



BID DOCUMENT

FOR

Design, supply, Construction, Installation, Testing and commissioning of 2x25 kV AC Electrification, signaling & Telecommunication, E&M and Associated Works on Design – Build Lump Sum Basis for Khurja – Pilkhani Section (approximately 220 Route Km of Single Line) of Eastern Dedicated Freight Corridor.

SYSTEM WORKS CONTRACT PACKAGE – 305

Issued on : 14.05.2018

ICB No.: HQ/SYS/EC/D-B/Khurja – Pilkhani

(Part – 4 Reference Document)

**EMPLOYER : DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD
(A GOVERNMENT OF INIDA ENTERPRISE)**

MINISTRY OF RAILWAYS

COUNTRY : INDIA

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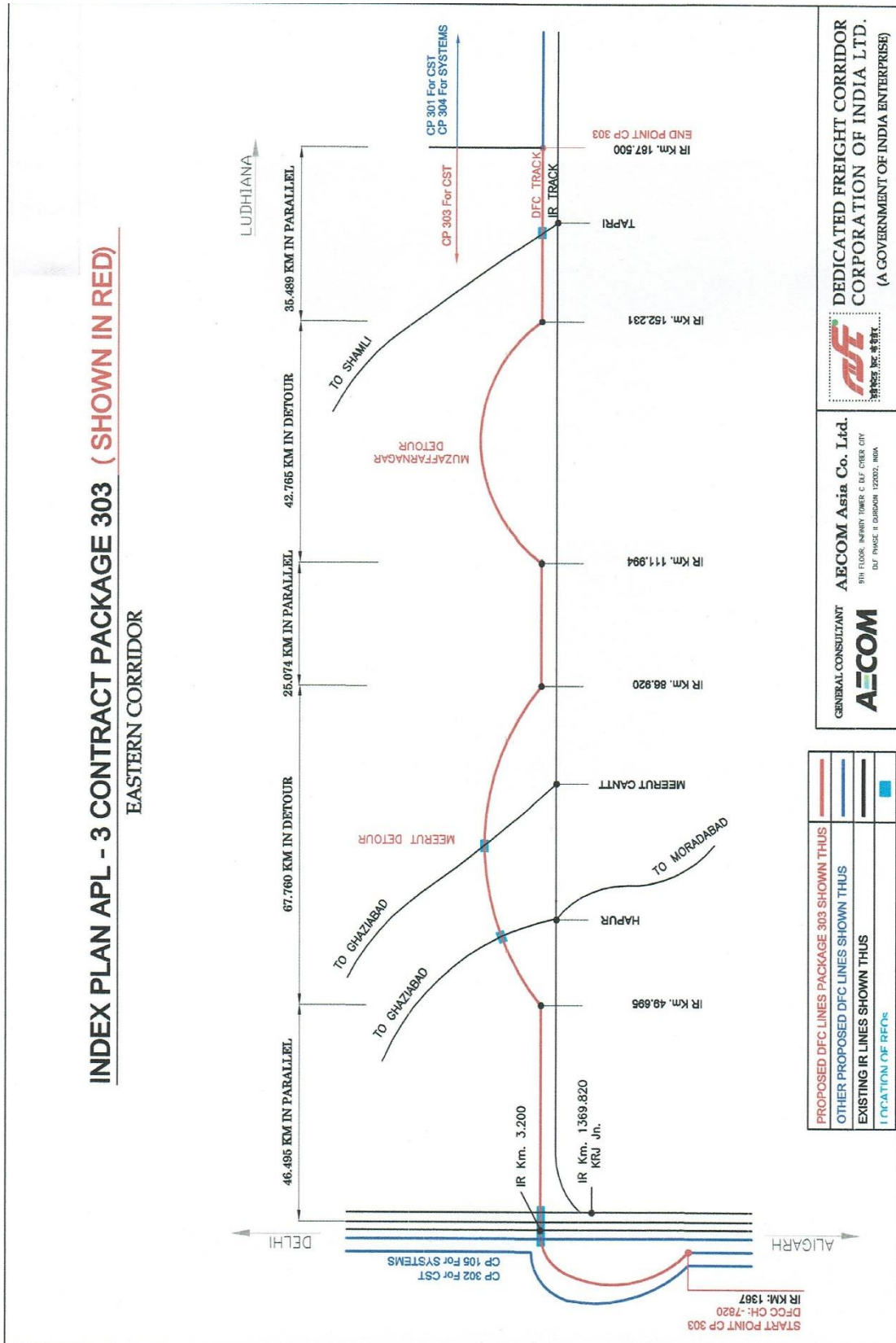
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1. ALIGNMENT PLANS, YARD PLANS AND BUILDING PLANS

1.1 INDEX PLAN



1.2 TENTATIVE ALIGNMENT PLANS

Khurja – Pilkhani (Drawings enclosed in separate booklet)

SN	DESCRIPTION	SHEET NO.	REVISION
1	PROJECT SHEET FROM CH : -7820 TO CH: -6620	1	-
2	PROJECT SHEET FROM CH : -6620 TO CH: -5420	2	-
3	PROJECT SHEET FROM CH : -5420 TO CH: -4220	3	-
4	PROJECT SHEET FROM CH : -4220 TO CH: -3020	4	-
5	PROJECT SHEET FROM CH : -3020 TO CH: -1820	5	-
6	PROJECT SHEET FROM CH : -1820 TO CH: -620	6	-
7	PROJECT SHEET FROM CH : -620 TO CH: 0	7	-
8	PROJECT SHEET FROM CH : 3200 TO CH: 4500	8	-
9	PROJECT SHEET FROM CH : 4500 TO CH: 5700	9	-
10	PROJECT SHEET FROM CH : 5700 TO CH: 6900	10	-
11	PROJECT SHEET FROM CH : 6900 TO CH: 8100	11	-
12	PROJECT SHEET FROM CH : 8100 TO CH: 9300	12	-
13	PROJECT SHEET FROM CH : 9300 TO CH: 10500	13	-
14	PROJECT SHEET FROM CH : 10500 TO CH: 11700	14	-
15	PROJECT SHEET FROM CH : 11700 TO CH: 12900	15	-
16	PROJECT SHEET FROM CH : 12900 TO CH: 14100	16	-
17	PROJECT SHEET FROM CH : 14100 TO CH: 15300	17	-
18	PROJECT SHEET FROM CH : 15300 TO CH: 16500	18	-
19	PROJECT SHEET FROM CH : 16500 TO CH: 17700	19	-
20	PROJECT SHEET FROM CH : 17700 TO CH: 18900	20	-
21	PROJECT SHEET FROM CH : 18900 TO CH: 20100	21	-
22	PROJECT SHEET FROM CH : 20100 TO CH: 21300	22	-
23	PROJECT SHEET FROM CH : 21300 TO CH: 22500	23	-
24	PROJECT SHEET FROM CH : 22500 TO CH: 23700	24	-
25	PROJECT SHEET FROM CH : 23700 TO CH: 24900	25	-
26	PROJECT SHEET FROM CH : 24900 TO CH: 26100	26	-
27	PROJECT SHEET FROM CH : 26100 TO CH: 27300	27	-
28	PROJECT SHEET FROM CH : 27300 TO CH: 28500	28	-
29	PROJECT SHEET FROM CH : 28500 TO CH: 29700	29	-
30	PROJECT SHEET FROM CH : 29700 TO CH: 30900	30	R1
31	PROJECT SHEET FROM CH : 30900 TO CH: 32100	31	-
32	PROJECT SHEET FROM CH : 32100 TO CH: 33300	32	-
33	PROJECT SHEET FROM CH : 33300 TO CH: 34500	33	-
34	PROJECT SHEET FROM CH : 34500 TO CH: 35700	34	-
35	PROJECT SHEET FROM CH : 35700 TO CH: 36900	35	-
36	PROJECT SHEET FROM CH : 36900 TO CH: 38100	36	-
37	PROJECT SHEET FROM CH : 38100 TO CH: 39300	37	-
38	PROJECT SHEET FROM CH : 39300 TO CH: 40500	38	-

SN	DESCRIPTION	SHEET NO.	REVISION
39	PROJECT SHEET FROM CH : 40500 TO CH: 41700	39	-
40	PROJECT SHEET FROM CH : 41700 TO CH: 42900	40	-
41	PROJECT SHEET FROM CH : 42900 TO CH: 44100	41	-
42	PROJECT SHEET FROM CH : 44100 TO CH: 45300	42	-
43	PROJECT SHEET FROM CH : 45300 TO CH: 46500	43	-
44	PROJECT SHEET FROM CH : 46500 TO CH: 47700	44	-
45	PROJECT SHEET FROM CH : 47700 TO CH: 48900	45	-
46	PROJECT SHEET FROM CH : 48900 TO CH: 49695	46	-
47	PROJECT SHEET FROM CH : 0 TO CH: 1200	47	-
48	PROJECT SHEET FROM CH : 1200 TO CH: 2400	48	-
49	PROJECT SHEET FROM CH : 2400 TO CH: 3600	49	-
50	PROJECT SHEET FROM CH : 3600 TO CH: 4800	50	-
51	PROJECT SHEET FROM CH : 4800 TO CH: 6000	51	-
52	PROJECT SHEET FROM CH : 6000 TO CH: 7200	52	-
53	PROJECT SHEET FROM CH : 7200 TO CH: 8400	53	-
54	PROJECT SHEET FROM CH : 8400 TO CH: 9600	54	-
55	PROJECT SHEET FROM CH : 9600 TO CH: 10800	55	-
56	PROJECT SHEET FROM CH : 10800 TO CH: 12000	56	-
57	PROJECT SHEET FROM CH : 12000 TO CH: 13200	57	-
58	PROJECT SHEET FROM CH : 13200 TO CH: 14400	58	-
59	PROJECT SHEET FROM CH : 14400 TO CH: 15600	59	-
60	PROJECT SHEET FROM CH : 15600 TO CH: 16800	60	-
61	PROJECT SHEET FROM CH : 16800 TO CH: 18000	61	-
62	PROJECT SHEET FROM CH : 18000 TO CH: 19200	62	-
63	PROJECT SHEET FROM CH : 19200 TO CH: 20400	63	-
64	PROJECT SHEET FROM CH : 20400 TO CH: 21600	64	-
65	PROJECT SHEET FROM CH : 21600 TO CH: 22800	65	-
66	PROJECT SHEET FROM CH : 22800 TO CH: 24000	66	-
67	PROJECT SHEET FROM CH : 24000 TO CH: 25200	67	-
68	PROJECT SHEET FROM CH : 25200 TO CH: 26400	68	-
69	PROJECT SHEET FROM CH : 26400 TO CH: 27600	69	-
70	PROJECT SHEET FROM CH : 27600 TO CH: 28800	70	-
71	PROJECT SHEET FROM CH : 28800 TO CH: 30000	71	-
72	PROJECT SHEET FROM CH : 30000 TO CH: 31200	72	-
73	PROJECT SHEET FROM CH : 31200 TO CH: 32400	73	-
74	PROJECT SHEET FROM CH : 32400 TO CH: 33600	74	-
75	PROJECT SHEET FROM CH : 33600 TO CH: 34800	75	-
76	PROJECT SHEET FROM CH : 34800 TO CH: 36000	76	-
77	PROJECT SHEET FROM CH : 36000 TO CH: 37200	77	-
78	PROJECT SHEET FROM CH : 37200 TO CH: 38400	78	-
79	PROJECT SHEET FROM CH : 38400 TO CH: 39600	79	-
80	PROJECT SHEET FROM CH : 39600 TO CH: 40800	80	-

SN	DESCRIPTION	SHEET NO.	REVISION
81	PROJECT SHEET FROM CH : 40800 TO CH: 42000	81	-
82	PROJECT SHEET FROM CH : 42000 TO CH: 43200	82	-
83	PROJECT SHEET FROM CH : 43200 TO CH: 44400	83	-
84	PROJECT SHEET FROM CH : 44400 TO CH: 45600	84	-
85	PROJECT SHEET FROM CH : 45600 TO CH: 46800	85	-
86	PROJECT SHEET FROM CH : 46800 TO CH: 48000	86	-
87	PROJECT SHEET FROM CH : 48000 TO CH: 49200	87	-
88	PROJECT SHEET FROM CH : 49200 TO CH: 50400	88	-
89	PROJECT SHEET FROM CH : 50400 TO CH: 51600	89	-
90	PROJECT SHEET FROM CH : 51600 TO CH: 52800	90	-
91	PROJECT SHEET FROM CH : 52800 TO CH: 54000	91	-
92	PROJECT SHEET FROM CH : 54000 TO CH: 55200	92	-
93	PROJECT SHEET FROM CH : 55200 TO CH: 56400	93	-
94	PROJECT SHEET FROM CH : 56400 TO CH: 57600	94	-
95	PROJECT SHEET FROM CH : 57600 TO CH: 58800	95	-
96	PROJECT SHEET FROM CH : 58800 TO CH: 60000	96	-
97	PROJECT SHEET FROM CH : 60000 TO CH: 61200	97	-
98	PROJECT SHEET FROM CH : 61200 TO CH: 62400	98	-
99	PROJECT SHEET FROM CH : 62400 TO CH: 63600	99	-
100	PROJECT SHEET FROM CH : 63600 TO CH: 64800	100	-
101	PROJECT SHEET FROM CH : 64800 TO CH: 66000	101	-
102	PROJECT SHEET FROM CH : 66000 TO CH: 67200	102	-
103	PROJECT SHEET FROM CH : 67200 TO CH: 67760	103	-
104	PROJECT SHEET FROM CH : 86920 TO CH: 88120	104	-
105	PROJECT SHEET FROM CH : 88120 TO CH: 89320	105	-
106	PROJECT SHEET FROM CH : 89320 TO CH: 90520	106	-
107	PROJECT SHEET FROM CH : 90520 TO CH: 91720	107	-
108	PROJECT SHEET FROM CH : 91720 TO CH: 92920	108	-
109	PROJECT SHEET FROM CH : 92920 TO CH: 94120	109	-
110	PROJECT SHEET FROM CH : 94120 TO CH: 95320	110	-
111	PROJECT SHEET FROM CH : 95320 TO CH: 96520	111	-
112	PROJECT SHEET FROM CH : 96520 TO CH: 97720	112	-
113	PROJECT SHEET FROM CH : 97720 TO CH: 98920	113	-
114	PROJECT SHEET FROM CH : 98920 TO CH: 100120	114	-
115	PROJECT SHEET FROM CH : 100120 TO CH: 101320	115	-
116	PROJECT SHEET FROM CH : 101320 TO CH: 102520	116	-
117	PROJECT SHEET FROM CH : 102520 TO CH: 103720	117	-
118	PROJECT SHEET FROM CH : 103720 TO CH: 104920	118	-
119	PROJECT SHEET FROM CH : 104920 TO CH: 106120	119	-
120	PROJECT SHEET FROM CH : 106120 TO CH: 107320	120	-
121	PROJECT SHEET FROM CH : 107320 TO CH: 108520	121	-
122	PROJECT SHEET FROM CH : 108520 TO CH: 107920	122	-

SN	DESCRIPTION	SHEET NO.	REVISION
123	PROJECT SHEET FROM CH : 109720 TO CH: 110920	123	-
124	PROJECT SHEET FROM CH : 110920 TO CH: 111994	124	-
125	PROJECT SHEET FROM CH : 0 TO CH: 1200	125	-
126	PROJECT SHEET FROM CH : 1200 TO CH: 2400	126	-
127	PROJECT SHEET FROM CH : 2400 TO CH: 3600	127	-
128	PROJECT SHEET FROM CH : 3600 TO CH: 4800	128	-
129	PROJECT SHEET FROM CH : 4800 TO CH: 6000	129	-
130	PROJECT SHEET FROM CH : 6000 TO CH: 7200	130	-
131	PROJECT SHEET FROM CH : 7200 TO CH: 8400	131	-
132	PROJECT SHEET FROM CH : 8400 TO CH: 9600	132	-
133	PROJECT SHEET FROM CH : 9600 TO CH: 10800	133	-
134	PROJECT SHEET FROM CH : 10800 TO CH: 12000	134	-
135	PROJECT SHEET FROM CH : 12000 TO CH: 13200	135	-
136	PROJECT SHEET FROM CH : 13200 TO CH: 14400	136	-
137	PROJECT SHEET FROM CH : 14400 TO CH: 15600	137	-
138	PROJECT SHEET FROM CH : 15600 TO CH: 16800	138	-
139	PROJECT SHEET FROM CH : 16800 TO CH: 18000	139	-
140	PROJECT SHEET FROM CH : 18000 TO CH: 19200	140	-
141	PROJECT SHEET FROM CH : 19200 TO CH: 20400	141	-
142	PROJECT SHEET FROM CH : 20400 TO CH: 21600	142	-
143	PROJECT SHEET FROM CH : 21600 TO CH: 22800	143	-
144	PROJECT SHEET FROM CH : 22800 TO CH: 24000	144	-
145	PROJECT SHEET FROM CH : 24000 TO CH: 25200	145	-
146	PROJECT SHEET FROM CH : 25200 TO CH: 26400	146	-
147	PROJECT SHEET FROM CH : 26400 TO CH: 27600	147	-
148	PROJECT SHEET FROM CH : 27600 TO CH: 28800	148	-
149	PROJECT SHEET FROM CH : 28800 TO CH: 30000	149	-
150	PROJECT SHEET FROM CH : 30000 TO CH: 31200	150	-
151	PROJECT SHEET FROM CH : 31200 TO CH: 32400	151	-
152	PROJECT SHEET FROM CH : 32400 TO CH: 33600	152	-
153	PROJECT SHEET FROM CH : 33600 TO CH: 34800	153	-
154	PROJECT SHEET FROM CH : 34800 TO CH: 36000	154	-
155	PROJECT SHEET FROM CH : 36000 TO CH: 37200	155	-
156	PROJECT SHEET FROM CH : 37200 TO CH: 38400	156	-
157	PROJECT SHEET FROM CH : 38400 TO CH: 39600	157	-
158	PROJECT SHEET FROM CH : 39600 TO CH: 40800	158	-
159	PROJECT SHEET FROM CH : 40800 TO CH: 42000	159	-
160	PROJECT SHEET FROM CH : 42000 TO CH: 42765	160	-
161	PROJECT SHEET FROM CH : 80951 TO CH: 82120	161	-
162	PROJECT SHEET FROM CH : 82120 TO CH: 83320	162	-
163	PROJECT SHEET FROM CH : 83320 TO CH: 84520	163	-
164	PROJECT SHEET FROM CH : 84520 TO CH: 85700	164	R1

SN	DESCRIPTION	SHEET NO.	REVISION
165	PROJECT SHEET FROM CH : 85700 TO CH: 86900	165	R1
166	PROJECT SHEET FROM CH : 86900 TO CH: 88100	166	R1
167	PROJECT SHEET FROM CH : 88100 TO CH: 89300	167	R1
168	PROJECT SHEET FROM CH : 89300 TO CH: 90500	168	R1
169	PROJECT SHEET FROM CH : 90500 TO CH: 91700	169	R1
170	PROJECT SHEET FROM CH : 91700 TO CH: 92900	170	R1
171	PROJECT SHEET FROM CH : 92900 TO CH: 94100	171	R1
172	PROJECT SHEET FROM CH : 94100 TO CH: 95300	172	R1
173	PROJECT SHEET FROM CH : 95300 TO CH: 96500	173	R1
174	PROJECT SHEET FROM CH : 96500 TO CH: 97700	174	R1
175	PROJECT SHEET FROM CH : 97700 TO CH: 98900	175	R1
176	PROJECT SHEET FROM CH : 98900 TO CH: 100100	176	R1
177	PROJECT SHEET FROM CH : 100100 TO CH: 101300	177	-
178	PROJECT SHEET FROM CH : 101300 TO CH: 102500	178	-
179	PROJECT SHEET FROM CH : 102500 TO CH: 103700	179	-
180	PROJECT SHEET FROM CH : 103700 TO CH: 104900	180	-
181	PROJECT SHEET FROM CH : 104900 TO CH: 106100	181	-
182	PROJECT SHEET FROM CH : 106100 TO CH: 107300	182	-
183	PROJECT SHEET FROM CH : 107300 TO CH: 108500	183	-
184	PROJECT SHEET FROM CH : 108500 TO CH: 109700	184	-
185	PROJECT SHEET FROM CH : 109700 TO CH: 110900	185	-
186	PROJECT SHEET FROM CH : 110900 TO CH: 112100	186	-
187	PROJECT SHEET FROM CH : 112100 TO CH: 113300	187	-
188	PROJECT SHEET FROM CH : 113300 TO CH: 114500	188	-
189	PROJECT SHEET FROM CH : 114500 TO CH: 115700	189	-
190	PROJECT SHEET FROM CH : 115700 TO CH: 116400	190	-

NOTE:

- 1) The Project Sheets mentioned above are indicative. The CST Contractor shall provide the definitive Project Sheets.

1.3 CONCORDANCE TABLE

Khurja – Pilkhani (CP-305)

Concordance Table					
Sheet No.	Chainage shown in Project Sheet		Corresponding Railway KM		Remarks
	From Ch.	To Ch.	From KM	To KM	
1	-7820	0	1367 (NCR)	3.200	
2	3200	49695	3.200	49.695	
3	0	67760	49.695	86.920	Detour
4	86920	111994	86.920	111.994	
5	0	42765	111.994	152.231	Detour
6	80951	116440	152.231	187.500	

1.4 INDICATIVE YARD PLAN AND OTHER DRAWINGS

A. List of indicative Yard Plans in the Block Section

SN.	Station Name	Drawing Number
1	New Khurja City	DFC/MTC.NEW KJY
2	New Maman	DFC/MTC/New MoM
3	New Bulandshahr	DFC/MTC/NEW BSC
4	New Chhaparawat	DFC/MTC/NEW CHWT
5	New Gulaothi	DFC/MTC/ NEW GLH
6	New Hapur	DFC/MTC/NEW HAPUR/Y-1/2016
7	New Pilakhuwa	DFC/MTC/NEW PILHUWA/Y-2/2016
8	New Mohiuddinpur	DFC/MTC/NEW HAPUR/Y-3/2016
9	New Partapur	DFC/MTC/NEW PARTAPUR/Y-4/2016
10	New Meerut Cantt	DFC/MTC/NEW MEERUT CANTT/Y-5/2016
11	New Daurala	DFC/MTC/NEW/DAURALA/Y-6/2016
12	New Sakoti	DFC/MTC/NEW SAKOTI-R1
13	New Khatoli	DFC/MTC/NEW KHATOULI-R1
14	New Mansurpur	DFC/MTC/NEW MANSURPUR-R1
15	New Jarauda Nara	DFC/MTC/NEW JARAUDA NARA/Y-7/2016
16	New Muzaffar Nagar	DFC/MTC/NEW MUZAFFARNAGAR/Y-8/2016
17	New Rahankalan	DFC/MTC/NEW ROHAN KALAN/Y-9/2016
18	New Deoband	DFC/MTC/NEW DEOBAND/Y/10/2016
19	New Talheri Buzurg	DFC/MTC/NEW TALHERI BUZURG
20	New Tapri	DFC/LDH/2014/CS/01
21	New SRE	DFC/LDH/2011/CS/02
22	Saharanpur Yard	DFC/LDH/2013/04

B. List of Indicative Building Drawings in the Block Section.

SN	Drawing Name	Drawing No.
1	Typical General Arrangement Drawing for Boundary wall	DFCC/Boundary wall/TYP-001
2	Station Building for crossing station ground floor plan	CC/DFCC/CS/201/REV.1
3	Station Building for crossing Station first floor and root level plan	GC/DFCC/CS/202/REV.1
4	Station Building for Crossing Station Front and Rear Elevation Plan	GC/DFCC/CS/203/REV.1
5	Proposed Typical GAD for LC Gate Lodge	GC/DFCC/GL/505/R1
6	Integrated Maintenance Depot (IMD) Ground and first floor plan	GC/DFCC/IMD/301
7	Integrated Maintenance Sub-Depot (IMSD) Ground Floor Plan	GC/DFCC/IMSD/401
8	Typical Drawing see through fencing	DFC/2015/FEN/TYP
9	Type – A Quarter Ground, First floor plan and Evaluation	GC/DFCC/QRTS/701
10	Type – B Quarter Ground, First floor Plan and Elevation	GC/DFCC/QRTS/702
11	Type - C Quarter Ground, First floor Plan for Elevation	GC/DFCC/QRTS/703
12	Typical Sketch for fixing of OHE Mast on BRIDGE PIER	HQ/EL/OHE/Pt.1/Mast
13	Typical Sketch for Earthing & Bonding Scheme on Bridge Piers & Abutments with PILE/WELL foundation	HQ/EL/OHE/Pt.1/Earthing
14	Minimum Ballast Profile B.G for Loops for Straights, Curves	DFC/2015/BF/01
15	Minimum Ballast Profile single line B.G for straights & curve	DFC/2015/BF/02
16	Standard Type – II Quarters Double Storeyed	DCW/CE/R/17/82
17	Standard Type – III Quarters Double Storeyed	DCW/CE/R/18/82
18	Minimum Ballast Profile Single Line B.G for Straight and Curve	DFC/2016/BPD

C. List of Electrical and S&T Drawings

SN	DRAWING NAME	DRAWING NUMBER
1.	Schematic Diagram of 132/55 KV TSS with One Transformer Scott Connected	GC/DFCC/PS/TSS/SCH/TYP/101-3(a)
2.	Schematic Diagram of 132/55 KV TSS with Two Transformer Scott Connected	GC/DFCC/PS/TSS/TYP/101-3(b)
3.	General Supply Diagram	GC/DFCC/PS/GSD/305
4.	General Arrangement Block Diagram for Traction SCADA Control	GC/DFCC/TR/SCADA/305(a)
5.	General Arrangement Block Diagram for Auxiliary SCADA Control	GC/DFCC/TR/SCADA/305(b)
6.	Control Room at TSS	GC/DFCC/TSS/305
7.	SP & SPP Ground floor Plan and Elevation	GC/DFCC/SP-SSP/504
8.	Schematic Diagram of 2x27 KV SP	GC/DFCC/PS/SP/SCH/TYP/201
9.	Schematic Diagram of 2x27 KV SSP	GC/DFCC/PS/SSP/SCH/TYP/301
10.	Electrical Single line Diagram for Non-Traction Power distribution System for Junction & Crossing Stations.	GC/DFCC/E&M/STzATION/801
11.	Tower Wagon Shed Ground Floor Plan and Elevation	GC/DFCC/TWS/501
12.	Typical Arrangement of OHE Mast on Embankment	GC/DFCC/OHE/EMBKT/TYP/501
13.	Typical Arrangement of OHE on Portal at Multi Track Section	GC/DFCC/OHE/PORTAL/TYP/513
14.	Arrangement for OHE Guy Rod on Steel Bridges	GC/DFCC/OHE/GUY/ROD on BRIDGE/TYP-507
15.	Earthing & Bonding of OHE Structure along the Bridge Girders (RCC) & Piers	GC/DFCC/OHE/E&B/GIRDERS/TYP/603
16.	OHE, Earthing & Bonding Arrangement on RCC Bridge/Viaduct	GC/DFCC/OHE/E&B/BRIDGE/TYP/604
17.	General Arrangement Drawing for Chain Link Fencing	GC/DFCC/CHAIN LINKFENCING/TYP-001
18.	Signal & Telecom Equipment Rooms	DFC/S&T/01/2017
19.	Telecom Equipment & Telecom power Supply Equipment Room	DFC/S&T/02/2017

2. POWER SUPPLY, DISTRIBUTION, OHE SCADA SYSTEM SCHEMES & LAYOUT AND SIGNALLING & TELECOMMUNICATION DRAWINGS

3. FINAL ENVIRONMENTAL ASSESSMENT REPORT FOR KHURJA – PILKHANI SECTION VOL- I & II

4. ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF) (FINAL) FOR EDFC (MUGHALSARAI – LUDHIANA SECTION)

5. FINAL RESETTLEMENT ACTION PLAN (RAP) (INCLUDING SOCIAL IMPACT ASSESSEMENT)

KHURJA – PILKHANI SECTION OF PROPOSED SECTION.

6. DFCC SHE MANUAL

7. SPECIFICATION FOR 12000HP LOCOMOTIVE AND TRACTIVE EFFORT CURVE

8. TENTATIVE LAYOUT FOR CONSTRUCTION OF TRANSMISSION LINE NETWORK OVER EDFC