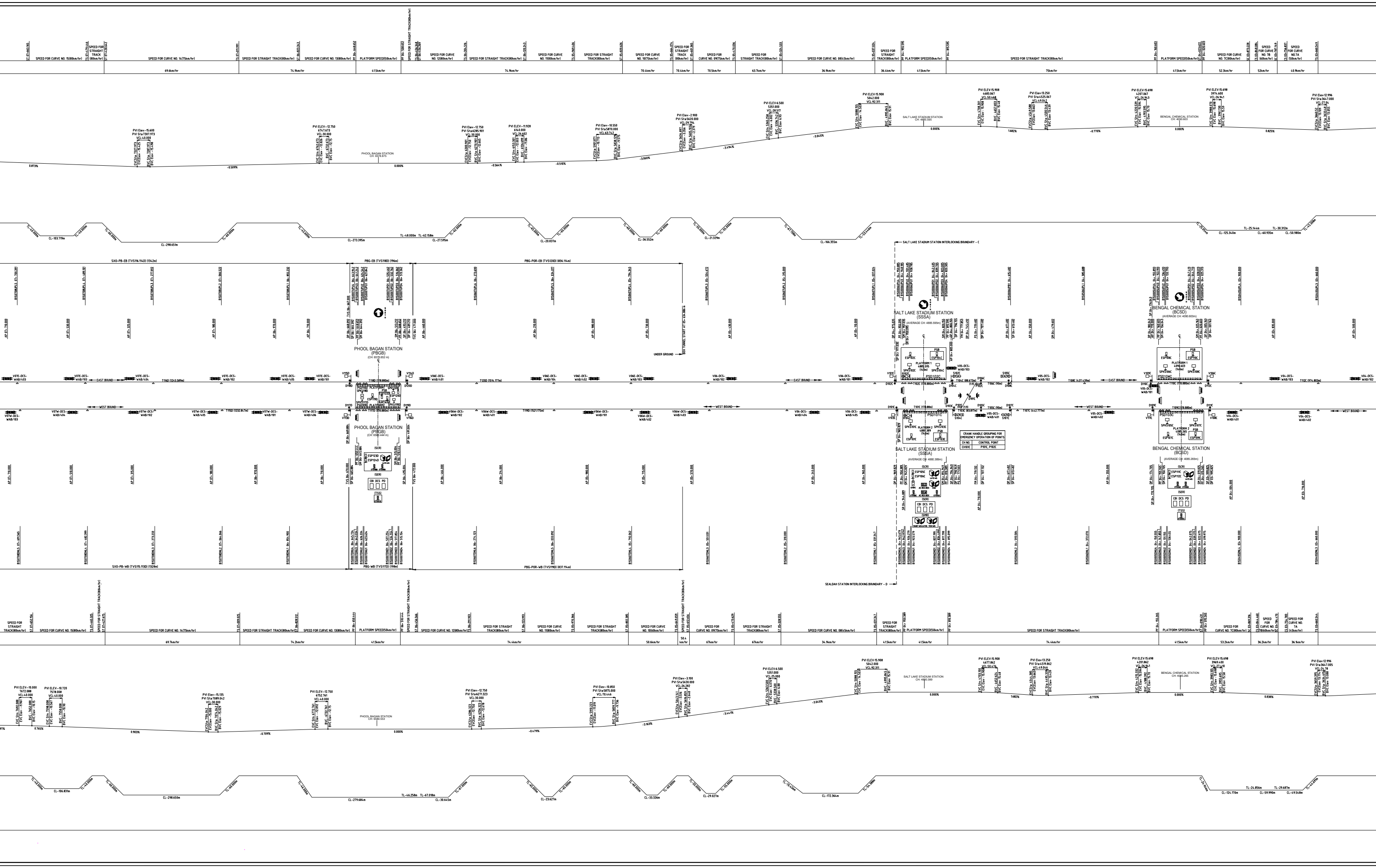
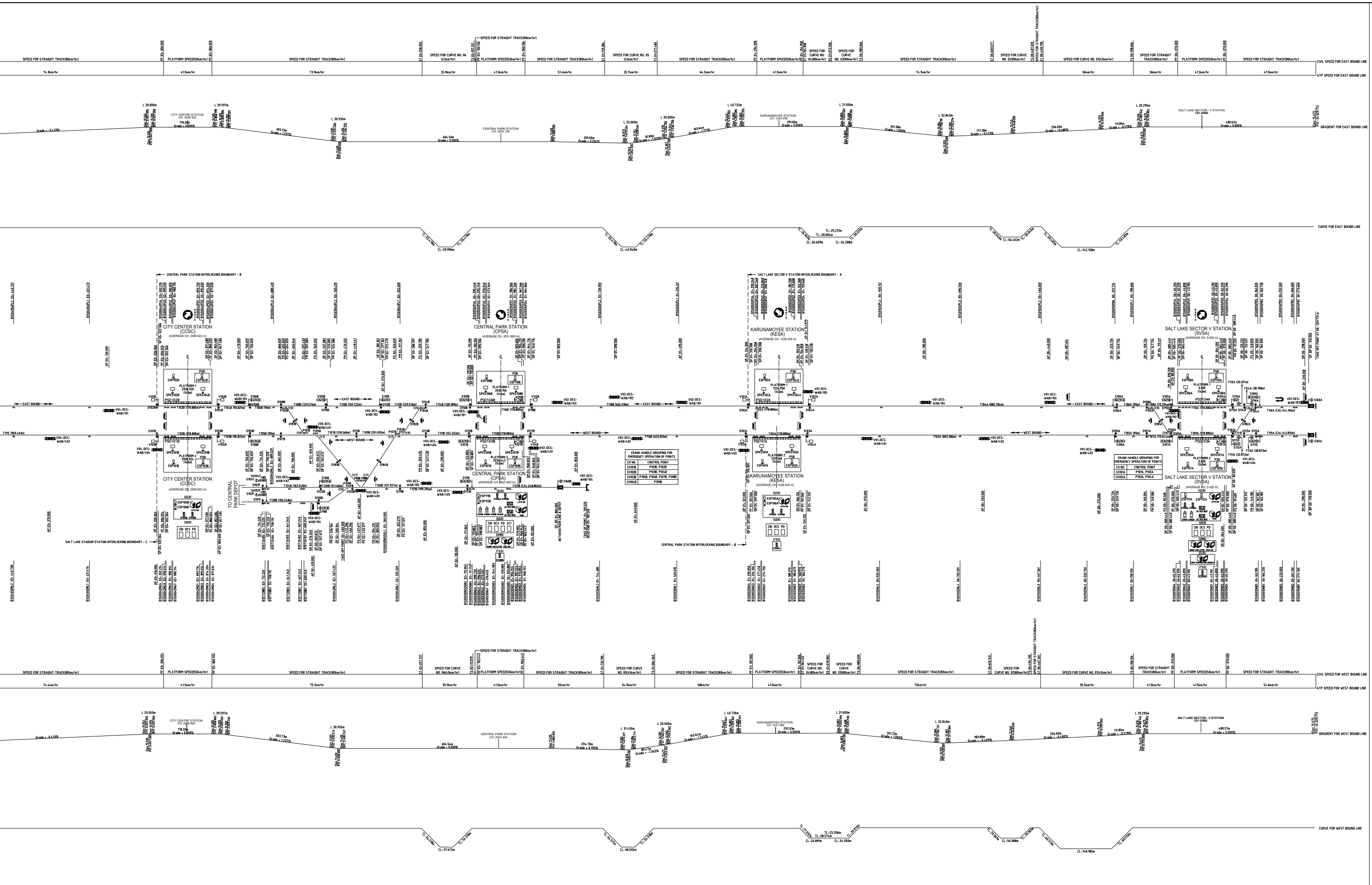

SPEED FOR EAST BOUND LINE
ATP SPEED FOR EAST BOUND LINE
PLATFORM SPEED(50km/hr)
SPEED FOR STRAIGHT TRACK(80km/hr)
SPEED FOR CURVE NO. 34(60km/hr)
39.4km/hr
49.6km/hr
52.9km/hr
52.4km/hr
53km/hr
GRADIENT FOR EAST BOUND LINE
G = 0.000%
G = 0.311%
G = 2.367%
G = 2.187%
G = 2.488%
CURVE FOR EAST BOUND LINE
L = 360.710m
SL=45.000m
Curve No: 34
R = 230.000m
CL = 408.204m
L = 25.562m
SL=40.000m
Curve No: 31
R = 1500.000m
CL = 85.802m
L = 84.346m
SL=25.000m
SL=60.000m
Curve No: 30
R = 315.000m
CL = 439.043m
L = 278.530m
Curve No: 29
R = 400.000m
CL = 27.202m
L = 23.240m
Curve No: 28
R = 500.000m
CL = 21.828m
SL=31.000m
L = 219.225m
Curve No: 27
R = 300.000m
CL = 33.210m
L = 29.080m
SL=42.000m
Curve No: 26
R = 300.000m
CL = 85.931m
L = 25.790m
SL=50.000m
SL=55.000m
HOWRAH MAIDAN METRO INTERLOCKING (E) BOUNDARY
HOM-EB (TVS102E) (190.00m)
HOM-HOW-EB (TVS104.106.108E) (828.328m)
HOW-EB (TVS110E)(140m)
SDR-EB (TVS114E)(52.75m)
SDR-MKN-EB (TVS116E)(1,255.21m)
MKN-EB (TVS118E)(140m)
MKN-ESP-EB (TVS120E)(737.923m)
NSZ-HOM-XO-EB
NSZ-SDR-EB
HOWRAH MAIDAN METRO STATION (HWMM) (CH: 15657.526 m)
HOWRAH MAIDAN METRO STATION (HWMM) (CH: 15640.267 m)
HOWRAH METRO STATION (HWHM) (CH: 14600.562 m)
HOWRAH METRO STATION (HWHM) (CH: 14614.723 m)
MAHAKARAN STATION (MKNA) (CH: 12394.075 m)
MAHAKARAN STATION (MKNA) (CH: 12426.036 m)
PLATFORM1
PLATFORM2
PLATFORM 1B
PLATFORM-1A
PLATFORM-2A
PLATFORM-2B
EAST BOUND
WEST BOUND
VENTILATION SHAFT (STRAND ROAD)
TRACK END AT 15+ 752.528
TRACK END AT 15+ 735.269
(SCR)
(SER)
(SMR)
(CCR)
(TSS)
CBI DCS PD
CRANK HANDLE GROUPING FOR EMERGENCY OPERATION OF POINTS
CH NO. | CONTROL POINT
CH101E | P101E, P104E, P102E, P103E
T102E (173.880m)
T101E (173.880m)
T104E (149.597m)
T103E (149.595m)
T106E (91.35m)
T105E (91.00m)
T108E (638.137m)
T107E (607.069m)
T116E (1239.770m)
T115E (1218.263m)
T118E (178.88m)
T117E (178.88m)
T120E (699.043m)
T119E (719.491m)
HOM-WB (TVS101E)(329.237m)
HOM-HOW-WB (TVS103.105.107E) (796.307m)
HOW-WB (TVS109E)(140m)
HOW-SDR-WB (TVS111E)(1761.086m)
SDR-WB (TVS113E)(53.9m)
SDR-MKN-WB (TVS115E)(1,233.703m)
MKN-WB (TVS117E)(140m)
MKN-ESP-WB (TVS119E)(758.371m)
SPEED FOR WEST BOUND LINE
ATP SPEED FOR WEST BOUND LINE
GRADIENT FOR WEST BOUND LINE
G = 0.000%
G = 0.311%
G = 2.522%
G = 2.961%
G = 0.301%
G = -2.493%
G = -0.297%
G = -0.319%
G = 1.004%
G = 0.525%
CURVE FOR WEST BOUND LINE
L = 343.189m
Curve No: 33
R = 228.000m
CL = 401.260m
Curve No: 32
R = 250.000m
CL = 69.505m
L = 266.959m
Curve No: 31
R = 600.000m
CL = 79.292m
L = 649.848m
Curve No: 30
R = 295.000m
CL = 424.696m
L = 279.275m
L = 172.153m
Curve No: 27
R = 300.000m
CL = 37.201m
L = 25.356m
Curve No: 26
R = 300.000m
CL = 89.422m
L = 33.659m


SEALDAH STATION INTERLOCKING (D) BOUNDARY
ESP-EB (TVS122E)(140m)
PHASE-2
PHASE-1
SEA-EB (TVS106D)(140.071m)
ESPLANADE STATION
(KESP)
(CH: 11516.152 m)
PLATFORM-1B
PLATFORM-1A
PLATFORM-2A
PLATFORM-2B
ESPLANADE STATION
(KESP)
(CH: 11527.665 m)
(SCR)
(SER)
CBI DCS PD
(TSS)
SEALDAH
METRO STATION
(SDHM)
(CH: 8885.091 m)
SEALDAH METRO STATION
(SDHM)
(CH: 8887.366 m)
CBI DCS PD ZC2
CRANK HANDLE GROUPING FOR EMERGENCY OPERATION OF POINTS
CH NO. | CONTROL POINT
CH101D | P101D, P104D, P102D, P103D
EAST BOUND
WEST BOUND
HOWRAH MAIDAN METRO INTERLOCKING (E) BOUNDARY
Curve No: 24
L=89.206m
R=300.000m
SL=50.000m
L=144.059m
L=294.614m
TL-50.000m
CL-218.872m
CIVIL SPEED FOR EAST BOUND LINE
ATP SPEED FOR EAST BOUND LINE
CIVIL SPEED FOR WEST BOUND LINE
ATP SPEED FOR WEST BOUND LINE
SPEED FOR STRAIGHT TRACK(80km/hr)
PLATFORM SPEED(50km/hr)


SPEED FOR CURVE NO. 15(80km/hr)
SPEED FOR STRAIGHT TRACK(80km/hr)
SPEED FOR CURVE NO. 14(75km/hr)
SPEED FOR CURVE NO. 13(80km/hr)
PLATFORM SPEED(50km/hr)
SPEED FOR CURVE NO. 12(80km/hr)
SPEED FOR CURVE NO. 11(80km/hr)
SPEED FOR CURVE NO. 10(75km/hr)
SPEED FOR CURVE NO. 09(75km/hr)
SPEED FOR CURVE NO. 08(65km/hr)
SPEED FOR CURVE NO. 7C(80km/hr)
SPEED FOR CURVE NO. 7B (60km/hr)
SPEED FOR CURVE NO. 7A (50km/hr)
PHOOL BAGAN STATION
SALT LAKE STADIUM STATION
BENGAL CHEMICAL STATION
TL-48.000m
TL-62.158m
CL-273.395m
CL-27.595m
TL-62.000m
TL-53.446m
CL-125.340m
TL-25.144m
SXO-PB-EB (TVS116.114D) (1342m)
PBG-EB (TVS118D) (196m)
PBG-POR-EB (TVS120D) (836.114m)
SXO-PB-WB (TVS115.113D) (1328m)
PBG-WB (TVS117D) (198m)
PBG-POR-WB (TVS119D) (837.114m)
UNDER GROUND
SALT LAKE STADIUM STATION INTERLOCKING BOUNDARY - C
SEALDAH STATION INTERLOCKING BOUNDARY - D
PHOOL BAGAN STATION
(PBGB)
(CH: 6578.652 m)
V115D
V114D
V07E-DCS-WAB/101
V06E-DCS-WAB/401
T118D (178.880m)
D118D
D120D
PSD110D
PLATFORM1
SPKS118D
PSB
SPKS120D
ESP122D
ESP119D
ESP120D
ESP121D
SPKS117D
PSD109D
PLATFORM2
SPKS119D
D117D
D119D
T117D (178.880m)
V113D
V116D
V06W-DCS-WAB/102
PHOOL BAGAN STATION
(PBGB)
(CH: 6580.444 m)
(SCR)
ESP123D
ESP124D
LATS WS
(SER)
CBI
DCS
PD
(TSS)
TVS 06+ 667.000
DP 06+ 668.092
SP 06+ 664.092
PF 06+ 648.652
SM 06+ 644.092
SM 06+ 513.212
PF 06+ 508.652
SP 06+ 493.212
DP 06+ 489.212
TVS 06+ 471.000
AP 06+ 460.000
B1S0007UPU4 06+ 643.942
B1S0007UPU3 06+ 641.242
B1S0007UPU2 06+ 624.542
B1S0007UPU1 06+ 621.842
B1S0007UPD1 06+ 535.462
B1S0007UPD2 06+ 532.762
B1S0007UPD3 06+ 516.062
B1S0007UPD4 06+ 513.362
SALT LAKE STADIUM STATION
(SSSA)
(AVERAGE CH: 4885.595m)
B1S0006UPU4 04+ 950.885
B1S0006UPU3 04+ 948.185
B1S0006UPU2 04+ 931.485
B1S0006UPU1 04+ 928.785
B1S0006UPD1 04+ 842.405
B1S0006UPD2 04+ 839.705
B1S0006UPD3 04+ 823.005
B1S0006UPD4 04+ 820.305
B1S0006UPB1 04+ 615.482
B1S0607UPL1 05+ 037.024
PSB
ESP102C
ESP104C
PLATFORM 1
4885.595
(140m)
SPKS102C
SPKS104C
V05-DCS-WAB/103
V101C
R102C
PSD102C
S102C
S105C
D102C
T102C (178.880m)
D104C
T104C (88.673m)
D106C
P102C
T106C (90m)
D108C
D181C
D101C
T101C (178.88m)
D103C
P101C
T103C (83.817m)
D105C
T105C (90m)
D107C
T107C (442.777m)
PSD101C
V103C
R104C
S104C
V05-DCS-WAB/401
S107C
SPKS101C
PLATFORM 2
4880.389
(140m)
SPKS103C
ESP101C
ESP103C
SALT LAKE STADIUM STATION
(SSSA)
(AVERAGE CH: 4880.389m)
(SCR)
ESP105C
ESP106C
LATS WS
AC RES BOX
IVDU
(SER)
CBI
DCS
PD
(SMR)
BENGAL CHEMICAL STATION
(BCSD)
(AVERAGE CH: 4090.603m)
B1S0005UPU4 04+ 155.893
B1S0005UPU3 04+ 153.193
B1S0005UPU2 04+ 136.493
B1S0005UPU1 04+ 133.793
B1S0005UPD1 04+ 047.413
B1S0005UPD2 04+ 044.713
B1S0005UPD3 04+ 028.013
B1S0005UPD4 04+ 025.313
B1S0405UPL4 03+ 900.000
PSB
ESP108C
ESP110C
PLATFORM 1
4090.603
(140m)
SPKS106C
SPKS108C
V109C
V106C
PSD104C
EAST BOUND
D110C
T110C (178.880m)
D112C
V05-DCS-WAB/101
D109C
T109C (178.880m)
D111C
PSD103C
V111C
V108C
V04-DCS-WAB/401
SPKS105C
SPKS107C
PLATFORM 2
4085.265
(140m)
ESP107C
ESP109C
BENGAL CHEMICAL STATION
(BCSD)
(AVERAGE CH: 4085.265m)
(SCR)
ESP111C
ESP112C
LATS WS
(SER)
CBI
DCS
PD
(TSS)
WEST BOUND
EAST BOUND
BENGAL CHEMICAL STATION
PHOOL BAGAN STATION
SALT LAKE STADIUM STATION

CRANK HANDLE GROUPING FOR EMERGENCY OPERATION OF POINTS

CH NO.	CONTROL POINT
CH101C	P101C, P102C


SPEED FOR STRAIGHT TRACK(80km/hr)
PLATFORM SPEED(50km/hr)
SPEED FOR CURVE NO. 06 (45km/hr)
SPEED FOR CURVE NO. 05 (45km/hr)
SPEED FOR CURVE NO. 04(80km/hr)
SPEED FOR CURVE NO. 03(80km/hr)
SPEED FOR CURVE NO. 02(80km/hr)
SPEED FOR CURVE NO. 01(45km/hr)
CIVIL SPEED FOR EAST BOUND LINE
ATP SPEED FOR EAST BOUND LINE
GRADIENT FOR EAST BOUND LINE
CURVE FOR EAST BOUND LINE
CITY CENTRE STATION
CENTRAL PARK STATION
KARUNAMOYEE STATION
SALT LAKE SECTOR - V STATION
CENTRAL PARK STATION INTERLOCKING BOUNDARY - B
SALT LAKE SECTOR V STATION INTERLOCKING BOUNDARY - A
SALT LAKE STADIUM STATION INTERLOCKING BOUNDARY - C
CITY CENTER STATION (CCSC)
CENTRAL PARK STATION (CPSA)
KARUNAMOYEE STATION (KESA)
SALT LAKE SECTOR V STATION (SVSA)
EAST BOUND
WEST BOUND
TO CENTRAL PARK DEPOT
PLATFORM 1
PLATFORM 2
CIVIL SPEED FOR WEST BOUND LINE
ATP SPEED FOR WEST BOUND LINE
GRADIENT FOR WEST BOUND LINE
CURVE FOR WEST BOUND LINE

CRANK HANDLE GROUPING FOR EMERGENCY OPERATION OF POINTS	
CH NO.	CONTROL POINT
CH101B	P101B, P102B
CH102B	P103B, P104B
CH103B	P105B, P106B, P107B, P108B
CH104B	P109B

CRANK HANDLE GROUPING FOR EMERGENCY OPERATION OF POINTS	
CH NO.	CONTROL POINT
CH101A	P101A, P102A
CH102A	P103A, P104A

NOTES:-

1. ALL SIGNALS EXCEPT VIRTUAL SIGNALS ARE PROVIDED WITH LED LAMP.
2. CRANK HANDLES SHOULD BE PROVIDED & SEALED IN THE STATION CONTROL ROOM.
3. ALL POINTS ARE MOTOR OPERATED.
4. ALL TRAINS WILL HAVE TO STOP AT THE STOPPING MARKER BOARD ON THE PLATFORM FOR EXACT TRAIN DOOR OPENING CONDITIONS.
5. VIRTUAL SIGNALS WILL BE PRESENT ONLY IN ATS AND WILL BE USED FOR ROUTE SETTING. NO PHYSICAL BOARDS FOR SIGNALS WILL BE PRESENT IN TRACK SIDE.
6. BUFFER STOP SIGNAL WILL BE INSTALLED ALONG BUFFER POST.
7. THE TURN OUT AND RADIUS OF CURVATURE IN MAIN LINE AS FOLLOWS:

1 IN 9, R190 (MAX. SPEED 40KMPH)	1 IN 7, R190 (MAX. SPEED 40KMPH)	1 IN 9, R300 (MAX. SPEED 40KMPH)
P101A, P102A, P103A, P104A, P101B, P102B, P103B, P104B, P109B, P101C, P102C	P105B, P106B, P107B, P108B	P101D, P102D, P103D, P104D P101E, P102E, P103E, P104E

8. ABBREVIATIONS :

AP - ACCESS POINT
ATS - AUTOMATIC TRAIN SUPERVISION
BP - BUFFER POST
CBI - COMPUTER BASED INTERLOCKING
DCS - DATA COMMUNICATION SYSTEM
DP - DETECTION POINT
ESP - EMERGENCY STOP PLUNGER
LATS - LOCAL AUTOMATIC TRAIN SUPERVISION
LATSS - LOCAL AUTOMATIC TRAIN SUPERVISION SERVER
MAINT - MAINTENANCE
NSMB - NORMAL STOPPING MARKER BOARD
PD - POWER DISTRIBUTION
PS - POINT SWITCH
PSB - PLATFORM SUPERVISORY BOOTH
PSD - PLATFORM SCREEN DOOR
SM - STOPPING MARKER
SP - SIGNAL POST
SPKS - STAFF PROTECTION KEY SWITCH
SRMB - STOPPING REVERSE MARKER BOARD
TECH - TECHNICIAN
WAP - WAYSIDE ACCESS POINT
WS - WORK STATION
ZC - ZONE CONTROLLER

LEGENDS			
▭○	POINT MACHINE	⌐	INTERLOCKING BOUNDARY
▯	CRANK HANDLE	●	AXLE COUNTER DETECTION POINT
▯	EMERGENCY STOP SWITCH (ESS/ESP)	(SER)	SIGNAL EQUIPMENT ROOM
▭	VIRTUAL SIGNAL	(SCR)	STATION CONTROL ROOM
▭	STAFF PROTECTION KEY SWITCH	(SMR)	SIGNAL MAINTENANCE ROOM
▯	NORMAL STOPPING MARKER BOARD	FM	FOULING MARK
▯	STOPPING REVERSE MARKER BOARD	┬┬┬┬	PLATFORM SCREEN DOOR (PSD)
⊣	DEAD END	■	BBRS/DCS ACCESS POINT (2+2)
▯	EMERGENCY TRIP SWITCH	■	BBRS/DCS ACCESS POINT (1+1)
△	BALISE	■	FRICTION TYPE BUFFER
▭	AXLE COUNTER LINE VERIFICATION RESET BOX	⊃	TURN BACK
⊖⊘⊕	UNDER GROUND TUNNEL MOUNTING THREE ASPECT SIGNAL OF RED, VIOLET AND GREEN ASPECTS WITH ROUTE INDICATOR FOR EAST BOUND LINE NORMAL DIRECTION.	⊖⊘⊕	UNDER GROUND TUNNEL MOUNTING THREE ASPECT SIGNAL OF RED, VIOLET AND GREEN ASPECTS WITH ROUTE INDICATOR FOR WEST BOUND LINE NORMAL DIRECTION.
⊕⊘⊖	UNDER GROUND TUNNEL MOUNTING THREE ASPECT SIGNAL OF RED, VIOLET AND GREEN ASPECTS WITH ROUTE INDICATOR FOR WEST BOUND LINE REVERSE DIRECTION.	⊕⊘⊖	UNDER GROUND TUNNEL MOUNTING THREE ASPECT SIGNAL OF RED, VIOLET AND GREEN ASPECTS WITH ROUTE INDICATOR FOR EAST BOUND LINE REVERSE DIRECTION.
⊘⊗	UNDER GROUND TUNNEL REPEATER SIGNAL WITH "R" MARKER BOARD FOR EAST BOUND LINE	⊘⊗	UNDER GROUND TUNNEL REPEATER SIGNAL WITH "R" MARKER BOARD FOR WEST BOUND LINE
►►	NORMAL DIRECTION OF TRAFFIC	►	REVERSE DIRECTION OF TRAFFIC
⊕⊘⊖	MAIN THREE ASPECT SIGNAL OF RED VIOLET AND GREEN WITH ROUTE INDICATOR(FOR EAST BOUND NORMAL DIRECTION)	⊖⊘⊕	MAIN THREE ASPECT SIGNAL OF RED VIOLET AND GREEN WITH ROUTE INDICATOR(FOR EAST BOUND REVERSE DIRECTION)
⊖⊘⊕	MAIN THREE ASPECT SIGNAL OF RED VIOLET AND GREEN WITH ROUTE INDICATOR(FOR WEST BOUND NORMAL DIRECTION)	⊕⊘⊖	MAIN THREE ASPECT SIGNAL OF RED VIOLET AND GREEN WITH ROUTE INDICATOR(FOR WEST BOUND REVERSE DIRECTION)
⊕	RED ASPECT BUFFER STOP SIGNAL FOR MAIN LINE		

HSTS RECORD

QA								
			11	12 JUN,24		MB		Letter: 1147-24_122, dt-18.06.24
			10	22 MAY,24	AN	RJ	DB	Letter: 1147-24_105, dt-21.05.24
DESIGNED	AN	10 JUN, 24	09	17 OCT, 23	SHB	RJ	DB	Letter: 1147-23_212, dt-19.09.23
DRAWN	AN	10 JUN, 24	08	03 JUL,23	SHB	MKT	DB	Letter: 1147-23_097, dt 24.06.23
CHECKED	MB	11 JUN, 24	07	03 APR,23	SHB	RJ	DB	UPDATED FOR PHASE-2A
APPROVED	DB	12 JUN, 24	REV	DATE	DESIGNED	CHECKED	APPROVED	MODIFICATION

REV. NO.-11	HSTS			GC	
	DESIGNATION	SIGNATURE	DATE	DESIGNATION	SIGNATURE
PREPARED BY	SIG. ENG.		10.06.2024	PM (S&T)	
CHECKED BY	Sr. SIG. ENG.	MB	11.06.2024	Dy. PM (SIG).	
APPROVED BY	PE (S&T)		12.06.2024		

REFERENCE DRAWINGS

S.L. NO.	DRAWING DESCRIPTION	DRAWING No.
	PHASE–1	
1	ALIGNMENT PLAN & PROFILE FROM SALTLAKE SECTOR V TO SEALDAH STATION	KRJV/TWR/SLV-SLS/DRG/ALG 1101 TO 1126 REV.C09
2	PHASE PLAN BETWEEN SALT LAKE SEC-V TO SALT LAKE STADIUM EAST AND WEST BOUND TRACK	KRJV/TWR/SLV_SLS/DRG/ASB/001, REV.C00
3	PHASE PLAN BETWEEN SALT LAKE STADIUM TO SEALDAH EAST AND WEST BOUND TRACK (TO MARK BUFFER STOP ONLY).	KRJV/TWR/SLV_SLS/DRG/ASB/002, REV.C00
	PHASE–1C	
1	PHASE PLAN BETWEEN PHOOLBAGAN TO SEALDAH EAST AND WEST BOUND TRACK	DRAWING NO.-"KRJV/TWR/SLV_SLS/DRG/PH-1C/01, REV.C00".
2	MAIN LINE SIGNALLING PLAN (PHASE-1)	DRAWING NO.-"KMRC-27006-11-2, REV.11".
	PHASE–2A	
1	(a) SCHEMATIC DRAWING FOR VENTILATION ZONES FOR TVS-PHASE-2 SEALDAH TO HOWRAH MAIDAN	VL-E-W-VZ-TVS-03, REV.R0
	(b) SCHEMATIC DRAWING OF NON-STOPPING ZONE FOR TVS-PHASE-2 SEALDAH TO HOWRAH MAIDAN STATION	VL-E-W-NSZ-TVS-04, REV.R0
2	INTERFACE DOCUMENT OF BLS SYSTEM FOR SIGNALING SYSTEM	KMRC-27060, REV.08 & KMRC-INTERFACE-PSY-SIG-04
3	AS-BUILT ALIGNMENT PLAN & PROFILE (EAST BOUND) BETWEEN HOWRAH MAIDAN AND ESPLANADE STATION.	10028/ALN/DWG/EB/ASB/001. REV.-R0 (SHEET NO.1 TO 8)
4	AS-BUILT ALIGNMENT PLAN & PROFILE (WEST BOUND) BETWEEN HOWRAH MAIDAN AND ESPLANADE STATION.	10028/ALN/DWG/WB/ASB/001, REV.-R0 (SHEET NO.1 TO 8)
5	AS-BUILT ALIGNMENT PLAN & PROFILE (EAST BOUND) BETWEEN SEALDAH STATION AND ESPLANADE.	10028/ALN/DWG/EB/ASB/002, REV.-R1 (SHEET NO.1 TO 6)
	PHASE–2	
1	ALIGNMENT PLAN & PROFILE (WEST BOUND) BETWEEN ESPLANADE STATION TO SEALDAH STATION	DRAWING NO.-"10028-ALN-DWG-WB-0002, REV.R1, DT.24/03.23".
2	SIGNALLING PLAN - MAIN LINE (PHASE-2A)	DRAWING NO.-"KMRC-27012-09-1, REV.9".
	PHASE–2	
1	ALIGNMENT PLAN & PROFILE (WEST BOUND) BETWEEN ESPLANADE STATION TO SEALDAH STATION	DRAWING NO.-"10028-ALN-DWG-WB-0002, REV.R1, DT.27/03.23".(SHEET NOS. 01 TO 06)
2	SIGNALLING PLAN - MAIN LINE (PHASE-2)	DRAWING NO.-"KMRC-27012-10-1, REV.10".

INITIAL DESIGN- REVISION 01

1. PHASE-1 SIGNALLING PLAN WILL BE MERGED WITH PHASE-2 AFTER FINAL APPROVAL AND COMMISSIONING OF PHASE-1B.
2. THE REFERENCE TRACK ALIGNMENT DRAWINGS PROVIDED BY CIVIL TRACK CONTRACTOR AND GC/KMRCL ARE NOT APPROVED. THEREFORE THE SIGNALLING PLAN (PHASE-2) SUBJECT TO CHANGE AS PER LATEST INPUTS IN LATER STAGE.
3. THE STRETCH BETWEEN SEALDAH METRO AND ESPLANADE PROVIDED BY CIVIL CONTRACTOR (ITD-ITD CEM JOINT VENTURE) IS NOT APPROVED AND SUBJECT TO CHANGE AS PER LATEST INPUTS IN LATER STAGE.
4. THE TURN OUT & RADIUS OF POINTS AT HOWRAH MAIDAN ARE NOT SHOWN IN PHASE-2 CIVIL TRACK ALIGNMENT PLAN.
5. TVS SECTION FOR PHASE-2 IS NOT AVAILABLE IN PHASE-2 TRACK ALIGNMENT PLAN.
6. THE AXLE COUNTERS DETECTION POINTS (DP) ARE SUBJECT TO CHANGE AS PER FINAL TVS SECTION IN LATER STAGE IF REQUIRED.
6. THE BALISES WILL BE PLACED AFTER INITIAL APPROVAL OF SIGNALLING PLAN AND AS PER APPROVED BALISE PLACEMENT GUIDELINES DOCUMENT FOR PHASE-2.

AMENDMENT FOR REVISION 02

1. VENTILATION ZONE FOR TVS ARE INDICATED AS PER VOLTAS SCHEMATIC DRAWING OF FOR TVS PHASE-2 (SEALDAH TO HOWRAH MAIDAN STATION), DRAWING NO. VL-E-W-VZ-TVS-03, REV. R0.
2. ESLANADE STATION HAS INCLUDED IN HOWRAH MAIDAN INTERLOCKING ZONE AND INTRLOCKING BOUNDARY IS SHIFTED FROM WEST SIDE TO EAST SIDE OF THE PLATFORM.
3. STATION LAYOUT IS DIVIDED INTO PHASE-1 & PHASE-2.
4. DRAWING TITLE IS MODIFIED AS "SIGNALLING PLAN- MAIN LINE (PART 2)"
5. FONT SIZES IN GRADIENT AND SPEED PROFILE HAVE BEEN INCREASED.
6. PHASE-1B BOUNDARY IS REPLACED WITH PHASE-1 BOUNDARY AND PHASE-2 BOUNDARY
7. THE NUMBER SEQUENCES OF ALL WAYSIDE DEVICES (SIGNALS, SPKS, ESP, DP, TRACK, PSD, ETS) FOR ESPLANADE STATION HAVE BEEN CHANGED FOLLOWED BY NEW MAHAKARAN STATION AND FOR SEALDAH METRO STATION FOLLOWED BY VENTILLATION BUILDING VIRTUAL SIGNALS.
8. AXLE COUNTER AND VIRTUAL SIGNALS ARE PROVIDED AT VENTILATION BUILDING (STRAND ROAD & SUBODH MULLICK SQUARE) ZONE.

AMENDMENT FOR REVISION 03

1. PHYSICAL SIGNAL S117E, S118E, S119E & S120E ARE REPLACED WITH VIRTUAL SIGNALS (AS PER GC LETTER NO. 1147-20_314, DATED-10.07.2020).
2. ETS NUMBERS AT ESPLANADE STATION ARE CHANGED AS ETS110E, ETS111E, ETS112E IN SEQUENCE.
3. BUFFER SIGNALS S160D, S161D & FRICTION BUFFERS ARE REMOVED.
4. AS PER BLS TRIPPING DETAILS CROETS AT SEALDAH METRO AND HOWRAH MAIDAN TSS IS NOT REQUIRED HENCE DELETED.

AMENDMENT FOR REVISION 04

1. DCS-ACCESS POINT INCORPORATED AS PER BBRS/DCS ACCESS POINT CHAINAGE DETAILS-PHASE2 (KMRC-32558, REV.03).
2. BALISES ARE INCORPORATED AS PER BALISE PLACEMENT GUIDELINES (KMRC-26070, REV.05).
3. TRACK END POINT AT HOWRAH MAIDAN STATION IS CORRECTED AS PER CHAINAGE IN CIVIL DRAWING, 10028-ALN-DWG-EB-0001, REV.1.
4. INTERFACE DOCUMENT NUMBER FOR BLS SYSTEM IS UPDATED IN "REFERENCE DRAWING" OF THIS SIGNALLING PLAN.
5. PHASE-2 IS FINAL COMMISSIONING. HENCE, PHASE BOUNDARY AT EAST SIDE OF SEALDAH METRO IS REMOVED.

AMENDMENT FOR REVISION 05

1. REPEATER SIGNAL R101E & R103E HAVE SHOWN AT CH:15+ 165.978 & CH:15+ 146.160
2. TRACKS ARE MENTIONED FOR EACH TVS SECTIONS.

AMENDMENT FOR REVISION 06

1. PHASE-1 & PHASE-2 SIGNALLING PLANS ARE COMBINED IN A SINGLE PLAN
2. ETS NUMBERS ARE UPDATED FOR SALT LAKE STADIUM, BENGAL CHEMICAL, CITY CENTRE & CENTRAL PARK AS PER SITE INSTALLATION BY SIEMENS BLS NUMBER (REFER KMRC-27060, REV.08)
3. SEALDAH INTERLOCKING ZONE IS MARKED BEFORE ESPLANADE STATION. ESPLANADE STATION HAS KEPT UNDER HOWRAH MAIDAN INTERLOCKING ZONE.

AMENDMENT FOR REVISION 07

1. "R" SYMBOL IS ADDED FOR HOWRAH MAIDAN REPEATER SIGNALS.
2. VINTILATION ZONE MENTIONED AS PER VL-E-W-NSZ-TVS-04, REV.R0
3. CHAINAGES FOR SIGNALS, DP, PS, NSMB, SRMB, FM, CL OF PLATFORM ARE UPDATED AS PER AS-BUILT ALIGNMENT & PROFILE.
4. PHASE-2A HAS SHOWN AS GC LETTER NO. 1147-23_059, DATED-24.02.2023 FOR ACTION PLAN FOR SIGNALLING WORKS OF PHASE-2 FOR LIMITED REVENUE SERVICE FROM ESPLANADE TO HOWRAH MAIDAN.

▭	BOUNDARY OF PHASE-2A
▭	BOUNDARY OF PHASE-2B

AMENDMENT FOR REVISION 08

1. LEGEND FOR HOWRAH MAIDAN REPEATER SIGNALS HAS CHANGED.
2. EAST BOUND AND WEST BOUND- CURVE, GRADIENT AND SPEED PROFILE UPDATED AS PER AS-BUILT ALIGNMENT & PROFILE.
3. ESPLANADE BUFFER STOP SIGNAL CHAINAGE AT WEST BOUND TRACK IS UPDATED AS 11+437.665 (GC LETTER NO.1147-23_113, DATED 19.05.2023).
4. PHASE-1 & PHASE-2 BOUNDARY MENTIONED AT SEALDAH METRO EAST BOUND TRACK TOWARDS ESPLANADE.
5. HOWRAH MAIDAN BUFFER SIGNAL CHINAGES (15.1m FROM OSP) UPDATED AS PER GC LETTER NO. 1147-23_161, DATED-14.07.2023.

AMENDMENT FOR REVISION 09

1. UPDATED ATP SPEED PROFILE FROM SEALDAH METRO TO HOWRAH MAIDAN METRO FOR WEST BOUND LINE AND ESPLANADE TO HOWRAH MAIDAN METRO FOR EAST BOUND LINE.
2. HOWRAH MAIDAN BUFFER SIGNAL AND NSMB UPDATED AS PER ADVANCE FIELD SURVEY CAPTURED CBTC DATABASE RC3.
   i) EAST BOUND BUFFER 15+736.230m
   ii) WEST BOUND BUFFER 15+718.760m
   iii) EAST BOUND PLATFORM WEST SIDE NSMB 15+ 720.303m & EAST SIDE NSMB 15+ 589.423m.
   iv) WEST BOUND PLATFORM WEST SIDE NSMB 15+ 703.053m & EAST SIDE NSMB 15+ 572.173m.
3. HOWRAH MAIDAN BUFFER SIGNAL TO NSMB 15.9m FOR EAST BOUND & 15.7m FOR WEST BOUND UPDATED AS PER ADVANCE FIELD SURVEY CAPTURED CBTC DATABASE RC3.

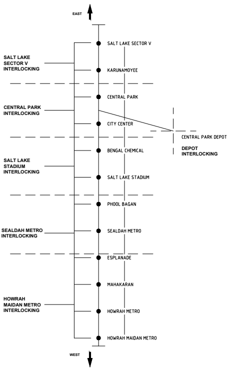
AMENDMENT FOR REVISION 10

1. ADDED CURVE PROFILE, GRADIENT PROFILE, CIVIL SPEED FROM SEALDAH METRO TO ESPLANADE STATION FOR WEST BOUND LINE.
2. ALL BLUE COLOURED MARK IN PREVIOUS REV (REV.09), NOW CHANGED IN RED COLOURED MARK.
3. ALL DOTTED LINE CHANGED TO CONTINUOUS LINE.
4. REMOVED BUFFER STOP SIGNAL S161D & S163E.
5. ADDED VIRTUAL SIGNAL V120E & ONE AXLE COUNTER D121E.
6. REMOVED BOUNDARIES OF PHASE-2A & PHASE-2B.
7. DRAWING TITLE IS MODIFIED AS "SIGNALLING PLAN- MAIN LINE (PHASE-2)"
8. UPDATION BASED ON DRAWING NUMBER : 10028-ALN-DWG-WB-0002, REV.01, DT.27.03.23.

AMENDMENT FOR REVISION 11

1. UPDATED AXLE COUNTER DP AND BALIESES ON WB LINE, AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
2. SUBODH MALLICK SQUARE VENTILATION SHAFT DELETED ON THE PLAN AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
3. EXISTING TVS SECTIONS UPDATED BETWEEN SEALDAH AND ESPLANADE OF WB AND EB AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
4. UPDATED IN THE AMENDMENT NOTE FOR REV. 10 SL.NO.8, AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
5. UPDATED (SHEET NOS. 01 TO 06) ADDED AFTER TRACK ALIGMMENT DRAWING AS PER THE 10028-ALN-DWG-WB-0002, REV.01, SHEET NO:-1 TO 6, DT.27.03.23.
6. UPDATED SYMBOL FOR TUNNEL MOUNTING MAIN SIGNALS AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
7. UPDATED SPASE BETWEEN THE TEXT PLATFORM-1A & SPKS 112D AS PER THE REF. LETTER NO. 1147-24_122, DT.10.06.24
8. AS PER REV. 10 SHOWN IN THIS PLAN ARE CORRECT AND AS PER THE APPROVED TRACK ALIGNMMENT DRAWING NO. 10028-ALN-DWG-WB-0002 (SHEET NOS. 01 TO 06) FOR WEST BOUND
9. UPDATED BOUNDARIES LINE BETWEEN PHASE 1 & PHASE 2 IN DOTTED LINE COVARED THE ACTUAL AREA OF SEALDAH STATION. PLATFROM 2A & 2B UP TO EXISTING BUFFER ON WB LINE COVARED THE RED PORTION OF THE PLAN SHOWN IN PHASE 2.
10. ATP SPEED MENTIONED IN SIP AS PER REV-10 IT IS SIMILAR TO PHASE-2A.
11. ACCORDING TO CURVE NO.23 AND DRAWING NUMBER 10028-ALN-DWG-0002 DATED 27.03.2023, THE SPEED IS UPDATED TO 72 km/h INSTEAD OF 60 km/h IN THE SEALDAH-ESPLANADE WB LINE IN THE SIP
12. UPDATED BALISE SYMBOL AT CHAINAGE 9.867, AND IT IS SHOWN AT THE BOTTOM OF THE LINE.
13. 'ST' & 'TS' CHAINAGES ALL MATCH AND ARE OKAY FOR EACH CURVE AS SHOWN IN SIGNALING PLAN WITH THE 'AS BUILT TRACK ALIGNMENT PLAN'.

STATION LAYOUT


EAST
SALT LAKE SECTOR V
KARUNAMOYEE
CENTRAL PARK
CITY CENTER
BENGAL CHEMICAL
SALT LAKE STADIUM
PHOOL BAGAN
SEALDAH METRO
ESPLANADE
MAHAKARAN
HOWRAH METRO
HOWRAH MAIDAN METRO
WEST
SALT LAKE SECTOR V INTERLOCKING
CENTRAL PARK INTERLOCKING
SALT LAKE STADIUM INTERLOCKING
SEALDAH METRO INTERLOCKING
HOWRAH MAIDAN METRO INTERLOCKING
CENTRAL PARK DEPOT
DEPOT INTERLOCKING

	KMRCL			CONTRACTOR	GENERAL CONSULTANTS :	EMPLOYER
DATE	DESIGNATION	SIGNATURE	DATE	Ansaldo STS Consortium SLV Complex, AVS Compound, #35, 80 Feet Road, 4th Block, Koramangala, Bangalore 560 034, India HITACHI Inspire the Next	MYCEL Kolkata Metro East West Line : General Consultant KMRC Building, Level 1, Munshi Premchand Sarani, Hastings Kolkata 700 021 MAUNSELL AECOM yec LHPA	KMRC KOLKATA METRO RAIL CORPORATION LTD. KMRCL Bhawan, 2nd & 3rd Floor, HRBC Office Complex, Munshi Premchand Sarani, Kolkata 700 021, India
	GGM (S&T)					
	Dy. CSTE (S&T)/II					

C.A.No :- KMRCL/CE/S&T/01/2011, Dt.10.10.2011

DRAWING NUMBER	PROJECT	NUMBER	REV	SHEET
	KMRC	27012	11	1

AUTOCAD	SCALE: VER-1:200 HOR-1:2000	NEXT SHEET NA

TITLE:

SIGNALLING PLAN - MAIN LINE (PHASE-2)

KOLKATA EAST-WEST METRO RAIL PROJECT

CAD FILE:KMRC-27012-11-2.DWG