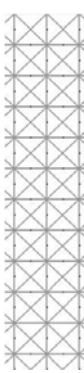
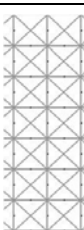
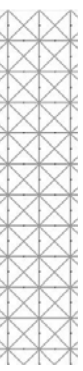

Package-8

Sl. No.	Land Slide Zone No.	Raod Marking (KM)	Design Chainage (KM)	Number of Bore-holes
1	D24	350+630	346+055	2
2	D25	350+790	346+230	2
3	D26	352+025	347+430	2
4	D27	360+835	354+585	2
5	D28	361+350	355+085	1
6	D29	361+550	355+245	1
7	D31	365+790	359+330	2

***Bore Log & Core Samples
Photographs
LS-D24***



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.  2nd Floor,NATARAJ BHAWAN,Haripal,Hooghly,712405. (WB) www.bpciopl.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)	350+630		Sliding Zone		LS_D24		No. of Core (C)		18									
Borehole No.	1		Commencement Date		08.07.2017		No. of SP Test (S)		3									
Ground Elevation (m)	861.3165		Completion Date		13.07.2017		No. of Undisturbed (U)		0									
Method of Boring	Rotary Drilling		Standing Water Level		12.25 M BELOW G.L.		No. of Disturbed (D)		2 (D - 1 & S - 1)									
Borehole Diameter	150 mm & 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 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								
Brownish / Yellowish, Clayey Silt with little sand & broken Claystone mixed. (CL) 0.00 m to 1.00 m	861.3165	860.3165		860.3165	860.8165	-	D	-	-	-	-	-	-	-	-	-	-	-
Brownish, Very weak Shale. 1.00 m to 3.00 m	860.3165	858.3165		860.3165	860.2865	-	S	3 cm / 36B	Re	Re	>100	97	-	-	-	-	-	-
				860.3165	859.3165	1.00	R1	-	-	-	-	-	10	10	Nil	-	-	
				859.3165	858.3165	1.00	R2	-	-	-	-	-	11	11	Nil	-	-	
Hard, Yellowish / Brownish, Clayey Silt with little broken claystone pices. (CL) 3.00 m to 4.00 m	858.3165	857.3165		858.3165	857.8665	-	S	19	27	36	63	-	-	-	-	-	-	-
				857.3165	857.2665	-	S	5 cm / 52 B	Re	Re	>100	74	-	-	-	-	-	-
Brownish / Yellowish, Highly fracture Weak Shale. 4.00 m to 15.00 m	860.3165	849.3165		857.3165	856.3165	1.00	R3	-	-	-	-	-	21	21	Nil	Brownish	-	-
				856.3165	855.3165	1.00	R4	-	-	-	-	-	22	22	Nil			
				855.3165	854.3165	1.00	R5	-	-	-	-	-	27	27	Nil			
				854.3165	853.3165	1.00	R6	-	-	-	-	-	20	20	Nil			
				853.3165	852.3165	1.00	R7	-	-	-	-	-	11	11	Nil			
				852.3165	851.3165	1.00	R8	-	-	-	-	-	15	15	Nil			
				851.3165	850.3165	1.00	R9	-	-	-	-	-	9	9	Nil			
				850.3165	849.3165	1.00	R10	-	-	-	-	-	15	15	Nil			
				849.3165	848.3165	1.00	R11	-	-	-	-	-	19	19	Nil			
				848.3165	847.3165	1.00	R12	-	-	-	-	-	15	15	Nil			
				847.3165	846.3165	1.00	R13	-	-	-	-	-	20	20	Nil			
Greyish / Dark Greyish, Highly fracture moderately Strong Shale. 15.00 m to 20.00 m	849.3165	844.3165		846.3165	845.3165	1.00	R14	-	-	-	-	-	59	59	Nil	Greyish	-	85°
				845.3165	844.3165	1.00	R15	-	-	-	-	-	72	72	13			85°-40°
				844.3165	843.3165	1.00	R16	-	-	-	-	-	71	71	32			-
				843.3165	842.3165	1.00	R17	-	-	-	-	-	77	77	Nil			85°-90°
				842.3165	841.3165	1.00	R18	-	-	-	-	-	71	71	23			-
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 4.00 m																		
** Masurement not posible due to heavy broken small pices																		

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.bpciopl.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)	350+630		Sliding Zone		LS_D24		No. of Core (C)		20												
Borehole No.	2		Commencement Date		09.07.2017		No. of SP Test (S)		0												
Ground Elevation (m)	871.0191		Completion Date		14.07.2017		No. of Undisturbed (U)		0												
Method of Boring	Rotary Drilling		Standing Water Level		11.16 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 IS-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											
Brownish / Grey, Highly fracture Very Weak Shale with infilling soil. 0.00 m to 8.00 m	871.0191			871.0191	870.0191	1.00	R1	-	-	-	-	-	16	16	Nil	Greyish	Partial	Measurement not possible due to heavy broken small pieces			
				870.0191	869.0191	1.00	R2	-	-	-	-	-	12	12	Nil						
				869.0191	868.0191	1.00	R3	-	-	-	-	-	17	17	Nil						
				868.0191	867.0191	1.00	R4	-	-	-	-	-	18	18	Nil						
				867.0191	866.0191	1.00	R5	-	-	-	-	-	20	20	Nil						
				866.0191	865.0191	1.00	R6	-	-	-	-	-	16	16	Nil						
				865.0191	864.0191	1.00	R7	-	-	-	-	-	22	22	Nil						
				864.0191	863.0191	1.00	R8	-	-	-	-	-	27	27	Nil						
Greyish, Highly fracture Weak Shale . 8.00 m to 20.00 m	863.0191			863.0191	862.0191	1.00	R9	-	-	-	-	-	29	29	Nil						
				862.0191	861.0191	1.00	R10	-	-	-	-	-	24	24	Nil						
				861.0191	860.0191	1.00	R11	-	-	-	-	-	24	24	Nil						
				860.0191	859.0191	1.00	R12	-	-	-	-	-	43	43	Nil						
				859.0191	858.0191	1.00	R13	-	-	-	-	-	18	18	Nil						
				858.0191	857.0191	1.00	R14	-	-	-	-	-	24	24	Nil						
				857.0191	856.0191	1.00	R15	-	-	-	-	-	23	23	Nil						
				856.0191	855.0191	1.00	R16	-	-	-	-	-	23	23	Nil						
				855.0191	854.0191	1.00	R17	-	-	-	-	-	20	20	Nil						
				854.0191	853.0191	1.00	R18	-	-	-	-	-	23	23	Nil						80°
				853.0191	852.0191	1.00	R19	-	-	-	-	-	20	20	Nil						85°
				852.0191	851.0191	1.00	R20	-	-	-	-	-	22	22	Nil						73°
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																					
Slip Plane - 14.00 m																					

➤ LS- D24 (BH-1 & BH-2) & CHAINAGE(km)- 350+630



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



PICTURE2: BH-1 (Depth-2.00 to 3.00m)



PICTURE 3: BH-1 (Depth-4.00 to 5.00m)



PICTURE 4: BH-1 (Depth-5.00 to 6.00m)



PICTURE5: BH-1 (Depth-6.00 to 7.00m)



PICTURE 6: BH-1 (Depth-7.00 to 8.00m)



PICTURE 7: BH-1 (Depth-8.00 to 9.00m)



PICTURE 8: BH-1 (Depth-9.00 to 10.00m)



PICTURE 9: BH-1 (Depth-10.00 to 11.00m)



PICTURE 10: BH-1 (Depth-11.00 to 12.00m)



PICTURE 11: BH-1 (Depth-12.00 to 13.00m)



PICTURE 12: BH-1 (Depth-13.00 to 14.00m)



PICTURE 13: BH-1 (Depth-14.00 to 15.00m)



PICTURE 14: BH-1 (Depth-15.00 to 16.00m)



PICTURE 15: BH-1 (Depth-16.00 to 17.00m)



PICTURE 16: BH-1 (Depth-17.00 to 18.00m)



PICTURE17: BH-1 (Depth-18.00 to 19.00m)



PICTURE 18: BH-1 (Depth-19.00 to 20.00m)



PICTURE 19: BH-2 (Depth-0.00 to 1.00m)



PICTURE 20: BH-2 (Depth-1.00 to 2.00m)



PICTURE 21: BH-2 (Depth-2.00 to 3.00m)



PICTURE 22: BH-2 (Depth-3.00 to 4.00m)



PICTURE 23: BH-2 (Depth-4.00 to 5.00m)



PICTURE 24: BH-2 (Depth-5.00 to 6.00m)



PICTURE 25: BH-2 (Depth-6.00 to 7.00m)



PICTURE 26: BH-2 (Depth-7.00 to 8.00m)



PICTURE 27: BH-2 (Depth-8.00 to 9.00m)



PICTURE 28: BH-2 (Depth-9.00 to 10.00m)



PICTURE 29: BH-2 (Depth-10.00 to 11.00m)



PICTURE 30: BH-2 (Depth-11.00 to 12.00m)



PICTURE 31: BH-2 (Depth-12.00 to 13.00m)



PICTURE 32: BH-2 (Depth-13.00 to 14.00m)



PICTURE 33: BH-2 (Depth-14.00 to 15.00m)



PICTURE 34: BH-2 (Depth-15.00 to 16.00m)



PICTURE 35: BH-2 (Depth-16.00 to 17.00m)



PICTURE 36: BH-2 (Depth-17.00 to 18.00m)



PICTURE 37: BH-2 (Depth-18.00 to 19.00m)

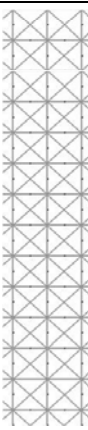


PICTURE 38: BH-2 (Depth-19.00 to 20.00m)

***Bore Log & Core Samples
Photographs
LS-D25***



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.											
Client Name :		M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.					 2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpcipl.com											
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)		350+790		Sliding Zone		LS_D25		No. of Core (C)				17						
Borehole No.		1		Commencement Date		09.06.2017		No. of SP Test (S)				6						
Ground Elevation (m)		865.9885		Completion Date		17.06.2017		No. of Undisturbed (U)				0						
Method of Boring		Rotary Drilling		Standing Water Level		14.32 M BELOW G.L.		No. of Disturbed (D)				4 (D - 1 & S - 3)						
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 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								
Brownish, Clayey Silt with some % of broken claystone pices. (CI) 0.00 m to 1.00 m	865.9885	864.9885		865.4885	-	D	-	-	-	-	-	-	-	-	-			-
Highly Weathered, Brownish / Greyish, Fine grained highly fracture Poor Shaley Sandstone. 1.00 m to 11.00 m	864.9885	854.9885		864.9885	864.9385	-	S	5cm / 52 B	Re	Re	>100	97	-	-	-			-
				864.9885	863.9885	1.00	R1	-	-	-	-	-	10	10	Nil	Brownish	Partial	:
				863.9885	862.9885	1.00	R2	-	-	-	-	-	12	12	Nil			
				862.9885	861.9885	1.00	R3	-	-	-	-	-	16	16	Nil			
				861.9885	860.9885	1.00	R4	-	-	-	-	-	18	18	Nil			
				860.9885	859.9885	1.00	R5	-	-	-	-	-	22	22	Nil			
				859.9885	858.9885	1.00	R6	-	-	-	-	-	16	16	Nil			
				858.9885	857.9885	1.00	R7	-	-	-	-	-	17	17	Nil			
				857.9885	856.9885	1.00	R8	-	-	-	-	-	16	16	Nil			
				856.9885	855.9885	1.00	R9	-	-	-	-	-	13	13	Nil			
				855.9885	854.9885	1.00	R10	-	-	-	-	-	Nil	Nil	Nil			
				Hard, Brownish / Yellowish, Clayey Silt with some % of claystone mixed. (CI) 11.00 m to 13.00 m	854.9885	852.9885		854.9885	854.5385	-	S	13	19	25	44			
853.9885	853.5385	-	S					16	22	29	51	-	-	-			-	
852.9885	852.9485	-	S					4cm / 43B	Re	Re	>100	54	-	-	-			-
852.9885	851.9885	1.00	R11					-	-	-	-	-	18	18	Nil			
Highly Weathered, Brownish / Greyish, Fine grained highly fracture Poor Shaley Sandstone. 13.00 m to 17.00 m	852.9885	848.9885		851.9885	850.9885	1.00	R12	-	-	-	-	-	15	15	Nil	Brownish	Full Water Loss	:
				850.9885	849.9885	1.00	R13	-	-	-	-	-	24	24	Nil			
				849.9885	848.9885	1.00	R14	-	-	-	-	-	Nil	Nil	Nil			
				Hard, Brownish / Yellowish, Clayey Silt with some % of claystone mixed. (CL) 17.00 m to 18.00 m	848.9885	847.9885		848.9885	848.5385	-	S	21	25	32	57			
847.9885	847.9385	-	S					5 cm / 57 B	Re	Re	>100	49	-	-	-			-
Highly Weathered, Brownish / Grey, Fine grained poor Shaley Sandstone. 18.00 m to 20.00 m	847.9885	845.9885		847.9885	846.9885	1.00	R15	-	-	-	-	-	17	17	Nil	Brownish	Full Water Loss	:
				846.9885	845.9885	1.00	R16	-	-	-	-	-	28	28	Nil			
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 12.45 m																		
** Measurement not possible due to heavy broken small pieces																		

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.											
Client Name :		M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.						 2 nd Floor,NATARAJ BHAWAN,Haripal,Hooghly,712405. (WB) www.bpci.com											
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)		350+790		Sliding Zone		LS_D25		No. of Core (C)				17							
Borehole No.		2		Commencement Date		01.07.2017		No. of SP Test (S)				3							
Ground Elevation (m)		885.4722		Completion Date		06.07.2017		No. of Undisturbed (U)				0							
Method of Boring		Rotary Drilling		Standing Water Level		16.22 M BELOW G.L.		No. of Disturbed (D)				3 (D - 1 & S - 2)							
Borehole Diameter		150 mm & 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 IS-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								
Very Stiff to Hard, Light Yellowish / Brownish, Clayey Silt with some % of broken claystone pieces. (CI) 0.00 m to 3.00 m		885.4722			884.9722	-	D	-	-	-	-	-	-	-	-	Brownish	Partial	Measurement not possible due to heavy broken small pices	
					884.4722	-	S	4	10	16	26	-	-	-	-				
					883.4722	-	S	6	13	21	34	-	-	-	-				
			884.4722			883.0222	-	S	6	13	21	34	-	-	-				-
Greyish, Highly fracture Poor Shale with infilling Soil. 3.00 m to 11.00 m		884.4722			882.4722	-	S	5 cm / 48 B	Re	Re	>100	78	-	-	-	Yellowish	Partial	Measurement not possible due to heavy broken small pices	
					882.4722	1.00	R1	-	-	-	-	-	20	20	Nil				
					881.4722	1.00	R2	-	-	-	-	-	30	30	Nil				
					880.4722	1.00	R3	-	-	-	-	-	15	15	Nil				
					879.4722	1.00	R4	-	-	-	-	-	12	12	Nil				
					878.4722	1.00	R5	-	-	-	-	-	13	13	Nil				
					877.4722	1.00	R6	-	-	-	-	-	22	22	Nil				
					876.4722	1.00	R7	-	-	-	-	-	20	20	Nil				
					875.4722	1.00	R8	-	-	-	-	-	18	18	Nil				
			876.4722			874.4722	1.00	R9	-	-	-	-	-	17	17				Nil
					873.4722	1.00	R10	-	-	-	-	-	38	38	Nil				
					872.4722	1.00	R11	-	-	-	-	-	24	24	Nil				
Dark Greyish, Fine grained highly fracture Weak Sandy Shale. 11.00 m to 20.00 m				871.4722	1.00	R12	-	-	-	-	-	38	38	Nil	Greyish	Partial	Measurement not possible due to heavy broken small pieces		
				870.4722	1.00	R13	-	-	-	-	-	32	32	Nil					
				869.4722	1.00	R14	-	-	-	-	-	30	30	Nil					
				868.4722	1.00	R15	-	-	-	-	-	25	25	Nil					
				867.4722	1.00	R16	-	-	-	-	-	9	9	Nil					
				866.4722	1.00	R17	-	-	-	-	-	20	20	Nil					
			867.4722		865.4722														
			867.4722		865.4722														
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																			
Slip Plane - 11.00 m																			

➤ LS- D25 (BH-1 & BH-2) & CHAINAGE(km)- 350+790



PICTURE 39: BH-1 (Depth-2.00 to 3.00m)



PICTURE 40: BH-1 (Depth-3.00 to 4.00m)



PICTURE 41: BH-1 (Depth-4.00 to 5.00m)



PICTURE 42: BH-1 (Depth-5.00 to 6.00m)



PICTURE 43: BH-1 (Depth-6.00 to 7.00m)



PICTURE 44: BH-1 (Depth-7.00 to 8.00m)



PICTURE 45: BH-1 (Depth-8.00 to 9.00m)



PICTURE 46: BH-1 (Depth-9.00 to 10.00m)



PICTURE 47: BH-1 (Depth-13.00 to 14.00m)



PICTURE 48: BH-1 (Depth-14.00 to 15.00m)



PICTURE 49: BH-1 (Depth-15.00 to 16.00m)



PICTURE 50: BH-1 (Depth-18.00 to 19.00m)



PICTURE 51: BH-1 (Depth-19.00 to 20.00m)



PICTURE 52: BH-2 (Depth-3.00 to 4.00m)



PICTURE 53: BH-2 (Depth-4.00 to 5.00m)



PICTURE 54: BH-2 (Depth-5.00 to 6.00m)



PICTURE 55: BH-2 (Depth-6.00 to 7.00m)



PICTURE 56: BH-2 (Depth-7.00 to 8.00m)



PICTURE 57: BH-2 (Depth-8.00 to 9.00m)



PICTURE 58: BH-2 (Depth-9.00 to 10.00m)



PICTURE 59: BH-2 (Depth-10.00 to 11.00m)



PICTURE 60: BH-2 (Depth-11.00 to 12.00m)



PICTURE 61: BH-2 (Depth-12.00 to 13.00m)



PICTURE 62: BH-2 (Depth-13.00 to 14.00m)



PICTURE 63: BH-2 (Depth-14.00 to 15.00m)



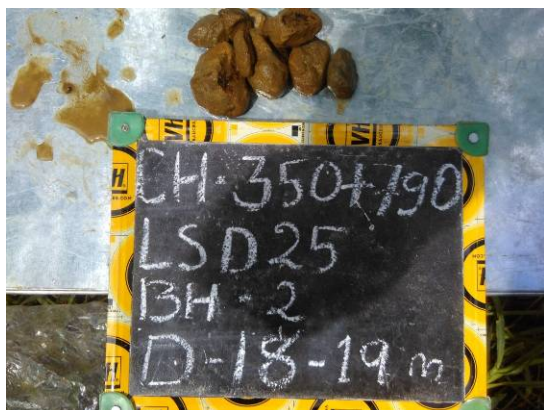
PICTURE 64: BH-2 (Depth-15.00 to 16.00m)



PICTURE 65: BH-2 (Depth-16.00 to 17.00m)



PICTURE 66: BH-2 (Depth-17.00 to 18.00m)



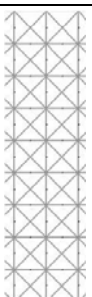
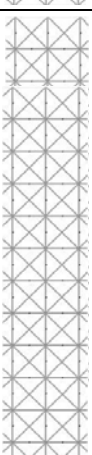
PICTURE 67: BH-2 (Depth-18.00 to 19.00m)

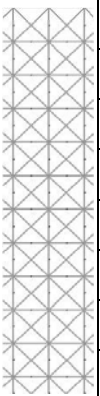
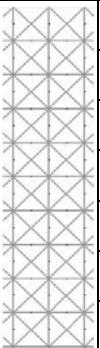


PICTURE 68: BH-2 (Depth-19.00 to 20.00m)

***Bore Log & Core Samples
Photographs
LS-D26***



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)	352+025		Sliding Zone		LS_D26		No. of Core (C)		15										
Borehole No.	1		Commencement Date		20.06.2017		No. of SP Test (S)		0										
Ground Elevation (m)	893.7793		Completion Date		24.06.2017		No. of Undisturbed (U)		0										
Method of Boring	Rotary Drilling		Standing Water Level		10.00 M BELOW G.L.		No. of Disturbed (D)		0 (D - 0 & S - 0)										
Borehole Diameter	75 mm		Termination Depth		15.00 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 IS-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, Brownish / Grey, highly fracture Weak Shale with infilling soil. 0.00 m to 6.00 m	893.7793	887.7793		893.7793	892.7793	1.00	R1	-	-	-	-	-	11	11	NIL	-	Full Water Loss	Measurement not possible due to heavy broken small pieces	
				891.7793	890.7793	1.00	R2	-	-	-	-	-	13	13	NIL				
				889.7793	888.7793	1.00	R3	-	-	-	-	-	9	9	NIL				
				887.7793	886.7793	1.00	R4	-	-	-	-	-	8	8	NIL				
				885.7793	884.7793	1.00	R5	-	-	-	-	-	15	15	NIL				
				883.7793	882.7793	1.00	R6	-	-	-	-	-	10	10	NIL				
Highly Weathered, Greyish, highly fracture Weak Sandy Shale with infilling soil. 6.00 m to 15.00 m	887.7793	878.7793		887.7793	886.7793	1.00	R7	-	-	-	-	-	20	20	NIL	Greyish	Partial		Measurement not possible due to heavy broken small pieces
				885.7793	884.7793	1.00	R8	-	-	-	-	-	14	14	NIL				
				883.7793	882.7793	1.00	R9	-	-	-	-	-	18	18	NIL				
				881.7793	880.7793	1.00	R10	-	-	-	-	-	17	17	NIL				
				879.7793	878.7793	1.00	R11	-	-	-	-	-	22	22	NIL				
				877.7793	876.7793	1.00	R12	-	-	-	-	-	17	17	NIL				
				875.7793	874.7793	1.00	R13	-	-	-	-	-	20	20	NIL				
				873.7793	872.7793	1.00	R14	-	-	-	-	-	15	15	NIL				
				871.7793	870.7793	1.00	R15	-	-	-	-	-	21	21	NIL				
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																			
Slip Plane -Did Not Identified.																			

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)	352+025		Sliding Zone		LS_D26		No. of Core (C)			15								
Borehole No.	2		Commencement Date		01.07.2017		No. of SP Test (S)			0								
Ground Elevation (m)	904.3810		Completion Date		04.07.2017		No. of Undisturbed (U)			0								
Method of Boring	Rotary Drilling		Standing Water Level		10.72 M BELOW G.L.		No. of Disturbed (D)			0 (D - 0 & S - 0)								
Borehole Diameter	75 mm		Termination Depth		15.00 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 IS-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, Greyish / Dark Greyish, highly fracture Weak Shale. 0.00 m to 8.00 m	904.3810			904.3810	903.3810	1.00	R1	-	-	-	-	-	15	15	NIL	Greyish	Partial	Measurement not possible due to heavy broken small pieces
				903.3810	902.3810	1.00	R2	-	-	-	-	-	19	19	NIL			
				902.3810	901.3810	1.00	R3	-	-	-	-	-	17	17	NIL			
				901.3810	900.3810	1.00	R4	-	-	-	-	-	14	14	NIL			
				900.3810	899.3810	1.00	R5	-	-	-	-	-	10	10	NIL			
				899.3810	898.3810	1.00	R6	-	-	-	-	-	17	17	NIL			
				898.3810	897.3810	1.00	R7	-	-	-	-	-	15	15	NIL			
				897.3810	896.3810	1.00	R8	-	-	-	-	-	10	10	NIL			
Greyish, highly fracture Weak Sandy Shale. 8.00 m to 15.00 m	896.3810			896.3810	895.3810	1.00	R9	-	-	-	-	-	23	23	NIL			
				895.3810	894.3810	1.00	R10	-	-	-	-	-	21	21	NIL			
				894.3810	893.3810	1.00	R11	-	-	-	-	-	19	19	NIL			
				893.3810	892.3810	1.00	R12	-	-	-	-	-	15	15	NIL			
				892.3810	891.3810	1.00	R13	-	-	-	-	-	13	13	NIL			
				891.3810	890.3810	1.00	R14	-	-	-	-	-	15	15	NIL			
				890.3810	889.3810	1.00	R15	-	-	-	-	-	13	13	NIL			
				889.3810														
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - Did Not Identified.																		

➤ LS- D26 (BH-1 & BH-2)_CHAINAGE(km)- 352+025



PICTURE 69: BH-1 (Depth-0.00 to 1.00m)



PICTURE 70: BH-1 (Depth-1.00 to 2.00m)



PICTURE 71: BH-1 (Depth-2.00 to 3.00m)



PICTURE 72: BH-1 (Depth-3.00 to 4.00m)



PICTURE 73: BH-1 (Depth-4.00 to 5.00m)



PICTURE 74: BH-1 (Depth-5.00 to 6.00m)



PICTURE 75: BH-1 (Depth-6.00 to 7.00m)



PICTURE76: BH-1 (Depth-7.00 to 8.00m)



PICTURE 77: BH-1 (Depth-8.00 to 9.00m)



PICTURE78: BH-1 (Depth-9.00 to 10.00m)



PICTURE 79 BH-1 (Depth-10.00 to 11.00m)



PICTURE 80: BH-1 (Depth-11.00 to 12.00m)



PICTURE 81: BH-1 (Depth-12.00 to 13.00m)



PICTURE 82: BH-1 (Depth-13.00 to 14.00m)



PICTURE 83: BH-1 (Depth-14.00 to 15.00m)



PICTURE 84: BH-2 (Depth-0.00 to 1.00m)



PICTURE 85: BH-2 (Depth-1.00 to 2.00m)



PICTURE 86: BH-2 (Depth-2.00 to 3.00m)



PICTURE 87: BH-2 (Depth-3.00 to 4.00m)



PICTURE 88: BH-2 (Depth-4.00 to 5.00m)



PICTURE 89: BH-2 (Depth-5.00 to 6.00m)



PICTURE 90: BH-2 (Depth-6.00 to 7.00m)



PICTURE 91: BH-2 (Depth-7.00 to 8.00m)



PICTURE 92: BH-2 (Depth-8.00 to 9.00m)



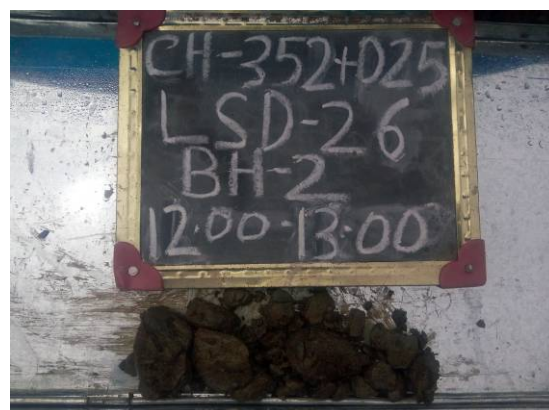
PICTURE 93: BH-2 (Depth-9.00 to 10.00m)



PICTURE 94: BH-2 (Depth-10.00 to 11.00m)



PICTURE 95: BH-2 (Depth-11.00 to 12.00m)



PICTURE 96: BH-2 (Depth-12.00 to 13.00m)



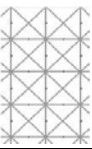
PICTURE 97: BH-2 (Depth-13.00 to 14.00m)

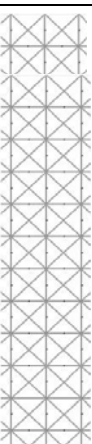
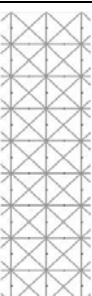


PICTURE 98: BH-2 (Depth-14.00 to 15.00m)

***Bore Log & Core Samples
Photographs
LS-D27***



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)	360+835		Sliding Zone		LS_D27		No. of Core (C)		15									
Borehole No.	1		Commencement Date		15.06.2017		No. of SP Test (S)		0									
Ground Elevation (m)	1254.1488		Completion Date		21.06.2017		No. of Undisturbed (U)		0									
Method of Boring	Rotary Drilling		Standing Water Level		11.10 M BELOW G.L.		No. of Disturbed (D)		0 (D - 0 & S - 0)									
Borehole Diameter	75 mm		Termination Depth		15.00 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 IS-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								
Brownish / Greyish, highly fracture Weak to moderately strong Shale with Sandstone observed. 000 m to 12.00 m	1254.1488			1254.1488	1253.1488	1.00	R1	-	-	-	-	-	28	28	NIL	-	Full Water Loss	**
					1.00	R2	-	-	-	-	-	26	26	NIL				
					1.00	R3	-	-	-	-	-	31	31	NIL				
					1.00	R4	-	-	-	-	-	23	23	NIL				
					1.00	R5	-	-	-	-	-	30	30	NIL				
					1.00	R6	-	-	-	-	-	24	24	NIL				
					1.00	R7	-	-	-	-	-	43	43	NIL				
					1.00	R8	-	-	-	-	-	35	35	NIL				
					1.00	R9	-	-	-	-	-	29	29	NIL				
					1.00	R10	-	-	-	-	-	20	20	NIL				
					1.00	R11	-	-	-	-	-	24	24	NIL				
					1.00	R12	-	-	-	-	-	26	26	NIL				
Greyish, highly fracture Weak Sandy Shale. 12.00 m to 15.00 m	1242.1488			1242.1488	1241.1488	1.00	R13	-	-	-	-	-	30	30	NIL	-	Full Water Loss	:
					1.00	R14	-	-	-	-	-	26	26	NIL				
					1.00	R15	-	-	-	-	-	36	36	NIL				
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 7.5 m																		
** Measurement not possible due to heavy broken small pieces																		

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.bpciopl.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)	360+835		Sliding Zone		LS_D27		No. of Core (C)		15									
Borehole No.	2		Commencement Date		26.06.2017		No. of SP Test (S)		0									
Ground Elevation (m)	1285.3918		Completion Date		30.06.2017		No. of Undisturbed (U)		0									
Method of Boring	Rotary Drilling		Standing Water Level		13.13 M BELOW G.L.		No. of Disturbed (D)		0 (D - 0 & S - 0)									
Borehole Diameter	75 mm		Termination Depth		15.00 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 IS-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, Brownish, highly fracture Weak Shale with infilling soil. 0.00 m to 9.00 m	1285.3918			1285.3918	1284.3918	1.00	R1	-	-	-	-	-	28	28	NIL	Brownish	Partial	Measurement not possible due to heavy broken small pieces
				1284.3918	1283.3918	1.00	R2	-	-	-	-	-	26	26	NIL			
				1283.3918	1282.3918	1.00	R3	-	-	-	-	-	23	23	NIL			
				1282.3918	1281.3918	1.00	R4	-	-	-	-	-	29	29	NIL			
				1281.3918	1280.3918	1.00	R5	-	-	-	-	-	33	33	NIL			
				1280.3918	1279.3918	1.00	R6	-	-	-	-	-	26	26	NIL			
				1279.3918	1278.3918	1.00	R7	-	-	-	-	-	35	35	NIL			
				1278.3918	1277.3918	1.00	R8	-	-	-	-	-	41	41	NIL			
				1277.3918	1276.3918	1.00	R9	-	-	-	-	-	35	35	NIL			
Greyish, highly fracture Weak Sandy Shale. 9.00 m to 15.00 m	1276.3918			1276.3918	1275.3918	1.00	R10	-	-	-	-	-	34	34	NIL			
				1275.3918	1274.3918	1.00	R11	-	-	-	-	-	38	38	NIL			
				1274.3918	1273.3918	1.00	R12	-	-	-	-	-	44	44	NIL			
				1273.3918	1272.3918	1.00	R13	-	-	-	-	-	31	31	NIL			
				1272.3918	1271.3918	1.00	R14	-	-	-	-	-	38	38	NIL			
				1271.3918	1270.3918	1.00	R15	-	-	-	-	-	47	47	NIL			
				1270.3918														
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 10.00 m																		

➤ LS- D27 (BH-1 & BH-2) & CHAINAGE(km)- 360+835



PICTURE 99: BH-1 (Depth-0.00 to 1.00m)



PICTURE 100: BH-1 (Depth-1.00 to 2.00m)



PICTURE 101: BH-1 (Depth-3.00 to 4.00m)



PICTURE 102: BH-1 (Depth-4.00 to 5.00m)



PICTURE 103: BH-1 (Depth-5.00 to 6.00m)



PICTURE 104: BH-12 (Depth-6.00 to 7.00m)



PICTURE 105: BH-1 (Depth-7.00 to 8.00m)



PICTURE 106: BH-1 (Depth-8.00 to 9.00m)



PICTURE 107: BH-1 (Depth-9.00 to 10.00m)



PICTURE 108: BH-1 (Depth-10.00 to 11.00m)



PICTURE 109: BH-1 (Depth-11.00 to 12.00m)



PICTURE 110: BH-1 (Depth-12.00 to 13.00m)



PICTURE 111: BH-1 (Depth-13.00 to 14.00m)



PICTURE 112: BH-1 (Depth-14.00 to 15.00m)



PICTURE 113: BH-2 (Depth-0.00 to 1.00m)



PICTURE 114: BH-2 (Depth-1.00 to 2.00m)



PICTURE 115: BH-2 (Depth-2.00 to 3.00m)



PICTURE 116: BH-2 (Depth-3.00 to 4.00m)



PICTURE 117: BH-2 (Depth-4.00 to 5.00m)



PICTURE 118: BH-2 (Depth-5.00 to 6.00m)



PICTURE 119: BH-2 (Depth-6.00 to 7.00m)



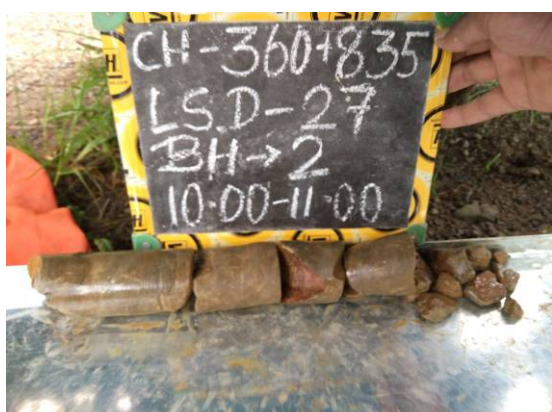
PICTURE 120: BH-2 (Depth-7.00 to 8.00m)



PICTURE 121: BH-2 (Depth-8.00 to 9.00m)



PICTURE 122: BH-2 (Depth-9.00 to 10.00m)



PICTURE 123: BH-2 (Depth-10.00 to 11.00m)



PICTURE 124: BH-2 (Depth-11.00 to 12.00m)



PICTURE 125: BH-2 (Depth-12.00 to 13.00m)

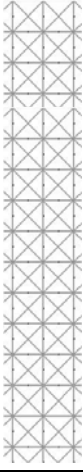


PICTURE 126: BH-2 (Depth-13.00 to 14.00m)



PICTURE 127: BH-2 (Depth-14.00 to 15.00m)

***Bore Log & Core Samples
Photographs
LS-D28***

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)	361+350		Sliding Zone		LS_D28		No. of Core (C)		10									
Borehole No.	1		Commencement Date		09.06.2017		No. of SP Test (S)		4									
Ground Elevation (m)	1285.5733		Completion Date		11.06.2017		No. of Undisturbed (U)		0									
Method of Boring	Rotary Drilling		Standing Water Level		10.48 M BELOW G.L.		No. of Disturbed (D)		4 (D - 1 & S - 3)									
Borehole Diameter	150 mm & 75 mm		Termination Depth		15.00 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 IS-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								
Hard, Brownish / Greyish, Clayey Silt with some % of sand & broken claystone pieces. (CI) 0.00 m to 5.00 m	1285.5733			1285.0733		-	D	-	-	-	-	-	-	-	-	-	-	-
				1284.5733	1284.1233	-	S	19	31	49	80	-	-	-	-	-	-	-
				1283.5733	1283.1233	-	S	24	39	58	97	-	-	-	-	-	-	-
				1282.5733	1282.1233	-	U*	-	-	-	-	-	-	-	-	-	-	-
				1281.5733	1281.1233	-	S	28	43	62	105	-	-	-	-	-	-	-
				1280.5733	1280.5333	-	S	4cm / 46B	Re	Re	>100	70	-	-	-	-	-	-
Brownish / Grey, highly fracture Weak Shale. 5.00 m to 15.00 m	1280.5733			1280.5733	1279.5733	1.00	R1	-	-	-	-	-	18	18	NIL	-	Full Water Loss	Measurement not possible due to heavy broken small pieces
				1279.5733	1278.5733	1.00	R2	-	-	-	-	-	20	20	NIL			
				1278.5733	1277.5733	1.00	R3	-	-	-	-	-	23	23	NIL			
				1277.5733	1276.5733	1.00	R4	-	-	-	-	-	32	32	NIL			
				1276.5733	1275.5733	1.00	R5	-	-	-	-	-	38	38	NIL			
				1275.5733	1274.5733	1.00	R6	-	-	-	-	-	29	29	NIL			
				1274.5733	1273.5733	1.00	R7	-	-	-	-	-	40	40	NIL			
				1273.5733	1272.5733	1.00	R8	-	-	-	-	-	33	33	NIL			
				1272.5733	1271.5733	1.00	R9	-	-	-	-	-	30	30	NIL			
				1271.5733	1270.5733	1.00	R10	-	-	-	-	-	30	30	NIL			
	Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																	
Slip Plane - Did not recognise																		

➤ LS- D28 (BH-1) & CHAINAGE(km)- 361+350



PICTURE 128: BH-1 (Depth-5.00 to 6.00m)



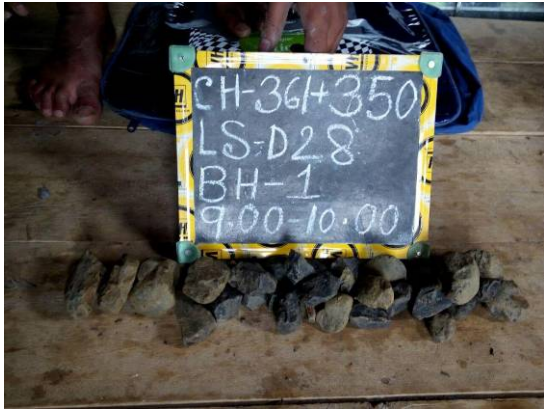
PICTURE 129: BH-1 (Depth-6.00 to 7.00m)



PICTURE 130: BH-1 (Depth-7.00 to 8.00m)



PICTURE 131: BH-1 (Depth-8.00 to 9.00m)



PICTURE 132: BH-1 (Depth-9.00 to 10.00m)



PICTURE 133: BH-1 (Depth-10.00 to 11.00m)



PICTURE 134: BH-1 (Depth-11.00 to 12.00m)



PICTURE 135: BH-1 (Depth-12.00 to 13.00m)



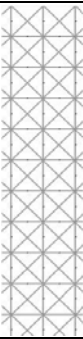
PICTURE 136: BH-1 (Depth-13.00 to 14.00m)



PICTURE 137: BH-1 (Depth-14.00 to 15.00m)

***Bore Log & Core Samples
Photographs
LS-D29***

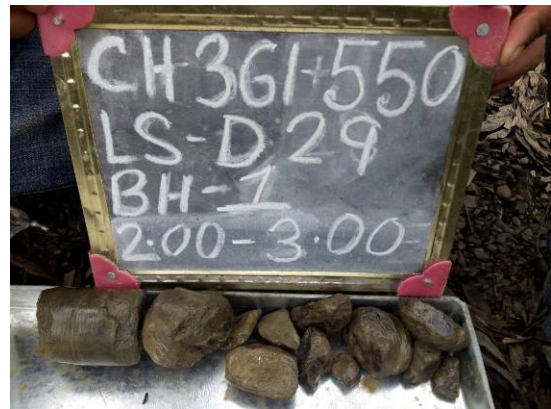


Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.				BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com													
Client 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)	361+550		Sliding Zone		LS-D29		No. of Core (C)		14									
Borehole No.	1		Commencement Date		09.06.2017		No. of SP Test (S)		1									
Ground Elevation (m)	1290.2070		Completion Date		17.06.2017		No. of Undisturbed (U)		0									
Method of Boring	Rotary Drilling		Standing Water Level		12.35 M BELOW G.L.		No. of Disturbed (D)		2 (D - 1 & S - 1)									
Borehole Diameter	150 & 75 mm		Termination Depth		15.00 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 IS-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								
Brownish / Grey, Clayey Silt with good % of broken Claystone mixed. (CL) 0.00 m to 1.00 m	1290.2070	1289.2070		1289.2070	1289.2070	-	D	-	-	-	-	-	-	-	-	-	-	-
Brownish / Greyish, highly fracture Weak Shale with Sandy Shale observed. 1.00 m to 7.00 m	1289.2070	1283.2070		1289.2070	1289.1570	-	S	5cm / 47B	Re	Re	>100	97	-	-	-	-	-	-
				1289.2070	1288.2070	1.00	R1	-	-	-	-	-	24	24	NIL	Full Water Loss	*	
				1288.2070	1287.2070	1.00	R2	-	-	-	-	-	26	26	NIL			
				1287.2070	1286.2070	1.00	R3	-	-	-	-	-	33	33	NIL			
				1286.2070	1285.2070	1.00	R4	-	-	-	-	-	32	32	NIL			
				1285.2070	1284.2070	1.00	R5	-	-	-	-	-	24	24	NIL			
				1284.2070	1283.2070	1.00	R6	-	-	-	-	-	23	23	NIL			
				1283.2070	1282.2070	1.00	R7	-	-	-	-	-	33	33	NIL			
Greyish, highly fracture Weak to moderately strong Sandy Shale. 7.00 m to 15.00 m	1283.2070	1275.2070		1282.2070	1281.2070	1.00	R8	-	-	-	-	-	32	32	NIL	Greyish	Partial	45°
				1281.2070	1280.2070	1.00	R9	-	-	-	-	-	28	28	NIL			
				1280.2070	1279.2070	1.00	R10	-	-	-	-	-	27	27	NIL			
				1279.2070	1278.2070	1.00	R11	-	-	-	-	-	22	22	NIL			
				1278.2070	1277.2070	1.00	R12	-	-	-	-	-	21	21	NIL			
				1277.2070	1276.2070	1.00	R13	-	-	-	-	-	27	27	NIL			
				1276.2070	1275.2070	1.00	R14	-	-	-	-	-	28	28	NIL			
				1275.2070	1274.2070	1.00	R15	-	-	-	-	-	28	28	NIL			
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																		
Slip Plane - 7 m																		
** Measurement not possible due to heavy broken small pieces																		

➤ LS- D29 (BH-1) & CHAINAGE(km)- 361+550



PICTURE 138: BH-1 (Depth-1.00 to 2.00m)



PICTURE 139: BH-1 (Depth-2.00 to 3.00m)



PICTURE 140: BH-1 (Depth-3.00 to 4.00m)



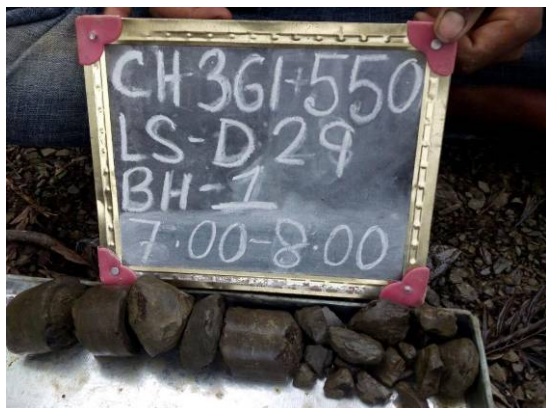
PICTURE 141: BH-1 (Depth-4.00 to 5.00m)



PICTURE 142: BH-1 (Depth-5.00 to 6.00m)



PICTURE 143: BH-1 (Depth-6.00 to 7.00m)



PICTURE 144: BH-1 (Depth-7.00 to 8.00m)



PICTURE 145: BH-1 (Depth-8.00 to 9.00m)



PICTURE 146: BH-1 (Depth-9.00 to 10.00m)



PICTURE 147: BH-1 (Depth-10.00 to 11.00m)



PICTURE 148: BH-1 (Depth-11.00 to 12.00m)



PICTURE 149: BH-1 (Depth-12.00 to 13.00m)



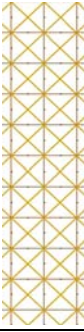
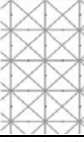
PICTURE 150: BH-1 (Depth-13.00 to 14.00m)

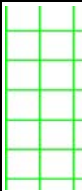
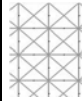


PICTURE 151: BH-1 (Depth-14.00 to 15.00m)

***Bore Log & Core Samples
Photographs
LS-D31***



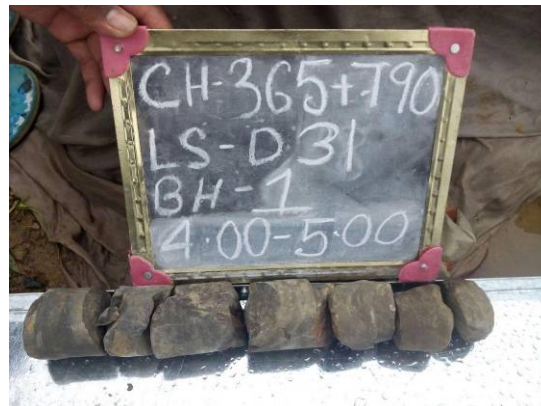
Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.				BPC Consultant INDIA (P) Ltd.  2nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpciopl.com														
Client 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)	365+790		Sliding Zone		LS-D31		No. of Core (C)		12										
Borehole No.	1		Commencement Date		07.06.2017		No. of SP Test (S)		3										
Ground Elevation (m)	1382.9675		Completion Date		12.06.2017		No. of Undisturbed (U)		0										
Method of Boring	Rotary Drilling		Standing Water Level		8.30 M BELOW G.L.		No. of Disturbed (D)		4 (D - 1 & S - 3)										
Borehole Diameter	150 & 75 mm		Termination Depth		15.00 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 IS-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									
Hard, Brownish / Yellowish, Clayey Silt with some % of broken claystone pieces. (CI) 0.00 m to 3.00 m	1382.9675	1379.9675		1382.4675		-	D	-	-	-	-	-	-	-	-	-	-	Soil	
Brownish / Greyish, Fine grained highly fracture Sandstone with shale mixed . 3.00 m to 9.00 m	1379.9675	1373.9675		1379.9675	-	S	7cm / 56B	Re	Re	>100	78	-	-	-	-	-	-	Greyish Partial	
Greyish, highly fracture Strong Shale. 9.00 m to 12.00 m	1373.9675	1370.9675		1373.9675	1.00	R7	-	-	-	-	-	44	44	11			35°		
Fresh, Greyish / Dark grey, moderately fracture & Strong Sandy Shale. 12.00 m to 15.00 m	1370.9675	1367.9675		1370.9675	1.00	R10	-	-	-	-	-	70	70	20			85°		
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																			
Slip Plane - 9 m																			
** Measurement not possible due to heavy broken small pieces.																			

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.												
Client Name :		M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.					 2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpciopl.com												
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)		365+790		Sliding Zone		LS-D31		No. of Core (C)				6							
Borehole No.		2		Commencement Date		31.05.2017		No. of SP Test (S)				13							
Ground Elevation (m)		1411.3965		Completion Date		03.06.2017		No. of Undisturbed (U)				0							
Method of Boring		Rotary Drilling		Standing Water Level		13.00 M BELOW G.L.		No. of Disturbed (D)				12 (D - 1 & S - 11)							
Borehole Diameter		150 & 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 IS-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								
Filled Up Materials		1411.3965			1410.8965		-	D	-	-	-	-	-	-	-	-	-	-	Soil
Brownish grey, Clayey Sandy Silt with good % broken claystone mixed. 0.00 m to 4.00 m					1410.3965	1409.9465	-	S	31	39	44	83	-	-	-	-	-	-	
					1409.3965	1408.9465	-	S	30	37	43	80	-	-	-	-	-	-	
					1408.3965	1407.9465	-	U*	-	-	-	-	-	-	-	-	-	-	
Brownish / Greyish, Fine grained highly fracture moderately Strong Sandstone. 4.00 m to 9.00 m		1407.3965			1407.3965		-	S	4cm / 46B	Re	Re	>100	74	-	-	-	-	-	Greyish Partial
					1407.3965	1407.3565	-	S	4cm / 46B	Re	Re	>100	74	-	-	-	-	-	
					1407.3965	1406.3965	1.00	R1	-	-	-	-	-	35	35	NIL	-	-	
					1406.3965	1405.3965	1.00	R2	-	-	-	-	-	33	33	NIL	-	-	
					1405.3965	1404.3965	1.00	R3	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1404.3965	1404.3665	-	S	3cm / 49B	Re	Re	>100	64	-	-	-	-	-	
					1404.3965	1403.3965	1.00	R4	-	-	-	-	-	32	32	NIL	-	-	
					1403.3965	1402.3965	1.00	R5	-	-	-	-	-	NIL	NIL	NIL	-	-	
Compacted, Greyish, Fine grained size Stone dust with some broken shale pieces. (SM) 9.00 m to 15.00 m		1402.3965			1402.3965		-	S	40	3cm / 60B	Re	>100	60	-	-	-	-	-	
					1402.3965	1401.3965	1.00	R6	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1401.3965	1401.1765	-	S	44	7cm / 57B	Re	>100	58	-	-	-	-	-	
					1401.3965	1400.3965	1.00	R7	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1400.3965	1400.1465	-	S	43	10cm / 54B	Re	>100	57	-	-	-	-	-	
					1400.3965	1399.3965	1.00	R8	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1399.3965	1399.2565	-	S	14cm / 65B	Re	Re	>100	55	-	-	-	-	-	
					1399.3965	1398.3965	1.00	R9	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1398.3965	1398.2965	-	S	10cm / 60B	Re	Re	>100	54	-	-	-	-	-	
					1398.3965	1397.3965	1.00	R10	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1397.3965	1397.3065	-	S	9cm / 51B	Re	Re	>100	53	-	-	-	-	-	
					1397.3965	1396.3965	1.00	R11	-	-	-	-	-	NIL	NIL	NIL	-	-	
Compacted, Brownish, Clayey Silt with broken claystone. (CL) 15.00 m to 17.00 m		1396.3965			1396.3965		-	S	12cm / 67B	Re	Re	>100	52	-	-	-	-	-	
					1396.3965	1395.3965	1.00	R12	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1395.3965	1395.2965	-	S	10cm / 61B	Re	Re	>100	51	-	-	-	-	-	
					1395.3965	1394.3965	1.00	R13	-	-	-	-	-	NIL	NIL	NIL	-	-	
					1394.3965	1394.3365	-	S	6cm / 47B	Re	Re	>100	50	-	-	-	-	-	
Highly Weathered, Greyish, highly fracture Shale. 17.00 m to 20.00 m					1394.3965		1.00	R14	-	-	-	-	-	20	20	NIL	-	-	
					1393.3965	1392.3965	1.00	R15	-	-	-	-	-	24	24	NIL	-	-	
					1391.3965		1.00	R16	-	-	-	-	-	25	25	NIL	-	-	
Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not been Collected (Slipped)																			
Slip Plane - 16.10 m																			
** Measurement not possible due to heavy broken small pieces																			

➤ LS- D31 (BH-1 & BH-2) & CHAINAGE(km)- 365+790



PICTURE 152: BH-1 (Depth-3.00 to 4.00m)



PICTURE 153: BH-1 (Depth-4.00 to 5.00m)



PICTURE 154: BH-1 (Depth-5.00 to 6.00m)



PICTURE 155: BH-1 (Depth-6.00 to 7.00m)



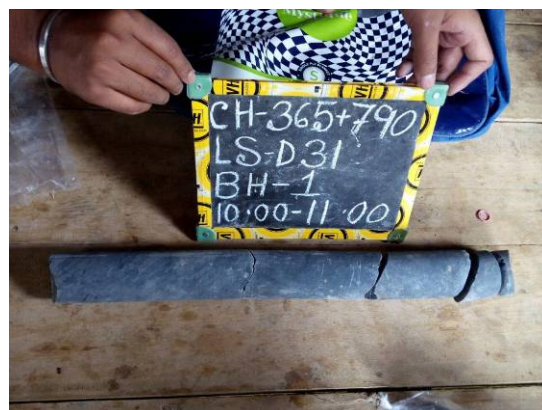
PICTURE 156: BH-1 (Depth-7.00 to 8.00m)



PICTURE 1571: BH-1 (Depth-8.00 to 9.00m)



PICTURE 158: BH-1 (Depth-9.00 to 10.00m)



PICTURE 159: BH-1 (Depth-10.00 to 11.00m)



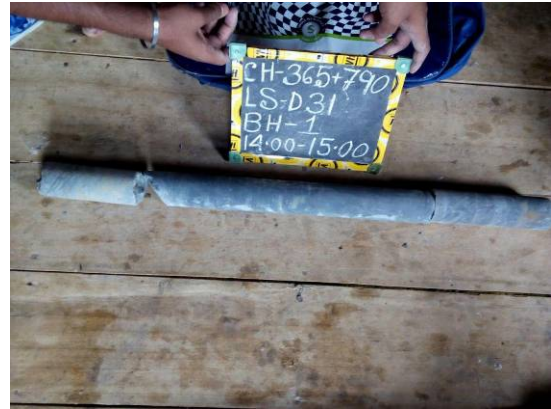
PICTURE 160: BH-1 (Depth-11.00 to 12.00m)



PICTURE 161: BH-1 (Depth-12.00 to 13.00m)



PICTURE 162: BH-1 (Depth-13.00 to 14.00m)



PICTURE163: BH-1 (Depth-14.00 to 15.00m)



PICTURE 164: BH-2 (Depth-4.00 to 5.00m)



PICTURE 165: BH-2 (Depth-5.00 to 6.00m)



PICTURE 166: BH-2 (Depth-7.00 to 8.00m)



PICTURE 167: BH-2 (Depth-17.00 to 18.00m)



PICTURE 168: BH-2 (Depth-18.00 to 19.00m)



PICTURE169: BH-2 (Depth-19.00 to 20.00m)