Attachment 10: Already Diverted Forest Area Calculation Sheet

KILOMETER-WISE ABSTRACT OF DIVERTED AND UNDIVERTED FOREST AREA
SECTION OF NH-15 (JAISALMER-BARMER) KM. 0.000 TO KM. 153.034
BARMER FOREST DIVISION (KM. 68.00 TO KM. 153.034)

Sl. No.	Design Chainage		Existing Chainage		Road Width in (m)	Existing ROW in (m)	Diverted Forest Area (Left Side)		Forest Area in Sqm.	Forest Area in Hect.	Diverted Forest Area (Right Side)		Forest Area in Sqm.	Forest Area in Hect.	Grand Total Diverted Forest Area in Hect.	Undiverted Area (Left Side)		Forest Area in Sqm.	Forest Area in Hect.	Undiverted Area (Right Side)		Forest Area in Sqm.	Total Undiverted Forest Area in Hect.	Grand Total Undiverted Forest Area in Hect.
	From	To	From	To			Width in (m)	Length in (m)			Width in (m)	Length in (m)				Width in (m)	Length in (m)			Width in (m)	Length in (m)			
421	108000	108005	108670	108675	12	45.50	15.486	5	16	0.002	3.596	5	18	0.002	0.003	7	5	36	0.004	19	5	96	0.010	0.013
422	108005	108100	108675	108670	12	45.50	5.043	95	1471	0.147	3.343	95	318	0.032	0.179	18	95	1682	0.168	19	95	1844	0.184	0.353
423	108100	108148	108670	108718	12	45.50	5.043	48	242	0.024	15.486	48	743	0.074	0.099	18	48	850	0.085	7	48	349	0.035	0.120
424	108148	108200	108718	108770	12	45.50	3.562	52	262	0.026	3.446	52	179	0.018	0.044	19	52	998	0.100	19	52	1004	0.100	0.200
425	108200	108300	108770	108870	12	45.50	3.083	100	356	0.036	3.004	100	300	0.030	0.066	20	100	1967	0.197	20	100	1975	0.197	0.394
426	108300	108400	108870	108970	12	45.50	3.582	100	308	0.031	3.528	100	353	0.035	0.066	19	100	1917	0.192	19	100	1922	0.192	0.384
427	108400	108500	108970	109070	12	45.00	3.926	100	358	0.036	3.623	100	362	0.036	0.072	19	100	1857	0.186	19	100	1888	0.189	0.375
428	108500	108600	109070	109170	12	45.00	6.992	100	393	0.039	7.322	100	732	0.073	0.112	16	100	1551	0.155	15	100	1518	0.152	0.307
429	108600	108700	109170	109270	12	45.00	3.538	100	699	0.070	3.794	100	379	0.038	0.108	19	100	1896	0.190	19	100	1871	0.187	0.377
430	108700	108800	109270	109370	12	45.00	3.910	100	354	0.035	3.517	100	352	0.035	0.071	19	100	1859	0.186	19	100	1898	0.190	0.376
431	108800	108900	109370	109470	12	45.00	3.577	100	391	0.039	3.204	100	320	0.032	0.071	19	100	1892	0.189	19	100	1930	0.193	0.382
432	108900	109000	109470	109670	12	45.00	4.162	100	358	0.036	3.330	100	333	0.033	0.069	18	100	1834	0.183	19	100	1917	0.192	0.375
433	109000	109100	109670	109770	12	45.00	3.911	100	416	0.042	3.766	100	377	0.038	0.079	19	100	1859	0.186	19	100	1873	0.187	0.373
434	109100	109200	109770	109870	12	45.00	3.747	100	391	0.039	3.305	100	331	0.033	0.072	19	100	1875	0.188	19	100	1920	0.192	0.379
435	109200	109300	109870	109970	12	45.00	3.468	100	375	0.037	3.912	100	391	0.039	0.077	19	100	1903	0.190	19	100	1859	0.186	0.376
436	109300	109400	109970	110070	12	45.00	3.650	100	347	0.035	4.692	100	469	0.047	0.082	19	100	1885	0.189	18	100	1781	0.178	0.367
437	109400	109500	110070	110170	12	45.00	6.656	100	365	0.037	7.784	100	778	0.078	0.114	16	100	1584	0.158	15	100	1472	0.147	0.306
438	109500	109600	110170	110270	12	45.00	5.238	100	666	0.067	7.207	100	721	0.072	0.139	17	100	1726	0.173	15	100	1529	0.153	0.326
439	109600	109700	110270	110370	12	45.00	3.002	100	524	0.052	4.653	100	465	0.047	0.099	19	100	1950	0.195	18	100	1785	0.178	0.373
440	109700	109800	110370	110470	12	45.00	3.843	100	300	0.030	5.042	100	504	0.050	0.080	19	100	1866	0.187	17	100	1746	0.175	0.361
441	109800	109900	110470	110570	12	45.00	6.635	100	384	0.038	5.699	100	570	0.057	0.095	16	100	1587	0.159	17	100	1680	0.168	0.327
442	109900	110000	110570	110670	12	45.00	4.388	100	664	0.066	4.759	100	476	0.048	0.114	18	100	1811	0.181	18	100	1774	0.177	0.359
443	110000	110100	110670	110770	12	45.00	3.216	100	439	0.044	3.529	100	353	0.035	0.079	19	100	1928	0.193	19	100	1897	0.190	0.383
444	110100	110200	110770	110870	12	45.00	3.904	100	322	0.032	4.594	100	459	0.046	0.078	19	100	1860	0.186	18	100	1791	0.179	0.365
445	110200	110300	110870	110970	12	45.00	3.710	100	390	0.039	3.463	100	346	0.035	0.074	19	100	1879	0.188	19	100	1904	0.190	0.378
446	110300	110400	110970	111070	12	45.00	3.598	100	371	0.037	3.736	100	374	0.037	0.074	19	100	1890	0.189	19	100	1876	0.188	0.377
447	110400	110500	111070	111170	12	45.00	3.577	100	360	0.036	3.563	100	356	0.036	0.072	19	100	1892	0.189	19	100	1894	0.189	0.379
448	110500	110600	111170	111270	12	45.00	3.402	100	358	0.036	4.428	100	443	0.044	0.080	19	100	1910	0.191	18	100	1807	0.181	0.372
449	110600	110700	111270	111370	12	45.00	4.024	100	340	0.034	4.665	100	467	0.047	0.081	18	100	1848	0.185	18	100	1784	0.178	0.363
450	110700	110735	111370	111405	12	45.00	15.486	35	141	0.014	4.665	35	163	0.016	0.030	7	35	245	0.025	18	35	624	0.062	0.087
451	110735	110800	111405	111470	12	45.00	3.979	65	1007	0.101	4.441	65	289	0.029	0.130	19	65	1204	0.120	18	65	1174	0.117	0.238
452	110800	110885	111470	111555	12	45.00	3.979	85	338	0.034	15.486	85	1316	0.132	0.165	19	85	1574	0.157	7	85	596	0.060	0.217
453	110885	110900	111555	111570	12	45.00	3.965	15	60	0.006	3.684	15	55	0.006	0.011	19	15	278	0.028	19	15	282	0.028	0.056
454	110900	111000	111570	111660	12	45.00	4.034	100	397	0.040	3.871	100	387	0.039	0.078	18	100	1847	0.185	19	100	1863	0.186	0.371
455	111000	111100	111660	111760	12	45.00	3.726	100	403	0.040	3.981	100	398	0.040	0.080	19	100	1877	0.188	19	100	1852	0.185	0.373
456	111100	111200	111760	111860	12	45.00	3.891	100	375	0.037	3.759	100	376	0.038	0.075	19	100	1861	0.186	19	100	1874	0.187	0.374
457	111200	111300	111860	111960	12	45.00	3.408	100	389	0.039	3.592	100	359	0.036	0.075	19	100	1909	0.191	19	100	1891	0.189	0.380
458	111300	111400	111960	112060	12	46.00	4.432	100	341	0.034	4.220	100	422	0.042	0.076	19	100	1857	0.186	19	100	1878	0.188	0.373
459	111400	111500	112060	112160	12	46.00	5.094	100	443	0.044	5.095	100	510	0.051	0.095	18	100	1791	0.179	18	100	1791	0.179	0.358
460	111500	111600	112160	112260	12	46.00	4.215	100	509	0.051	4.096	100	410	0.041	0.092	19	100	1879	0.188	19	100	1890	0.189	0.377
461	111600	111700	112260	112360	12	46.00	4.258	100	422	0.042	3.580	100	358	0.036	0.078	19	100	1874	0.187	19	100	1942	0.194	0.382
462	111700	111800	112360	112460	12	46.00	3.478	100	426	0.043	3.010	100	301	0.030	0.073	20	100	1952	0.195	20	100	1999	0.200	0.395
463	111800	111900	112460	112560	12	46.00	3.034	100	348	0.035	3.221	100	322	0.032	0.067	20	100	1997	0.200	20	100	1978	0.198	0.397
464	111900	112000	112560	112660	12	46.00	3.012	100	303	0.030	3.366	100	337	0.034	0.064	20	100	1999	0.200	20	100	1963	0.196	0.396
465	112000	112100	112660	112760	12	46.00	3.468	100	301	0.030	3.506	100	351	0.035	0.065	20	100	1953	0.195	19	100	1949	0.195	0.390
466	112100	112200	112760	112860	12	46.00	3.569	100	347	0.035	5.125	100	513	0.051	0.086	19	100	1943	0.194	18	100	1788	0.179	0.373
467	112200	112300	112860	112960	12	46.00	3.075	100	357	0.036	3.016	100	302	0.030	0.066	20	100	1993	0.199	20	100	1998	0.200	0.399
468	112300	112400	112960	113060	12	46.00	3.391	100	308	0.031	3.034	100	303	0.030	0.061	20	100	1961	0.196	20	100	1997	0.200	0.399
469	112400	112500	113060	113160	12	46.00	3.080	100	339	0.034	3.006	100	301	0.030	0.064	20	100	1992	0.199	20	100	1999	0.200	0.399
470	112500	112600	113160	113260	12	46.00	3.153	100	308	0.031	3.572	100	357	0.036	0.067	20	100	1985	0.198	19	100	1943	0.194	0.393
471	112600	112700	113260	113360	12	46.00	3.126	100	315	0.032	3.678	100	368	0.037	0.068	20	100	1987	0.199	19	100	1932	0.193	0.392
472	112700	112800	113360	113460	12	46.00	4.062	100	313	0.031	3.439	100	344	0.034	0.066	19	100	1894	0.189	20	100	1956	0.196	0.385
473	112800	112900	113460	113560	12	45.00	3.914	100	406	0.041	4.083	100	408	0.041	0.081	19	100	1859	0.186	18	100	1842	0.184	0.370
474	112900	113000	113560	113650	12	45.00	3.008	100	391	0.039	3.148	100	315	0.031	0.071	19	100	1949	0.195	19	100	1935	0.194	0.388
475	113000	113100	113650	113750	12	45.00	3.199	100	301	0.030	3.259	100	326	0.033	0.063	19	100	1930	0.193	19	100	1924	0.192	0.385
476	113100	113200	113750	113850	12	45.00	3.366	100	320	0.032	3.309	100	331	0.033	0.065	19	100	1913	0.191	19	100	1919	0.192	0.383
477	113200	113300	113850	113950	12	45.00	3.091	100	337	0.034	3.002	100	300	0.030	0.064	19	100	1941	0.194	19	100	1950	0.195	0.389
478	113300	113400	113950	114050	12	45.00	4.062	100	309	0.031	4.130	100	413	0.041	0.072	18	100	1844	0.184	18	100	1837	0.184	0.368
479	113400	113500	114050	114150	12	45.00	3.335	100	406	0.041	3.548	100	355	0.035	0.076	19	100	1917	0.192	19	100	1895	0.190	0.381
480	113500	113600	114150	114250	12	45.00	4.054	100	334	0.033	3.540	100	354	0.035	0.069	18	100	1845	0.184	19	100	1896	0.190	0.374

उप वन संरक्षक

Comparison of TCS Schedule CA Vs Design

TCS Schedule As Per CA

S.No.	CHAINAGE (m)		LENGTH (m)	Applicable TCS Type
	From	To		
1	100000	102320	2320	I A
2	102320	102560	240	I B
3	102560	103000	440	I A
4	103000	103220	220	I B
5	103220	104111	891	I A
6	104111	105674	1563	TOLL PLAZA
7	105674	106940	1266	I A
8	106940	107160	220	I B
9	107160	109380	2220	I A
10	109380	110070	690	I B
11	110070	113780	3710	I A
12	113780	114070	290	I B
13	114070	118400	4330	I A
14	118400	119538	1138	I B
15	119538	122000	2462	I A
		Total Length	**22000**	

TCS Schedule As Per DESIGN

CHAINAGE (m)		LENGTH (m)	Applicable TCS Type	
From	To			
100000	100160	160	I A	
100160	100900	740	I B	
100900	102200	1300	I A	
102200	102320	120	I B	
102320	102560	240	I B	
102560	102620	60	I B	
102620	103000	380	I A	
103000	103040	40	I A	
103040	103220	180	I B	
103220	103300	80	I B	
103300	104111	811	I A	
104111	104574	463	I A	
104574	104874	300		TollPlaza
104874	104911	37	I A	
104911	105211	300		TollPlaza
105211	105440	229	I B	
105440	105674	234	I A	
105674	106700	1026	I A	
106700	106940	240	I B	
106940	107160	220	I B	
107160	107460	300	I B	
107460	107800	340	I A	
107800	108040	240	I A	
108040	109120	1080	I A	
109120	109380	260	I B	
109380	110070	690	I B	
110070	110360	290	I B	
110360	113560	3200	I A	
113560	113780	220	I B	
113780	114070	290	I B	
114070	114320	250	I B	
114320	116300	1980	I A	
116300	116740	440	I B	
116740	118400	1660	I A	
118400	119538	1138	I A	
119538	120520	982	I A	
120520	120840	320	I B	
120840	122000	1160	I A	
	Total Length	**22000**		

PROOF CHECKED INDIAN TECHNOCRAT LIMITED itl

DESIGN DIRECTOR

REV.	DATE	DESCRIPTION

AUTHORITY: NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Road Transport & Highways) (Government of India)

EPC CONTRACTOR: GR INFRA PROJECT LTD. GR House Hiran Magri Sector -11, Udaipur, Rajasthan - 313002

DESIGN CONSULTANTS: GRACE CONSULTING ENGINEERS Plot No. 13, Sector B-1, Vasant Kunj, New Delhi-110070

AUTHORITY ENGINEER: Theme Engineering Services Pvt.Ltd. B-24 Gokul Vatika, Jawahar Circle, Jaipur-302018(Raj.) Tel: +91-141-2724495-96-97, Fax: +91-141-2724491 Email: theme@dataone.in , theme@themeengineering.com

PROJECT: WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	kapil
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: TYPICAL CROSS SECTION SCHEDULE

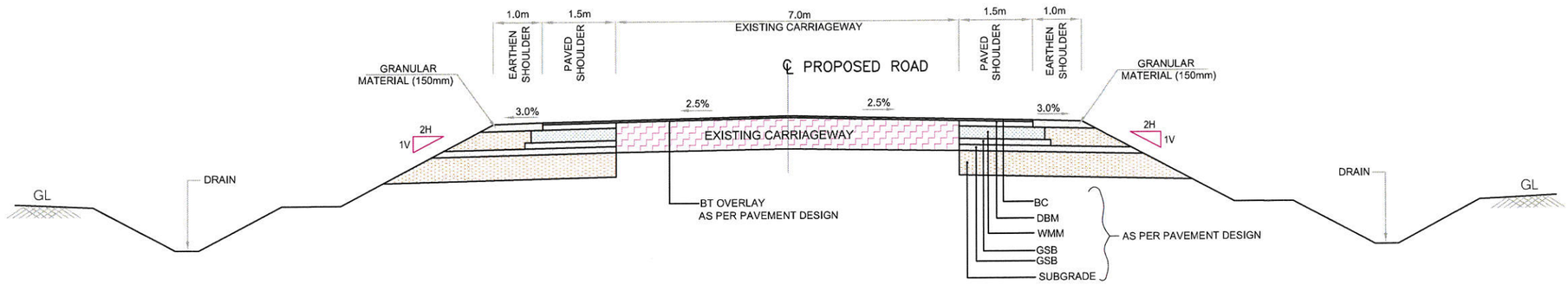
DATE: Sept. 2015

SCALE: NTS

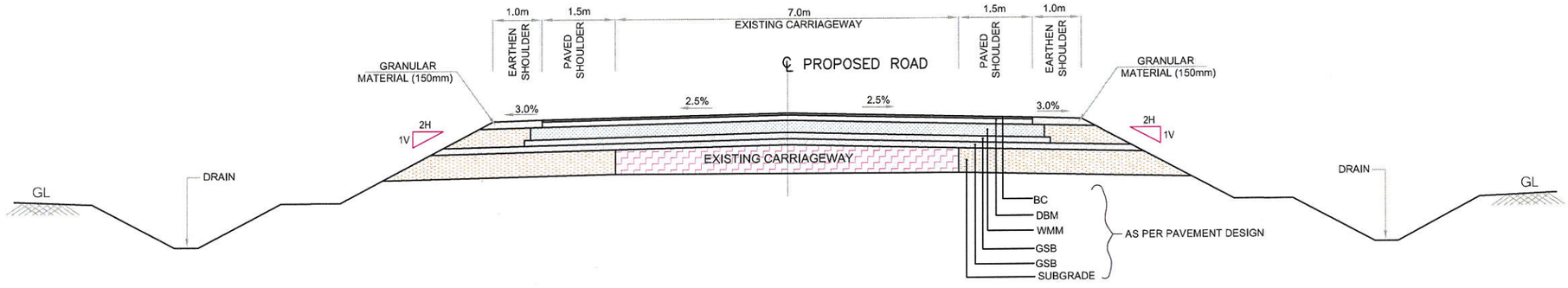
DRG. NO: GR/JA-BA/HWY/TCSS- 02

REV: P0/R0

ORIGINAL DRAWING SHEET SIZE-A2



WIDENING AND STRENGTHENING OF EXISTING CARRIAGEWAY TO TWO LANE WITH PAVED SHOULDER IN RURAL AREA- (TYPE- I A)



RECONSTRUCTION OF EXISTING CARRIAGEWAY TO TWO LANE WITH PAVED SHOULDER IN RURAL AREA- (TYPE- I B)

NOTE:-

1) ALL DIMENSIONS ARE IN METER. UNLESS OTHERWISE SPECIFIED.
2) PAVEMENT CRUST AS PER APPROVED PAVEMENT DESIGN.

PROOF CHECKED INDIAN TECHNOCRAT LIMITED itl

DESIGN DIRECTOR

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport & Highways)
(Government of India)

EPC CONTRACTOR
GR INFRA PROJECT LTD.
GR House Hiran Magri Sector -11,
Udaipur, Rajasthan - 313002

DESIGN CONSULTANTS:
GRACE CONSULTING ENGINEERS
Plot No. 13, Sector B-1, Vasant Kunj,
New Delhi-110070

AUTHORITY ENGINEER
Theme Engineering Services Pvt.Ltd.
B-24 Gokul Vatika, Jawahar Circle, Jaipur-302018(Raj.)
Tel: +91-141-2724495-96-97, Fax: +91-141-2724491
Email: theme@datsone.in , theme@themeengineering.com

PROJECT:
WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	kapil
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: TYPICAL CROSS SECTIONS
DATE: Sept. 2015
SCALE: 1:75
DRG. NO: GR/JA-BA/HWY/TCS-01
REV: P0/R0
ORIGINAL DRAWING SHEET SIZE-A2

BEING PATH E:\WORK_DATA\WORK\JAISALMER\ENGINEERING\DESIGN\DRAWING\2015\TCS\TCS-1 & 2.DWG

LEGEND :

PLAN :

EXISTING

EXIST. ROAD

EXISTING ROW

P-K P-K PUCCA CONSTRUCTION

P-R P-R PUCCA RESIDENCE/ BUILDING

PROPOSED

PROW PROPOSED ROW

TOE LINE
E.SH EDGE
P.SH EDGE
C/W EDGE
C/W EDGE
P.SH EDGE
E.SH EDGE
TOE LINE

HOR./ VER. TANGENT POINT

PIPE CULVERT WIDENING

EXISTING BOX / SLAB CULVERT

NEW BOX / SLAB CULVERT

BOX / SLAB CULVERT WIDENING

NEW BRIDGE

EXISTING ROAD CENTER LINE

PROPOSED ROAD CENTER LINE

PROFILE:

PROPOSED ROAD LEVEL

EXISTING ROAD/ GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

SUPERELEVATION(SCHEMATIC)

LEFT

RIGHT

JAISALMER

BARMER

CURVE NO.199	
Ch.	109+057
R	650m
Lc	149.32m
Ls	80.0m
D	20° 12' 49.7"
Es	10.7m
e	6.8%
V	100

CURVE NO.200	
Ch.	109+686
R	-500m
Lc	34.89m
Ls	95.0m
D	14° 53' 2.6"
Es	5.0m
e	7.0%
V	100

MATCH LINE 109+000

CS 109+132.054

ST 109+212.054

KM 110+000

TS 109+573.810

SC 109+668.810

CS 109+703.698

ST 109+758.698

MATCH LINE 110+000

Start point of Emergency landing Strip km 109.740

PROPOSED ROAD LVL

EXISTING ROAD/GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

PVC CH:109+021 Elev. 161.109

PVT CH:109+081 Elev.161.513

PVC CH:109+128 Elev. 161.764

PVT CH:109+328 Elev.165.052

PVC CH:109+335 Elev. 165.237

PROOF CHECKED INDIAN TECHNOCRAT LIMITED

DESIGN DIRECTOR

DATUM=155

PROPOSED FRL	160.937 161.101 161.256 161.391 161.508 161.613 161.719 161.832 161.986 162.184 162.427 162.715 163.047 163.424 163.846 164.312 164.823 165.370 165.901 166.403 166.877 167.322 167.739 168.127 168.487 168.819 169.122 169.396 169.642 169.859 170.048 170.209 170.341 170.444 170.519 170.566 170.584 170.573 170.535 170.467 170.371 170.247 170.094 169.913 169.703 169.464 169.198 168.902 168.579 168.226 167.846
EX. ROAD/ EX GL. BELOW PROPOSED CL	160.736 160.880 160.980 161.101 161.191 161.310 161.390 161.501 161.648 161.811 161.960 162.109 162.273 162.485 162.747 162.991 163.261 163.568 163.880 164.017 164.383 164.783 165.203 165.644 166.138 166.805 167.444 168.074 168.806 169.494 170.118 170.579 170.865 171.087 171.320 171.421 171.336 171.144 170.920 170.528 169.998 169.468 168.871 168.308 167.644 167.200 167.073 166.275 165.555 165.538 165.497 164.981 164.809
EXISTING GROUND @ 10M LEFT	160.746 160.853 160.940 161.326 161.304 161.482 161.479 161.496 162.019 161.998 161.907 162.273 162.029 162.904 162.769 163.063 163.486 163.568 164.080 164.476 164.367 165.649 165.142 165.442 166.328 166.237 166.383 167.640 168.363 169.438 170.320 171.133 171.412 171.728 172.039 171.367 171.314 171.220 170.924 170.565 170.028 169.203 168.236 167.644 167.073 166.275 165.555 165.538 165.497 164.981 164.655
EXISTING GROUND @ 10M RIGHT	160.653 160.825 160.759 160.660 160.576 160.856 160.754 160.908 160.937 161.268 161.257 161.583 161.735 161.991 162.205 162.614 162.595 162.778 163.057 164.094 164.584 164.781 165.195 164.895 165.480 166.395 167.588 167.306 167.607 168.740 170.096 169.794 170.972 172.146 171.654 172.074 171.280 171.269 170.846 170.644 169.662 168.988 168.323 167.793 167.486 166.928 166.106 165.384 165.307 165.078 164.655
VERTICAL ALIGNMENT SCHEMATIC	9.319 K = 206.827 LC = 60.000 G = 0.528% L = 47.484 K = 89.630 LC = 200.000 G = 2.760% L = 5.696 K = 140.418 LC = 700.000
HORIZONTAL ALIGNMENT SCHEMATIC	R = 650.000 L = 149.319 Right Transition LC = 80.000 361.756 Left Transition LC = 95.000 R = -500.000 L = 34.888 Left Transition LC = 95.000
SUPERELEVATION (E%)	6.8 6.8 -6.8 -2.5 -2.5 7.0 7.0 -7.0 -7.0 -2.5 -2.5
CHAINAGE (M)	109+000 109+020 109+040 109+060 109+080 109+100 109+120 109+140 109+160 109+180 109+200 109+220 109+240 109+260 109+280 109+300 109+320 109+340 109+360 109+380 109+400 109+420 109+440 109+460 109+480 109+500 109+520 109+540 109+560 109+580 109+600 109+620 109+640 109+660 109+680 109+700 109+720 109+740 109+760 109+780 109+800 109+820 109+840 109+860 109+880 109+900 109+920 109+940 109+960 109+980 110+000

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport & Highways) (Government of India)

EPC CONTRACTOR:
GR INFRA PROJECTS LTD.
GR House Hiran Magri Sector -11, Udaipur Rajasthan, Udaipur- 313001

DESIGN CONSULTANT:
GRACE CONSULTING ENGINEERS
Plot No. 13, Sector B-1, Vasant Kunj, New Delhi-110070

AUTHORITY ENGINEER:
Theme Engineering Services Pvt.Ltd.
B-24 Gokul Vatika, Jawahar Circle, Jaipur-302018(Raj.)
Tel: +91-141-2724495-96-97, Fax: +91-141-2724491
Email: theme@dataone.in , theme@themeengineering.com

PROJECT:
WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: Plan & Profile from (Km: 109+000 to Km: 110+000)

DATE: Sept.2015

SCALE: (1 : 2000 at A2 Size Sheet)
Hor: 20 0 20 40
Ver: 2 0 2 4

DRG. NO: GR/JA-BA/HWY/PNP-110

REV: P0/R0

ORIGINAL DRAWING SHEET SIZE-A2

LEGEND :

PLAN :

EXISTING

EXIST. ROAD

EXISTING ROW

PUCCA CONSTRUCTION

PUCCA RESIDENCE/ BUILDING

PROPOSED

PROPOSED ROW

TOE LINE
E.SH EDGE
P.SH EDGE
C/W EDGE
C/W EDGE
P.SH EDGE
E.SH EDGE
TOE LINE

HOR./ VER. TANGENT POINT

PIPE CULVERT WIDENING

EXISTING BOX / SLAB CULVERT

NEW BOX / SLAB CULVERT

BOX / SLAB CULVERT WIDENING

NEW BRIDGE

EXISTING ROAD CENTER LINE

PROPOSED ROAD CENTER LINE

PROFILE:

PROPOSED ROAD LEVEL

EXISTING ROAD/ GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

SUPERELEVATION(SCHEMATIC)

LEFT

RIGHT

JAISALMER

BARMER

CURVE NO.201	
Ch.	110+244
R	−20000m
Lc	26.95m
Ls	0.0m
D	0° 4' 37.9"
Es	0.0m
e	−2.5%
V	100

PC 110+230.897

PT 110+257.843

KM. 111+000

MATCH LINE

MATCH LINE

PROP.STR.TYPE : SLAB CULVERT
EX.SPAN/EX.STR. : 1 x 2.5 / SLAB
EX.CH./CA.CH : 111+247/110+588
PROP.CH. : 110+563
IMPR.PROPSAL : REPAIR
PROP.SPAN : 1 x 2.50

110+000 110+100 110+200 110+300 110+400 110+500 110+600 110+700 110+800 110+900 111+000

R=∞ R=−20000.000 R=∞ R=−20000.000

PROOF CHECKED
INDIAN TECHNOCRAT LIMITED

DESIGN DIRECTOR

PROPOSED ROAD LVL
EXISTING ROAD/GROUND LEVEL
EXISTING GROUND LEVEL @ 10M LEFT
EXISTING GROUND LEVEL @ 10M RIGHT

PROP.STR.TYPE : SLAB CULVERT
EX.SPAN/EX.STR. : 1 x 2.5 / SLAB
EX.CH./CA.CH. : 111+247/110+588
PROP.CH. : 110+563
IMPR.PROPSAL : REPAIR
PROP.SPAN : 1 x 2.50

172
170
168
166
164
162
160
158
157

PVT CH.110+035 Elev.167.108
PVC CH.110+167 Elev. 164.167
PVT CH.110+367 Elev.161.698
PVC CH.110+392 Elev. 161.636
PVT CH.110+452 Elev.161.595
PVC CH.110+559 Elev. 161.709
PVT CH.110+619 Elev.161.692
PVC CH.110+718 Elev. 161.532
PVT CH.110+778 Elev.161.517
PVC CH.110+867 Elev. 161.614
PVT CH.110+927 Elev.161.674

DATUM=155

CHAINAGE (M)	PROPOSED FRL	EX. ROAD/ EX GL. BELOW PROPOSED CL	EXISTING GROUND @ 10M LEFT	EXISTING GROUND @ 10M RIGHT
110+000	167.846	164.809	164.981	164.655
110+020	167.436	164.379	164.598	163.514
110+040	166.999	163.979	163.944	163.147
110+060	166.554	163.610	163.543	162.634
110+080	166.109	163.409	163.065	162.297
110+100	165.664	163.265	162.739	162.236
110+120	165.219	163.069	162.254	161.783
110+140	164.774	162.874	161.922	161.418
110+160	164.329	162.706	162.099	161.302
110+180	163.892	162.426	161.640	161.307
110+200	163.492	162.191	161.418	161.000
110+220	163.132	162.057	161.508	161.059
110+240	162.811	161.979	161.311	161.031
110+260	162.530	161.941	161.356	161.012
110+280	162.288	161.863	161.208	160.957
110+300	162.086	161.767	161.154	160.928
110+320	161.924	161.627	161.059	160.908
110+340	161.801	161.557	161.084	160.852
110+360	161.718	161.551	161.101	160.748
110+380	161.666	161.556	160.868	160.677
110+400	161.619	161.529	160.876	160.465
110+420	161.591	161.470	161.048	160.775
110+440	161.586	161.470	160.789	160.402
110+460	161.603	161.481	160.693	160.302
110+480	161.625	161.483	160.656	160.356
110+500	161.646	161.483	160.589	160.379
110+520	161.667	161.508	160.704	160.407
110+540	161.689	161.577	160.119	159.454
110+560	161.710	161.655	160.884	160.481
110+580	161.721	161.583	160.619	160.300
110+600	161.715	161.533	160.606	160.383
110+620	161.690	161.512	160.590	160.446
110+640	161.658	161.473	160.600	160.201
110+660	161.626	161.469	160.477	160.155
110+680	161.594	161.456	160.518	160.104
110+700	161.562	161.427	160.574	160.295
110+720	161.530	161.405	160.520	160.190
110+740	161.508	161.432	160.658	160.207
110+760	161.504	161.453	160.638	160.353
110+780	161.519	161.440	160.636	160.611
110+800	161.541	161.439	160.686	160.591
110+820	161.563	161.437	160.788	160.686
110+840	161.585	161.428	160.970	160.803
110+860	161.607	161.496	160.888	160.760
110+880	161.628	161.477	160.733	160.503
110+900	161.649	161.418	160.783	160.392
110+920	161.668	161.413	160.804	160.640
110+940	161.685	161.436	160.588	160.496
110+960	161.703	161.431	160.756	160.411
110+980	161.721	161.487	160.704	160.871
111+000	161.739	161.576	160.875	

VERTICAL ALIGNMENT SCHEMATIC: G = −2.225% L = 132.129 | K = 100.969 LC = 200.000 | G = −0.244% L = 25.057 | K = 170.792 LC = 60.000 | Gradient = 0.107% Length = 106.295 | K = 224.388 LC = 60.000 | G = −0.161% L = 99.726 | K = 221.947 LC = 60.000 | G = 0.110% L = 88.720 | K = 2829.415 LC = 60.000

HORIZONTAL ALIGNMENT SCHEMATIC: 432.199 | R = −20000.000 L = 26.946 | 1495

SUPERELEVATION (E%): −2.5 | −2.5

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport & Highways) (Government of India)

EPC CONTRACTOR:
GR INFRA PROJECTS LTD.
GR House Hiran Magri Sector -11, Udaipur Rajasthan, Udaipur- 313001

DESIGN CONSULTANT:
GRACE CONSULTING ENGINEERS
Plot No. 13, Sector B-1, Vasant Kunj, New Delhi-110070

AUTHORITY ENGINEER:
Theme Engineering Services Pvt.Ltd.
B-24 Gokul Vatika, Jawahar Circle, Jaipur-302017(Raj.)
Tel +91-141-2724495-96-97, Fax: +91-141-2724491
Email: theme@dataone.in , theme@themeengineering.com

PROJECT:
WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: Plan & Profile from (Km: 110+000 to Km: 111+000)

DATE: Sept.2015

SCALE: (1 : 2000 at A2 Size Sheet) Hor: 20 0 20 40 Ver: 2 0 2 4

DRG. NO: GR/JA-BA/HWY/PNP-111

REV: P0/R0

ORIGINAL DRAWING SHEET SIZE-A2

LEGEND :

PLAN :

EXISTING

EXIST. ROAD

EXISTING ROW

PUCCA CONSTRUCTION

PUCCA RESIDENCE/ BUILDING

PROPOSED

PROPOSED ROW

TOE LINE
E.SH EDGE
P.SH EDGE
C/W EDGE
C/W EDGE
P.SH EDGE
E.SH EDGE
TOE LINE

HOR./ VER. TANGENT POINT

PIPE CULVERT WIDENING

EXISTING BOX / SLAB CULVERT

NEW BOX / SLAB CULVERT

BOX / SLAB CULVERT WIDENING

NEW BRIDGE

EXISTING ROAD CENTER LINE

PROPOSED ROAD CENTER LINE

PROFILE:

PROPOSED ROAD LEVEL

EXISTING ROAD/ GROUND LEVEL

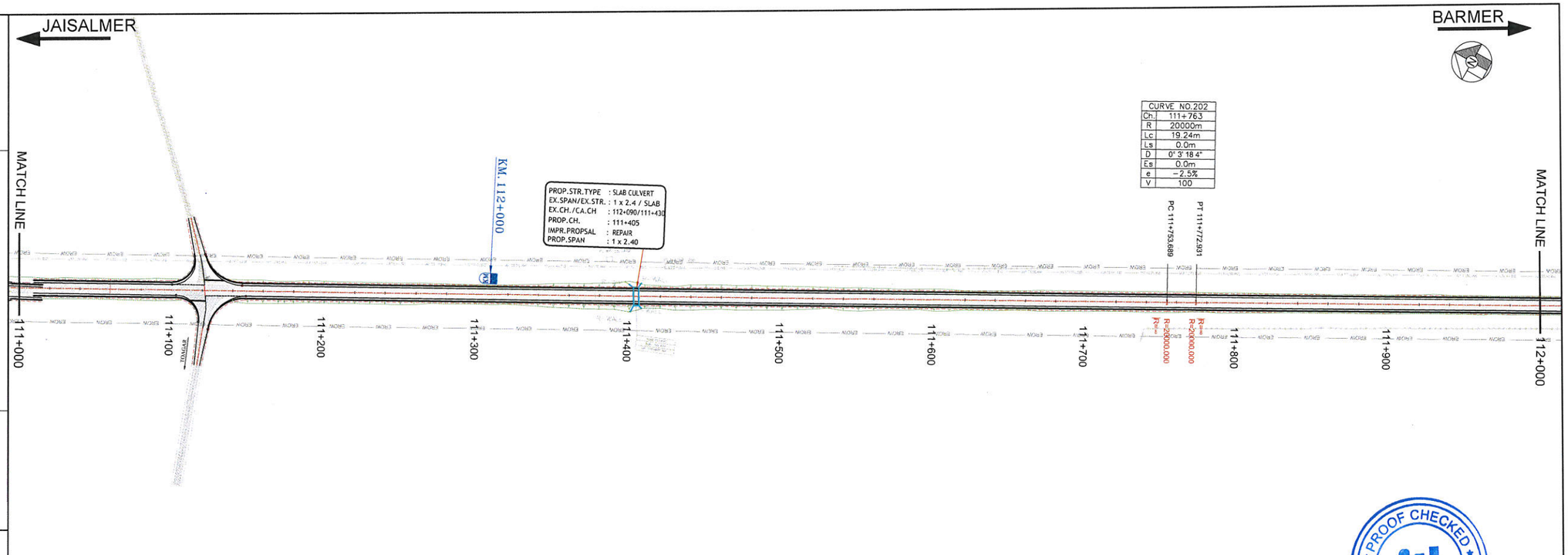
EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

SUPERELEVATION(SCHEMATIC)

LEFT

RIGHT



PROOF CHECKED INDIAN TECHNOCRAT LIMITED itl

DESIGN DIRECTOR

PROPOSED FRL	161.739 161.756 161.774 161.792 161.809 161.827 161.845 161.863 161.880 161.897 161.891 161.857 161.794 161.702 161.598 161.493 161.388 161.283 161.178 161.073 160.968 160.863 160.758 160.653 160.549 160.444 160.339 160.234 160.131 160.046 159.982 159.939 159.900 159.861 159.821 159.782 159.743 159.704 159.664 159.625 159.586 159.547 159.508 159.468 159.429 159.390 159.351 159.311 159.272 159.233 159.194	
EX. ROAD/ EX GL. BELOW PROPOSED CL	161.576 161.655 161.706 161.740 161.725 161.694 161.675 161.640 161.596 161.605 161.615 161.628 161.562 161.567 161.531 161.406 161.236 161.106 160.933 160.802 160.657 160.562 160.527 160.452 160.387 160.332 160.269 160.181 160.041 159.951 159.835 159.821 159.779 159.748 159.746 159.676 159.624 159.570 159.478 159.452 159.427 159.462 159.402 159.343 159.278 159.227 159.190 159.157 159.126 159.124 159.134	
EXISTING GROUND @ 10M LEFT	160.875 161.164 160.936 161.022 160.961 160.981 161.044 160.934 160.940 160.942 160.938 161.105 161.216 161.024 161.074 161.116 160.900 160.376 159.947 159.547 158.953 159.736 159.313 159.181 159.127 159.113 159.145 159.330 159.342 159.384 159.384 160.169 159.810 159.381 159.168 159.297 159.222 159.073 159.171 159.471 159.503 159.816 159.704 159.950 160.094 160.123 160.307 160.288 160.015 159.950 159.963	
EXISTING GROUND @ 10M RIGHT	160.871 160.901 161.049 161.044 160.884 160.798 161.504 160.510 160.430 160.694 160.841 160.821 160.703 160.619 160.784 160.759 160.913 160.056 159.635 159.388 158.667 159.605 159.026 159.163 158.933 159.007 159.233 158.890 158.882 158.889 158.828 158.994 159.028 159.185 159.033 158.924 158.862 158.905 159.079 158.895 159.028 158.878 159.028 159.125 159.339 159.747 159.770 159.124 158.753 158.865 158.666	
VERTICAL ALIGNMENT SCHEMATIC	G = 0.089% L = 246.972	K = 138.656 LC = 85.000 G = -0.524% L = 292.978 K = 182.741 LC = 60.000 G = -0.196% L = 530.455
HORIZONTAL ALIGNMENT SCHEMATIC	1495.846	R = 20000.000 L = 19.242
SUPERELEVATION (E%)	-2.5	-2.5 -2.5
CHAINAGE (M)	111+000 111+020 111+040 111+060 111+080 111+100 111+120 111+140 111+160 111+180 111+200 111+220 111+240 111+260 111+280 111+300 111+320 111+340 111+360 111+380 111+400 111+420 111+440 111+460 111+480 111+500 111+520 111+540 111+560 111+580 111+600 111+620 111+640 111+660 111+680 111+700 111+720 111+740 111+760 111+780 111+800 111+820 111+840 111+860 111+880 111+900 111+920 111+940 111+960 111+980 112+000	

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport & Highways) (Government of India)

EPC CONTRACTOR:
GR INFRA PROJECTS LTD.
GR House Hiran Magri Sector -11, Udaipur Rajasthan, Udaipur- 313001

DESIGN CONSULTANT:
GRACE CONSULTING ENGINEERS
Plot No. 13, Sector B-1, Vasant Kunj, New Delhi-110070

AUTHORITY ENGINEER:
Theme Engineering Services Pvt.Ltd.
B-24 Gokul Vatika, Jawahar Circle, Jaipur-302018(Raj.)
Tel: +91-141-2724495-96-97, Fax: +91-141-2724491
Email: theme@dataone.in , theme@themeengineering.com

PROJECT:
WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: Plan & Profile from (Km: 111+000 to Km: 112+000)

DATE: Sept.2015

SCALE: (1 : 2000 at A2 Size Sheet)
Hor: 20 0 20 40
Ver: 2 0 2 4

DRG. NO: GR/JA-BA/HWY/PNP-112

REV: P0/R0

ORIGINAL DRAWING SHEET SIZE-A2

ASSIGNED TO LAXMI DEVI DALURI(LAXMIDEVIDALURI@GMAIL.COM)(IP:103.240.90.18)

LEGEND :

PLAN :

EXISTING

EXIST. ROAD

EXISTING ROW

PUCCA CONSTRUCTION

PUCCA RESIDENCE/ BUILDING

PROPOSED

PROPOSED ROW

TOE LINE

E.SH EDGE

P.SH EDGE

C/W EDGE

C/W EDGE

P.SH EDGE

E.SH EDGE

TOE LINE

HOR./ VER. TANGENT POINT

PIPE CULVERT WIDENING

EXISTING BOX / SLAB CULVERT

NEW BOX / SLAB CULVERT

BOX / SLAB CULVERT WIDENING

NEW BRIDGE

EXISTING ROAD CENTER LINE

PROPOSED ROAD CENTER LINE

PROFILE:

PROPOSED ROAD LEVEL

EXISTING ROAD/ GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

SUPERELEVATION(SCHEMATIC)

LEFT

RIGHT

JAISALMER

BARMER

MATCH LINE

MATCH LINE

KM. 113+000

CURVE NO.203	
Ch.	112+801
R	20000m
Lc	36.82m
Ls	0.0m
D	0° 6' 19.7"
Es	0.0m
e	-2.5%
V	100

PC 112+782.276

PT 112+819.093

R=∞ R=20000.000 R=∞ R=20000.000

112+000 112+100 112+200 112+300 112+400 112+500 112+600 112+700 112+800 112+900 113+000

PROPOSED ROAD LVL

EXISTING ROAD/GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

172 170 168 166 164 162 160 158 157

PVC Ch.112+142 Elev. 158.914

PVT Ch.112+202 Elev.158.876

PVC Ch.112+369 Elev. 158.992

PVT Ch.112+429 Elev.159.009

PVC Ch.112+645 Elev. 158.979

PVT Ch.112+705 Elev.159.020

PVC Ch.112+810 Elev. 159.180

PVT Ch.112+870 Elev.159.291

DATUM=155

CHAINAGE (M)	112+000	112+020	112+040	112+060	112+080	112+100	112+120	112+140	112+160	112+180	112+200	112+220	112+240	112+260	112+280	112+300	112+320	112+340	112+360	112+380	112+400	112+420	112+440	112+460	112+480	112+500	112+520	112+540	112+560	112+580	112+600	112+620	112+640	112+660	112+680	112+700	112+720	112+740	112+760	112+780	112+800	112+820	112+840	112+860	112+880	112+900	112+920	112+940	112+960	112+980	113+000
PROPOSED FRL	159.194	159.155	159.115	159.076	159.037	158.998	158.958	158.919	158.887	158.872	158.875	158.889	158.903	158.916	158.930	158.944	158.958	158.972	158.986	158.999	159.007	159.010	159.007	159.004	159.002	158.999	158.996	158.993	158.990	158.988	158.985	158.982	158.979	158.980	158.991	159.013	159.043	159.074	159.104	159.135	159.165	159.197	159.232	159.271	159.314	159.358	159.402	159.445	159.489	159.533	159.576
EX. ROAD/ EX GL. BELOW PROPOSED CL	159.134	159.087	159.019	158.992	158.936	158.900	158.841	158.813	158.745	158.695	158.698	158.722	158.787	158.828	158.854	158.849	158.853	158.891	158.819	158.853	158.892	158.865	158.887	158.903	158.896	158.874	158.884	158.851	158.842	158.875	158.903	158.882	158.875	158.863	158.822	158.838	158.895	158.952	158.966	159.018	159.075	159.095	159.073	159.119	159.168	159.224	159.294	159.315	159.372	159.422	159.478
EXISTING GROUND @ 10M LEFT	159.963	159.828	159.639	160.072	160.096	159.085	159.062	159.191	158.609	158.791	158.692	158.856	158.919	159.190	159.506	159.309	159.160	159.374	159.325	158.922	159.804	160.690	160.170	159.442	159.831	159.192	158.911	158.971	159.842	159.107	158.741	158.560	158.593	158.881	158.602	159.395	158.544	158.468	158.469	158.261	159.142	158.408	158.757	158.523	158.634	159.173	159.570	159.735	160.126	159.677	159.577
EXISTING GROUND @ 10M RIGHT	158.666	159.090	158.692	158.898	158.586	158.506	158.530	157.865	157.951	157.783	158.231	158.192	158.801	158.713	158.816	158.426	158.612	159.006	159.095	158.992	159.257	159.605	159.633	159.144	159.125	158.687	158.440	158.442	158.440	158.708	158.713	158.041	158.315	158.363	157.366	157.749	157.908	158.345	158.007	157.857	158.011	158.036	157.998	158.062	158.308	158.255	158.756	158.897	158.181	160.062	159.150
VERTICAL ALIGNMENT SCHEMATIC								K = 225.699 LC = 60.000				G = 0.070% L = 166.125								K = 716.359 LC = 60.000			G = -0.014% L = 216.324												K = 359.755 LC = 60.000			G = 0.153% L = 104.585					K = 911.602 LC = 60.000						G = 0.219% L = 140.250			
HORIZONTAL ALIGNMENT SCHEMATIC																																				R = 20000.000 L = 36.817									237.425								
SUPERELEVATION (E%)								-2.5																		-2.5																									-2.5			

DESIGN DIRECTOR

PROOF CHECKED * INDIAN TECHNOCRAT LIMITED *

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
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Theme Engineering Services Pvt.Ltd.
B-24 Gokul Vatika, Jawahar Circle, Jaipur-302018(Raj.)
Tel: +91-141-2724495-96-97, Fax: +91-141-2724491
Email: theme@dataone.in , theme@themeengineering.com

PROJECT:
WIDENING & STRENGTHENING OF JAISALMER - BARMER SECTION OF NH - 15 TO TWO / FOUR LANE WITH PAVED SHOULDER (Km 0.00 To Km. 153.034) UNDER NHDP - IV IN THE STATE OF RAJASTHAN.

DRAWN	K.G	
DESIGNED	M. P	
CHECKED	A.S	
APPROVED	A.K.S	

TITLE: Plan & Profile from (Km: 112+000 to Km: 113+000)

DATE: Sept.2015

SCALE: (1 : 2000 at A2 Size Sheet)
Hor: 20 0 20 40
Ver: 2 0 2 4

DRG. NO: GR/JA-BA/HWY/PNP-113

REV: P0/R0

ORIGINAL DRAWING SHEET SIZE-A2

LEGEND :

PLAN :

EXISTING

EXIST. ROAD

EXISTING ROW

PUCCA CONSTRUCTION

PUCCA RESIDENCE/ BUILDING

PROPOSED

PROW — PROPOSED ROW

TOE LINE

E.SH EDGE

P.SH EDGE

C/W EDGE

C/W EDGE

P.SH EDGE

E.SH EDGE

TOE LINE

HOR./ VER. TANGENT POINT

PIPE CULVERT WIDENING

EXISTING BOX / SLAB CULVERT

NEW BOX / SLAB CULVERT

BOX / SLAB CULVERT WIDENING

NEW BRIDGE

EXISTING ROAD CENTER LINE

PROPOSED ROAD CENTER LINE

PROFILE:

PROPOSED ROAD LEVEL

EXISTING ROAD/ GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

SUPERELEVATION(SCHEMATIC)

LEFT

RIGHT

DESIGN DIRECTOR

JAISALMER

BARMER

MATCH LINE

MATCH LINE

CURVE NO.204	
Ch.	113+071
R	−20000m
Lc	29.20m
Ls	0.0m
D	0°5'11"
Es	0.0m
e	−2.5%
V	100

CURVE NO.205	
Ch.	113+414
R	10000m
Lc	270.45m
Ls	0.0m
D	1°32'58.4"
Es	0.9m
e	−2.5%
V	100

PC 113+056.518

PT 113+085.716

PC 113+278.534

KM. 114+000

PT 113+548.982

End point of Emergency Landing Facility at km 113.445

PROP.STR.TYPE : PIPE CULVERT
EX.SPAN/EX.STR. : NIL
EX.CH./CA.CH : 114+505/113+910
PROP.CH. : 113+840
IMPR.PROPSAL : NEW
PROP.SPAN : 1 x 1.20

R=∞ R=-20000.000 R=∞ R=-20000.000 R=∞ R=10000.000 R=∞ R=10000.000

113+000 113+100 113+200 113+300 113+400 113+500 113+600 113+700 113+800 113+900 114+000

PROPOSED ROAD LVL

EXISTING ROAD/GROUND LEVEL

EXISTING GROUND LEVEL @ 10M LEFT

EXISTING GROUND LEVEL @ 10M RIGHT

PVC CH.113+010 Elev.159.598

PVT CH.113+070 Elev.159.638

PVC CH.113+239 Elev.159.498

PVT CH.113+299 Elev.159.428

PVC CH.113+531 Elev.159.083

PVT CH.113+681 Elev.159.472

PVC CH.113+764 Elev.160.228

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EX.CH./CA.CH. : 114+505/113+910
PROP.CH. : 113+840
IMPR.PROPSAL : NEW
PROP.SPAN : 1 x 1.20

162 160 158 156 154 152 150 148 147

DATUM=145

PROOF CHECKED INDIAN TECHNOCRAT LIMITED itl

CHAINAGE (M)	PROPOSED FRL	EX. ROAD/ EX GL. BELOW PROPOSED CL	EXISTING GROUND @ 10M LEFT	EXISTING GROUND @ 10M RIGHT
113+000	159.576	159.478	159.577	159.150
113+020	159.576	159.516	159.739	159.144
113+040	159.618	159.512	159.775	158.539
113+060	159.641	159.514	160.540	158.689
113+080	159.644	159.454	159.850	158.596
113+100	159.630	159.400	159.389	158.729
113+120	159.613	159.338	159.700	158.604
113+140	159.597	159.320	159.954	158.339
113+160	159.580	159.283	159.554	158.168
113+180	159.563	159.288	159.424	158.575
113+200	159.547	159.312	160.102	158.595
113+220	159.530	159.367	159.837	159.244
113+240	159.514	159.379	160.565	159.677
113+260	159.497	159.404	159.891	159.603
113+280	159.478	159.394	159.999	159.478
113+300	159.455	159.313	159.569	159.780
113+320	159.427	159.253	159.464	159.269
113+340	159.397	159.165	159.100	158.785
113+360	159.367	159.105	158.541	159.260
113+380	159.337	159.055	158.353	158.517
113+400	159.307	159.015	158.252	158.455
113+420	159.278	159.028	158.156	158.929
113+440	159.248	159.083	158.270	158.815
113+460	159.218	159.081	158.287	159.109
113+480	159.188	159.017	158.470	158.683
113+500	159.158	159.019	158.436	158.560
113+520	159.129	159.030	159.146	158.504
113+540	159.099	158.965	158.321	159.018
113+560	159.071	158.911	158.260	159.162
113+580	159.062	158.871	158.149	158.840
113+600	159.075	158.862	158.103	158.415
113+620	159.110	158.902	158.018	158.267
113+640	159.167	158.892	158.174	158.544
113+660	159.245	158.859	158.220	158.292
113+680	159.345	158.850	158.545	158.363
113+700	159.467	158.873	158.603	159.172
113+720	159.600	158.875	158.994	158.791
113+740	159.734	158.825	159.068	159.392
113+760	159.868	158.761	158.556	158.560
113+780	160.001	158.757	158.302	158.156
113+800	160.135	158.756	158.179	158.164
113+820	160.267	158.790	158.295	158.843
113+840	160.381	158.807	158.571	158.697
113+860	160.470	158.796	158.760	158.559
113+880	160.534	158.742	159.033	158.497
113+900	160.574	158.668	159.600	159.271
113+920	160.588	158.588	159.925	159.803
113+940	160.578	158.532	159.434	158.834
113+960	160.543	158.417	158.510	158.864
113+980	160.484	158.278	158.664	157.764
114+000	160.399	158.172	158.800	158.071

VERTICAL ALIGNMENT SCHEMATIC: K = 198.928 LC = 60.000 | G = −0.083% L = 169.177 | K = 910.089 LC = 60.000 | Gradient = −0.149% L = 231.805 | K = 183.631 LC = 150.000 | G = 0.668% L = 113.278 | K = 161.445 LC = 350.000

HORIZONTAL ALIGNMENT SCHEMATIC: R = −20000.000 L = 29.198 | 192.818 | 560.273

SUPERELEVATION (E%): −2.5 | −2.5 | −2.5

REV.	DATE	DESCRIPTION

AUTHORITY:
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport & Highways) (Government of India)

EPC CONTRACTOR:
GR INFRA PROJECTS LTD.
GR House Hiran Magri Sector -11,
Udaipur Rajasthan, Udaipur- 313001

DESIGN CONSULTANT:
GRACE CONSULTING ENGINEERS
Plot No. 13, Sector B-1, Vasant Kunj,
New Delhi-110070

AUTHORITY ENGINEER:
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