

Package -5

Sl. No.	Land Slide Zone No.	Raod Marking (KM)	Design Chainage (KM)	Number of Bore-holes
1	LS-NEW	235+400	228+980	1
2	C-11	239+160	232+585	2



**Bore Log and Core Sample
Photographs
LS-NEW**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	235+400	Sliding Zone	LS-New	No. of Core (C)	20
Borehole No.	1	Commencement Date	28.08.2017	No. of SP Test (S)	3
Ground Elevation (m)	826.000	Completion Date	01.09.2017	No. of Undisturbed (U)	0
Method of Boring	Rotary Drilling	Standing Water Level	Not Found	No. of Disturbed (D)	1 (D - 0 & S - 1)
Borehole Diameter	75 mm	Termination Depth	20.00 M BELOW G.L.	No. of Water Sample (W)	0

Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values IS-2131	Corrected N'	Total Core Length (cm)	TCR (%)	ROD (%)	Colours of return Water	Water Loss	Angle of Fracture	
	From	To		From	To			15cm	15cm	15cm									
Highly Weathered, Brownish / Yellowish, Poor Sandy Shale / Shaley Sandstone. 0.00 m to 8.00 m	826.000			826.000	825.000	1.00	R1	-	-	-	-	23	23	NIL	-	Full Water Loss	-	Measurement not possible due to heavy broken small pieces	
				825.000	824.950	-	S	5cm / 61B	Re	Re	>100	97	-	-					-
				825.000	824.000	1.00	R2	-	-	-	-	22	22	NIL					
				824.000	823.960	-	S	4cm / 49B	Re	Re	>100	85	-	-					-
				824.000	823.000	1.00	R3	-	-	-	-	25	25	NIL					
				823.000	822.940	-	S	6cm / 67B	Re	Re	>100	78	-	-					-
				823.000	822.000	1.00	R4	-	-	-	-	20	20	NIL					
				822.000	821.000	1.00	R5	-	-	-	-	22	22	NIL					
				821.000	820.000	1.00	R6	-	-	-	-	18	18	NIL					
				820.000	819.000	1.00	R7	-	-	-	-	20	20	NIL					
		819.000	818.000	1.00	R8	-	-	-	-	11	11	NIL							
Brownish / Greyish, highly fracture Weak Shale. 8.00 m to 20.00 m	818.000			818.000	817.000	1.00	R9	-	-	-	-	14	14	NIL	-	Full Water Loss	-	Measurement not possible due to heavy broken small pieces	
				817.000	816.000	1.00	R10	-	-	-	-	13	13	NIL					
				816.000	815.000	1.00	R11	-	-	-	-	11	11	NIL					
				815.000	814.000	1.00	R12	-	-	-	-	14	14	NIL					
				814.000	813.000	1.00	R13	-	-	-	-	14	14	NIL					
				813.000	812.000	1.00	R14	-	-	-	-	15	15	NIL					
				812.000	811.000	1.00	R15	-	-	-	-	18	18	NIL					
				811.000	810.000	1.00	R16	-	-	-	-	16	16	NIL					
				810.000	809.000	1.00	R17	-	-	-	-	20	20	NIL					
				809.000	808.000	1.00	R18	-	-	-	-	20	20	NIL					
				808.000	807.000	1.00	R19	-	-	-	-	20	20	NIL					
				807.000	806.000	1.00	R20	-	-	-	-	26	26	NIL					

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)

Slip Plane - 7 m

➤ LS- New (BH-1) at CHAINAGE(km)- 235+400



PICTURE 138: BH- 1 (Depth-0.00 to 1.00m)



PICTURE 139: BH-1 (Depth-1.00 to 2.00m)



PICTURE 140: BH-1 (Depth-2.00 to 3.00m)



PICTURE 141: BH-1 (Depth-3.00 to 4.00m)



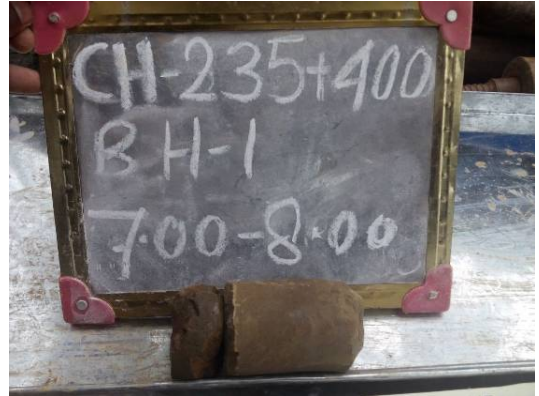
PICTURE 142: BH-1 (Depth-4.00 to 5.00m)



PICTURE 143: BH-1 (Depth-5.00 to 6.00m)



PICTURE 148: BH- 1 (Depth-6.00 to 7.00m)



PICTURE 149: BH-1 (Depth-7.00 to 8.00m)



PICTURE 150: BH-1 (Depth-8.00 to 9.00m)



PICTURE 151: BH-1 (Depth-9.00 to 10.00m)



PICTURE 152: BH-1 (Depth-10.00 to 11.00m)



PICTURE 153: BH-1 (Depth-11.00 to 12.00m)



PICTURE 154: BH- 1 (Depth-12.00 to 13.00m)



PICTURE 156: BH-1 (Depth-13.00 to 14.00m)



PICTURE 157: BH-1 (Depth-14.00 to 15.00m)



PICTURE 158: BH-1 (Depth-15.00 to 16.00m)



PICTURE 159: BH-1 (Depth-16.00 to 17.00m)



PICTURE 160: BH-1 (Depth-17.00 to 18.00m)




PICTURE 161: BH-1 (Depth-18.00 to 19.00m)



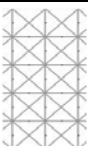
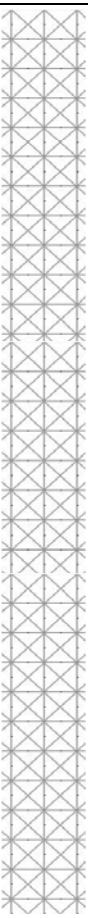
PICTURE 162: BH-1 (Depth-19.00 to 20.00m)

**Bore Log and Core Sample
Photographs
LS-C11**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	239+160		Sliding Zone	LS_C11			No. of Core (C)	7										
Borehole No.	1		Commencement Date	20.06.2017			No. of SP Test (S)	12										
Ground Elevation (m)	713.2960		Completion Date	24.06.2017			No. of Undisturbed (U)	0										
Method of Boring	Rotary Drilling		Standing Water Level	3.40 M BELOW G.L.			No. of Disturbed (D)	0										
Borehole Diameter	75 mm		Termination Depth	20.00 M BELOW G.L.			No. of Water Sample (W)	1										
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values (S-2131)	Corrected N*	Total Core Length (cm)	TCR (%)	RQD (%)	Colours of return Water	Water Loss	Angle of Fracture
	From	To		From	To			15cm	15cm	15cm								
Highly Weathered, Dark greyish, Poor Sandy Shale. 0.00 m to 5.00 m	713.296	708.296		713.296	712.296	1.00	R1	-	-	-	-	-	21	21	NIL	Greyish	Partial	65°
				712.296	711.296	1.00	R2	-	-	-	-	-	23	23	NIL			85°
				711.296	710.296	1.00	R3	-	-	-	-	-	29	29	NIL			**
				710.296	709.296	1.00	R4	-	-	-	-	-	12	12	NIL			
				709.296	708.296	1.00	R5	-	-	-	-	-	19	19	NIL			
Completely Weathered, Dark greyish, Very poor Shale. 5.00 m to 20.00 m Note - Observed some thinly Sandstone pocket layer observed. (10.00 - 11.00 m & 15.00 - 16.00 m)	708.296	702.296		708.296	707.296	1.00	R6	-	-	-	-	-	NIL	NIL	NIL	Greyish	Partial	-
				707.296	-	S	3 cm / 51B	Re	Re	>100	67	-	-	-	-			-
				707.296	706.296	1.00	R7	-	-	-	-	-	NIL	NIL	NIL			-
				706.296	-	S	4cm / 48B	Re	Re	>100	64	-	-	-	-			-
				706.296	705.296	1.00	R8	-	-	-	-	-	NIL	NIL	NIL			-
				705.296	-	S	2cm / 35B	Re	Re	>100	62	-	-	-	-			-
				705.296	704.296	1.00	R9	-	-	-	-	-	NIL	NIL	NIL			-
				704.296	-	S	Hummer Rebound	>100	-	-	-	-	-	-	-			-
				704.296	703.296	1.00	R10	-	-	-	-	-	NIL	NIL	NIL			-
				703.296	-	S	Hummer Rebound	>100	-	-	-	-	-	-	-			-
				703.296	702.296	1.00	R11	-	-	-	-	-	14	14	NIL			-
				702.296	701.296	1.00	R12	-	-	-	-	-	NIL	NIL	NIL			-
				701.296	-	S	Hummer Rebound	>100	-	-	-	-	-	-	-			-
				701.296	700.296	1.00	R13	-	-	-	-	-	NIL	NIL	NIL			-
				700.296	-	S	2cm / 36B	Re	Re	>100	54	-	-	-	-			-
				700.296	699.296	1.00	R14	-	-	-	-	-	NIL	NIL	NIL			-
				699.296	-	S	Hummer Rebound	>100	-	-	-	-	-	-	-			-
				699.296	698.296	1.00	R15	-	-	-	-	-	NIL	NIL	NIL			-
				698.296	-	S	Hummer Rebound	>100	-	-	-	-	-	-	-			-
				698.296	697.296	1.00	R16	-	-	-	-	-	23	23	NIL			60°
	697.296	696.296	1.00	R17	-	-	-	-	-	NIL	NIL	NIL	-					
	696.296	-	S	2cm / 40B	Re	Re	>100	50	-	-	-	-	-					
	696.296	695.296	1.00	R18	-	-	-	-	-	NIL	NIL	NIL	-					
	695.296	-	S	3 cm / 46B	Re	Re	>100	49	-	-	-	-	-					
	695.296	694.296	1.00	R19	-	-	-	-	-	NIL	NIL	NIL	-					
	694.296	-	S	2 cm / 33B	Re	Re	>100	48	-	-	-	-	-					
	694.296	693.296	1.00	R20	-	-	-	-	-	NIL	NIL	NIL	-					

Re: Refusal R: Run RQD: Rock Quality Designation TCR: Total Core Recovery U*: UDS Could not be Collected (Slipped)

Slip Plane - 9m

** Measurement not possible due to heavy broken small pieces.

				753.280	753.280	1.00	R8	-	-	-	-	-	21	21	NIL			80°
				752.280	752.280	1.00	R9	-	-	-	-	-	25	25	NIL			60°
				751.280	751.280	1.00	R10	-	-	-	-	-	22	22	NIL			-
		750.280		750.280	750.280	1.00	R11	-	-	-	-	-	37	37	NIL			50°
				749.280	749.280	1.00	R12	-	-	-	-	-	72	72	NIL			55°, 40°
				748.280	748.280	1.00	R13	-	-	-	-	-	80	80	12			**
				747.280	747.280	1.00	R14	-	-	-	-	-	40	40	NIL			-
		746.280		746.280	746.280	1.00	R15	-	-	-	-	-	74	74	NIL			50°, 80°
				745.280	745.280	1.00	R16	-	-	-	-	-	35	35	NIL			**
				744.280	744.280	1.00	R17	-	-	-	-	-	34	34	NIL			40°
				743.280	743.280	1.00	R18	-	-	-	-	-	24	24	NIL			-
				742.280	742.280	1.00	R19	-	-	-	-	-	26	26	NIL			70°
				741.280	741.280	1.00	R20	-	-	-	-	-	27	27	NIL			-
				740.280	740.280	1.00	R21	-	-	-	-	-	35	35	NIL			70°
				739.280	739.280	1.00	R22	-	-	-	-	-	36	36	NIL			-
				738.280	738.280	1.00	R23	-	-	-	-	-	27	27	NIL			-
				737.280	737.280	1.00	R24	-	-	-	-	-	26	26	NIL			50°, 58°
				736.280	736.280	1.00	R25	-	-	-	-	-	21	21	NIL			60°, 65°
				735.280	735.280	1.00	R26	-	-	-	-	-	26	26	NIL			47°
				734.280	734.280	1.00	R27	-	-	-	-	-	25	25	NIL			-
				733.280	733.280	1.00	R28	-	-	-	-	-	25	25	NIL			46°
				732.280	732.280	1.00	R29	-	-	-	-	-	24	24	NIL			-
		731.280		731.280	731.280	1.00	R30	-	-	-	-	-	29	29	10			50°
Re: Refusal R: Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 16m.																		
** Measurement not possible due to heavy broken small pieces.																		

➤ LS- C11 (BH-1 & BH-2) at CHAINAGE(km)- 239+160



PICTURE 163: BH-1 (Depth-0.00 to 1.00m)



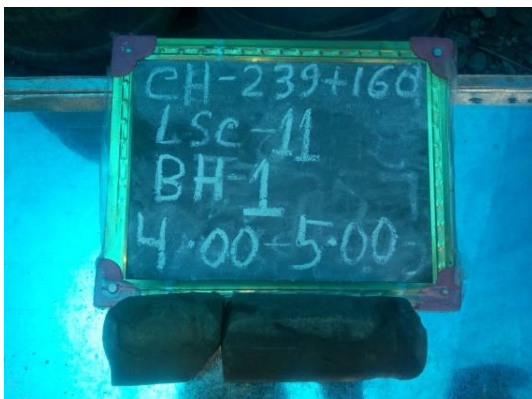
PICTURE 164: BH-1 (Depth-1.00 to 2.00m)



PICTURE 165: BH-1 (Depth-2.00 to 3.00m)



PICTURE 166: BH-1 (Depth-3.00 to 4.00m)



PICTURE 167: BH- 1 (Depth-4.00 to 5.00m)



PICTURE 168: BH- 1 (Depth-10.00 to 11.00m)



PICTURE 169: BH-1 (Depth-15.00 to 16.00m)



PICTURE 170: BH-2 (Depth-16.00 to 17.00m)



PICTURE 171: BH-2 (Depth-17.00 to 18.00m)



PICTURE 172: BH-2 (Depth-18.00 to 19.00m)



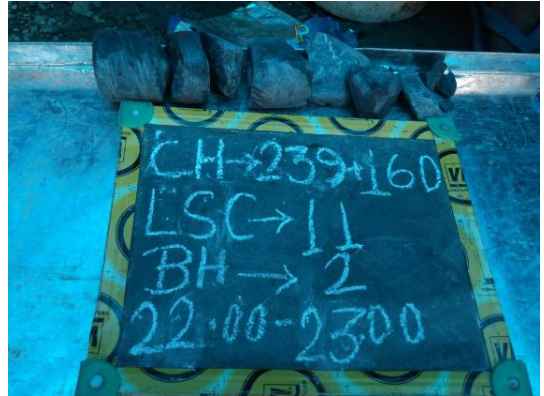
PICTURE 173: BH-2 (Depth-19.00 to 20.00m)



PICTURE 174: BH-2 (Depth-20.00 to 21.00m)



PICTURE 175: BH-2 (Depth-21.00 to 22.00m)



PICTURE 176: BH-2 (Depth-22.00 to 23.00m)



PICTURE 177: BH-2 (Depth-23.00 to 24.00m)



PICTURE 178: BH-2 (Depth-24.00 to 25.00m)



PICTURE 179: BH-2 (Depth-25.00 to 26.00m)



PICTURE 180: BH-2 (Depth-26.00 to 27.00m)



PICTURE 181: BH-2 (Depth-27.00 to 28.00m)



PICTURE 182: BH-2 (Depth-28.00 to 29.00m)



PICTURE 183: BH-2 (Depth-29.00 to 30.00m)