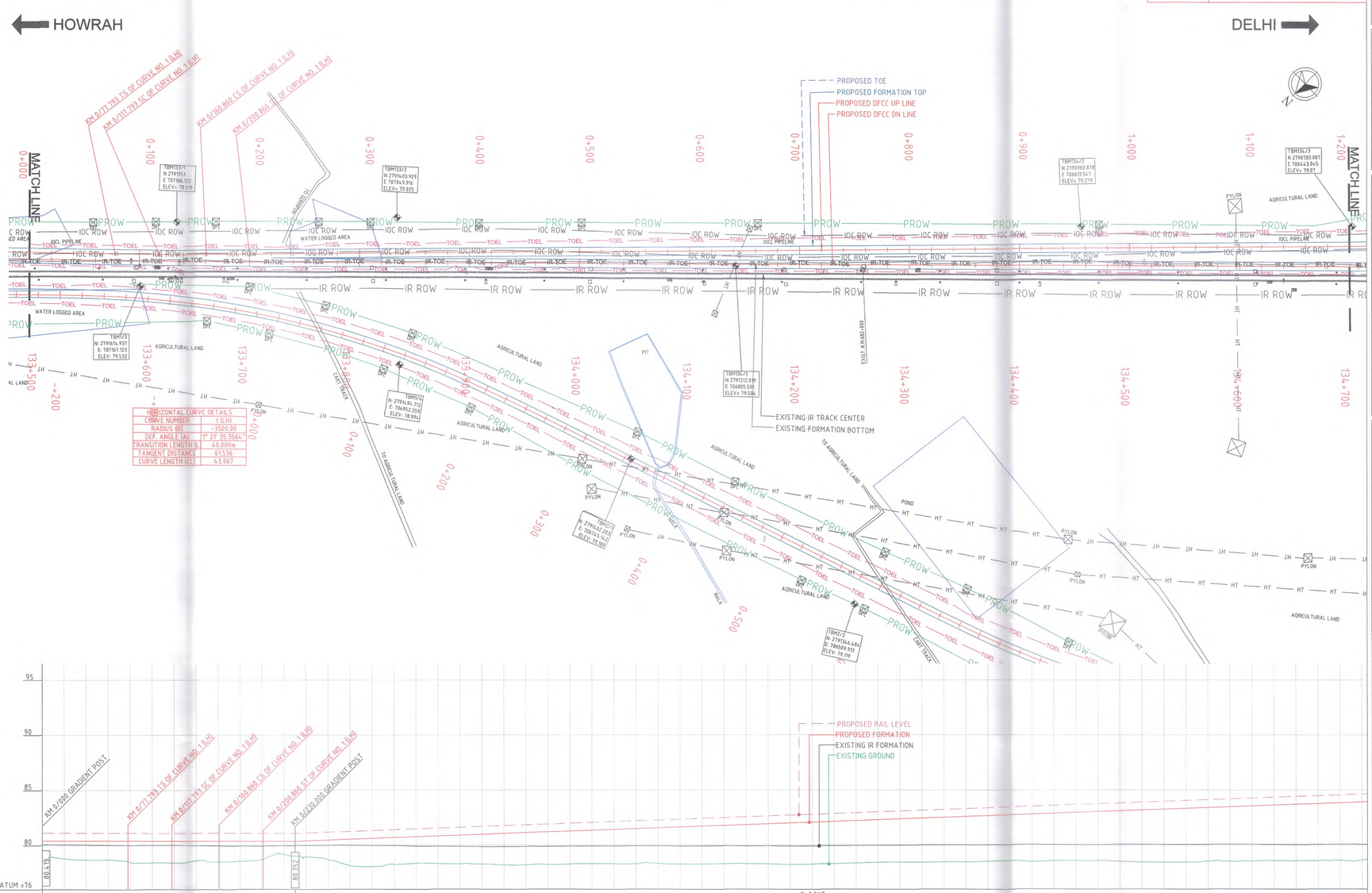
Chainage CH- 0 CH- 1200

SECTION-CP-201



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	1 (LH)
RADIUS (R)	-3500.00
DEF. ANGLE (Δ)	1° 21' 35.3564"
TRANSITION LENGTH (L)	40.000m
TANGENT DISTANCE	61.536
CURVE LENGTH (CL)	43.067

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW: DFCC ROW LINE
- IR-TOE — IR-TOE: EXISTING IR TOE LINE
- TOEL — TOEL: DFCC TOE LINE
- FLOW DIRECTION

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR UP LINK LINE) FROM KM. 0/000 TO KM. 1/200

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 4 6	A1	C	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	19/05/2016	Z.C	
CHKD.	19/05/2016		
APPD.	19/05/2016	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Reetesh Gupta	
APPD.	02.07.19	NISHEETH K. SINGH	02.07.19

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	R. Amerikanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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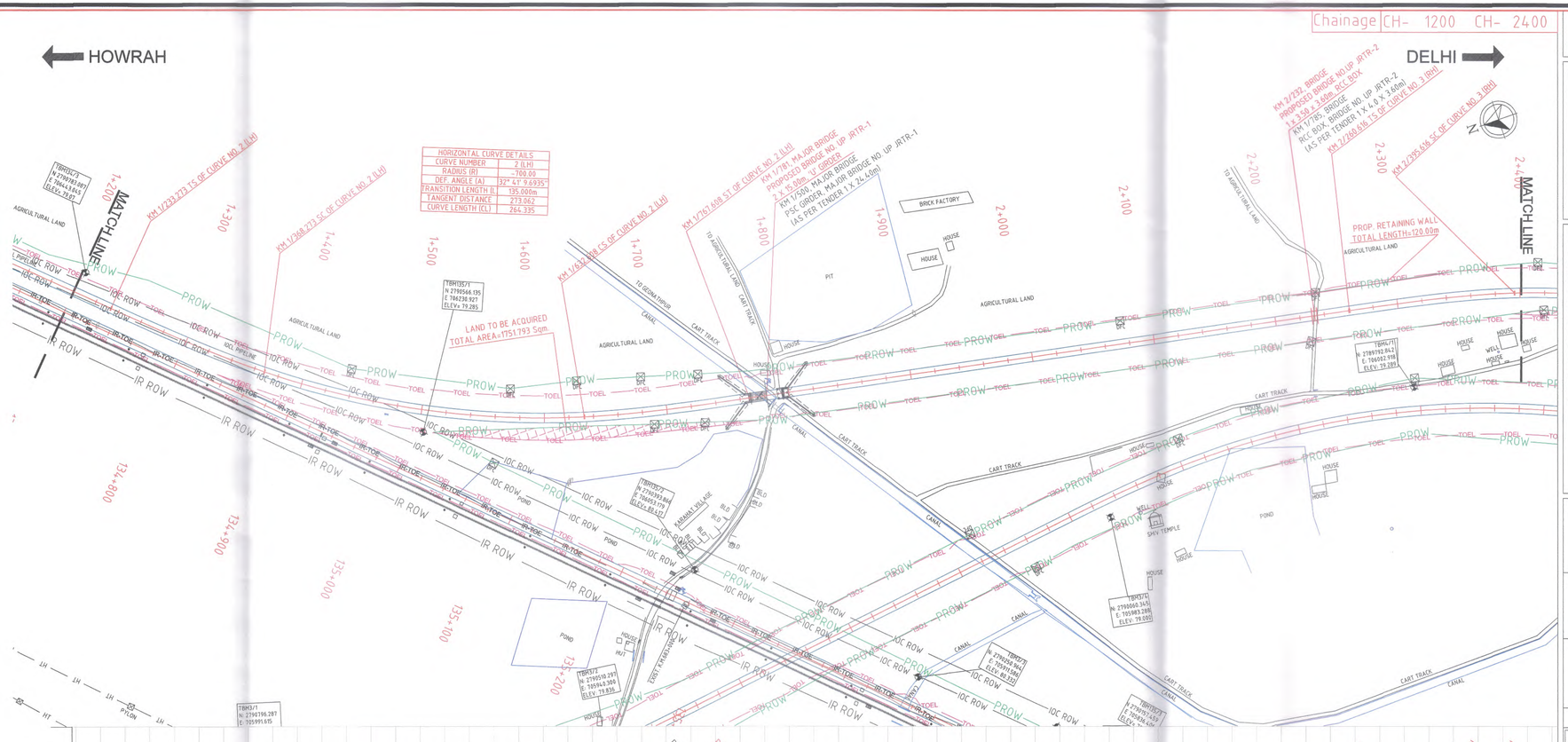

Chainage	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	LHS R.O.W DISTANCE FROM JEONATHPUR UP LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR UP LINE TRACK	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXIST IR FORMATION LEVELS	GROUND LEVELS	THROUGH CHAINAGE
1200	26.349	17.567	25.012	5.274	83.910	80.076	78.635	
1220	26.593	17.914	25.282	5.215	83.983	80.080	78.768	
1240	26.783	18.045	25.601	5.314	84.057	80.110	78.742	
1260	27.018	33.467	25.901	5.451	84.130	80.099	78.680	
1280	27.483	33.612	26.280	5.359	84.203	80.078	78.845	
1300	28.020	33.562	26.844	5.590	84.277	80.059	78.687	
1320	28.886	33.237	27.749	5.606	84.350	80.048	78.745	
1340	30.107	32.560	29.009	5.688	84.423	80.050	78.736	
1360	31.838	31.452	30.767	5.715	84.497	80.072	78.782	
1380	34.197	29.834	18.523	5.837	84.570	80.073	78.733	
1400	37.056	27.661	18.559	5.827	84.644	80.061	78.817	
1420	40.662	24.921	18.418	5.875	84.717	80.027	78.841	
1440	44.883	22.437	18.342	5.867	84.790	80.005	78.923	
1460	49.740	24.134	18.389	6.014	84.864	80.018	78.849	
1480	55.277	25.273	18.468	6.114	84.937	79.998	78.823	
1500	61.549	25.860	18.338	6.161	85.010	80.004	78.849	
1520	68.566	25.895	15.530	6.230	85.084	80.031	78.854	
1540	76.444	25.380	12.748	6.266	85.157	80.050	78.891	
1560	85.012	24.312	10.565	6.356	85.231	80.036	78.874	
1580	94.449	24.703	8.972	6.458	85.304	80.033	78.846	
1600		27.255	7.963	6.540	85.377		78.838	
1620		29.242	7.534	6.571	85.451		78.879	
1640		29.945	7.699	6.666	85.524		78.858	
1660		29.694	8.632	6.698	85.597		78.899	
1680		28.999	10.027	6.453	85.671		79.217	
1700		27.145	11.615	6.373	85.744		79.371	
1720		26.182	13.354	6.981	85.818		79.836	
1740		24.499	15.354	7.084	85.891		79.807	
1760		22.761	17.520	7.320	85.964		78.644	
1780		21.584	19.578	6.600	86.038		79.437	
1800		21.294	19.669	7.342	86.111		78.768	
1820		21.004	19.760	7.459	86.184		78.726	
1840		20.713	19.851	7.519	86.258		78.738	
1860		20.423	19.941	7.561	86.331		78.770	
1880		20.212	20.032	7.649	86.376		78.727	
1900		20.098	20.123	7.586	86.363		78.777	
1920		19.984	20.214	7.601	86.345		78.743	
1940		19.871	20.304	7.643	86.327		78.683	
1960		19.757	20.395	7.678	86.308		78.631	
1980		19.643	20.486	7.709	86.290		78.582	
2000		19.530	20.576	7.654	86.272		78.618	
2020		19.416	20.667	7.671	86.254		78.583	
2040		19.302	20.758	7.670	86.235		78.566	
2060		19.188	20.849	7.677	86.217		78.540	
2080		19.091	20.923	7.665	86.199		78.533	
2100		19.043	20.818	7.621	86.180		78.559	
2120		18.995	20.713	7.598	86.162		78.565	
2140		18.947	20.608	7.575	86.144		78.568	
2160		18.898	20.503	7.615	86.126		78.510	
2180		18.850	20.398	7.594	86.107		78.513	
2200		18.802	20.293	7.448	86.089		78.641	
2220		18.754	20.188	7.157	86.071		78.913	
2240		18.744	20.284	7.876	86.052		78.177	
2260		18.860	20.472	7.811	86.034		78.224	
2280		18.992	20.645	7.785	86.016		78.231	
2300		19.224	20.719	7.690	85.998		78.398	
2320		19.659	20.597	7.595	85.979		78.385	
2340		20.462	20.179	7.727	85.961		78.235	
2360		21.563	19.370	7.694	85.943		78.249	
2380		22.520	18.072	7.634	85.924		78.291	
2400		23.600	16.185	7.620	85.906		78.287	

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW: DFCC ROW LINE
- IR-TOE — IR-TOE: EXISTING IR TOE LINE
- TOEL — TOEL: DFCC TOE LINE
- FLOW DIRECTION

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER :

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT :

EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE :

ALIGNMENT PLAN & PROFILE (JEONATHPUR UP LINK LINE)
FROM KM. 1/200 TO KM. 2/400

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 4 7	A1	C	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated

DRAWING STAGE

☑ FOR APPROVAL
☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	19/05/2016	T.C	
CHKD.	19/05/2016		
APPD.	19/05/2016	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Roopjeet Gayatri	
APPD.	02.07.19	NISHCEETH N. SINGH	02.07.19

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	R. Amerikanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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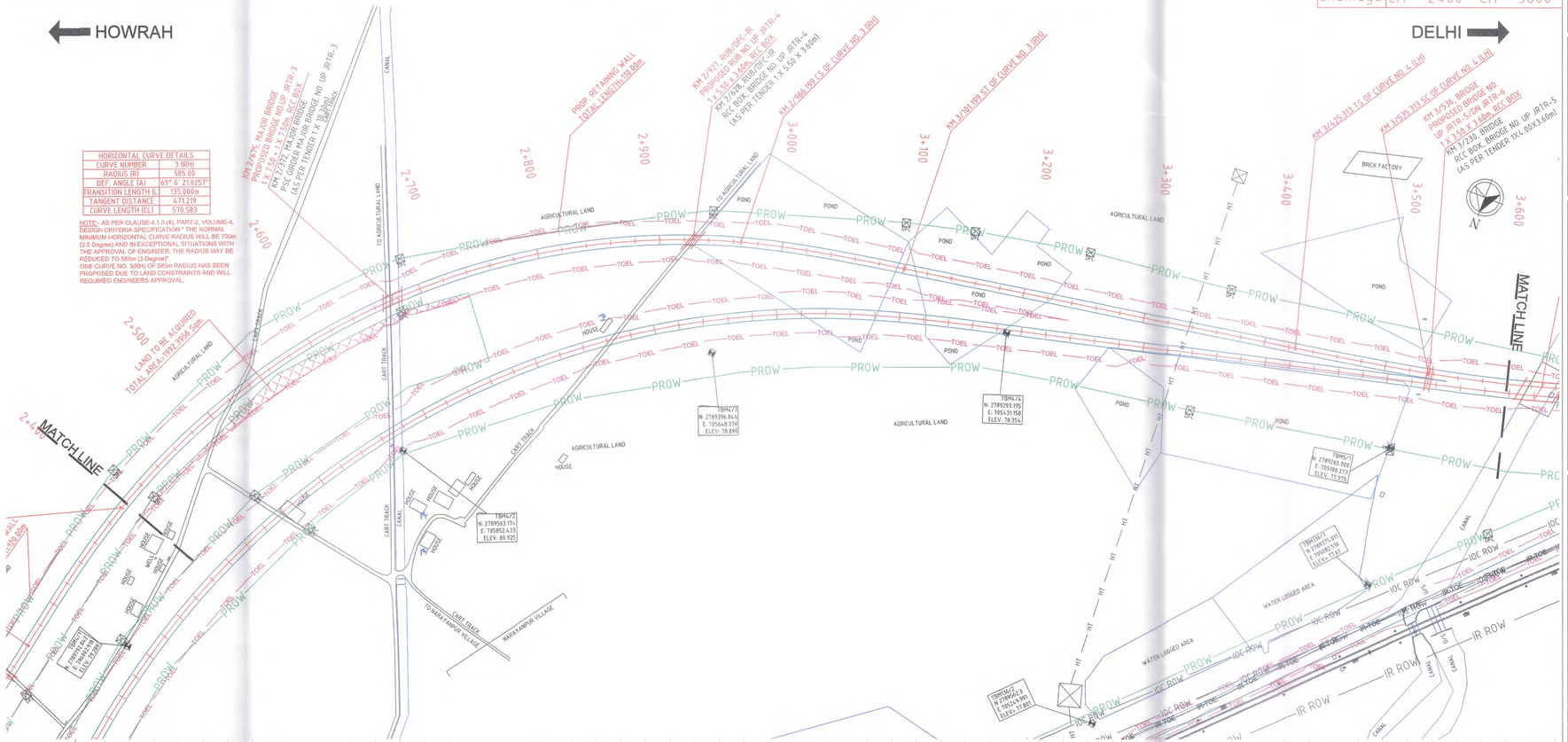
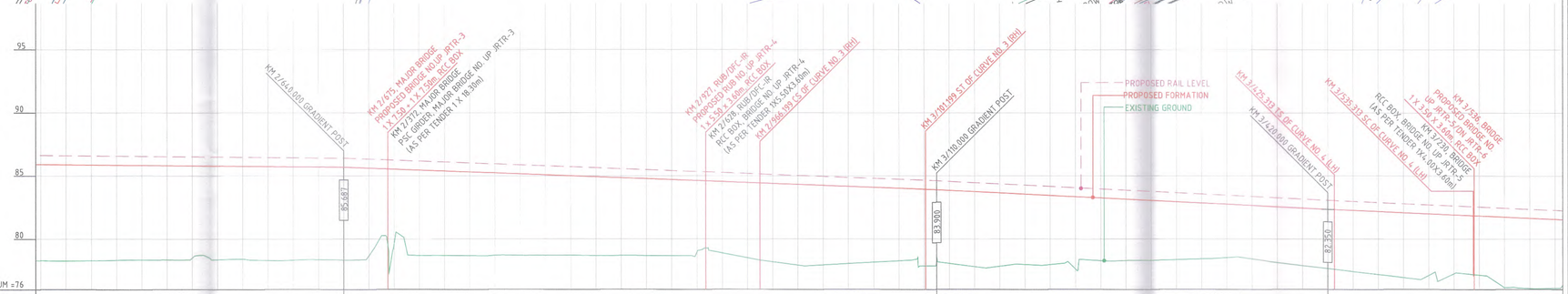
Chainage CH- 2400 CH- 3600



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	3 (RH)
RADIUS (R)	585.00
DEF. ANGLE (Δ)	69° 6' 21.0257"
TRANSITION LENGTH (L)	135.000m
TANGENT DISTANCE	471.219
CURVE LENGTH (CL)	570.583

NOTE:- AS PER CLAUSE-4.1.3 (4), PART-2, VOLUME-4, DESIGN CRITERIA SPECIFICATION " THE NORMAL MINIMUM HORIZONTAL CURVE RADIUS WILL BE 700m (2.5 Degree) AND IN EXCEPTIONAL SITUATIONS WITH THE APPROVAL OF ENGINEER, THE RADIUS MAY BE REDUCED TO 585m (3 Degree)".
ONE CURVE NO. 3(RH) OF 585m RADIUS HAS BEEN PROPOSED DUE TO LAND CONSTRAINTS AND WILL REQUIRED ENGINEERS APPROVAL.



VERTICAL	L=752.500m Gr=-0.091; L=470.000m Gr=-0.380; L=470.000m Gr=-0.380; L=310.000m Gr=-0.500; L=310.000m Gr=-0.500; L=597.500m Gr=-0.441
HORIZONTAL	R=585.000m L=570.583m; R=585.000m L=570.583m; L=135.000m; L=324.114m; L=110.000m; R=-1250.000m L=509.882m

CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR UP LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR UP LINE TRACK	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXIST IR FORMATION LEVELS	GROUND LEVELS	THROUGH CHAINAGE
2400	23.600	16.185	7.620	85.906		78.287	
2420	24.441	13.726	7.620	85.888		78.267	
2440	23.777	15.138	7.581	85.870		78.289	
2460	23.226	15.879	7.532	85.851		78.320	
2480	23.686	15.955	7.477	85.833		78.357	
2500	24.860	15.010	7.456	85.815		78.359	
2520	26.755	13.771	7.295	85.796		78.501	
2540	29.381	10.646	7.418	85.778		78.360	
2560	32.756	7.421	7.352	85.760		78.408	
2580	31.752	9.003	7.441	85.742		78.330	
2600	30.425	10.760	7.400	85.723		78.324	
2620	29.589	11.839	7.337	85.705		78.368	
2640	29.094	12.245	7.361	85.687		78.325	
2660	28.963	11.982	6.949	85.611		78.661	
2680	28.714	11.377	6.933	85.535		79.602	
2700	27.584	13.809	6.762	85.459		78.697	
2720	23.769	15.557	6.691	85.383		78.691	
2740	20.906	17.775	6.633	85.307		78.673	
2760	19.102	19.403	6.536	85.230		78.694	
2780	17.141	22.488	6.459	85.154		78.695	
2800	15.893	21.223	6.382	85.078		78.696	
2820	15.350	21.636	6.301	85.002		78.701	
2840	15.484	21.507	6.247	84.926		78.679	
2860	15.923	20.835	6.166	84.850		78.684	
2880	17.067	19.546	6.183	84.774		78.671	
2900	18.923	17.599	6.036	84.698		78.662	
2920	21.342	15.083	5.682	84.622		78.941	
2940	24.130	11.984	5.666	84.546		78.881	
2960	24.484	10.284	5.973	84.470		78.498	
2980	25.078	10.239	6.213	84.394		78.181	
3000	26.305	10.858	6.392	84.318		77.926	
3020	28.058	96.883	6.300	84.242		77.941	
3040	30.229	92.382	6.116	84.166		78.050	
3060	32.707	88.850	5.934	84.090		78.156	
3080	35.383	85.100	5.754	84.014		78.260	
3100	37.826	81.151	6.075	83.938		77.862	
3120	39.288	77.115	5.786	83.850		78.064	
3140	40.750	72.980	5.940	83.750		77.810	
3160	41.763	68.845	5.812	83.650		77.838	
3180	42.145	65.486	5.571	83.550		77.919	
3200	42.528	65.097	5.480	83.450		77.970	
3220	42.910	64.708	5.728	83.350		77.621	
3240	43.293	64.416	4.980	83.250		78.270	
3260	42.679	64.704	4.861	83.150		78.288	
3280	41.548	64.991	4.749	83.050		78.301	
3300	40.418	65.279	4.591	82.950		78.358	
3320	39.288	65.567	4.423	82.850		78.426	
3340	38.158	65.854	4.232	82.750		78.518	
3360	37.028	65.930	4.234	82.650		78.416	
3380	36.582	65.727	4.430	82.550		78.120	
3400	36.366	65.524	4.562	82.450		77.888	
3420	36.151	65.321	4.695	82.350		77.654	
3440	35.932	65.122	4.841	82.262		77.420	
3460	35.672	64.964	4.987	82.173		77.186	
3480	35.313	64.907	5.133	82.085		76.953	
3500	34.799	65.075	4.876	81.997		77.121	
3520	34.075	65.349	4.658	81.909		77.252	
3540	33.085	65.975	4.684	81.821		77.138	
3560	31.788	66.937	5.574	81.733		76.158	
3580	30.174	68.237	5.555	81.645		76.089	
3600	28.244	69.878	5.460	81.557		76.097	

THROUGH CHAINAGE

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW — DFCC ROW LINE
- IR-TOE — IR-TOE — EXISTING IR TOE LINE
- TOEL — TOEL — DFCC TOE LINE
- FLOW DIRECTION

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR UP LINK LINE)
FROM KM. 2/400 TO KM. 3/600

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 4 8	A1	C	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated

DRAWING STAGE

☑ FOR APPROVAL
☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.
REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.
OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	19/05/2016	KC	
CHKD.	19/05/2016		
APPD.	19/05/2016	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Prasenjit Ganguly	
APPD.	02.07.19	NISHEETH K. SINGH	02.07.19

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	R.Amerikanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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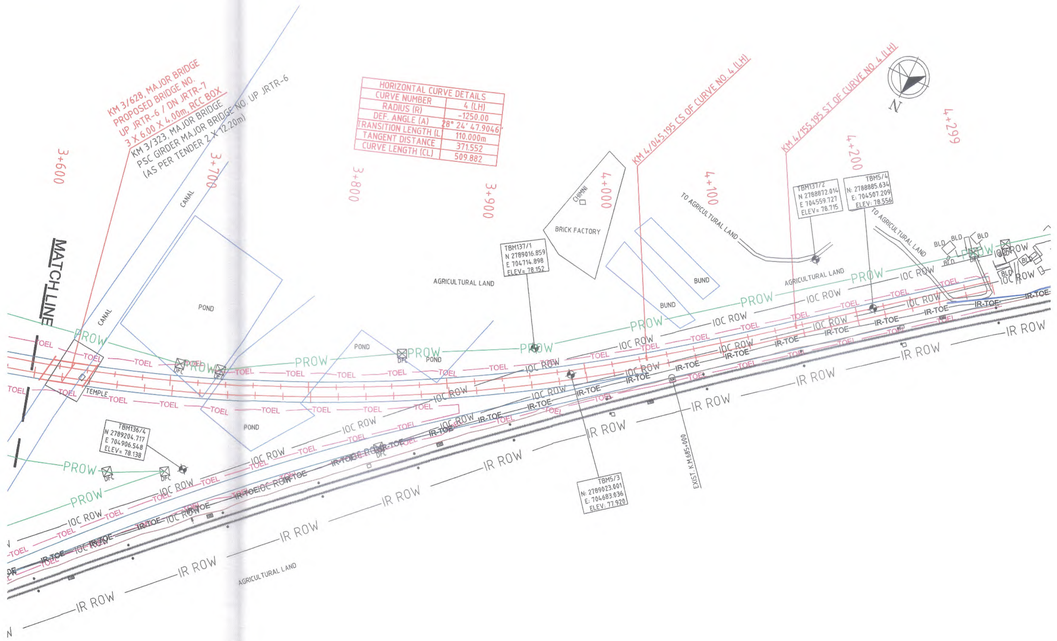
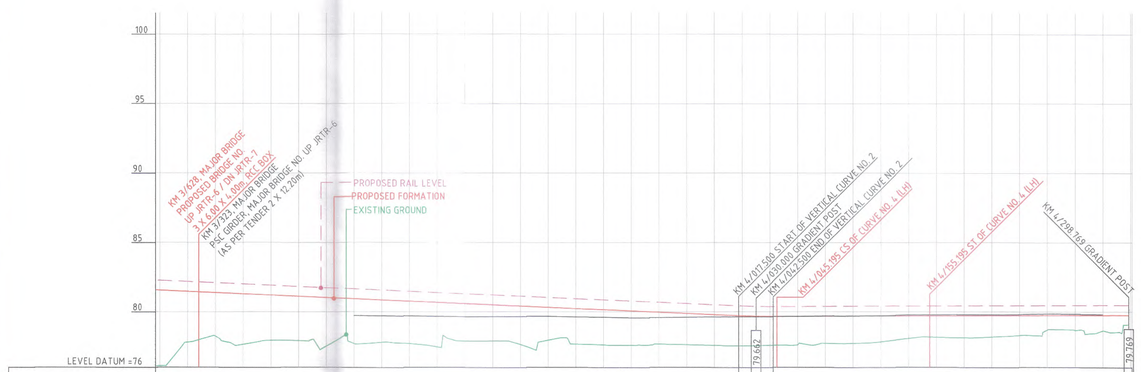
Chainage CH- 3600 CH- 4298

HOWRAH ⟵ ⟶ DELHI



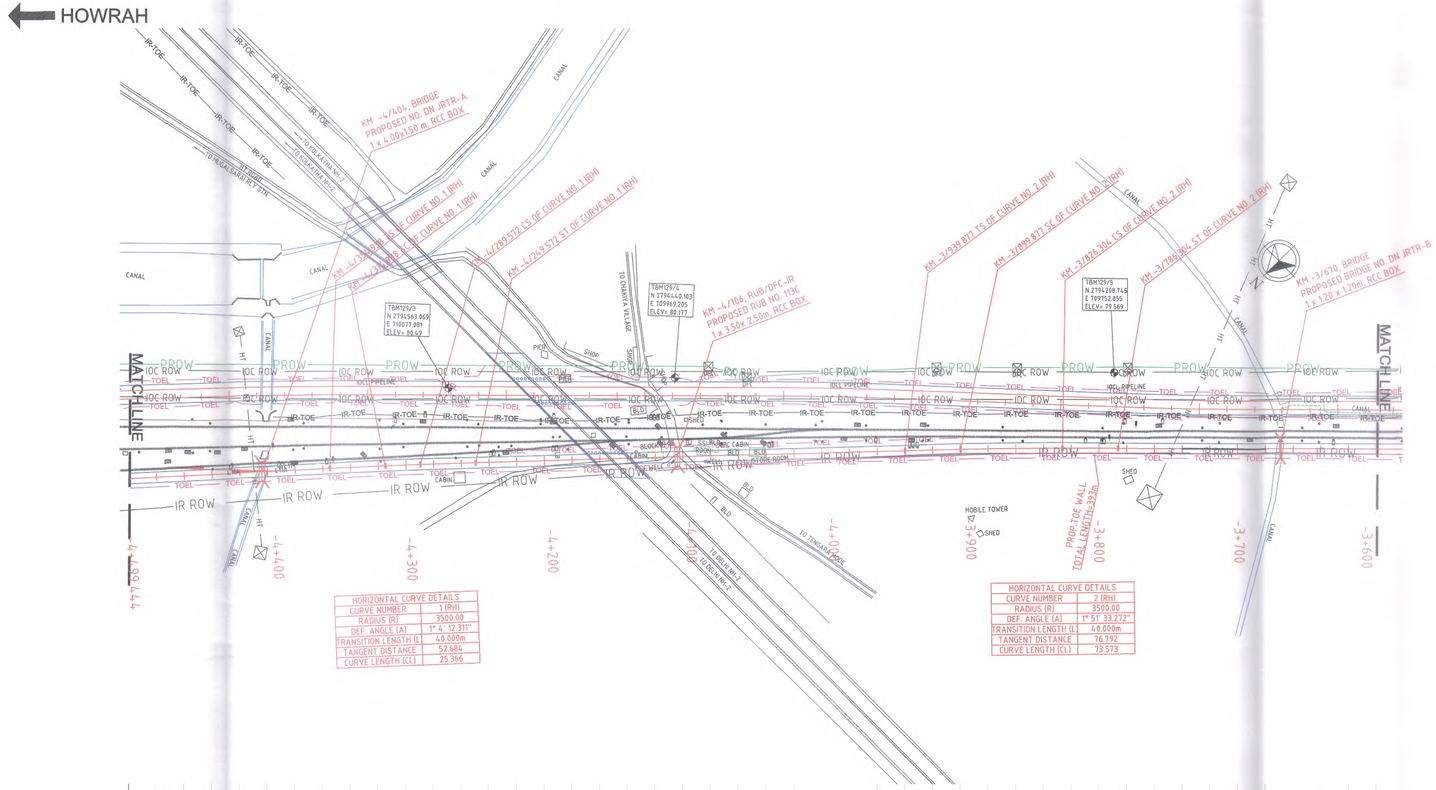


| | | |

Chainage CH- -4500 CH- -3600

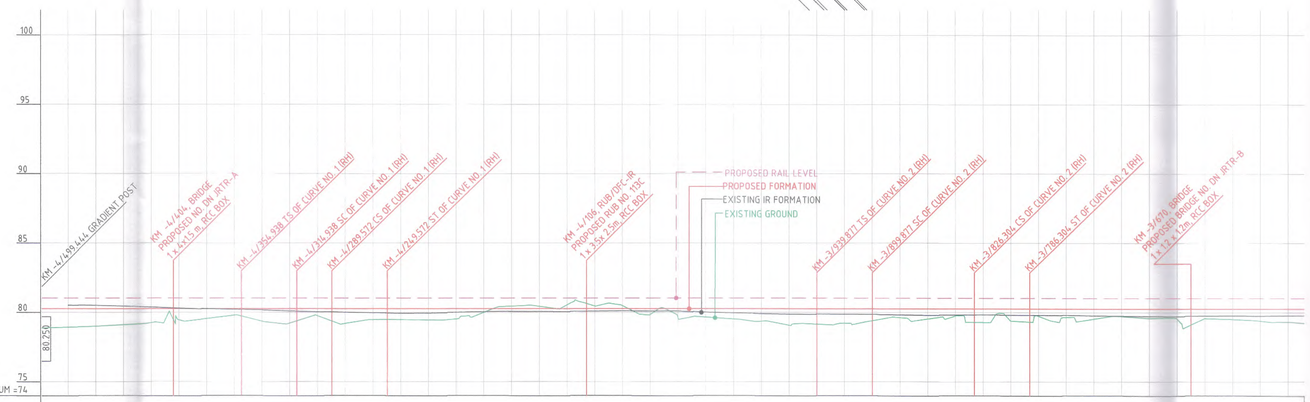
SECTION-CP-201

HOWRAH ⟵ ⟶ DELHI



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	1 (RH)
RADIUS (R)	3500.00
DEF. ANGLE (A)	1° 4' 12.311"
TRANSITION LENGTH (L)	40.000m
TANGENT DISTANCE	52.684
CURVE LENGTH (CL)	25.366

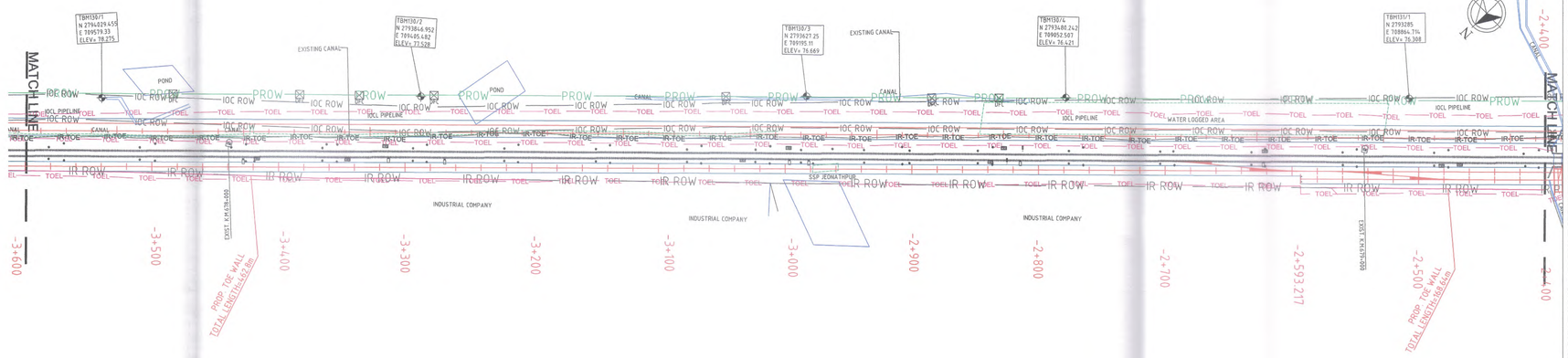
HORIZONTAL CURVE DETAILS	
CURVE NUMBER	2 (RH)
RADIUS (R)	3500.00
DEF. ANGLE (A)	1° 51' 33.272"
TRANSITION LENGTH (L)	40.000m
TANGENT DISTANCE	76.792
CURVE LENGTH (CL)	73.573

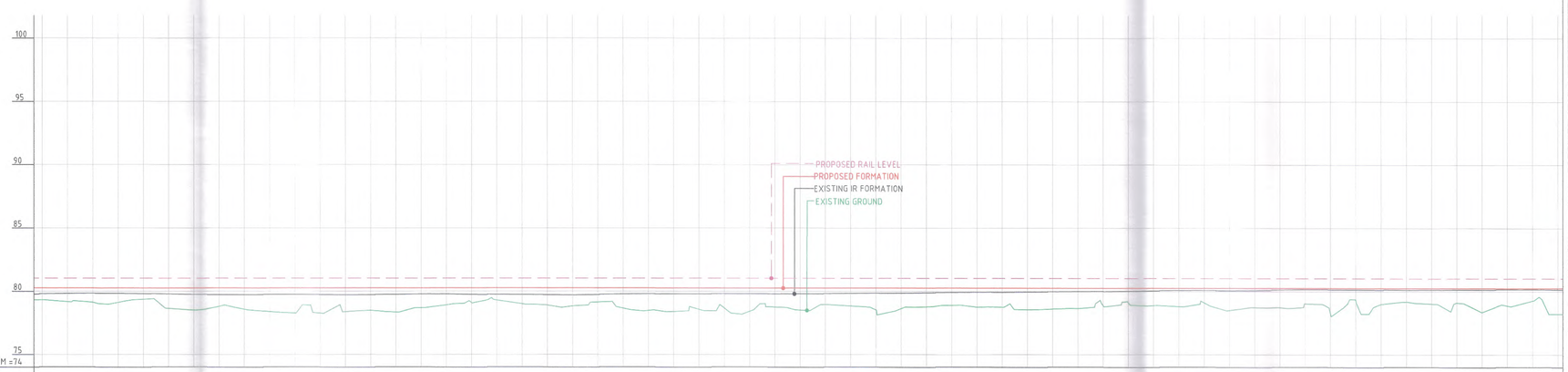


| | | |

Chainage CH- -3600 CH- -2400

HOWRAH ⟵ ⟶ DELHI





VERTICAL: L=2199.444m G=0.000% | L=2199.444m G=0.000%

HORIZONTAL: L=1769.316m | L=1769.316m

CHAINAGE	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS
-3600	8.073	0.940	80.250	79.792	79.310
-3580	8.061	1.084	80.250	79.819	79.166
-3560	8.045	1.127	80.250	79.838	79.123
-3540	8.044	1.148	80.250	79.841	79.102
-3520	8.048	0.894	80.250	79.823	79.356
-3500	8.045	1.614	80.250	79.776	78.636
-3480	8.032	1.738	80.250	79.740	78.512
-3460	8.015	1.456	80.250	79.734	78.794
-3440	8.000	1.680	80.250	79.738	78.570
-3420	7.990	1.867	80.250	79.740	78.383
-3400	7.988	1.983	80.250	79.740	78.267
-3380	7.978	1.988	80.250	79.737	78.262
-3360	7.955	1.878	80.250	79.726	78.372
-3340	7.949	1.762	80.250	79.732	78.488
-3320	7.924	1.910	80.250	79.746	78.340
-3300	7.905	1.562	80.250	79.778	78.688
-3280	7.898	1.341	80.250	79.791	78.909
-3260	7.897	1.154	80.250	79.765	79.096
-3240	7.887	0.964	80.250	79.745	79.286
-3220	7.875	1.253	80.250	79.736	78.997
-3200	7.861	1.360	80.250	79.723	78.890
-3180	7.847	1.430	80.250	79.722	78.820
-3160	7.841	1.110	80.250	79.747	79.140
-3140	7.814	1.591	80.250	79.776	78.659
-3120	7.787	1.777	80.250	79.797	78.473
-3100	7.749	1.860	80.250	79.807	78.390
-3080	7.765	1.687	80.250	79.807	78.563
-3060	7.760	1.597	80.250	79.801	78.663
-3040	7.747	1.642	80.250	79.805	78.608
-3020	7.736	1.507	80.250	79.806	78.743
-3000	7.718	1.735	80.250	79.816	78.515
-2980	7.703	1.302	80.250	79.820	78.948
-2960	7.712	1.417	80.250	79.840	78.833
-2940	7.704	1.730	80.250	79.857	78.520
-2920	7.687	1.622	80.250	79.869	78.628
-2900	7.660	1.488	80.250	79.894	78.762
-2880	7.634	1.361	80.250	79.913	78.889
-2860	7.606	1.497	80.250	79.927	78.753
-2840	7.584	1.514	80.250	79.942	78.736
-2820	7.566	1.695	80.250	79.961	78.555
-2800	7.553	1.643	80.250	79.977	78.607
-2780	7.551	1.608	80.250	79.985	78.642
-2760	7.548	1.368	80.250	79.997	78.882
-2740	7.549	1.150	80.250	80.035	79.100
-2720	7.542	1.376	80.250	80.054	78.874
-2700	7.519	1.452	80.250	80.076	78.798
-2680	7.488	1.143	80.250	80.082	79.107
-2660	7.459	1.749	80.250	80.078	78.501
-2640	7.438	1.524	80.250	80.089	78.726
-2620	7.416	1.524	80.250	80.123	78.726
-2600	7.374	1.220	80.250	80.147	79.030
-2580	7.345	2.001	80.250	80.147	78.249
-2560	7.317	0.964	80.250	80.146	79.286
-2540	7.293	1.266	80.250	80.134	78.984
-2520	7.305	1.068	80.250	80.120	79.182
-2500	7.294	1.226	80.250	80.123	79.024
-2480	7.261	1.139	80.250	80.150	79.111
-2460	7.239	1.882	80.250	80.152	78.368
-2440	7.219	1.378	80.250	80.159	78.872
-2420	7.194	0.977	80.250	80.163	79.273
-2400	7.168	2.037	80.250	80.154	78.213

THROUGH CHAINAGE

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW — DFCC ROW LINE
- IR-TOE — IR-TOE — EXISTING IR TOE LINE
- TOEL — TOEL — DFCC TOE LINE

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. -3/600 TO KM. -2/400

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 1	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018		
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Reetpalli Gayatha	
APPD.	02.07.19	NISHEETH K. SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	P. Amirtkanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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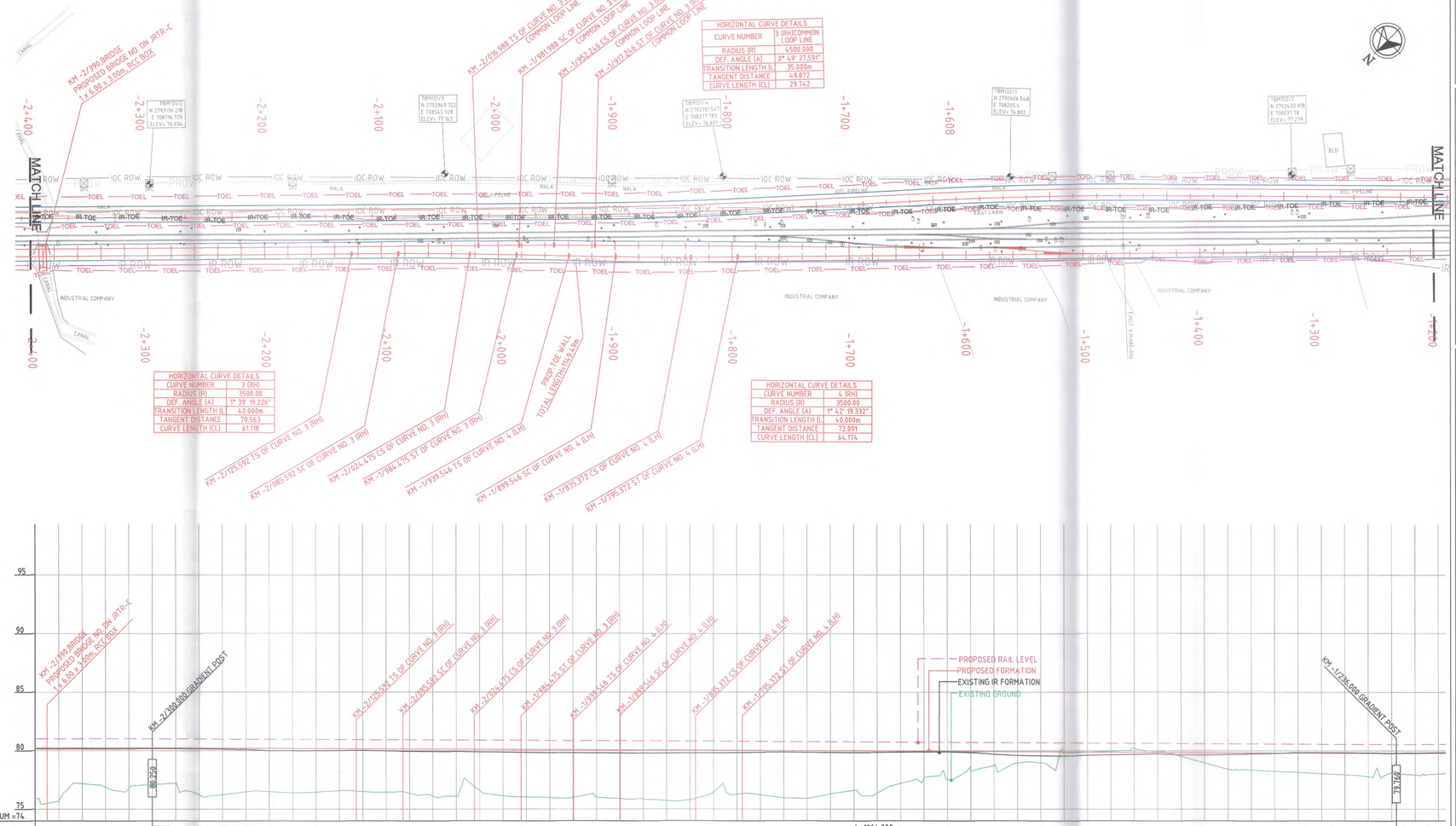
Chainage CH- -2400 CH- -1200

HOWRAH ← → DELHI



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	3 (RH)COMMON LOOP LINE
RADIUS (R)	4500.000
DEF. ANGLE (A)	0° 4.9' 27.591"
TRANSITION LENGTH (L)	35.000m
TANGENT DISTANCE	49.872
CURVE LENGTH (CL)	29.742

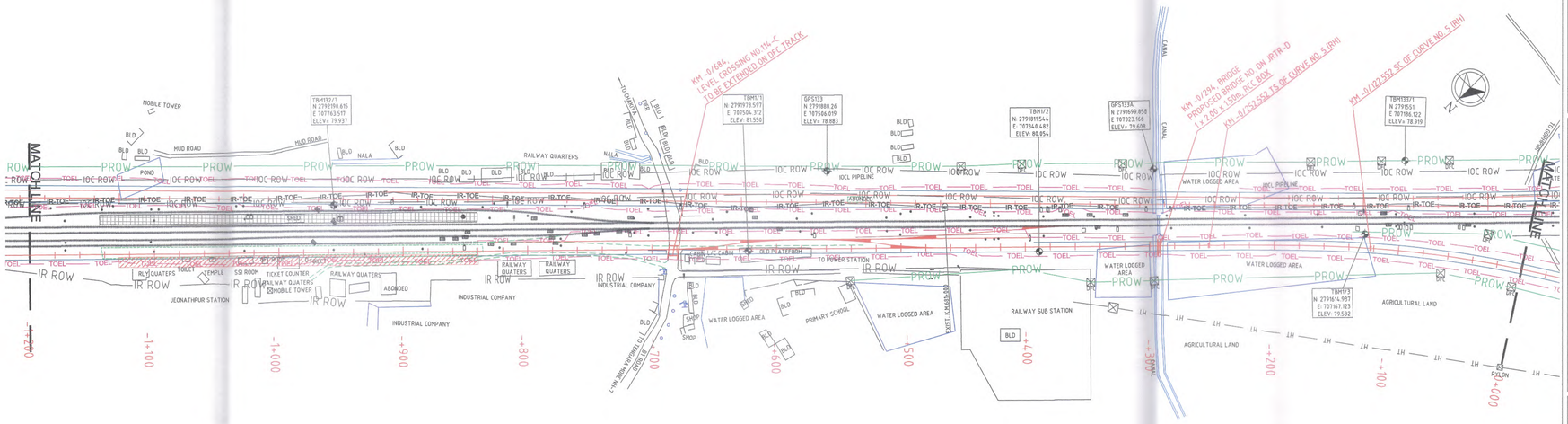
HORIZONTAL CURVE DETAILS	
CURVE NUMBER	3 (RH)
RADIUS (R)	3500.00
DEF. ANGLE (A)	1° 39' 19.226"
TRANSITION LENGTH (L)	40.000m
TANGENT DISTANCE	70.563
CURVE LENGTH (CL)	61.118

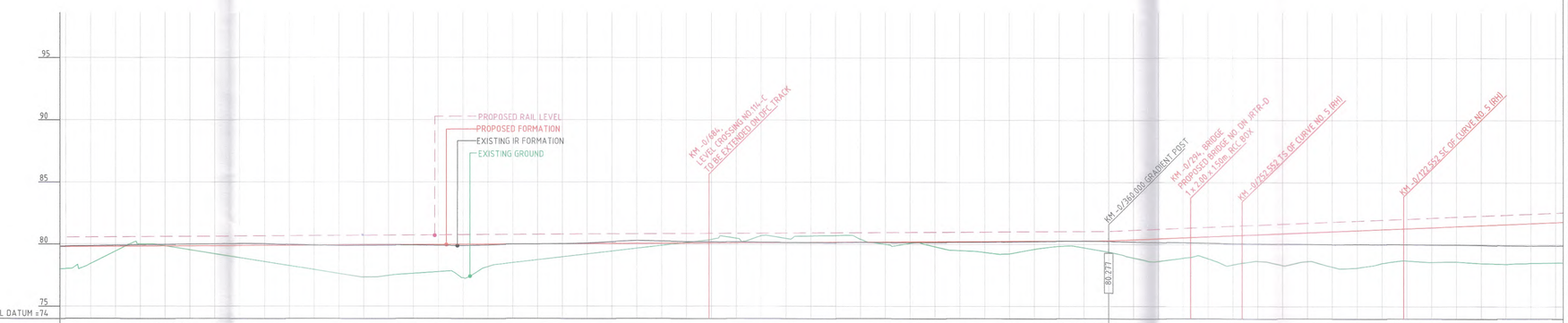
HORIZONTAL CURVE DETAILS	
CURVE NUMBER	4 (RH)
RADIUS (R)	3500.00
DEF. ANGLE (A)	1° 4.2' 19.332"
TRANSITION LENGTH (L)	40.000m
TANGENT DISTANCE	72.691
CURVE LENGTH (CL)	64.174

| | | |

Chainage CH- -1200 CH- 0

HOWRAH ← → DELHI





VERTICAL: G=0.059% L=876.000m; G=0.059% L=876.000m; G=0.417% L=980.000m

HORIZONTAL: L=1542.820m; L=1542.820m; L=130.000m; R= 875.000m; L =271.097m

CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR DN LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR DN LINE TRACK	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS	THROUGH CHAINAGE
-1200			11.598	1.763	79.781	79.834	78.018	
-1180			11.538	1.370	79.793	79.857	78.423	
-1160			11.469	0.386	79.805	79.894	79.419	
-1140			11.408	-0.195	79.817	79.944	80.012	
-1120			11.362	-0.020	79.828	79.959	79.848	
-1100			11.337	0.309	79.840	79.986	79.531	
-1080			11.288	0.638	79.852	80.001	79.214	
-1060			11.261	0.967	79.864	80.040	78.897	
-1040			11.591	1.296	79.876	80.037	78.580	
-1020			12.016	1.624	79.887	79.968	78.263	
-1000			12.442	1.953	79.899	79.907	77.946	
-980			12.418	2.282	79.911	79.885	77.629	
-960			12.372	2.576	79.923	79.912	77.347	
-940			12.358	2.459	79.935	79.924	77.476	
-920			12.312	2.307	79.946	79.917	77.639	
-900			12.250	2.181	79.958	79.892	77.777	
-880			12.202	2.490	79.970	79.880	77.280	
-860			12.143	1.806	79.982	79.926	78.176	
-840			12.075	1.495	79.994	80.001	78.499	
-820			11.886	1.273	80.005	80.005	78.732	
-800			11.844	1.052	80.017	80.030	78.965	
-780			12.245	0.830	80.029	80.102	79.199	
-760			13.355	0.609	80.041	80.206	79.432	
-740			15.064	0.388	80.053	80.287	79.665	
-720			16.031	0.165	80.064	80.249	79.899	
-700			16.863	-0.056	80.076	80.216	80.132	
-680			16.869	-0.292	80.088	80.200	80.380	
-660			16.874	-0.375	80.100	80.185	80.475	
-640			16.872	-0.573	80.112	80.167	80.685	
-620			16.868	-0.349	80.123	80.153	80.472	
-600			16.864	-0.516	80.135	80.145	80.651	
-580			16.859	-0.544	80.147	80.140	80.691	
-560			16.841	-0.246	80.159	80.151	80.405	
-540			16.830	0.178	80.171	80.141	79.993	
-520			16.805	0.110	80.182	80.145	80.072	
-500			16.781	0.391	80.194	80.159	79.803	
-480			16.768	0.711	80.206	80.166	79.495	
-460			16.755	0.868	80.218	80.180	79.350	
-440			16.731	1.010	80.229	80.207	79.219	
-420			16.691	0.646	80.241	80.235	79.595	
-400			16.647	0.417	80.253	80.264	79.836	
-380			16.649	0.546	80.265	80.259	79.719	
-360			16.605	0.898	80.277	80.238	79.379	
-340			16.544	1.460	80.360	80.215	78.900	
-320			16.573	1.807	80.443	80.167	78.636	
-300			16.577	1.629	80.527	80.142	78.898	
-280			16.595	1.756	80.610	80.113	78.854	
-260			16.595	2.341	80.693	80.072	78.352	
-240			16.599	2.131	80.777	80.065	78.646	
-220			16.685	2.548	80.860	80.045	78.312	
-200			16.784	2.317	80.943	80.027	78.626	
-180			17.147	2.839	81.027	80.003	78.188	
-160			17.772	3.002	81.110	80.027	78.108	
-140			18.698	2.714	81.193	80.021	78.479	
-120	12.082	22.959	20.869	2.585	81.277	80.005	78.692	
-100	13.486	20.019	21.844	2.776	81.360	79.988	78.584	
-80	15.361	17.379	24.175	2.844	81.443	79.990	78.599	
-60	17.710	15.370	26.958	3.046	81.527	79.967	78.481	
-40	20.542	16.204	30.235	3.193	81.610	79.921	78.417	
-20	21.451	16.588	33.937	3.177	81.693	79.898	78.516	
0	20.889	16.760	38.248	3.246	81.777	79.918	78.531	

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW — DFCC ROW LINE
- IR-TOE — IR-TOE — EXISTING IR TOE LINE
- TOEL — TOEL — DFCC TOE LINE

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. -1/200 TO KM. 0/000

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 3	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018	TC	
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Prashanth Gangadhar	
APPD.	02.07.19	NISHEETA K. SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	R.Amerikanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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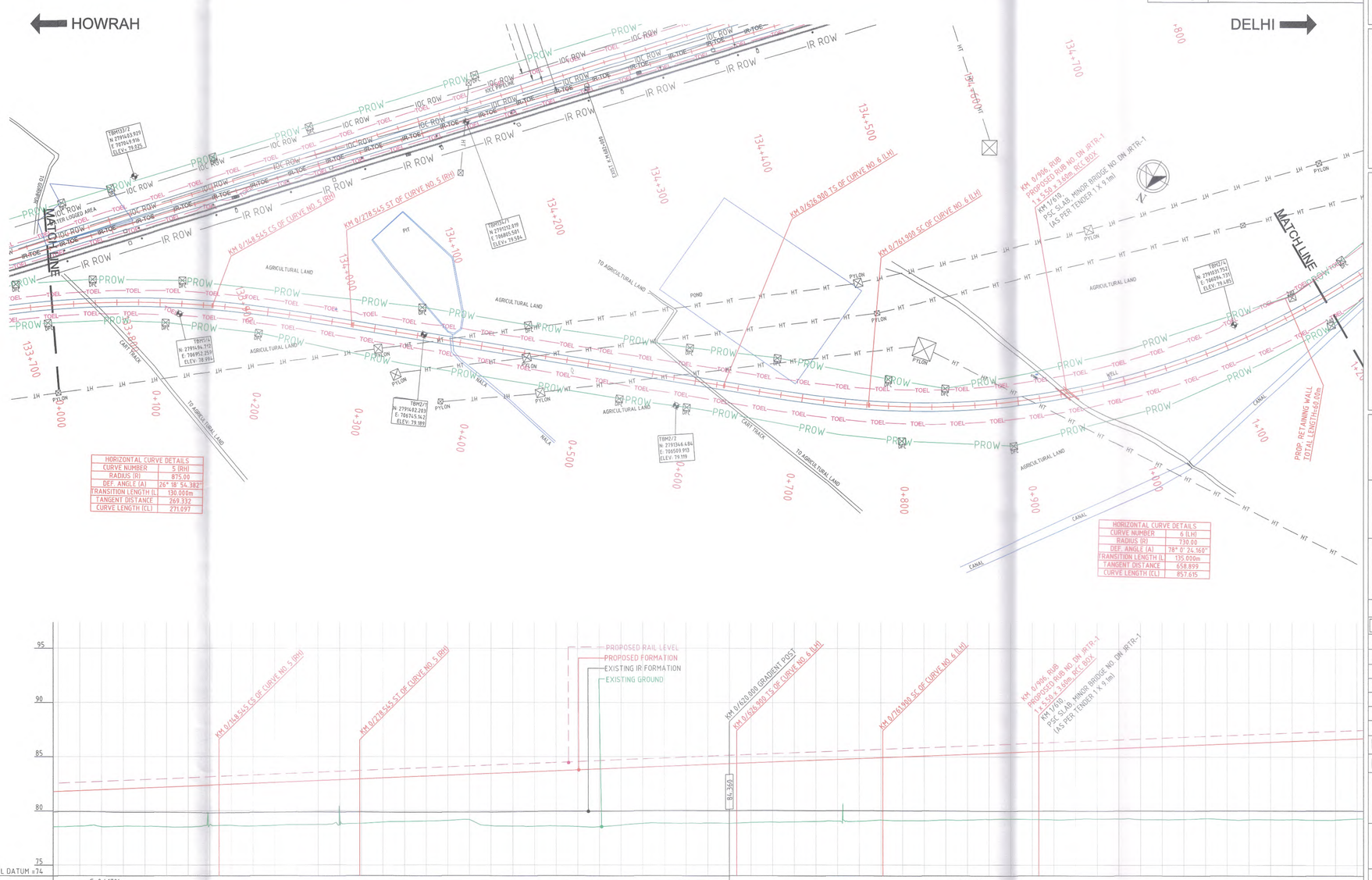
Chainage CH- 0 CH- 1200

HOWRAH ⟵ ⟶ DELHI



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	5 (RH)
RADIUS (R)	875.00
DEF. ANGLE (A)	26° 18' 54.382"
TRANSITION LENGTH (L)	130.000m
TANGENT DISTANCE	269.332
CURVE LENGTH (CL)	271.097

HORIZONTAL CURVE DETAILS	
CURVE NUMBER	6 (LH)
RADIUS (R)	730.00
DEF. ANGLE (A)	78° 0' 24.560"
TRANSITION LENGTH (L)	135.000m
TANGENT DISTANCE	658.899
CURVE LENGTH (CL)	857.615

VERTICAL: G=0.417% L=980.000m; G=0.417% L=980.000m; G=0.400% L=947.500m

HORIZONTAL: R = 875.000m, L =271.097m; L =130.000m; L=348.355m; L=135.000m; R=-730.000m, L=857.615m

CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR DN LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR DN LINE TRACK	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS
0	20.889	16.760	38.248	3.246	81.777	79.918	78.531
20	20.795	17.198	43.037	3.270	81.860	79.929	78.590
40	21.041	17.187	48.434	3.407	81.943	79.906	78.536
60	20.347	17.212	54.271	3.448	82.027	79.878	78.579
80	20.121	17.963	60.786	3.541	82.110	79.880	78.569
100	20.364	18.264	67.926	3.671	82.193	79.867	78.522
120	21.005	19.182	75.511	3.770	82.277	79.846	78.507
140	20.131	20.090	83.889	3.666	82.360	79.814	78.704
160	19.722	20.554	92.809	3.795	82.443	79.827	78.648
180	19.728	20.620	102.226	3.944	82.527	79.856	78.583
200	20.076	20.911	111.958	3.966	82.610	79.864	78.644
220	20.691	22.231	121.954	3.979	82.693	79.850	78.714
240	21.503	23.362	132.101	4.050	82.777	79.904	78.727
260	22.438	24.372	142.220	2.982	82.860	79.887	78.878
280	23.425	25.330	152.208	4.112	82.943	79.885	78.831
300	24.417	26.284	162.087	4.073	83.027	79.862	78.954
320	25.408	27.238	171.922	4.107	83.110	79.871	79.003
340	26.400	27.642	181.822	4.152	83.193	79.881	79.041
360	26.335	27.585	191.713	4.176	83.277	79.870	79.101
380	26.259	27.527	201.552	4.176	83.360	79.870	79.184
400	26.183	27.470	211.428	4.835	83.443	79.882	78.608
420	26.107	27.412	221.320	4.952	83.527	79.923	78.575
440	26.049	27.355	231.155	5.042	83.610	79.948	79.568
460	26.533	27.297	241.045	5.094	83.693	79.964	78.599
480	27.018	27.240	250.931	5.231	83.777	79.965	78.546
500	27.502	27.182	260.820	5.338	83.860	79.977	78.522
520	27.986	27.125	270.668	5.279	83.943	79.983	78.664
540	28.471	26.861	280.555	5.195	84.027	80.006	78.832
560	28.955	26.192	290.385	5.247	84.110	80.015	78.863
580	29.440	25.523	300.269	5.346	84.193	80.030	78.847
600	30.134	25.000	310.142	5.402	84.277	80.021	78.875
620	31.036	25.030	319.985	5.529	84.360	80.014	78.831
640	31.933	25.064	329.717	5.516	84.440	80.028	78.924
660	32.769	25.447	338.707	5.560	84.520	80.038	78.960
680	32.897	26.070	346.884	5.621	84.600	80.033	78.979
700	31.997	26.919	354.159	5.662	84.680	80.022	79.018
720	30.810	28.080	360.389	5.702	84.760	80.017	79.058
740	29.259	29.427	365.661	5.800	84.840	80.018	79.840
760	27.265	29.804	369.996	5.773	84.920	80.025	79.147
780	24.782	30.736	373.628	5.907	85.000	80.024	79.993
800	22.261	31.814	376.900	5.988	85.080	80.012	79.992
820	19.387	32.667	379.852	5.990	85.160	80.000	79.170
840	17.849	34.096	382.524	6.085	85.240	79.993	79.155
860	20.199	36.107	384.909	6.106	85.320	79.988	79.214
880	22.004	38.766	386.995	6.157	85.400	79.986	79.243
900	23.271	39.191	388.787	6.263	85.480	79.989	79.217
920	24.526	36.638	390.301	6.381	85.560	79.993	79.179
940	25.959	34.674	391.538	6.412	85.640	80.001	79.228
960	26.860	33.292	392.512	6.456	85.720	80.009	79.264
980	27.232	32.486	393.257	6.527	85.800	80.010	79.273
1000	27.076	32.252	393.748	6.668	85.880	80.012	79.212
1020	26.873	32.592	393.987	6.759	85.960	80.014	79.201
1040	27.255	32.479	393.974	6.812	86.040	80.018	79.228
1060	27.109	30.523	393.705	6.818	86.120	80.022	79.302
1080	26.435	29.145	393.163	6.992	86.200	80.026	79.208
1100	25.230	28.341	392.365	7.079	86.280	80.031	79.201
1120	23.490	28.107	391.331	7.152	86.360	80.032	79.208
1140	21.208	27.027	390.037	7.227	86.440	80.033	79.213
1160	18.375	26.343	388.475	7.347	86.520	80.033	79.173
1180	16.541	26.227	386.640	7.418	86.600	80.034	79.182
1200	18.492	25.021	384.526	7.390	86.680	80.032	79.290

THROUGH CHAINAGE

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — DFCC ROW LINE
- IR-TOE — EXISTING IR TOE LINE
- TOEL — DFCC TOE LINE

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE.
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. 0/000 TO KM. 1/200

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 4	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018		
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19		
APPD.	02.07.19	NISHEETH K. SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	P. Amritanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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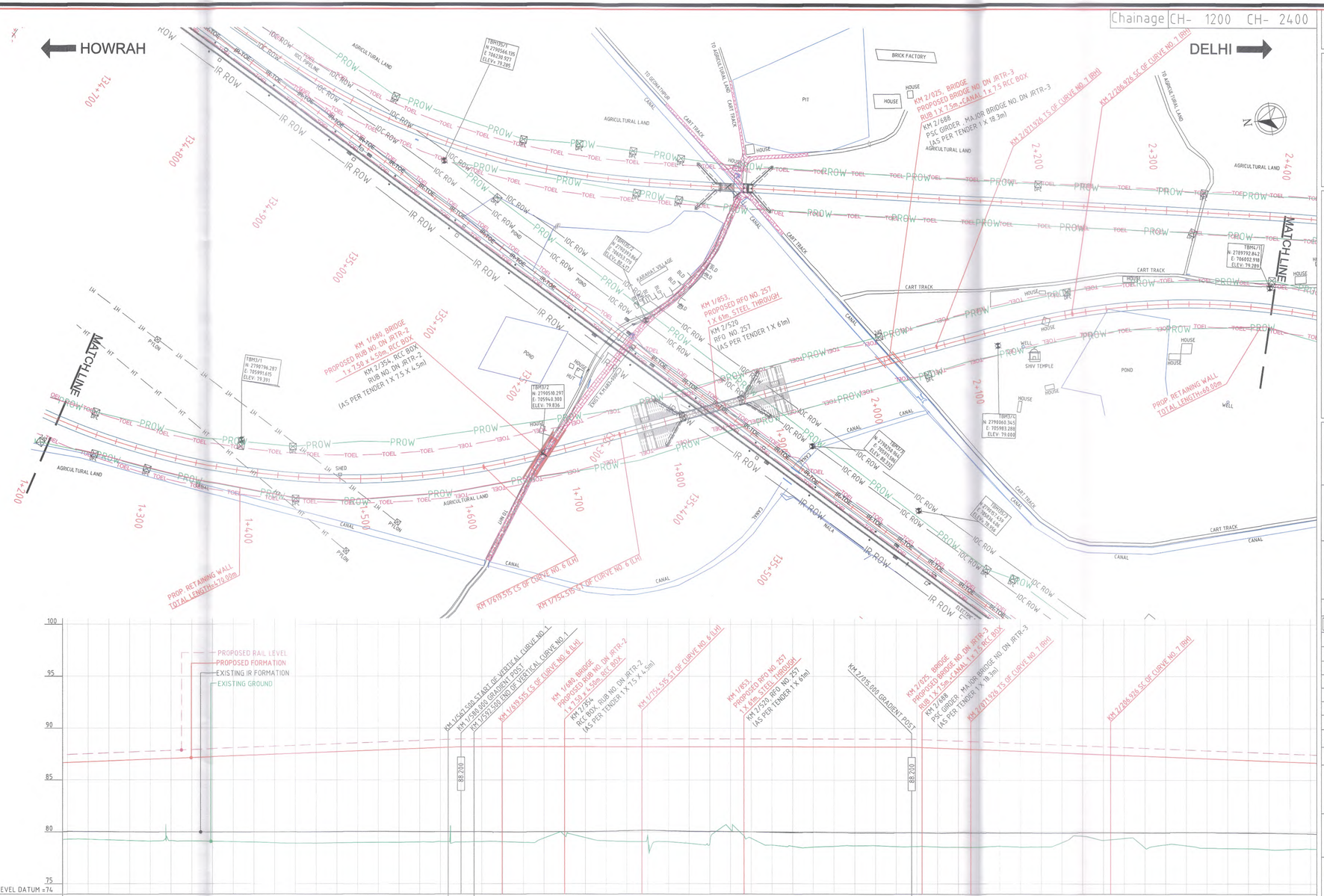

VERTICAL: G=0.400% L=947.500m; G=0.400% L=947.500m; L=25.0m R=-6250m; L=422.500m G=0.000%; L=422.500m G=0.000%; L=1175.000m G=-0.395%

HORIZONTAL: R=-730.000m L=857.615m; L=135.000m; L=317.411m; L=135.000m; R=675.000m L=845.918m

CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR DN LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR DN LINE TRACK	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS
1200	18.602	25.021	384.526	7.390	86.680	80.032	79.290
1220	19.722	21.339	382.130	7.486	86.760	80.021	79.274
1240	21.130	18.251	379.418	7.625	86.840	80.009	79.215
1260	22.918	16.706	376.365	7.767	86.920	79.997	79.153
1280	24.169	15.976	372.994	7.908	87.000	79.987	79.092
1300	24.922	15.691	369.307	7.939	87.080	79.982	79.141
1320	25.186	15.524	365.268	8.061	87.160	79.981	79.099
1340	24.919	15.917	360.862	8.159	87.240	79.987	79.081
1360	26.547	15.933	356.067	8.273	87.320	79.992	79.047
1380	27.876	16.255	350.875	8.390	87.400	79.991	79.010
1400	28.675	17.139	345.223	8.536	87.480	79.995	78.944
1420	28.947	18.187	339.072	8.661	87.560	80.007	78.899
1440	29.980	20.418	332.457	8.731	87.640	80.025	78.909
1460	32.531	20.249	325.300	8.776	87.720	80.039	78.944
1480	34.543	20.644	317.532	8.833	87.800	80.044	78.967
1500	36.024	19.806	309.150	8.890	87.880	80.049	78.990
1520	35.218	18.770	300.129	8.967	87.960	80.057	78.993
1540	34.570	18.297	290.335	9.005	88.040	80.049	79.035
1560	35.742	18.386	279.730	9.056	88.120	80.036	79.064
1580	36.391	19.037	268.258	9.168	88.188	80.026	79.020
1600	36.518	18.672	255.792	9.136	88.200	80.040	79.064
1620	36.125	18.349	242.268	9.147	88.200	80.018	79.053
1640	35.218	18.573	227.031	9.214	88.200	80.007	78.986
1660	33.852	19.273	209.703	8.869	88.200	80.018	79.391
1680	32.096	21.057	190.266	8.550	88.200	80.028	79.650
1700	30.025	23.166	168.849	8.752	88.200	80.051	79.448
1720	27.735	25.081	145.796	9.068	88.200	80.078	79.132
1740	25.362	26.895	121.337	9.152	88.200	80.102	79.048
1760	23.002	28.763	96.147	8.568	88.200	80.148	79.632
1780	23.560	28.731	70.676	9.558	88.200	80.114	79.042
1800	24.117	27.806	45.264	9.316	88.200	80.076	78.884
1820	24.675	26.881	19.837	9.322	88.200	80.059	78.878
1840	24.841	25.955	5.552	7.979	88.200	80.018	80.221
1860	24.742	25.030	31.069	8.833	88.200	79.996	79.367
1880	24.644	24.642	56.409	9.487	88.200	79.956	78.773
1900	24.545	24.544	81.818	9.559	88.200	79.926	78.601
1920	24.447	24.445	107.105	9.681	88.200	79.947	78.519
1940	24.348	24.347	132.659	9.614	88.200	79.915	78.586
1960	24.249	24.248	157.931	9.557	88.200	79.910	78.643
1980	24.151	24.150	183.323	9.529	88.200	79.912	78.671
2000	24.052	24.051	208.715	9.610	88.200	79.903	78.590
2020	23.954	23.953	234.115	9.587	88.180	79.918	78.593
2040	23.704	23.854	259.524	9.549	88.101	79.884	78.552
2060	23.446	23.669	284.873	9.488	88.022	79.930	78.534
2080	23.168	22.569	310.128	9.400	87.943	79.926	78.543
2100	22.894	22.114	333.787	9.244	87.864	79.902	78.620
2120	22.032	22.957	355.073	9.237	87.785	79.903	78.548
2140	21.383	23.584	373.710	9.139	87.706	79.917	78.567
2160	21.040	23.911	389.503	8.638	87.627	79.922	78.989
2180	21.094	23.857	402.470	7.940	87.548	79.932	79.608
2200	21.640	23.340	412.633	8.254	87.469	79.932	79.215
2220	21.902	23.088	420.585	8.000	87.390	79.930	79.390
2240	22.502	22.509	427.773	8.810	87.311	79.934	78.501
2260	22.756	22.125	434.361	8.454	87.231	79.936	78.777
2280	21.560	23.226	440.407	8.477	87.152	79.939	78.675
2300	20.979	23.749	445.960	8.622	87.073	79.941	78.451
2320	21.009	23.702	451.066	8.573	86.994	79.931	78.421
2340	21.651	23.083	455.761	8.507	86.915	79.922	78.408
2360	22.907	21.888	460.081	8.524	86.836	79.892	78.312
2380	24.783	20.113	464.052	8.432	86.757	79.859	78.325
2400	26.552	18.516	467.701	8.369	86.678	79.828	78.369

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW — DFCC ROW LINE
- IR-TOE — IR-TOE — EXISTING IR TOE LINE
- TOEL — TOEL — DFCC TOE LINE

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE.
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. 1/200 TO KM. 2/400

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 5	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018	TG	
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Roopjyoti Gangopadhyay	
APPD.	02.07.19	NISHEETH K SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	P. Amarnath	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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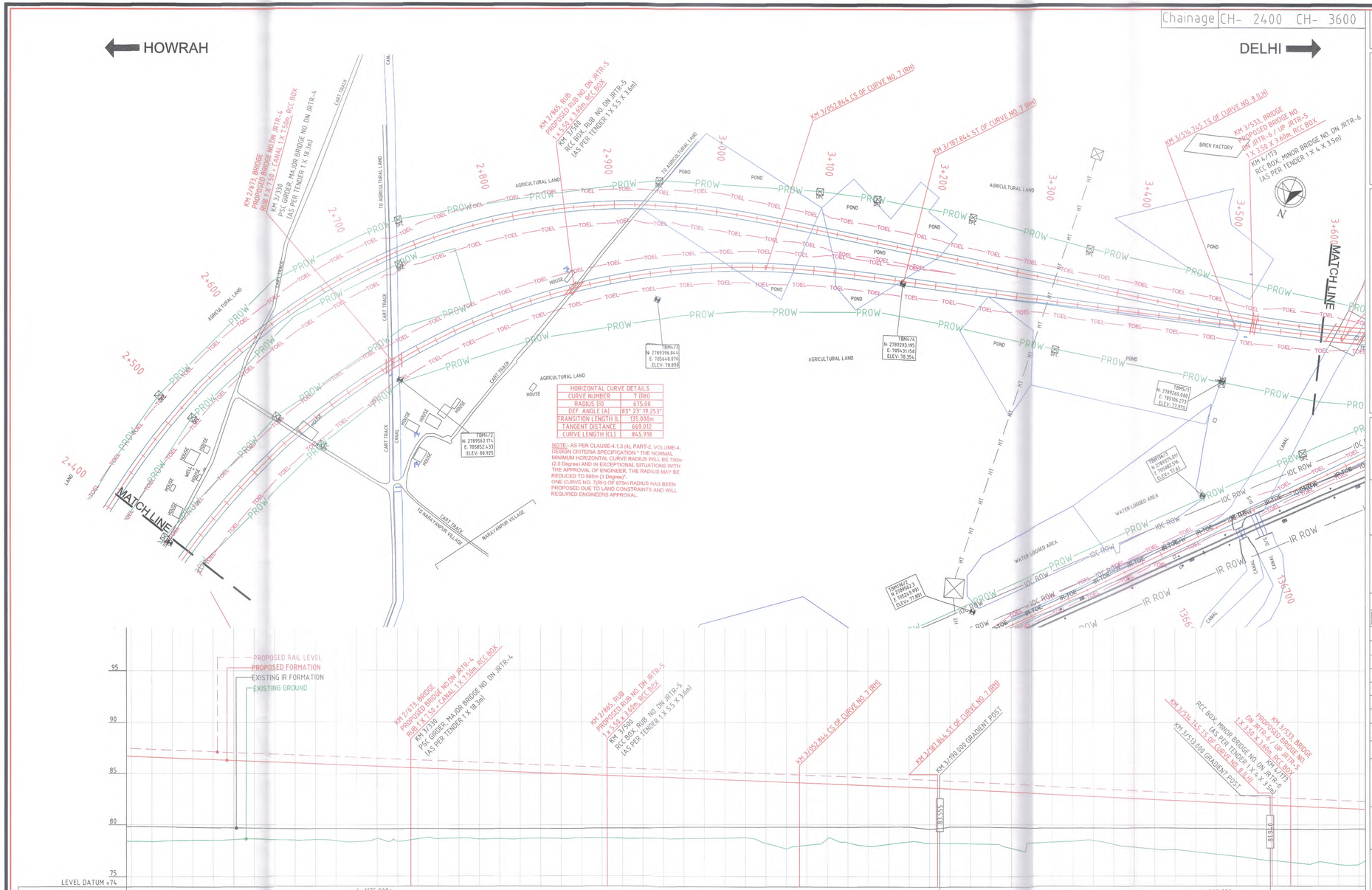
Chainage CH- 2400 CH- 3600



CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR DN LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR DN LINE TRACK	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS
2400	26.552	18.516	467.701	8.309	86.678	79.828	78.369
2420	24.382	21.336	471.049	8.251	86.599	79.798	78.348
2440	22.835	23.564	474.118	8.094	86.520	79.768	78.426
2460	21.906	25.207	476.924	7.969	86.441	79.739	78.472
2480	21.590	26.214	479.483	7.894	86.362	79.711	78.468
2500	21.886	26.710	481.810	7.738	86.283	79.683	78.545
2520	22.795	26.696	483.916	7.590	86.204	79.657	78.614
2540	24.321	26.053	485.810	7.582	86.125	79.651	78.543
2560	24.565	24.836	487.504	7.534	86.046	79.645	78.512
2580	22.887	24.418	489.006	7.401	85.966	79.639	78.565
2600	21.827	24.242	490.324	7.439	85.887	79.633	78.448
2620	21.381	23.494	491.460	7.451	85.808	79.634	78.357
2640	21.547	22.171	492.423	7.052	85.729	79.634	78.677
2660	22.375	20.267	493.217	7.260	85.650	79.634	78.390
2680	23.719	21.858	493.839	6.936	85.571	79.635	78.635
2700	25.193	25.512	494.298	6.848	85.492	79.636	78.644
2720	21.558	28.561	494.597	6.702	85.413	79.637	78.711
2740	18.567	31.197	494.736	6.730	85.334	79.638	78.604
2760	16.205	33.372	494.734	6.597	85.255	79.642	78.658
2780	109.626	34.971	494.577	6.533	85.176	79.647	78.643
2800	105.413	36.003	494.261	6.397	85.097	79.652	78.700
2820	101.278	37.536	493.784	6.362	85.018	79.657	78.656
2840	97.862	40.334	493.142	6.198	84.939	79.665	78.741
2860	95.149	42.555	492.328	6.125	84.860	79.676	78.735
2880	92.745	44.149	491.345	6.092	84.780	79.688	78.688
2900	90.936	45.040	490.188	6.014	84.701	79.700	78.687
2920	89.805	45.377	488.852	6.002	84.622	79.712	78.620
2940	89.121	45.161	487.317	5.937	84.543	79.722	78.606
2960	88.470	44.390	485.582	5.830	84.464	79.731	78.634
2980	84.859	44.304	483.646	5.734	84.385	79.740	78.651
3000	81.943	44.177	481.504	5.593	84.306	79.745	78.713
3020	79.710	43.494	479.146	6.062	84.227	79.746	78.165
3040	78.149	43.063	476.554	6.535	84.148	79.747	77.613
3060	77.253	42.681	473.658	6.099	84.069	79.749	77.970
3080	76.985	41.765	469.701	5.381	83.990	79.752	78.609
3100	77.188	40.383	464.332	5.679	83.911	79.754	78.232
3120	76.470	38.539	457.423	5.947	83.832	79.753	77.885
3140	76.081	36.336	449.082	5.687	83.753	79.754	78.066
3160	75.541	33.901	439.237	5.352	83.674	79.780	78.322
3180	74.414	33.352	428.023	5.421	83.595	79.566	78.174
3200	73.342	34.415	415.829	5.341	83.505	79.760	78.164
3220	72.273	35.477	403.490	5.278	83.405	79.763	78.127
3240	71.204	36.872	391.191	5.220	83.305	79.748	78.085
3260	69.198	38.614	378.841	5.523	83.205	79.729	77.682
3280	66.604	40.956	366.565	4.886	83.105	79.697	78.219
3300	64.010	42.099	354.183	4.689	83.005	79.686	78.316
3320	61.417	43.841	341.917	4.500	82.905	79.682	78.405
3340	58.823	45.583	329.542	4.324	82.805	79.670	78.481
3360	56.229	46.932	317.272	4.603	82.705	79.708	78.102
3380	54.322	48.181	305.099	4.789	82.605	79.690	77.816
3400	52.652	49.431	292.692	4.883	82.505	79.710	77.622
3420	50.983	50.680	280.301	4.827	82.405	79.695	77.578
3440	49.313	51.929	268.002	4.949	82.305	79.690	77.356
3460	47.643	53.178	255.699	5.071	82.205	79.675	77.134
3480	45.974	54.427	243.330	5.193	82.105	79.638	76.912
3500	44.304	55.676	231.028	5.350	82.005	79.602	76.655
3520	42.635	56.926	218.673	5.443	81.909	79.567	76.466
3540	40.952	58.205	206.030	5.571	81.821	79.582	76.250
3560	39.203	59.514	193.232	5.375	81.733	79.551	76.358
3580	37.326	61.098	180.505	5.541	81.645	79.570	76.104
3600	35.261	62.846	167.783	5.408	81.557	79.614	76.149

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — DFCC ROW LINE
- IR-TOE — EXISTING IR TOE LINE
- TOEL — DFCC TOE LINE

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
2. ALL COORDINATES ARE BASED ON WGS 84 PROJECTION IN UTM ZONE 44.
3. TOP WIDTH OF FORMATION IS 13.5M FOR DOUBLE LINE IN STRAIGHT SECTION.
4. CHAINAGE AND LEVELS AS SHOWN IN THE DRAWING IS BASED ON THE DFC DOWN LINE.
5. EQUILIBRIUM SPEED HAS BEEN TAKEN 85 KMPH.
6. TRACK CENTER BETWEEN MAIN LINES OF DFC HAS BEEN KEPT AS MIN. 6.0M AT STRAIGHT SECTION.
7. DRAIN SHALL BE PROVIDED BETWEEN IR AND DFC TRACKS TO DRAIN OUT RAINWATER.
8. PUBLIC UTILITIES,HT/LT LINES,ETC. INTERFERING DFC TRACKS SHALL BE RELOCATED
9. AT THE LOCATIONS WHERE FORMATION HEIGHT IS <1.75m, IT IS PROPOSED TO MAKE THE FORMATION HEIGHT TO 1.750m BY CUTTING THE EARTH
10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. 2/400 TO KM. 3/600

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 6	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018	TE	
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Deepesh Gupta	
APPD.	02.07.19	NISHEETH N. SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.19	ANURANJAN PRASAD	
NOC	06.07.19	R. Amirthanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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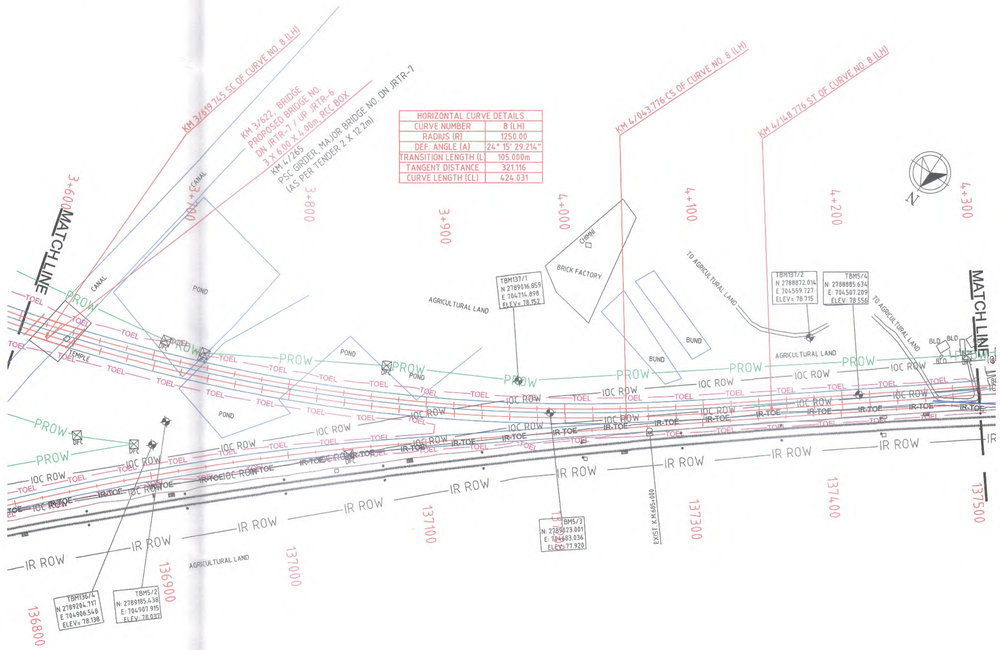
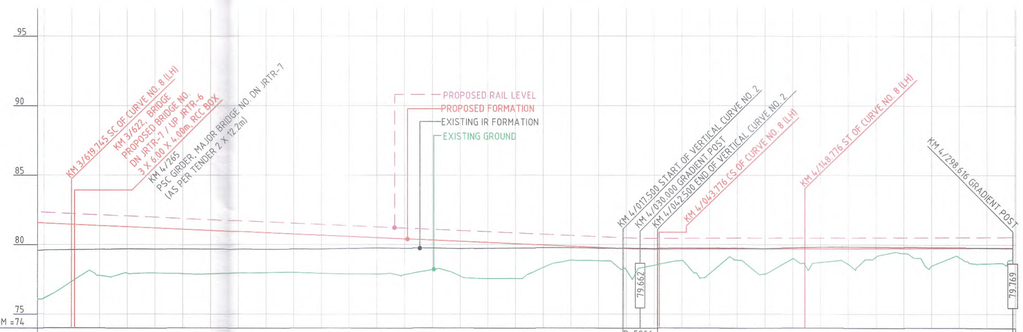
Chainage CH- 3600 CH- 4298

HOWRAH ⟵ ⟶ DELHI



HORIZONTAL CURVE DETAILS	
CURVE NUMBER	8 (LH)
RADIUS (R)	1250.00
DEF. ANGLE (Δ)	24° 15' 29.214"
TRANSITION LENGTH (L)	105.000m
TANGENT DISTANCE	321.116
CURVE LENGTH (CL)	424.031



VERTICAL: L=504.500m G=-0.441% | L=504.500m G=-0.441% | R=5206m L=25.0m | G=0.040% L=256.116m

HORIZONTAL: R=-1250.000m L=424.031m | L=105.000m | L=266.967m

CHAINAGE	LHS R.O.W DISTANCE FROM JEONATHPUR DN LINE TRACK	RHS R.O.W. DISTANCE FROM JEONATHPUR DN LINE TRACK	DIST. BETWEEN EX. IR MAIN TRACK & PROPOSED DFC TRACK AS PER DESIGN	FILL (+)/ CUT (-)	PROPOSED FORMATION LEVELS	EXISTING IR DN FORMATION LEVELS	GROUND LEVELS
3600	35.261	62.846	167.783	5.408	81.557	79.864	76.149
3620	32.947	62.960	155.570	4.127	81.469	79.635	77.342
3640	30.327	62.928	143.754	3.593	81.381	79.660	77.788
3660	27.382	63.232	132.501	3.350	81.292	79.716	77.942
3680	24.108	58.939	122.133	3.246	81.204	79.696	77.958
3700	20.501	48.993	112.275	3.201	81.116	79.686	77.915
3720	18.572	41.679	103.029	3.127	81.028	79.679	77.901
3740	18.354	39.893	94.354	2.985	80.940	79.674	77.955
3760	21.090	38.248	86.257	2.880	80.852	79.667	77.972
3780	23.502	36.672	78.598	2.765	80.764	79.672	77.999
3800	25.591	34.818	71.620	2.748	80.676	79.666	77.928
3820	27.361	32.746	65.025	2.711	80.588	79.713	77.877
3840	28.813	30.398	58.998	2.625	80.499	79.763	77.874
3860	29.950	28.093	53.406	2.580	80.411	79.735	77.831
3880	30.179	25.342	48.256	2.134	80.323	79.737	78.189
3900	29.746	22.112	43.675	2.492	80.235	79.697	77.743
3920	29.000	19.807	39.620	2.597	80.147	79.727	77.550
3940	27.940	17.102	35.945	2.569	80.059	79.744	77.550
3960	26.565	14.506	32.666	1.631	79.971	79.766	78.340
3980	40.372	12.135	29.806	1.008	79.883	79.761	78.875
4000	36.978	10.142	27.359	0.957	79.795	79.729	78.838
4020	33.705	8.480	25.338	1.518	79.707	79.749	78.189
4040	30.413	7.280	23.755	1.951	79.667	79.723	78.516
4060	27.254	6.421	22.540	0.818	79.674	79.731	78.856
4080	23.821	5.836	21.677	1.782	79.682	79.729	77.900
4100	21.456	6.180	21.101	0.806	79.690	79.747	78.884
4120	19.067	6.159	20.718	1.802	79.698	79.734	77.896
4140	16.921	5.427	20.509	0.701	79.706	79.781	79.005
4160	15.321	6.058	20.384	0.980	79.714	79.822	78.734
4180	14.397	6.062	20.349	1.116	79.722	79.852	78.666
4200	13.602	6.074	20.402	0.609	79.730	79.843	79.121
4220	13.009	6.043	20.555	0.351	79.738	79.829	79.387
4240	12.522	6.047	20.669	1.255	79.746	79.809	78.491
4260	11.788	6.051	21.092	0.662	79.754	79.797	79.092
4280	12.220	5.374	21.514	1.113	79.762	79.784	78.649
4298.676	12.451	5.492		0.790	79.769		78.979

THROUGH CHAINAGE

SECTION-CP-201

LEGEND:-

- EXISTING IR TRACK
- PROPOSED DFCC TRACK
- PROW — PROW — DFCC ROW LINE
- IR-TOE — IR-TOE — EXISTING IR TOE LINE
- TOEL — TOEL — DFCC TOE LINE

NOTES:-

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10. FOR LEGEND AND ABBREVIATION REFER RELEVANT DRAWING.

EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : EASTERN DEDICATED FREIGHT CORRIDOR (PACKAGE - 201)

TITLE : ALIGNMENT PLAN & PROFILE (JEONATHPUR DN LINK LINE) FROM KM. 3/600 TO KM. 4/298

DRAWING NO.	SIZE	REV	SCALE
P 2 AL 0 1 5 7	A1	D	HOR:- 1 : 2000, VER:- 1 : 200

REVIEWS

REV	DATE	REMARKS
A	15/02/2016	PRELIMINARY DESIGN
B	14/04/2016	Ltr No.PMCS/EDFC2/LTT/2016/00686 Comments Incorporated
C	19/05/2016	Ltr No.PMCS/EDFC2/LTT/2016/01196 Comments Incorporated
D	23/03/2018	AS PER REVISED ESP REVISION - E

DRAWING STAGE

☑ FOR APPROVAL

☐ GOOD FOR CONSTRUCTION

PMC : SYSTRA - Mott MacDonald JV

CONTRACTOR : GIL - SIL JV

DESIGN CONSULTANT: STUP Consultants Pvt. Ltd.

REGISTERED OFFICE : 1004-5 RAHEJA CHAMBERS, NARIMAN POINT, MUMBAI 400 021.

OFFICE OF ORIGIN KOLKATA

	DATE	NAME	SIGN.
DRAWN	23/03/2018	76	
CHKD.	23/03/2018		
APPD.	23/03/2018	S. MITRA	

SUBMITTED BY GIL-SIL JV

	DATE	NAME	SIGN.
CHKD.	02.07.19	Preetpal Singh	
APPD.	02.07.19	NISHEETH K. SINGH	

NOC BY SYSTRA - Mott MacDonald JV

	DATE	NAME	SIGN.
CHKD.	06.07.2019	ANURANJAN PRASAD	
NOC	06.07.2019	R. Amarkanos	

APPROVAL BY DFCC

	DATE	NAME	SIGN.
CHKD.			
APPD.			

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