



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2239855.567 E 282121.455 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 27.939 **Chainage (m) :** 158000 **Date Started :** 09.05.2017
Ground Elevation (m) : 27.939 **Ground Water Table(m):** 3.30 **Date Completed :** 09.05.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
27.939	0.00	Black Silty CLAY of medium plasticity with gravels (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level
27.439	0.50										
26.939	1.00	Loose, dark brown Sandy SILT, non plastic in nature with gravels (ML-SM)		2.00	SPT-1	1.00-1.45	2	3	4	7	Ground water table encountered at 3.30m depth below existing ground level, measured on 10/05/2017
26.439	1.50				UDS-1	1.50-1.80					
25.939	2.00				SPT-2	2.00-2.45	3	4	6	10	
25.439	2.50										
24.939	3.00										
24.439	3.50				SPT-3	3.00-3.45	3	5	8	13	
23.939	4.00										
23.439	4.50				SPT-4	4.00-4.45	8	9	12	21	
22.939	5.00				UDS-2	4.50-4.80					
22.439	5.50				SPT-5	5.00-5.45	8	15	18	33	
21.939	6.00										
21.439	6.50	Stiff to hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		7.00	SPT-6	6.00-6.45	8	16	21	37	
20.939	7.00										
20.439	7.50				SPT-7	7.00-7.45	10	18	25	43	
19.939	8.00										
19.439	8.50				SPT-8	8.00-8.45	12	20	28	48	
18.939	9.00										
18.439	9.50				SPT-9	9.00-9.45	14	18	30	48	
17.939	10.00										
		Very dense, brown Silty SAND (SM)		0.45	SPT-10	10.00-10.45	16	26	32	58	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty SAND

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2240781.076 E 282500.180 Dia. of The Hole : 150mm
Collar Elevation (m) : 28.796 Chainage (m) : 159000 Date Started : 09.05.2017
Ground Elevation (m) : 28.796 Ground Water Table(m): 6.10 Date Completed : 09.05.2017
Total Depth (m) : 8.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
28.796	0.00	Very stiff, dark brown Silty CLAY of medium plasticity, low expansive (CI)		2.00	DS-1	0.00-0.50					Borehole terminated at 8.45m below existing ground level	
28.296	0.50											
27.796	1.00											
27.296	1.50											
26.796	2.00	Very stiff to very hard, brownish yellow Silty CLAY of low plasticity with occasional gravels (CL)		6.45	UDS-1	1.50-1.80					Ground water table encountered at 6.10m depth below existing ground level, measured on 10/05/2017	
26.296	2.50											
25.796	3.00											
25.296	3.50											
24.796	4.00											
24.296	4.50											
23.796	5.00											
23.296	5.50											
22.796	6.00				SPT-2	2.00-2.45	8	11	18	29		
22.296	6.50											
21.796	7.00											
21.296	7.50											
20.796	8.00				SPT-3	3.00-3.45	8	13	19	32		
					SPT-4	4.00-4.45	8	16	20	36		
					UDS/DS-2	4.50-4.80						
					SPT-5	5.00-5.45	3	8	22	30		
					SPT-6	6.00-6.45	18	20	30	50		
					SPT-7	7.00-7.45	13	26	30	56		
					SPT-8	8.00-8.45	11	20	25	45		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2241706.585 E 282878.906	Dia. of The Hole : 150mm
Collar Elevation (m) : 28.119	Chainage (m) : 160000	Date Started : 08.05.2017
Ground Elevation (m) : 28.119	Ground Water Table(m): 4.90	Date Completed : 08.05.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
28.119	0.00	Stiff, black and brown Clayey SILT of high plasticity, low expansive (MH)	[Vertical Lines]	4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below existing ground level			
27.619	0.50													
27.119	1.00													
26.619	1.50							SPT-1	1.00-1.45	3		4	5	9
26.119	2.00							UDS-1	1.50-1.80					
25.619	2.50							SPT-2	2.00-2.45	3		4	6	10
25.119	3.00													
24.619	3.50							SPT-3	3.00-3.45	4		5	7	12
24.119	4.00													
23.619	4.50				Stiff to hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)	[Diagonal Dots]	5.00	SPT-4	4.00-4.45	5		7	9	16
23.119	5.00													
22.619	5.50							SPT-5	5.00-5.45	7	10	13	23	
22.119	6.00													
21.619	6.50							SPT-6	6.00-6.45	9	13	18	31	
21.119	7.00													
20.619	7.50							SPT-7	7.00-7.45	8	15	20	35	
20.119	8.00													
19.619	8.50							SPT-8	8.00-8.45	10	17	23	40	
19.119	9.00													
18.619	9.50	Hard, brown Silty CLAY of high plasticity (CH)	[Diagonal Lines]	2.00	SPT-9	9.00-9.45	12	19	26	45				
18.119	10.00													
17.619	10.50							SPT-10	10.00-10.45	14	21	28	49	
17.119	11.00	Very hard, brown Clayey SILT of high plasticity (MH)	[Vertical Lines]	0.45										
	11.45							SPT-11	11.00-11.45	15		24	33	57

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Clayey Silt of high plasticity	Silty Clay of medium plasticity	Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2242632.094 E 283257.631	Dia. of The Hole : 150mm
Collar Elevation (m) : 24.657	Chainage (m) : 161000	Date Started : 08.05.2017
Ground Elevation (m) : 24.657	Ground Water Table(m): 3.40	Date Completed : 08.05.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
24.657	0.00	Medium stiff to very stiff, dark brown Silty CLAY of medium plasticity, low expansive (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below existing ground level	
24.157	0.50											
23.657	1.00											
23.157	1.50											
22.657	2.00											
22.157	2.50											
21.657	3.00											
21.157	3.50								Ground water table encountered at 3.40m depth below existing ground level, measured on 9/05/2017			
20.657	4.00											
20.157	4.50	Very stiff, brown Clayey SILT of high plasticity (MH)		3.00	SPT-4	4.00-4.45	5	9	12	21		
19.657	5.00				UDS-2	4.50-4.80						
19.157	5.50				SPT-5	5.00-5.45	7	11	13	24		
18.657	6.00											
18.157	6.50											
17.657	7.00											
17.157	7.50	Hard to very hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		4.45	SPT-7	7.00-7.45	10	16	20	36		
16.657	8.00											
16.157	8.50				SPT-8	8.00-8.45	12	18	22	40		
15.657	9.00											
15.157	9.50				SPT-9	9.00-9.45	13	18	34	52		
14.657	10.00											
14.157	10.50											
13.657	11.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of high plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2244483.113 E 284015.081	Dia. of The Hole :	150mm	
Collar Elevation (m) :	28.130	Chainage (m) :	163000	Date Started :	07.05.2017
Ground Elevation (m) :	28.130	Ground Water Table(m):	4.80	Date Completed :	07.05.2017
Total Depth (m) :	12.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
28.130	0.00	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level		
27.630	0.50												
27.130	1.00												
26.630	1.50	Medium stiff to hard, brown Silty CLAY of medium plasticity (CI)		9.00	SPT-1	1.00-1.45	2	3	3	6	Ground water table encountered at 4.80m depth below existing ground level, measured on 8/05/2017		
26.130	2.00				UDS-1	1.50-1.80							
25.630	2.50				SPT-2	2.00-2.45	8	4	5	9			
25.130	3.00												
24.630	3.50				SPT-3	3.00-3.45	3	5	7	12			
24.130	4.00												
23.630	4.50				SPT-4	4.00-4.45	5	7	9	16			
23.130	5.00				UDS-2	4.50-4.80							
22.630	5.50				SPT-5	5.00-5.45	6	8	10	18			
22.130	6.00												
21.630	6.50				SPT-6	6.00-6.45	7	12	14	26			
21.130	7.00												
20.630	7.50	SPT-7	7.00-7.45	13	16	20	36						
20.130	8.00												
19.630	8.50	SPT-8	8.00-8.45	12	16	22	38						
19.130	9.00												
18.630	9.50	SPT-9	9.00-9.45	14	18	24	42						
18.130	10.00												
17.630	10.50	Hard, brown Clayey SILT of medium plasticity (MI)		2.00	SPT-10	10.00-10.45	16	20	26	46			
17.130	11.00												
16.630	11.50	SPT-11	11.00-11.45	18	24	24	48						
16.130	12.00	Very hard, brown Clayey SILT of high plasticity (MH)		0.45	SPT-12	12.00-12.45	20	27	38	65			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Clayey Silt of high plasticity
Silty Clay of low plasticity	Silty Clay of medium plasticity	Clayey Silt of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2245408.622 E 284393.806 Dia. of The Hole : 150mm
Collar Elevation (m) : 22.503 Chainage (m) : 164000 Date Started : 07.05.2017
Ground Elevation (m) : 22.503 Ground Water Table(m): 6.10 Date Completed : 07.05.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
22.503	0.00	Medium stiff to stiff, dark brown Silty CLAY of medium plasticity, low expansive (Cl)		4.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level			
22.003	0.50													
21.503	1.00													
21.003	1.50													
20.503	2.00							SPT-1	1.00-1.45	2		3	3	6
20.003	2.50							UDS-1	1.50-1.80					
19.503	3.00							SPT-2	2.00-2.45	3		4	6	10
19.003	3.50							SPT-3	3.00-3.45	4		6	9	15
18.503	4.00							SPT-4	4.00-4.45	6		7	10	17
18.003	4.50							UDS/DS-2	4.50-4.80					
17.503	5.00							SPT-5	5.00-5.45	7		10	12	22
17.003	5.50				Very stiff to very hard, brown Silty CLAY of high plasticity (CH)		8.00	SPT-6	6.00-6.45	9		13	16	29
16.503	6.00													
16.003	6.50							SPT-7	7.00-7.45	11	15	18	33	
15.503	7.00							SPT-8	8.00-8.45	13	16	20	36	
15.003	7.50							SPT-9	9.00-9.45	14	18	22	40	
14.503	8.00							SPT-10	10.00-10.45	14	20	26	46	
14.003	8.50							SPT-11	11.00-11.45	16	23	29	52	
13.503	9.00							SPT-12	12.00-12.45	18	27	35	62	
13.003	9.50													
12.503	10.00													
12.003	10.50													
11.503	11.00													
11.003	11.50													
10.503	12.00													
		Very hard, brown Silty CLAY of medium plasticity (Cl)		0.45	SPT-12	12.00-12.45	18	27	35	62				

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity
 Silty Clay of high plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2246334.131 E 284772.531	Dia. of The Hole : 150mm
Collar Elevation (m) : 27.027	Chainage (m) : 165000	Date Started : 06.05.2017
Ground Elevation (m) : 27.027	Ground Water Table(m): 5.80	Date Completed : 06.05.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
27.027	0.00	Black Silty CLAY of high plasticity (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level	
26.527	0.50											
26.027	1.00	Loose, brown Silty SAND (SM)		1.00	SPT-1	1.00-1.45	2	3	5	8		
25.527	1.50				UDS-1	1.50-1.80						
25.027	2.00				SPT-2	2.00-2.45	3	4	6	10		
24.527	2.50	Stiff to very stiff, brown Silty CLAY of medium plasticity (CI)		4.00								
24.027	3.00				SPT-3	3.00-3.45	3	5	8	13		
23.527	3.50											
23.027	4.00				SPT-4	4.00-4.45	4	6	9	15		
22.527	4.50				UDS/DS-2	4.50-4.80						
22.027	5.00				SPT-5	5.00-5.45	5	8	12	20		
21.527	5.50	Very stiff to very hard, brown Silty CLAY of high plasticity (CH)		6.00								
21.027	6.00				SPT-6	6.00-6.45	7	13	16	29		
20.527	6.50											
20.027	7.00				SPT-7	7.00-7.45	9	15	18	33		
19.527	7.50											
19.027	8.00				SPT-8	8.00-8.45	11	16	21	37		
18.527	8.50	Very hard, brown Silty CLAY of meidum plasticity (CI)		0.45								
18.027	9.00				SPT-9	9.00-9.45	13	20	25	45		
17.527	9.50											
17.027	10.00				SPT-10	10.00-10.45	12	22	26	48		
16.527	10.50	Very hard, brown Silty CLAY of meidum plasticity (CI)		0.45								
16.027	11.00				SPT-11	11.00-11.45	14	24	32	56		
15.527	11.50											
15.027	12.00											

Ground water table encountered at 5.800m depth below existing ground level, measured on 7/05/2017

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty SAND	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2248185.149 E 285529.981

Structure : Viaduct

Ground Elevation (m) : 26.314

Chainage m. : 167000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 26.314

Date Started : 4.5.2017

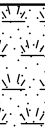

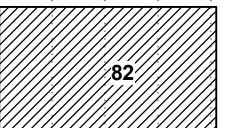

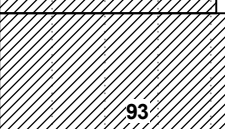

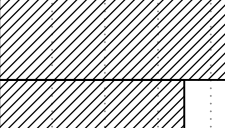
Casing Size : Nx Size

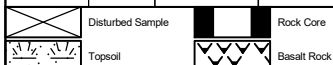
Total Depth (m) : 6.00

Date Completed : 4.5.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199 GPJ_GAD-58_GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	ROD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations						
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon				
25.314	0.50	DS - 1	Top Soil consisting of Silty CLAY of high plasticity (CH)										Overburden																					From 0.00 to 1.00m Top Soil consisting of Silty CLAY of high plasticity		
24.314	1.00																																Bedrock encountered at 1.00m depth below EGL.			
24.314	1.50	RC - 1	From 1.00 to 2.00m Greenish grey colour, highly weathered, highly fractured, fine grained, BASALT (Core recovered as small pieces)		-	-	-	-	37	-	43	21	-	Aphanitic texture, vesicular and amygdaloidal structure						26.30	0.00	>15												From 1.00 to 2.00m Greenish grey colour, highly weathered, highly fractured, fine grained, BASALT (Core recovered as small pieces)		
23.314	2.00	RC - 2			-	-	-	-	56	-	33	11	-								24.30	19.00	>15													
22.314	2.50																				19.20	62.00	5-8													From 2.00 to 6.00m Greenish grey to reddish brown colour, moderately to slightly weathered, fine grained, BASALT
21.314	3.00	RC - 3	From 2.00 to 6.00m Greenish grey to reddish brown colour, moderately to slightly weathered, fine grained, BASALT Mineral composition: Pyroxene, Plagioclase, feldspar and Quartz		-	-	-	-	31	-	13	38	19									25.60	45.33	>15												Ground water table encountered at 3.10m depth below existing ground level, measured on 05/05/2017
20.314	3.50																																			
20.314	4.00	RC - 4			-	-	-	-	35	-	12	11	41																							
20.314	4.50																																			
20.314	5.00																																			
20.314	5.50																																			
20.314	6.00																																			



LOGGED BY : CHECKED BY : APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2250036.168 E 286287.432

Structure : Viaduct

Ground Elevation (m) : 33.042

Chainage m. : 169000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 33.042

Date Started : 27.4.2017






Casing Size : Nx Size









Total Depth (m) : 11.00

Date Completed : 28.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199 GPJ_GAD-58_GDT_29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record					Size of Core Pieces (%)	Structural Condition Description	Percent Core Recovery	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations
					15cm	15cm	15cm	N VALUE	< 10 mm												10 to 25 mm	25 to 75 mm	
32.042	0.50	DS - 1	Medium stiff, black Silty CLAY of high plasticity, medium expansive (CH)																		From 0.00 to 2.00m Silty CLAY of high plasticity		
31.042	1.50	SPT - 1			2	3	5	8	-	-	-	-											From 2.00 to 3.00m Sandy SILT
31.042	2.00	UDS - 1																					
30.042	2.50	SPT - 2	Medium dense, black Sandy SILT, non plastic in nature (ML-SM)		3	9	14	23	-	-	-	-									From 3.00 to 6.00m Silty SAND		
29.042	3.50	SPT - 3	Dense to very dense, grey Silty SAND (SM)		3	14	19	33	-	-	-	-									Bedrock encountered at 6.00m depth below EGL.		
28.042	4.50	SPT - 4			50	75/10	-	>100	-	-	-	-											From 6.00 to 9.00m Grey colour, highly weathered, highly fractured, fine grained, BASALT (Core recovered as small pieces)
27.042	5.50	SPT - 5			75/10	-	-	>100	-	-	-	-											
26.042	6.50	RC - 1	From 6.00 to 9.00m Grey colour, highly weathered, highly fractured, fine grained, BASALT (Core recovered as small pieces)		-	-	-	-	-	-	-	-									From 9.00 to 11.00m Greenish grey to reddish brown colour, moderately to slightly weathered, fine grained, BASALT		
25.042	7.50	RC - 2-5			-	-	-	-	-	-	-	-	-										Ground water table encountered at 4.20m depth below existing ground level, measured on 29/04/2017
24.042	8.50	RC - 6-10			-	-	-	-	-	-	-	-	-										
23.042	9.50	RC - 11-16			-	-	-	-	-	-	-	-	-										
22.042	10.50	RC - 17-30	From 9.00 to 11.00m Greenish grey to reddish brown colour, moderately to slightly weathered, fine grained, BASALT		-	-	-	-	-	-	-	-											
	11.00																						

 Disturbed Sample	 Standard Penetration Test	 Undisturbed Sample	 Rock Core
 Silty Clay of high plasticity	 Sandy SILT	 Silty SAND	 Basalt Rock

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 31.311

Collar Elevation (m) : 31.311

Total Depth (m) : 10.00

Coordinates

: N 2250961.726 E 286666.036

Chainage m.

: 170000

Date Started

: 25.4.2017

Date Completed

: 26.4.2017

Structure

: Viaduct

Type of Core Barrel

: Nx Triple / double tube

Casing Size

: Nx Size

Drilling Method

: Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199.GPJ_GAD-58.GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	ROD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations					
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		0	20	40	60	80									100	Test Section		Lugeon				
30.311	0.50	DS -																																	From 0.00 to 5.00m Overburden Soil
	1.00																																		
29.311	1.50	SPT - 1			4	6	9	15																											Bedrock encountered at 5.00m depth below EGL.
	2.00																																		
28.311	2.50	SPT - 2			6	10	13	23																											From 5.00 to 10.00m Grey colour, slightly weathered to fresh, fine grained, Massive BASALT
	3.00																																		
27.311	3.50	SPT - 3			7	9	19	28																											
	4.00																																		
26.311	4.50	SPT - 4			9	11	16	27																											
	5.00																																		
26.311	5.00	SPT - 5			75/10	-	-	>100																											
	5.50																																		
25.311	6.00	RC -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6.50																																		
24.311	7.00	RC -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7.50																																		
23.311	8.00	RC -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	8.50																																		
22.311	9.00	RC -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	9.50																																		
21.311	10.00	RC -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



LOGGED BY : CHECKED BY : APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 27.888

Collar Elevation (m) : 27.888

Total Depth (m) : 10.50

Coordinates : N 2252896.071 E 287138.088

Chainage m. : 172000

Date Started : 24.4.2017

Date Completed : 25.4.2017






















Structure : Viaduct




Type of Core Barrel : Nx Triple / double tube

Casing Size : Nx Size

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199.GPJ_GAD-58.GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability		Special Observations and Interpretations										
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60	80	100		Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section	Lugeon
26.888	0.50	DS - 1							-	-	-	-	-							NA	NA	NA										From 0.00 to 5.00m Silty CLAY of high plasticity
25.888	1.00	SPT - 1																		NA	NA	NA									Bedrock encountered at 5.00m depth below EGL.	
24.888	1.50	UDS - 1																		NA	NA	NA									From 5.00 to 6.00m Brownish grey colour, completely weathered, BASALT (Core recovered as small pieces)	
23.888	2.00	SPT - 2			2	6	6	12	-	-	-	-	-		Overburden					NA	NA	NA	150mm	Hx	6.40	NA	NA	NA	NA	NA	From 5.00 to 6.00m Brownish grey colour, completely weathered, BASALT	
22.888	2.50	SPT - 3			3	6	9	15	-	-	-	-	-		Overburden					NA	NA	NA									From 6.00 to 10.50m Reddish brown, highly weathered, highly fractured, fine grained, weak to moderately strong BASALT	
21.888	3.00	SPT - 4			8	10	14	24	-	-	-	-	-		Overburden					NA	NA	NA										From 6.00 to 10.50m Reddish brown, highly weathered, highly fractured, fine grained, weak to moderately strong BASALT
20.888	3.50	WS -			10	16	19	35	-	-	-	-	-		Overburden					NA	NA	NA										From 6.00 to 10.50m Reddish brown, highly weathered, highly fractured, fine grained, weak to moderately strong BASALT
19.888	4.00	RC - 1							-	-	-	-	-		Overburden					NA	NA	NA										From 6.00 to 10.50m Reddish brown, highly weathered, highly fractured, fine grained, weak to moderately strong BASALT
18.888	4.50	RC - 2-4							95	-	5	-	-		Overburden					24.30	0.00	>15										Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
17.888	5.00	RC - 5-8							85	-	9	6	-		Overburden					33.30	0.00	>15	76mm	Nx		Partial	Brown	Not done	Not done	Not done		Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
17.888	5.50	RC - 9-20							74	-	6	9	11		Aphanitic texture, vesicular and amygdaloidal structure, highly fractured					30.00	17.00	>15										Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	6.00								43	-	26	31	-		Aphanitic texture, vesicular and amygdaloidal structure, highly fractured					31.20	8.60	>15										Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	6.50														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	7.00														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	7.50														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	8.00														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	8.50														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	9.00														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	9.50														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	10.00														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017
	10.50														Aphanitic texture, vesicular and amygdaloidal structure, highly fractured																	Ground water table encountered at 6.40m depth below existing ground level, measured on 26/04/2017

				
Disturbed Sample	Standard Penetration Test	Undisturbed Sample	No Recovery	Rock Core
				
Silty Clay of high plasticity	Basalt Rock			

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2253895.542 E 287143.557 Dia. of The Hole : 150mm
Collar Elevation (m) : 26.187 Chainage (m) : 173000 Date Started : 24.04.2017
Ground Elevation (m) : 26.187 Ground Water Table(m): 7.11 Date Completed : 25.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
26.187	0.00	Black Sandy GRAVLES (GM)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below existing ground level	
25.687	0.50				SPT-1	1.00-1.45	2	3	3	6		
25.187	1.00	Medium stiff to stiff, black Silty CLAY of high plasticity, medium expansive (CH)		2.00	UDS-1	1.50-1.80						
24.687	1.50				SPT-2	2.00-2.45	3	4	6	10		
24.187	2.00				SPT-3	3.00-3.45	5	7	10	17		
23.687	2.50				SPT-4	4.00-4.45	5	9	13	22		
23.187	3.00	Very stiff to very hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		8.45	UDS-2	4.50-4.80						Ground water table encountered at 7.11m depth below existing ground level, measured on 26/04/2017
22.687	3.50				SPT-5	5.00-5.45	7	11	15	26		
22.187	4.00				SPT-6	6.00-6.45	8	14	19	33		
21.687	4.50				SPT-7	7.00-7.45	9	16	21	37		
21.187	5.00				SPT-8	8.00-8.45	11	18	25	43		
20.687	5.50				SPT-9	9.00-9.45	13	19	27	46		
20.187	6.00				SPT-10	10.00-10.45	18	22	30	52		
19.687	6.50	SPT-11	11.00-11.45	16	28	31	59					
19.187	7.00											
18.687	7.50											
18.187	8.00											
17.687	8.50											
17.187	9.00											
16.687	9.50											
16.187	10.00											
15.687	10.50											
15.187	11.00											

Disturbed Sample
Well graded sands, gravelly sands, little or no fines

Standard Penetration Test
Silty Clay of high plasticity

Undisturbed Sample
Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2254895.204 E 287117.592 Dia. of The Hole : 150mm
Collar Elevation (m) : 26.900 Chainage (m) : 174000 Date Started : 23.04.2017
Ground Elevation (m) : 26.900 Ground Water Table(m): Not Met With Date Completed : 24.04.2017
Total Depth (m) : 10.05 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
26.900	0.00	Black Clayey SILT of medium plasticity (MI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.05m below existing ground level			
26.400	0.50													
25.900	1.00	Medium stiff to very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		4.00	SPT-1	1.00-1.45	2	3	4	7	Ground water table was not encountered upto termination depth of borehole.			
25.400	1.50				UDS-1	1.50-1.80								
24.900	2.00				SPT-2	2.00-2.45	3	5	7	12				
24.400	2.50													
23.900	3.00				SPT-3	3.00-3.45	4	6	9	15				
23.400	3.50													
22.900	4.00				SPT-4	4.00-4.45	5	8	12	20				
22.400	4.50				UDS-2	4.50-4.80								
21.900	5.00				SPT-5	5.00-5.45	8	12	18	30				
21.400	5.50													
20.900	6.00	Very stiff to very hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		5.00	SPT-6	6.00-6.45	10	16	19	35				
20.400	6.50													
19.900	7.00				SPT-7	7.00-7.45	12	18	23	41				
19.400	7.50													
18.900	8.00				SPT-8	8.00-8.35	20	28	55/5	>100				
18.400	8.50													
17.900	9.00				SPT-9	9.00-9.35	24	39	55/5	>100				
17.400	9.50													
16.900	10.00				Very dense, grey Silty SAND with gravels (SM)		0.05	SPT-10	10.00-10.05	55/5		-	-	>100

Disturbed Sample
 Clayey Silt of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity
 Silty SAND

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2255894.867 E 287091.635	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.786	Chainage (m) : 175000	Date Started : 23.04.2017
Ground Elevation (m) : 16.786	Ground Water Table(m): 7.10	Date Completed : 23.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.786	0.00	From 0.00 to 6.00m Filled-up Soil: Consisting of Clayey SILT / Sandy SILT and Silty CLAY matrix		6.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level
16.286	0.50										
15.786	1.00				SPT-1	1.00-1.45	2	3	3	6	
15.286	1.50				UDS-1	1.50-1.80					
14.786	2.00										
14.286	2.50				SPT-2	2.00-2.45	3	5	6	11	
13.786	3.00										
13.286	3.50				SPT-3	3.00-3.45	4	6	9	15	
12.786	4.00										
12.286	4.50				SPT-4	4.00-4.45	6	10	14	24	
11.786	5.00										
11.286	5.50										
11.286	5.50										
11.286	5.50										
11.286	5.50										
10.786	6.00										
10.286	6.50	Very dense, grey Sandy GRAVELS (GM)		1.00	SPT-6	6.00-6.12	56/12	-	-	>100	Ground water table encountered at 7.10m depth below existing ground level, measured on 24/04/2017
9.786	7.00										
9.286	7.50	Very dense, grey Silty SAND with gravels (SM)		1.00	SPT-7	7.00-7.05	75/5	-	-	>100	
8.786	8.00										
8.286	8.50										
7.786	9.00	Very dense, grey Poorly Graded GRAVELS (GP)		2.00	SPT-8	8.00-8.03	75/3	-	-	>100	
7.286	9.50										
6.786	10.00										
6.786	10.00	Hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-10	10.00-10.45	9	13	19	32	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Fill (made ground)		Well graded sands, gravelly sands, little or no fines		Silty SAND
			Poorly graded sands or gravelly sands, little or no fines		Silty Clay of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2256893.716 E 287118.021 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 18.049 **Chainage (m) :** 176000 **Date Started :** 22.04.2017
Ground Elevation (m) : 18.049 **Ground Water Table(m):** 7.80 **Date Completed :** 22.04.2017
Total Depth (m) : 12.05 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.049	0.00	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.05m below existing ground level	
17.549	0.50											
17.049	1.00	Loose, black Silty SAND (SM-ML)		0.50	SPT-1	1.00-1.45	2	3	5	8		
16.549	1.50											
16.049	2.00	Stiff to very hard, brown Silty CLAY of medium plasticity (CI)		10.00	UDS-1	1.50-1.80						
15.549	2.50					SPT-2	2.00-2.45	2	5	8		13
15.049	3.00											
14.549	3.50					SPT-3	3.00-3.45	3	6	10		16
14.049	4.00											
13.549	4.50					SPT-4	4.00-4.45	4	8	12		20
13.049	5.00					UDS-2	4.50-4.80					
12.549	5.50					SPT-5	5.00-5.45	6	10	14		24
12.049	6.00											
11.549	6.50					SPT-6	6.00-6.45	8	14	15	29	
11.049	7.00											
10.549	7.50		SPT-7	7.00-7.45	10	17	19	36				
10.049	8.00											
9.549	8.50		SPT-8	8.00-8.45	18	19	23	42				
9.049	9.00											
8.549	9.50		SPT-9	9.00-9.45	12	21	26	47				
8.049	10.00											
7.549	10.50		SPT-10	10.00-10.45	10	24	29	53				
7.049	11.00											
6.549	11.50		SPT-11	11.00-11.45	15	26	33	59				
6.049	12.00	Very dense, grey Silty SAND (SM)		0.55								
					SPT-12	12.00-12.05	55/5	-	-	>100	Ground water table encountered at 7.80m depth below existing ground level, measured on 23/04/2017	

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Sandy SILT
 Silty SAND
 Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2257888.447 E 287220.532 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 19.270 **Chainage (m) :** 177000 **Date Started :** 21.04.2017
Ground Elevation (m) : 19.270 **Ground Water Table(m):** 3.00 **Date Completed :** 21.04.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.270	0.00	Black, Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level	
18.770	0.50											
18.270	1.00	Stiff, black Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	3	3	6	9		
17.770	1.50											
17.270	2.00	Stiff, black Silty SAND with gravels (SM-ML)		1.50	UDS-1	1.50-1.80						
16.770	2.50				SPT-2	2.00-2.45	3	5	7	12		
16.270	3.00											
15.770	3.50				SPT-3	3.00-3.45	5	7	8	15		
15.270	4.00	Stiff to hard, brown Silty CLAY of medium plasticity (CI)		7.00						Ground water table encountered at 3.00m depth below existing ground level, measured on 22/04/2017		
14.770	4.50				SPT-4	4.00-4.45	5	7	10			17
14.270	5.00				UDS-2	4.50-4.80						
13.770	5.50				SPT-5	5.00-5.45	9	11	14			25
13.270	6.00											
12.770	6.50				SPT-6	6.00-6.45	12	13	16		29	
12.270	7.00											
11.770	7.50				SPT-7	7.00-7.45	13	18	21		39	
11.270	8.00											
10.770	8.50				SPT-8	8.00-8.45	18	19	24		43	
10.270	9.00											
9.770	9.50	SPT-9	9.00-9.45	16	21	28	49					
9.270	10.00											
8.770	10.50	Very hard, brown Silty CLAY of high plasticity (CH)		2.45	SPT-10	10.00-10.45	15	24	31	55		
8.270	11.00											
7.770	11.50				SPT-11	11.00-11.45	17	26	35	61		
7.270	12.00											
				12.45m								

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Sandy SILT
 Clayey Silt of medium plasticity
 Silty Sand with gravels
 Silty Clay of medium plasticity
 Silty Clay of high plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2258883.112 E 287323.690 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.642 Chainage (m) : 178000 Date Started : 20.04.2017
Ground Elevation (m) : 20.642 Ground Water Table(m): 3.10 Date Completed : 20.04.2017
Total Depth (m) : 12.20 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks					
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE						
20.642	0.00	Black Silty CLAY of high plasticity (CH)		1.00		DS-1	0.00-0.50					Borehole terminated at 12.20m below existing ground level				
20.142	0.50															
19.642	1.00	Loose to medium dense, blackish grey Sandy SILT, non plastic in nature (ML)		3.00		SPT-1	1.00-1.45	2	3	4	7		Ground water table encountered at 3.10m depth below existing ground level, measured on 21/04/2017			
19.142	1.50					UDS-1	1.50-1.80									
18.642	2.00															
18.142	2.50								SPT-2	2.00-2.45	8			6	8	14
17.642	3.00															
17.142	3.50								SPT-3	3.00-3.45	6			7	11	18
16.642	4.00	Medium dense, grey Silty SAND (SM-ML)		3.00												
16.142	4.50					SPT-4	4.00-4.45	8	11	15	26					
15.642	5.00					UDS/DS-2	4.50-4.80									
15.142	5.50								SPT-5	5.00-5.45	10				12	16
14.642	6.00															
14.142	6.50								SPT-6	6.00-6.45	12	14			15	29
13.642	7.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		5.20												
13.142	7.50					SPT-7	7.00-7.45	14	17	19	36					
12.642	8.00															
12.142	8.50								SPT-8	8.00-8.45	15		18		26	44
11.642	9.00															
11.142	9.50								SPT-9	9.00-9.45	17		21		27	48
10.642	10.00															
10.142	10.50					SPT-10	10.00-10.45	14	24	31	55					
9.642	11.00															
9.142	11.50					SPT-11	11.00-11.45	21	27	36	63					
8.642	12.00					SPT-12	12.00-12.20	25	59/5	-	>100					

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty SAND
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2259877.777 E 287426.847 Dia. of The Hole : 150mm
Collar Elevation (m) : 23.211 Chainage (m) : 179000 Date Started : 20.04.2017
Ground Elevation (m) : 23.211 Ground Water Table(m): 4.70 Date Completed : 20.04.2017
Total Depth (m) : 12.20 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
23.211	0.00	Medium stiff, black Silty CLAY of high plasticity (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.20m below existing ground level	
22.711	0.50											
22.211	1.00											
21.711	1.50	Medium stiff, dark brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	2	3	3	6	Ground water table encountered at 4.70m depth below existing ground level, measured on 21/04/2017	
21.211	2.00				UDS-1	1.50-1.80						
20.711	2.50	Stiff to very stiff, brown Silty CLAY of medium plasticity (CI)		2.50	SPT-2	2.00-2.45	3	4	6	10		
20.211	3.00											
19.711	3.50				SPT-3	3.00-3.45	4	7	10	17		
19.211	4.00											
18.711	4.50				SPT-4	4.00-4.45	5	7	12	19		
18.211	5.00				UDS-2	4.50-4.80						
17.711	5.50	Very stiff to hard, brown Silty CLAY of medium plasticity with gravels (CI)		5.50	SPT-5	5.00-5.45	7	9	14	23		
17.211	6.00											
16.711	6.50				SPT-6	6.00-6.45	9	12	16	28		
16.211	7.00											
15.711	7.50				SPT-7	7.00-7.45	12	16	18	34		
15.211	8.00											
14.711	8.50	Very dense, brownish grey Silty SAND (SM)		2.20	SPT-8	8.00-8.45	12	18	21	39		
14.211	9.00											
13.711	9.50				SPT-9	9.00-9.45	16	22	27	49		
13.211	10.00											
12.711	10.50				SPT-10	10.00-10.45	18	24	24	48		
12.211	11.00											
11.711	11.50				SPT-11	11.00-11.45	19	26	31	57		
11.211	12.00				SPT-12	12.00-12.20	31	48/5	-	>100		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of low plasticity
 Silty Clay of medium plasticity
 Medium plastic Clay with gravels
 Silty SAND

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2260872.442 E 287530.005	Dia. of The Hole : 150mm
Collar Elevation (m) : 24.578	Chainage (m) : 180000	Date Started : 20.04.2017
Ground Elevation (m) : 24.578	Ground Water Table(m): 6.30	Date Completed : 20.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
24.578	0.00											
24.078	0.50	Black Silty SAND (SM)		1.00	DS-1	0.00-0.50						Borehole terminated at 12.45m below existing ground level
23.578	1.00											
23.078	1.50	Medium stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	2	3	4	7		
22.578	2.00	Brown Clayey SILT of medium plasticity (MI)		0.50	UDS-1	1.50-1.80						
22.078	2.50				SPT-2	2.00-2.45	3	4	7	11		
21.578	3.00											
21.078	3.50				SPT-3	3.00-3.45	4	8	10	18		
20.578	4.00											
20.078	4.50				SPT-4	4.00-4.45	4	7	9	16		
19.578	5.00				UDS-2	4.50-4.80						
19.078	5.50				SPT-5	5.00-5.45	5	8	12	20		
18.578	6.00	Stiff to very hard, brown Silty CLAY of medium plasticity (CI)		8.00								Ground water table encountered at 6.30m depth below existing ground level, measured on 21/04/2017
18.078	6.50				SPT-6	6.00-6.45	7	16	17	33		
17.578	7.00											
17.078	7.50				SPT-7	7.00-7.45	9	18	21	39		
16.578	8.00											
16.078	8.50				SPT-8	8.00-8.45	10	21	26	47		
15.578	9.00											
15.078	9.50				SPT-9	9.00-9.45	12	23	28	51		
14.578	10.00											
14.078	10.50				SPT-10	10.00-10.45	14	26	30	56		
13.578	11.00	Very hard, brown Silty CLAY of high plasticity (CH)		2.00								
13.078	11.50				SPT-11	11.00-11.45	15	27	31	58		
12.578	12.00	Very dense, brown Silty SAND (SM)		0.45	SPT-12	12.00-12.45	16	24	36	60		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty CLAY of medium plasticity	Silty CLAY of high plasticity
Silty SAND	Silty CLAY of low plasticity	Clayey SILT of medium plasticity		

LOGGED BY :

CHECKED BY :

APPROVED BY :



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 26.153

Collar Elevation (m) : 26.153

Total Depth (m) : 12.00

Coordinates : N 2261867.107 E 287633.162

Chainage m. : 181000

Date Started : 20.4.2017

Date Completed : 20.4.2017

Structure : Viaduct

Type of Core Barrel : Nx Triple / double tube

Casing Size : Nx Size

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations						
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon				
25.153	0.50	DS-1																																From 0.00 to 7.00m Silty CLAY of medium plasticity		
	1.00																																			
	1.50	SPT-1																																		
24.153	2.00	UDS-1																																Bedrock encountered at 7.00m depth below EGL.		
	2.50	SPT-2																																		
23.153	3.00																																			
	3.50	SPT-3																																		
22.153	4.00																																			
	4.50	SPT-4																																		
21.153	5.00	UDS/DS-2																																		
	5.50	SPT-5																																		
20.153	6.00																																			
	6.50	SPT-6																																		
19.153	7.00																																			
	7.50	SPT-7																																		
18.153	8.00	RC-1-3																																		
	8.50																																			
17.153	9.00	RC - Small pieces																																		
	9.50																																			
16.153	10.00																																			
	10.50																																			
15.153	11.00	RC-4-6																																		
	11.50																																			
14.153	12.00	RC-7-8																																		

VOIDUCT CORE LOGS VIADUCT_KM 158 TO 199.GPJ CAD-58.GDT 29/12/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Rock Core
 Silty Clay of medium plasticity
 Basalt Rock

LOGGED BY : CHECKED BY : APPROVED BY :



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2262861.772 E 287736.320

Structure : Viaduct

Ground Elevation (m) : 23.876

Chainage m. : 182000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 23.876

Date Started : 19.4.2017

Casing Size : Nx Size

Total Depth (m) : 12.00

Date Completed : 19.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS_VIADUCT_KM 158 TO 199.GPJ_GAD-58.GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record					Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations					
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm	0		20	40	60	80	100									Test Section	Lugeon						
22.876	0.50	DS - 1	Black Silty CLAY of high plasticity (CH)																														From 0.00 to 3.00m Silty CLAY of medium to high plasticity			
	1.00																																			
21.876	1.50	SPT - 1	Stiff, brown Silty CLAY of medium plasticity with gravels (CI)		3	4	6	10																									From 3.00 to 5.00m Sandy SILT			
	2.00	UDS - 1	Very stiff, brown Silty CLAY of high plasticity, medium plasticity (CH)																																	
20.876	2.50	SPT - 2			4	9	11	20																									From 5.00 to 7.00m Silty SAND			
	3.00																																			
19.876	3.50	SPT - 3	Medium dense, brown Sandy SILT, non plastic in nature (ML)		5	10	13	23																									Bedrock encountered at 7.00m depth below EGL.			
	4.00				11	16	18	34																												
	4.50	SPT - 4				11	13	14	27																										From 7.00 to 12.00m Blackish grey colour, highly to moderately weathered, fine grained, BASALT	
18.876	5.00	SPT - 5			13	12	16	28																												
	5.50																																			
17.876	6.00	SPT - 6	Medium dense to very dense, brownish grey Silty SAND with occasional gravels (SM)		75	-	-	>100																										Ground water table encountered at 5.6m depth below existing ground level, measured on 20/04/2017		
	6.50	SPT - 7																																		
16.876	7.00	RC - 1	From 7.00 to 12.00m Blackish grey colour, highly to moderately weathered, fine grained, BASALT Mineral composition: Pyroxene, Plagioclase, feldspar and Quartz																																	
	7.50																																			
15.876	8.00	RC - 2-3																																		
	8.50																																			
14.876	9.00	RC - 4-7																																		
	9.50																																			
13.876	10.00	RC - 8-10																																		
	10.50																																			
12.876	11.00	RC - 11-13																																		
	11.50																																			
11.876	12.00																																			

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Sandy SILT
 Rock Core
 Silty SAND
 Basalt Rock

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2263856.437 E 287839.478 Dia. of The Hole : 150mm
Collar Elevation (m) : 28.935 Chainage (m) : 183000 Date Started : 19.04.2017
Ground Elevation (m) : 28.935 Ground Water Table(m): 6.20 Date Completed : 19.04.2017
Total Depth (m) : 14.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
28.935	0.00	Black Silty CLAY of high plasticity (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 14.45m below existing ground level	
28.435	0.50											
27.935	1.00	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		3.00	SPT-1	1.00-1.45	3	4	6	10		
27.435	1.50				UDS-1	1.50-1.80						
26.935	2.00				SPT-2	2.00-2.45	3	4	7	11		
26.435	2.50				SPT-3	3.00-3.45	4	8	9	17		
25.935	3.00											
25.435	3.50	Very stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-4	4.00-4.45	5	7	10	17		
24.935	4.00				UDS-2	4.50-4.80						
24.435	4.50	Very stiff to hard, brown Clayey SILT of medium plasticity (MI)		3.50	SPT-5	5.00-5.45	9	12	16	28		
23.935	5.00				SPT-6	6.00-6.45	11	16	19	35		
23.435	5.50				SPT-7	7.00-7.45	14	16	22	38		
22.935	6.00											
22.435	6.50											
21.935	7.00	Hard, brown Silty CLAY of low plasticity (CL)		1.00	SPT-8	8.00-8.45	14	19	29	48		
21.435	7.50				SPT-9	9.00-9.45	16	19	27	46		
20.935	8.00	Denseto very dense, brownish grey Sandy SILT, non plastic in nature (ML)		5.45	SPT-10	10.00-10.45	16	21	28	49		
20.435	8.50				SPT-11	11.00-11.45	14	24	29	53		
19.935	9.00				SPT-12	12.00-12.45	26	29	32	61		
19.435	9.50				SPT-13	13.00-13.45	28	32	38	70		
18.935	10.00				SPT-14	14.00-14.45	25	39	41	80		
18.435	10.50											
17.935	11.00											
17.435	11.50											
16.935	12.00											
16.435	12.50											
15.935	13.00											
15.435	13.50											
14.935	14.00											

Ground water table encountered at 6.20m depth below existing ground level, measured on 20/04/2017

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Silty Clay of low plasticity
 Clayey Silt of medium plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2264851.102 E 287942.635 Dia. of The Hole : 150mm
Collar Elevation (m) : 26.097 Chainage (m) : 184000 Date Started : 19.04.2017
Ground Elevation (m) : 26.097 Ground Water Table(m): 5.10 Date Completed : 19.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
26.097	0.00	Black Silty SAND with gravels (SM-ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level	
25.597	0.50											
25.097	1.00	Stiff, brown Silty CLAY of high plasticity (CH)		3.00	SPT-1	1.00-1.45	3	4	7	11		
24.597	1.50				UDS-1	1.50-1.80						
24.097	2.00				SPT-2	2.00-2.45	6	6	7	13		
23.597	2.50											
23.097	3.00				SPT-3	3.00-3.45	4	7	9	16		
22.597	3.50											
22.097	4.00	Very stiff, brown Silty CLAY of low plasticity (CL)		2.00	SPT-4	4.00-4.45	6	10	12	22		
21.597	4.50				UDS-2	4.50-4.80						
21.097	5.00				SPT-5	5.00-5.45	8	12	15	27		
20.597	5.50	Very stiff to hard, brown Clayey SILT of medium plasticity (MI)		3.00						Ground water table encountered at 5.10m depth below existing ground level, measured on 20/04/2017		
20.097	6.00				SPT-6	6.00-6.45	10	14	15		29	
19.597	6.50											
19.097	7.00				SPT-7	7.00-7.45	11	17	19		36	
18.597	7.50											
18.097	8.00				SPT-8	8.00-8.45	14	21	26		47	
17.597	8.50	Very hard, brown Silty CLAY of medium plasticity (CI)		3.00								
17.097	9.00				SPT-9	9.00-9.45	16	24	26	50		
16.597	9.50											
16.097	10.00				SPT-10	10.00-10.45	18	25	30	55		
15.597	10.50	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45								
15.097	11.00				SPT-11	11.00-11.45	18	27	33	60		
14.597	11.50											
14.097	12.00				SPT-12	12.00-12.45	21	29	37	66		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty SAND
 Silty Clay of high plasticity
 Silty Clay of low plasticity
 Clayey Silt of medium plasticity
 Silty Clay of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2265845.767 E 288045.793 Dia. of The Hole : 150mm
Collar Elevation (m) : 25.065 Chainage (m) : 185000 Date Started : 19.04.2017
Ground Elevation (m) : 25.065 Ground Water Table(m): 6.30 Date Completed : 19.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
25.065	0.00	Medium stiff, black Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level	
24.565	0.50											
24.065	1.00											
23.565	1.50	Medium stiff to stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		3.50	SPT-1	1.00-1.45	2	3	3	6		
23.065	2.00				UDS-1	1.50-1.80						
22.565	2.50				SPT-2	2.00-2.45	2	3	4	7		
22.065	3.00											
21.565	3.50				SPT-3	3.00-3.45	3	5	5	10		
21.065	4.00											
20.565	4.50	Very stiff, brown Silty CLAY of low plasticity (CL)		1.00	SPT-4	4.00-4.45	5	7	8	15		
20.065	5.00				UDS-2	4.50-4.80						
19.565	5.50				SPT-5	5.00-5.45	8	11	13	24		
19.065	6.00	Medium dense to dense, brownish grey Silty SAND (SM-ML)		3.00	SPT-6	6.00-6.45	10	12	14	26	Ground water table encountered at 6.30m depth below existing ground level, measured on 20/04/2017	
18.565	6.50											
18.065	7.00				SPT-7	7.00-7.45	11	14	16	30		
17.565	7.50											
17.065	8.00	Dense, brownish grey Sandy SILT, non plastic in nature (ML)		1.00	SPT-8	8.00-8.45	13	16	19	35		
16.565	8.50											
16.065	9.00				SPT-9	9.00-9.45	13	18	22	40		
15.565	9.50	Hard, brownish grey Silty CLAY of low plasticity (CL)		2.45	SPT-10	10.00-10.45	14	19	23	42		
15.065	10.00											
14.565	10.50				SPT-11	11.00-11.45	16	21	24	45		
14.065	11.00											
13.565	11.50				SPT-12	12.00-12.45	19	24	24	48		
13.065	12.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Silty Clay of low plasticity
 Silty SAND
 Sandy SILT

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2266840.432 E 288148.951	Dia. of The Hole : 150mm
Collar Elevation (m) : 22.905	Chainage (m) : 186000	Date Started : 18.04.2017
Ground Elevation (m) : 22.905	Ground Water Table(m): 4.70	Date Completed : 18.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
22.905	0.00	Medium stiff, black Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level
22.405	0.50										
21.905	1.00										
21.405	1.50	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		3.00	SPT-1	1.00-1.45	2	3	4	7	Ground water table encountered at 4.70m depth below existing ground level, measured on 19/04/2017
20.905	2.00				UDS-1	1.50-1.80					
20.405	2.50				SPT-2	2.00-2.45	3	4	7	11	
19.905	3.00				SPT-3	3.00-3.45	4	8	10	18	
19.405	3.50				SPT-4	4.00-4.45	4	7	9	16	
18.905	4.00				SPT-5	4.50-4.80	5	8	12	20	
18.405	4.50	Very stiff, brown Clayey SILT of medium plasticity (MI)		3.50	UDS-2	4.50-4.80					
17.905	5.00				SPT-6	5.00-5.45	7	12	17	29	
17.405	5.50				SPT-7	6.00-6.45	9	18	21	39	
16.905	6.00				SPT-8	7.00-7.45	9	19	22	41	
16.405	6.50				SPT-9	8.00-8.45	10	21	26	47	
15.905	7.00	Very hard, brown Clayey SILT of high plasticity (MH)		4.45	SPT-10	9.00-9.45	12	22	28	50	
15.405	7.50				SPT-11	10.00-10.45	14	26	30	56	
14.905	8.00				SPT-12	11.00-11.45	15	24	36	60	
14.405	8.50										
13.905	9.00										
13.405	9.50										
12.905	10.00										
12.405	10.50										
11.905	11.00										
11.405	11.50										
10.905	12.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Clayey Silt of high plasticity
Silty Clay of high plasticity	Silty Clay of medium plasticity	Clayey Silt of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2267835.097 E 288252.108

Structure : Viaduct

Ground Elevation (m) : 24.382

Chainage m. : 187000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 24.382

Date Started : 17.4.2017

Casing Size : Nx Size

Total Depth (m) : 12.00

Date Completed : 18.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM_158 TO 199.GPJ_GAD-58.GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability	Special Observations and Interpretations											
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60			80	100	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section
23.382	0.50	DS - 1	Medium dense, black Silty SAND with gravels (SM)												Overburden								NA							From 0.00 to 2.00m Silty SAND		
22.382	1.00	SPT - 1			3	6	5	11	-	-	-	-	-											NA							From 2.00 to 6.00m	
	1.50	UDS - 1																						NA							Fine to Medium SAND	
21.382	2.00																								NA							Bedrock encountered at 6.00m depth below EGL.
20.382	2.50	SPT - 2			4	7	7	14	-	-	-	-	-												NA		NA	150mm	4.70			
19.382	3.00	SPT - 3			5	9	10	19	-	-	-	-	-												NA		NA	150mm				From 6.00 to 12.00m Brown colour, fine grained, highly weathered, BASALT
18.382	3.50	SPT - 4	11	19	22	41	-	-	-	-	-											NA							Ground water table encountered at 4.70m depth below existing ground level, measured on 19/04/2017			
	4.00	SPT - 5	19	22	33	55	-	-	-	-	-											NA										
17.382	4.50	SPT - 6	75/5	-	-	>100	-	-	-	-	-											NA	30.60	12.60	8-15							
16.382	6.50	RC - 1	From 6.00 to 12.00m Brown colour, fine grained, highly weathered, highly fractured, BASALT					13	3	34	24	27																				
15.382	7.00	RC - 2							80	-	8	12	-																			
14.382	8.00	RC - 3							16	-	46	38	-																			
13.382	9.00	RC - 4							10	-	41	49	-																			
12.382	9.50		Between 7.00 to 9.00m Core recovered as small sub angular pieces																													
	10.00		Mineral composition: Pyroxene, Plagioclase, feldspar and Quartz																													
	10.50																															
	11.00																															
	11.50																															
	12.00																															

Silty SAND	Fine, medium, coarse Sand	Basalt Rock	

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2268829.762 E 288355.266	Dia. of The Hole : 150mm
Collar Elevation (m) : 24.601	Chainage (m) : 188000	Date Started : 17.04.2017
Ground Elevation (m) : 24.601	Ground Water Table(m): 2.80	Date Completed : 17.04.2017
Total Depth (m) : 11.05	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
24.601	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.05m below existing ground level		
24.101	0.50												
23.601	1.00	Stiff to very stiff, brown Silty CLAY of high plasticity (CH)		2.00	SPT-1	1.00-1.45	4	6	8	14			
23.101	1.50				UDS-1	1.50-1.80							
22.601	2.00				SPT-2	2.00-2.45	5	9	12	21			
22.101	2.50												
21.601	3.00	Medium dense, brown Sandy SILT, non plastic in nature with gravels (ML)		2.00	SPT-3	3.00-3.45	7	11	14	25		Ground water table encountered at 2.80m depth below existing ground level, measured on 18/04/2017	
21.101	3.50												
20.601	4.00				SPT-4	4.00-4.45	9	12	17	29			
20.101	4.50				UDS/DS-2	4.50-4.80							
19.601	5.00	Very stiff to very hard, brown Silty CLAY of medium plasticity with gravels (CI)		6.05	SPT-5	5.00-5.45	11	13	18	31			
19.101	5.50												
18.601	6.00				SPT-6	6.00-6.45	14	19	21	40			
18.101	6.50												
17.601	7.00				SPT-7	7.00-7.45	16	21	26	47			
17.101	7.50												
16.601	8.00				SPT-8	8.00-8.45	19	27	36	63			
16.101	8.50												
15.601	9.00				SPT-9	9.00-9.45	26	31	39	70			
15.101	9.50												
14.601	10.00				SPT-10	10.00-10.25	31	75/10	-	>100			
14.101	10.50												
13.601	11.00				SPT-11	11.00-11.05	75/5	-	-	>100			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Silty Clay of high plasticity	Sandy SILT	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2271813.757 E 288664.739 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 26.161 **Chainage (m) :** 191000 **Date Started :** 16.04.2017
Ground Elevation (m) : 26.161 **Ground Water Table(m):** 7.10 **Date Completed :** 16.04.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
26.161	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level		
25.661	0.50												
25.161	1.00	Medium stiff, brown Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	2	3	5	8			
24.661	1.50												
24.161	2.00	Stiff, brown Silty CLAY of high plasticity medium, expansive (CH)		3.00	UDS-1	1.50-1.80							
23.661	2.50					SPT-2	2.00-2.45	3	4	7		11	
23.161	3.00												
22.661	3.50					SPT-3	3.00-3.45	4	6	8		14	
22.161	4.00												
21.661	4.50					SPT/DS-4	4.00-4.45						
21.161	5.00	Brown Clayey SILT of high plasticity, medium expansive (MH)		0.50	UDS-2	4.50-4.80							
20.661	5.50					SPT-5	5.00-5.45	6	10	15		25	
20.161	6.00	Very stiff, brown Silty CLAY of medium plasticity with gravels (CI)		2.00									
19.661	6.50					SPT-6	6.00-6.45	8	11	17	28		
19.161	7.00												
18.661	7.50	Hard, brown Silty CLAY of low plasticity (CL)		3.00		SPT-7	7.00-7.45	9	14	16	30	Ground water table encountered at 7.10m depth below existing ground level, measured on 17/04/2017	
18.161	8.00												
17.661	8.50					SPT-8	8.00-8.45	11	15	17	32		
17.161	9.00												
16.661	9.50												
16.161	10.00	Dense to very dense, brown Silty SAND (SM)		2.45		SPT-10	10.00-10.45	16	17	21	38		
15.661	10.50												
15.161	11.00					SPT-11	11.00-11.45	19	21	25	46		
14.661	11.50												
14.161	12.00												

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Collected as disturbed sample
 Silty Clay of medium plasticity
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Silty Clay of low plasticity
 Silty SAND

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 26.608

Collar Elevation (m) : 26.608

Total Depth (m) : 12.00

Coordinates : N 2272808.422 E 288767.897

Chainage m. : 192000

Date Started : 16.4.2017

Date Completed : 16.4.2017

Structure : Viaduct

Type of Core Barrel : Nx Triple / double tube

Casing Size : Nx Size

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability			Special Observations and Interpretations											
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60	80	100	Penetration Rate (mm/min)		RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section	Lugeon		
25.608	0.50	DS-1	Stiff, black Silty CLAY of high plasticity (CH)																														From 0.00 to 2.00m Silty CLAY of high plasticity	
	1.00	SPT-1																																From 2.00 to 4.00m Sandy SILT
24.608	2.00	UDS-1																																From 4.00 to 7.00m Silty SAND
23.608	2.50	SPT-2	Medium dense, brown Sandy SILT, non plastic in nature (ML-SM)		4	9	12	21	-	-	-	-	-																				Bedrock encountered at 7.00m depth below EGL.	
	3.00	SPT-3			7	11	16	27	-	-	-	-	-																					From 7.00 to 12.00m Blackish grey colour, fine grained, highly to moderately weathered, BASALT Rock
22.608	4.00				13	20	31	51	-	-	-	-	-																					Ground water table encountered at 7.00m depth below existing ground level, measured on 17/04/2017
21.608	5.00	SPT-4			14	24	36	60	-	-	-	-	-																					
20.608	5.50	SPT-5	Very dense, brown Silty SAND (SM-ML)		16	27	35	62	-	-	-	-	-																					
19.608	6.50	SPT-6			75/5	-	-	>100	-	-	-	-	-																					
18.608	7.50	SPT-7			-	-	-	-	92	-	8	-	-																					
17.608	8.50	RC-1	Mineral composition: Pyroxene, Plagioclase, feldspar and Quartz		-	-	-	-	55	-	23	23	-																					
16.608	9.50	RC-2			-	-	-	-	67	-	33	-	-																					
15.608	10.50	RC-3			-	-	-	-	13	-	46	41	-																					
14.608	11.50	RC-4																																

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199 GPJ_GAD-58_GDT 29/12/17

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		Rock Core
	Silty Clay of high plasticity		Sandy SILT		Silty SAND		Basalt Rock

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2273803.087 E 288871.054 Dia. of The Hole : 150mm
Collar Elevation (m) : 25.780 Chainage (m) : 193000 Date Started : 16.04.2017
Ground Elevation (m) : 25.780 Ground Water Table(m): 4.80 Date Completed : 16.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
25.780	0.00	Black Clayey SILT of high plasticity (MH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level		
25.280	0.50												
24.780	1.00	Stiff, brown Silty CLAY of high plasticity (CH)		2.00	SPT-1	1.00-1.45	3	4	7	11			
24.280	1.50				UDS-1	1.50-1.80							
23.780	2.00				SPT-2	2.00-2.45	4	6	9	15			
23.280	2.50												
22.780	3.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		6.00	SPT-3	3.00-3.45	6	13	13	26		Ground water table encountered at 4.80m depth below existing ground level, measured on 17/04/2017	
22.280	3.50												
21.780	4.00				SPT-4	4.00-4.45	11	14	16	30			
21.280	4.50				UDS-2	4.50-4.80							
20.780	5.00				SPT-5	5.00-5.45	10	21	19	40			
20.280	5.50												
19.780	6.00				SPT-6	6.00-6.45	13	24	14	38			
19.280	6.50												
18.780	7.00				SPT-7	7.00-7.45	13	20	27	47			
18.280	7.50												
17.780	8.00				SPT-8	8.00-8.45	18	28	30	58			
17.280	8.50												
16.780	9.00	Very hard, brown Silty CLAY of low plasticity (CL)		1.45	SPT-9	9.00-9.45	20	29	36	65			
16.280	9.50												
15.780	10.00				SPT-10	10.00-10.45	22	32	38	70			

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2274797.752 E 288974.212

Structure : Viaduct

Ground Elevation (m) : 19.946

Chainage m. : 194000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 19.946

Date Started : 15.4.2017

Casing Size : Nx Size

Total Depth (m) : 11.00

Date Completed : 16.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations							
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon					
18.946	0.50	DS - 1	Very stiff, black Silty CLAY of medium plasticity (CI)																																	From 0.00 to 5.00m Silty CLAY of low to medium plasticity	
17.946	1.00	SPT - 1			9	11	12	23	-	-	-	-																								From 5.00 to 6.00m Fine to Medium SAND	
16.946	1.50	UDS - 1																																			Bedrock encountered at 6.00m depth below EGL.
15.946	2.00	SPT - 2			9	12	10	22	-	-	-	-																									
14.946	2.50	SPT - 3			11	13	14	27	-	-	-	-																									From 6.00 to 11.00m Grey to dark brown colour, fine grained, moderately to slightly weathered, BASALT
14.946	3.00	SPT - 4	Vey stiff, brown Silty CLAY of low plasticity (CL)		13	15	16	31	-	-	-	-																									
13.946	3.50	SPT - 5			14	16	30	46	-	-	-	-																									Ground water table encountered at 5.10m depth below existing ground level, measured on 17/04/2017
12.946	4.00		From 6.00 to 11.00m Grey to dark brown colour, fine grained, moderately to slightly weathered, BASALT									12	-	3	16	69																					
11.946	4.50	RC - 1																																			
10.946	5.00	RC - 2													19	-	16	35	30																		
9.946	5.50	RC - 3														2	-	-	18	80																	
8.946	6.00	RC - 4														22	-	30	18	30																	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Fine, medium, coarse Sand
 Rock Core
 Basalt Rock

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

VIADUCT CORE LOGS VIADUCT_KM_158 TO 199.GPJ_GAD-58.GDT 29/12/17

GEOLOGICAL LOG OF DRILL HOLE
Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 23.134

Collar Elevation (m) : 23.134

Total Depth (m) : 12.00

Coordinates : N 2275792.417 E 289077.370

Chainage m. : 195000

Date Started : 14.4.2017

Date Completed : 15.4.2017

Structure : Viaduct

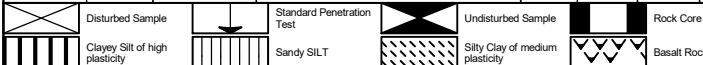
Type of Core Barrel : Nx Triple / double tube

Casing Size : Nx Size

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations						
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon				
22.134	0.50	DS -	Black Silty CLAY of high plasticity (CH)																															From 0.00 to 1.00m Silty CLAY of high plasticity		
	1.00																																			
	1.50	SPT - 1																																		
21.134	2.00	UDS - 1																																	From 1.00 to 4.00m Sandy SILT with gravels	
	2.50	SPT - 2																																		
20.134	3.00																																			
	3.50	SPT - 3																																		
19.134	4.00																																			
	4.50	SPT - 4																																		
18.134	5.00																																			
	5.50	SPT - 5																																		
17.134	6.00																																			
	6.50	SPT - 6																																		
16.134	7.00																																			
	7.50	SPT - 7 RC - 1																																		
15.134	8.00																																			
	8.50	RC - 2																																		
14.134	9.00																																			
	9.50	RC - 3																																		
13.134	10.00																																			
	10.50	RC - 4																																		
12.134	11.00																																			
	11.50																																			
11.134	12.00																																			

VIADUCT CORE LOGS VIADUCT_KM_158 TO_199.GPJ_GAD-58.GDT 29/12/17



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2276787.082 E 289180.527

Structure : Viaduct

Ground Elevation (m) : 25.594

Chainage m. : 196000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 25.594

Date Started : 14.4.2017

Casing Size : Nx Size









Total Depth (m) : 12.00

Date Completed : 15.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM_158 TO_199.GPJ_GAD-58.GDT 29/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record					Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations					
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm	0		20	40	60	80	100									Test Section	Lugeon						
24.594	0.50	DS -	Black Silty SAND with gravels (SM-ML)																																From 0.00 to 1.00m Silty SAND with gravels	
23.594	1.50	SPT - 1	Medium dense, grey Sandy SILT, non plastic in nature (ML/ML-SM)		7	8	11	19	-	-	-	-	-																					From 1.00 to 5.00m Sandy SILT with gravels		
23.594	2.00	UDS - 1																																		
22.594	2.50	SPT - 2					9	10	12	22	-	-	-	-	-																					From 5.00 to 7.00m Fine to Medium SAND
21.594	3.50	SPT - 3					11	12	13	25	-	-	-	-	-																					Bedrock encountered at 7.00m depth below EGL.
20.594	4.50	SPT - 4					10	14	13	27	-	-	-	-	-																					From 7.00 to 12.00m Grey colour, moderately weathered, fine grained, BASALT
19.594	5.50	SPT - 5	Dense, grey Fine to Medium SAND (SP)		12	18	21	39	-	-	-	-	-																						Ground water table encountered at 7.25m depth below existing ground level, measured on 16/04/2017	
18.594	6.50	SPT - 6					14	16	25	41	-	-	-	-	-																					
17.594	7.50	SPT - 7	From 7.00 to 12.00m Grey colour, moderately weathered, fine grained, BASALT		100/5	-	-	>100	-	-	-	-	-																							
17.594	8.00	RC - 1					-	-	-	-	44	-	8	30	18																					
16.594	8.50	RC - 2					-	-	-	-	57	-	26	17	-																					
15.594	9.50	RC - 3					-	-	-	-	28	-	11	10	51																					
14.594	10.50	RC - 4																																		
13.594	11.50							-	-	-	-	30	-	5	9	57																				
	12.00																																			

 Disturbed Sample
 Silty SAND
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Fine, medium, coarse Sand
 Rock Core
 Basalt Rock

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2277781.747 E 289283.685 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.568 Chainage (m) : 197000 Date Started : 14.04.2017
Ground Elevation (m) : 20.568 Ground Water Table(m): 6.70 Date Completed : 14.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.568	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level	
20.068	0.50											
19.568	1.00	Stiff to very stiff, brown Clayey SILT of medium plasticity (MI)		3.50	SPT-1	1.00-1.45	5	5	7	12		
19.068	1.50				UDS-1	1.50-1.80						
18.568	2.00											
18.068	2.50				SPT-2	2.00-2.45	5	6	12	18		
17.568	3.00											
17.068	3.50				SPT-3	3.00-3.45	5	8	11	19		
16.568	4.00	Hard, brown Silty CLAY of medium plasticity (CI)		4.50	SPT-4	4.00-4.45	8	10	19	29		
16.068	4.50				UDS-2	4.50-4.80						
15.568	5.00											
15.068	5.50				SPT-5	5.00-5.45	10	16	23	39		
14.568	6.00	Very hard, brown Clayey SILT of medium plasticity with gravels (MI)		1.45	SPT-6	6.00-6.45	10	18	22	40		
14.068	6.50											
13.568	7.00				SPT-7	7.00-7.45	12	18	21	39		
13.068	7.50											
12.568	8.00				SPT-8	8.00-8.45	14	21	26	47		
12.068	8.50											
11.568	9.00				SPT-9	9.00-9.45	15	23	28	51		
11.068	9.50				SPT-10	10.00-10.45	17	26	34	60		
10.568	10.00											

Ground water table encountered at 6.70m depth below existing ground level, measured on 15/04/2017

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample

LOGGED BY : CHECKED BY : APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE
Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2278776.412 E 289386.843

Structure : Viaduct

Ground Elevation (m) : 8.370

Chainage m. : 198000

Type of Core Barrel : Nx Triple / double tube

Collar Elevation (m) : 8.370



Date Started : 13.4.2017

Casing Size : Nx Size

Total Depth (m) : 6.00

Date Completed : 14.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations			
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon	
7.370	0.50	RC - 1			-	-	-	-	100	-	-	-	-		12					23.20	0.00	>15											Bedrock encountered from Existing Ground Level
6.370	1.00	RC - 2	From 0.00 to 3.00m Black colour, completely to highly weahtered, fine grained, BASALT		-	-	-	-	67	-	24	9	-	Aphanitic texture, Amygdaloidal structure	37					16.40	0.00	>15									From 0.00 to 3.00m Black colour, completely to highly weahtered, fine grained, BASALT		
5.370	2.00				-	-	-	-	90	-	-	10	-		44							16.30	0.00	>15								From 3.00 to 6.00m Black colour, moderately weahtered, fine grained, BASALT	
4.370	3.00				RC - 3			-	-	-	-	36	-		-	-	64	36					15.60	10.00	15-8	76mm	Nx	4.80	Partial	Black	Not done	Not done	Mineral composition: Pyroxene, Plagioclase, feldspar and Quartz
3.370	3.50	RC - 4	From 3.00 to 6.00m Black colour, moderately weahtered, fine grained, BASALT		-	-	-	-	67	-	7	10	16		55					14.40	26.00	15-8								Ground water table encountered at 4.80m depth below existing ground level, measured on 15/04/2017			
2.370	4.00				RC - 5			-	-	-	-	36	-		-	-	64	66					14.00	64.00	8-5								
	4.50	RC - 6			-	-	-	-																									
	5.00				RC - 6			-	-	-	-																						
	5.50																																
	6.00																																

VIADUCT CORE LOGS VIADUCT_KM 158 TO 199 GPJ_GAD-58_GDT 29/12/17



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2279771.077 E 289490.000 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 21.637 **Chainage (m) :** 199000 **Date Started :** 13.04.2017
Ground Elevation (m) : 21.637 **Ground Water Table(m):** 6.10m **Date Completed :** 13.04.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
21.637	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level	
21.137	0.50											
20.637	1.00	Loose to medium dense, brownish grey Sandy SILT, non plastic in nature (ML)		3.00	SPT-1	1.00-1.45	2	3	4	7		
20.137	1.50				UDS-1	1.50-1.80						
19.637	2.00				SPT-2	2.00-2.45	8	2	6	8		
19.137	2.50				SPT-3	3.00-3.45	4	7	9	16		
18.637	3.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-4	4.00-4.45	6	10	13	23		
18.137	3.50				UDS-2	4.50-4.80						
17.637	4.00				SPT-5	5.00-5.45	12	16	19	35		
17.137	4.50				SPT-6	6.00-6.45	14	16	21	37		
16.637	5.00	Hard to very hard, brown Silty CLAY of low plasticity (CL)		3.45	SPT-7	7.00-7.45	14	18	27	45		
16.137	5.50				SPT-8	8.00-8.45	16	22	24	46		
15.637	6.00				SPT-9	9.00-9.45	18	22	27	49		
15.137	6.50				SPT-10	10.00-10.45	20	25	31	56		
14.637	7.00									Ground water table encountered at 6.10m depth below existing ground level, measured on 14/04/2017		
14.137	7.50											
13.637	8.00											
13.137	8.50											
12.637	9.00											
12.137	9.50											
11.637	10.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of medium plasticity
 Sandy SILT
 Silty Clay of low plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2280765.742 E 289593.158 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.333 Chainage (m) : 200000 Date Started : 13.04.2017
Ground Elevation (m) : 18.333 Ground Water Table(m): 5.80 Date Completed : 13.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.333	0.00	Stiff, black Silty CLAY of low plasticity (CL)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.	
17.833	0.50											
17.333	1.00											
16.833	1.50	Brown Silty CLAY of medium plasticity with gravels (CI)		0.50	SPT-1	1.00-1.45	3	4	6	10		
16.333	2.00				UDS-1	1.50-1.80						
15.833	2.50	Stiff to hard, brownish grey Silty CLAY of high plasticity, medium expansive (CH)		4.00	SPT-2	2.00-2.45	4	6	8	14		
15.333	3.00											
14.833	3.50				SPT-3	3.00-3.45	9	6	13	19		
14.333	4.00											
13.833	4.50				SPT-4	4.00-4.45	9	14	15	29		
13.333	5.00	Hard to very hard, brown Silty CLAY of medium plasticity with gravels (CI)		3.00	SPT-5	5.00-5.45	12	18	21	39		
12.833	5.50											
12.333	6.00				SPT-6	6.00-6.45	14	19	24	43		
11.833	6.50											
11.333	7.00	Very dense, brownish grey Sandy SILT, non plastic in nature (ML-SM)		1.45	SPT-7	7.00-7.45	16	21	23	44		
10.833	7.50											
10.333	8.00				SPT-8	8.00-8.45	18	24	32	56		
9.833	8.50				SPT-9	9.00-9.45	19	24	36	60		
9.333	9.00											
8.833	9.50				SPT-10	10.00-10.45	20	29	42	71		
8.333	10.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of low plasticity
 Silty Clay of medium plasticity
 Silty Clay of high plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2281760.407 E 289696.316	Dia. of The Hole : 150mm
Collar Elevation (m) : 22.438	Chainage (m) : 201000	Date Started : 13.04.2017
Ground Elevation (m) : 22.438	Ground Water Table(m): 5.00	Date Completed : 13.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
22.438	0.00	Medium stiff, brown Clayey SILT of high plasticity (MH)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.			
21.938	0.50													
21.438	1.00													
20.938	1.50				SPT-1	1.00-1.45	3	4	4	8				
20.438	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		3.50	UDS-1	1.50-1.80								
19.938	2.50													
19.438	3.00							SPT-2	2.00-2.45	4		6	8	14
18.938	3.50							SPT-3	3.00-3.45	5		8	9	17
18.438	4.00							SPT-4	4.00-4.45	7		12	14	26
17.938	4.50				UDS/DS-2	4.50-4.80								
17.438	5.00	Hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-5	5.00-5.45	9	15	18	33	Ground water table encountered at 5.00m below existing ground level, measured on 14/04/2017.			
16.938	5.50													
16.438	6.00							SPT-6	6.00-6.45	12		16	19	35
15.938	6.50							SPT-7	7.00-7.45	13		17	21	38
15.438	7.00													
14.938	7.50	Hard to very hard, brownish grey Clayey SILT of medium plasticity (MI)		2.45	SPT-8	8.00-8.45	15	19	23	42				
14.438	8.00													
13.938	8.50							SPT-9	9.00-9.45	17		21	27	48
13.438	9.00													
12.938	9.50				SPT-10	10.00-10.45	19	24	29	53				
12.438	10.00													

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Clayey Silt of high plasticity	Silty Clay of high plasticity	Silty Clay of medium plasticity	Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2282755.072 E 289799.473	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.905	Chainage (m) : 202000	Date Started : 12.04.2017
Ground Elevation (m) : 21.905	Ground Water Table(m): 7.10	Date Completed : 12.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
21.905	0.00	Medium stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		5.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.	
21.405	0.50											
20.905	1.00											
20.405	1.50				SPT-1	1.00-1.45	3	3	5	8		
19.905	2.00				UDS-1	1.50-1.80						
19.405	2.50				SPT-2	2.00-2.45	4	8	10	18		
18.905	3.00											
18.405	3.50				SPT-3	3.00-3.45	4	9	13	22		
17.905	4.00											
17.405	4.50				SPT-4	4.00-4.45	7	8	22	30		
16.905	5.00											
16.405	5.50	Hard, brown Clayey SILT of medium plasticity (MI)		5.00	UDS-2	4.50-4.80					Ground water table encountered at 7.10m below existing ground level, measured on 13/04/2017.	
16.405	5.50				SPT-5	5.00-5.45	6	19	36	55		
15.905	6.00											
15.405	6.50				SPT-6	6.00-6.45	7	16	22	38		
14.905	7.00											
14.405	7.50				SPT-7	7.00-7.45	10	16	24	40		
13.905	8.00											
13.405	8.50				SPT-8	8.00-8.45	14	18	27	45		
12.905	9.00											
12.405	9.50	SPT-9	9.00-9.45	16	21	29	50					
11.905	10.00	Hard, brown Silty CLAY of medium plasticity (CI)		0.45								
	10.45				SPT-10	10.00-10.45	18	22	27	49		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Clayey Silt of medium plasticity		Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2283748.024 E 289916.682	Dia. of The Hole :	150mm	
Collar Elevation (m) :	18.895	Chainage (m) :	203000	Date Started :	12.04.2017
Ground Elevation (m) :	18.895	Ground Water Table(m):	6.10	Date Completed :	12.04.2017
Total Depth (m) :	10.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.895	0.00	Medium stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		5.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.	
18.395	0.50											
17.895	1.00											
17.395	1.50				SPT-1	1.00-1.45	2	3	3	6		
16.895	2.00				UDS-1	1.50-1.80						
16.395	2.50				SPT-2	2.00-2.45	3	4	8	12		
15.895	3.00											
15.395	3.50				SPT-3	3.00-3.45	4	6	8	14		
14.895	4.00											
14.395	4.50				SPT-4	4.00-4.45	5	7	10	17		
13.895	5.00		5.00m									
13.395	5.50	Hard, brown Clayey SILT of medium plasticity (MI)		3.00	UDS/DS-2	4.50-4.80					Ground water table encountered at 6.10m below existing ground level, measured on 13/04/2017.	
12.895	6.00				SPT-5	5.00-5.45	6	16	18	34		
12.395	6.50				SPT-6	6.00-6.45	9	15	18	33		
11.895	7.00				SPT-7	7.00-7.45	12	17	22	39		
11.395	7.50											
10.895	8.00		8.00m									
10.395	8.50	Hard, brownish grey Silty CLAY of medium plasticity (CI)		2.45	SPT-8	8.00-8.45	14	17	24	41		
9.895	9.00											
9.395	9.50				SPT-9	9.00-9.45	16	19	26	45		
8.895	10.00				SPT-10	10.00-10.45	19	21	29	50		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Clayey Silt of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2284730.031 E 290105.277 Dia. of The Hole : 150mm
Collar Elevation (m) : 21.696 Chainage (m) : 204000 Date Started : 11.04.2017
Ground Elevation (m) : 21.696 Ground Water Table(m): 5.40 Date Completed : 12.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
21.696	0.00	Stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level.			
21.196	0.50													
20.696	1.00													
20.196	1.50				SPT-1	1.00-1.45	3	4	5	9				
19.696	2.00				UDS-1	1.50-1.80								
19.196	2.50				SPT-2	2.00-2.45	3	5	8	13				
18.696	3.00													
18.196	3.50	Very stiff, brown Silty CLAY of low plasticity (CL)		2.00	SPT-3	3.00-3.45	4	7	9	16				
17.696	4.00													
17.196	4.50							SPT-4	4.00-4.45	5		8	13	21
16.696	5.00				UDS-2	4.50-4.80								
16.196	5.50	Medium dense, brownish grey Sandy SILT, non plastic in nature (ML-SM)		1.00	SPT-5	5.00-5.45	8	18	10	28	Ground water table encountered at 5.40m below existing ground level, measured on 13/04/2017.			
15.696	6.00													
15.196	6.50				SPT-6	6.00-6.45	10	16	21	37				
14.696	7.00													
14.196	7.50				SPT-7	7.00-7.45	13	18	23	41				
13.696	8.00													
13.196	8.50	Hard to very hard, brownish grey Clayey SILT of medium plasticity (MI)		5.45	SPT-8	8.00-8.45	14	21	27	48				
12.696	9.00													
12.196	9.50							SPT-9	9.00-9.45	16		24	32	56
11.696	10.00													
11.196	10.50							SPT-10	10.00-10.45	18		26	29	55
10.696	11.00				SPT-11	11.00-11.45	20	28	32	60				

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Sandy SILT
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2285710.898 E 290299.956

Structure : Viaduct

Ground Elevation (m) : 19.061

Chainage m. : 205000

Type of Core Barrel : Nx Triple tube

Collar Elevation (m) : 19.061

Date Started : 11.4.2017

Casing Size : 150mm / Nx

Total Depth (m) : 13.00

Date Completed : 12.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VAINDUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_18/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations			
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon	
18.061	0.50	DS - 1	Stiff, brown Silty CLAY of medium plasticity (CI)	[Pattern]																												Overburden From 0.00 to 8.00m, Silty CLAY of medium to high plasticity Bed rock encountered at 8.00m depth below EGL. From 8.00 to 10.50m, All rock material is decomposed and disintegrated into soil. The original rock mass structure is largely intact. From 10.50 to 13.00m, Grey colour, highly weathered, highly fractured, fine grained, BASALT Ground water table encountered at 5.20m depth below existing ground level, measured on 13/04/2017	
17.061	1.00	SPT - 1			3	4	6	10	-	-	-	-	-																				
	1.50	UDS/DS-1																															
16.061	2.00	SPT - 2			5	6	9	15	-	-	-	-	-																				
15.061	2.50	SPT - 3	Very stiff to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)	[Pattern]																													
14.061	3.00				7	11	13	24	-	-	-	-	-																				
13.061	3.50				7	13	18	31	-	-	-	-	-																				
12.061	4.00	SPT - 4	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
11.061	4.50				9	14	20	34	-	-	-	-	-																				
10.061	5.00				10	16	23	39	-	-	-	-	-																				
9.061	5.50	SPT - 5	Grey colour, highly weathered, highly fractured, fine grained, BASALT	[Pattern]																													
8.061	6.00	12			27	29	56	-	-	-	-	-																					
7.061	6.50	10			16	23	39	-	-	-	-	-																					
6.061	7.00	SPT - 6	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
5.061	7.50	78/8			-	-	>100	-	-	-	-	-																					
4.061	8.00	100			-	-	-	-	-	-	-	-																					
3.061	8.50	SPT - 7	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
2.061	9.00	100			-	-	-	-	-	-	-	-																					
1.061	9.50	100			-	-	-	-	-	-	-	-																					
0.061	10.00	100	-	-	-	-	-	-	-	-																							
9.061	10.50	RC - 1	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
8.061	11.00	78/8			-	-	>100	-	-	-	-	-																					
7.061	11.50	100			-	-	-	-	-	-	-	-																					
6.061	12.00	RC - 2	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
5.061	12.50	100			-	-	-	-	-	-	-	-																					
4.061	13.00	100			-	-	-	-	-	-	-	-																					
3.061	13.00	RC - 3	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
2.061	10.50	100			-	-	-	-	-	-	-	-																					
1.061	11.00	100			-	-	-	-	-	-	-	-																					
0.061	11.50	RC - 4	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
9.061	12.00	100			-	-	-	-	-	-	-	-																					
8.061	12.50	100			-	-	-	-	-	-	-	-																					
7.061	13.00	RC - 5	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
6.061	10.50	100			-	-	-	-	-	-	-	-																					
5.061	11.00	100			-	-	-	-	-	-	-	-																					
4.061	11.50	RC - 6	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
3.061	12.00	78/8			-	-	>100	-	-	-	-	-																					
2.061	12.50	100			-	-	-	-	-	-	-	-																					
1.061	13.00	RC - 7	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
0.061	10.50	100			-	-	-	-	-	-	-	-																					
9.061	11.00	100			-	-	-	-	-	-	-	-																					
8.061	11.50	RC - 8	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
7.061	12.00	100			-	-	-	-	-	-	-	-																					
6.061	12.50	100			-	-	-	-	-	-	-	-																					
5.061	13.00	RC - 8	Brown colour, completely weathered, decomposed BASALT Rock (Core recovered as small pieces)	[Pattern]																													
4.061	10.50	100			-	-	-	-	-	-	-	-																					
3.061	11.00	100			-	-	-	-	-	-	-	-																					

Disturbed Sample
 Standard Penetration Test
 Silty Clay of medium plasticity
 Silty Clay of high plasticity
 Basalt Rock
 Slipped / Hard to penetrate samples
 Rock Core

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

GEOLOGICAL LOG OF DRILL HOLE
Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 21.265

Collar Elevation (m) : 21.265

Total Depth (m) : 10.00

Coordinates : N 2286691.765 E 290494.634

Chainage m. : 206000

Date Started : 10.4.2017

Date Completed : 11.4.2017

Structure : Viaduct

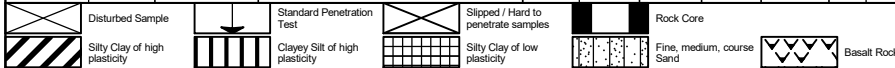
Type of Core Barrel : Nx Triple tube

Casing Size : 150mm / Nx

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_16/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record					Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations						
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm	0		20	40	60	80	100									Test Section	Lugeon							
20.265	0.50	DS - 1	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		-	-	-	-	-	-	-	-	-	-	Overburden	-	-	-	-	-	NA	NA	NA	150mm	150mm	6.10m	NA	NA	NA	NA	NA	NA	NA	NA	Overburden From 0.00 to 3.00m, Silty CLAY / Clayey SILT From 3.00 to 5.00m, Fine to Medium SAND Bed rock encountered at 5.00m depth below EGL. From 5.00 to 8.00m, Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)		
19.265	1.00	SPT - 1			7	11	16	27	-	-	-	-	-	NA		NA	NA	NA	NA	NA	NA	NA	NA													NA	NA
19.265	1.50	UDS/DS - 1	Blackish brown Clayey SILT of high plasticity, medium expansive (MH)		-	-	-	-	-	-	-	-	-	-	Overburden	-	-	-	-	-	NA	NA	NA	150mm	150mm	6.10m	NA	NA	NA	NA	NA	NA	NA	NA	NA	From 5.00 to 8.00m, Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)	
18.265	2.00	SPT - 2			14	21	22	43	-	-	-	-	-	NA		NA	NA	NA	NA	NA	NA	NA	NA														NA
18.265	2.50	SPT - 3	Hard, brown Silty CLAY of low plasticity (CL)		20	33	30	63	-	-	-	-	-	Overburden	-	-	-	-	-	NA	NA	NA	150mm	150mm	6.10m	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	From 5.00 to 8.00m, Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)
17.265	3.00	SPT - 4			26	29	40	69	-	-	-	-	-		NA	NA	NA	NA	NA	NA	NA	NA															
16.265	3.50	SPT - 5	Very dense, brown Fine to Medium SAND (SP-SM)		83/10	-	-	>100	-	-	-	-	-	Overburden	-	-	-	-	-	NA	NA	NA	76mm	Uncased	6.10m	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	From 5.00 to 8.00m, Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)	
16.265	4.00	SPT - 5			26	29	40	69	-	-	-	-	-		NA	NA	NA	NA	NA	NA	NA	NA															NA
15.265	5.00	RC - 1	Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)		-	-	-	-	100	-	-	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	28.40	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT
14.265	5.50	RC - 2			-	-	-	-	100	-	-	-	-		33.40	0.00	>15	NA	NA	NA	NA	NA															
13.265	6.00	RC - 3	Reddish brown colour, completely weathered, fine grained, BASALT (More than half rock material is decomposed into soil. The original mass structure is still largely intact)		-	-	-	-	100	-	-	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	33.30	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT
12.265	6.50	RC - 4			-	-	-	-	100	-	-	-	-		25.00	0.00	>15	NA	NA	NA	NA	NA															
12.265	7.00	RC - 5	Reddish brown colour, highly weathered, fine grained, BASALT		-	-	-	-	45	10	45	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	19.23	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT
11.265	7.50	RC - 6			-	-	-	-	65	-	35	-	-		19.23	0.00	>15	NA	NA	NA	NA	NA															
11.265	8.00	RC - 6	Reddish brown colour, highly weathered, fine grained, BASALT		-	-	-	-	45	10	45	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	19.23	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT	
11.265	8.50	RC - 6			-	-	-	-	65	-	35	-	-		19.23	0.00	>15	NA	NA	NA	NA	NA															NA
11.265	9.00	RC - 6	Reddish brown colour, highly weathered, fine grained, BASALT		-	-	-	-	45	10	45	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	19.23	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT	
11.265	9.50	RC - 6			-	-	-	-	65	-	35	-	-		19.23	0.00	>15	NA	NA	NA	NA	NA															NA
11.265	10.00	RC - 6	Reddish brown colour, highly weathered, fine grained, BASALT		-	-	-	-	45	10	45	-	-	Aphanitic texture, vesicular and amygdaloidal structure	-	-	-	-	-	19.23	0.00	>15	76mm	Uncased	6.10m	Partial	Brown	Not done	Not done	NA	NA	NA	NA	NA	NA	From 8.00 to 10.00m, Reddish brown colour, highly weathered, fine grained, BASALT	
11.265	10.00	RC - 6			-	-	-	-	65	-	35	-	-		19.23	0.00	>15	NA	NA	NA	NA	NA															NA



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2287672.632 E 290689.312

Structure : Viaduct

Ground Elevation (m) : 25.209

Chainage m. : 207000

Type of Core Barrel : Nx Triple tube

Collar Elevation (m) : 25.209

Date Started : 10.4.2017

Casing Size : 150mm / Nx

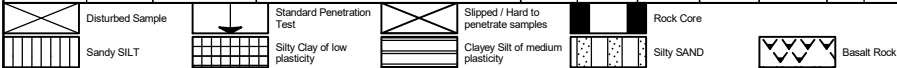
Total Depth (m) : 10.50

Date Completed : 10.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_18/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations							
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		0	20	40	60	80									100	Test Section		Lugeon						
24.209	0.50	DS - 1	Black Sandy SILT, non plastic in nature (ML)																																		Overburden
23.209	1.00 - 1.50	SPT - 1	Stiff, brown Silty CLAY of low plasticity (CL)		3	5	7	12																												From 1.00 to 1.50m, Silty CLAY	
22.209	2.00 - 2.50	UDS/DS - 1	Very stiff, brown Clayey SILT of medium plasticity (MI)		4	8	10	18																											From 1.50 to 5.00m, Sandy SILT/Silty SAND		
21.209	3.00 - 3.50	SPT - 2	Very stiff, brown Clayey SILT of medium plasticity (MI)		4	8	10	18																											Bed rock encountered at 5.00 depth below EGL.		
20.209	4.00 - 4.50	SPT - 3	Medium dense, brown Sandy SILT with non to low plasticity (ML-SM)		6	10	15	25																											From 5.00 to 7.00m, Brownish yellow colour, highly weathered, fine grained, BASALT		
19.209	5.00 - 6.00	SPT - 4	Medium dense, brown Silty SAND with gravels (SM-ML)		9	6	19	25																											From 7.00 to 10.50m, Brownish yellow colour, moderately weathered, fine grained, BASALT		
	5.00 - 5.50	RC - 1	Brownish yellow colour, highly weathered, fine grained, BASALT		70/11				>100																											Ground Water Table encountered at 4.30m below existing ground level, measured on 11/04/2017	
	6.00 - 6.50	RC - 2								100																											
	7.00 - 7.50	RC - 3								100																											
	7.50 - 8.50	RC - 4								48		52																									
	8.50 - 9.00	RC - 5								7		12		81																							
	9.00 - 9.50	RC - 6								65			35																								
	15.209	RC - 6									11	41	49																								



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 24.556

Collar Elevation (m) : 24.556

Total Depth (m) : 9.50

Coordinates : N 2288653.499 E 290883.990

Chainage m. : 208000

Date Started : 9.4.2017

Date Completed : 10.4.2017

Structure : Viaduct

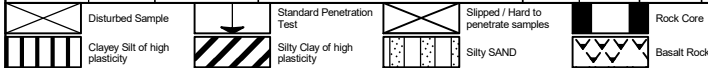
Type of Core Barrel : Nx Triple tube

Casing Size : 150mm / Nx

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS_VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_16/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record					Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations							
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm	0		20	40	60	80	100									Test Section	Lugeon								
23.556	0.50	DS - 1	Medium stiff, brown Clayey SILT of high plasticity (MH)																															Overburden From 0.00 to 4.00m, Clayey SILT/ Silty CLAY of medium to high plasticity From 4.00 to 4.50m, Silty SAND				
22.556	1.00	SPT - 1			3	3	4	7	-	-	-	-	-																									
22.556	2.00	UDS/DS - 1	Brown Silty CLAY of high plasticity, medium expansive (CH)																															Bed rock encountered at 4.50m below EGL. From 4.50 to 9.50m, Grey colour, completely to highly weathered, highly fractured, fine grained, BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)				
21.556	2.50	SPT - 2			5	8	9	17	-	-	-	-	-		Overburden																							
21.556	3.00	SPT - 3	Very stiff to hard, brown Clayey SILT of high plasticity, medium expansive (MH)																															Ground water table encountered at 4.30m below existing ground level, measured on 11/04/2017				
20.556	3.50				7	10	12	22	-	-	-	-	-																									
20.556	4.00	SPT - 4	Medium dense, brown Silty SAND (SM-ML)																																			
19.556	4.50				11	13	16	29	-	-	-	-	-																									
19.556	5.00	RC - 1	Grey colour, completely to highly weathered, highly fractured, fine grained BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)																																			
18.556	5.50				-	-	-	-	7	-	24	25	44				64	18.90	0.00	>15																		
18.556	6.00																																					
17.556	6.50				RC - 2																																	
16.556	7.00							-	-	-	-	90	-	10	-	-				19	16.30	0.00	>15															
16.556	7.50	RC - 3																																				
15.556	8.00				-	-	-	-	11	-	39	50	-				24	15.60	0.00	>15																		
15.556	8.50	RC - 4																																				
15.556	9.00				-	-	-	-	100	-	-	-	-				49	14.40	0.00	>15																		
15.556	9.50	RC - 5																																				



LOGGED BY : CHECKED BY : APPROVED BY :



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 22.747

Collar Elevation (m) : 22.747

Total Depth (m) : 9.50

Coordinates : N 2289634.367 E 291078.669

Chainage m. : 209000

Date Started : 8.4.2017

Date Completed : 9.4.2017

Structure : Viaduct

Type of Core Barrel : Nx Triple tube

Casing Size : 150mm / Nx

Drilling Method : Hydraulic Feed Rotary Drilling

VIADUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT 16/12/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability	Special Observations and Interpretations											
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60			80	100	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section
21.747	0.50	DS - 1	Stiff to stiff, brown Silty CLAY of high plasticity, medium expansive (CH)																	NA	NA	NA							Overburden From 0.00 to 4.50m, Silty CLAY			
20.747	1.00	SPT - 1			3	4	6	10	-	-	-	-									NA	NA	NA								Bed rock encountered at 4.50m depth below EGL.	
19.747	2.00	UDS/DS - 1																			NA	NA	NA									From 4.50 to 9.50m, Grey colour, completely weathers, fine grained, BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)
18.747	2.50	SPT - 2			3	5	8	13	-	-	-	-		Overburden							NA	NA	NA	150mm	150mm	NA	NA	NA		NA		
18.747	3.00	SPT - 3	Very stiff, brown Silty CLAY of low plasticity (CL)																	NA	NA	NA							Ground water table encountered at 7.10m depth below existing ground level measured on 10/04/2017			
17.747	3.50	SPT - 4			5	7	12	19	-	-	-	-									NA	NA	NA	7.10m								
17.747	4.00	RC - 1	Grey colour, completely weathers, fine grained, BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)																	NA	NA	NA							Ground water table encountered at 7.10m depth below existing ground level measured on 10/04/2017			
16.747	4.50				5	9	16	25	-	-	-	-										22.22	0.00	>15								
15.747	5.00				RC - 2																	18.04	0.00	>15	76mm	Nx	7.10m	Partial		Grey	Not done	Not done
14.747	5.50				RC - 3																	16.66	0.00	>15								
13.747	6.00	RC - 4																		13.33	0.00	>15										
	6.50																															
	7.00																															
	7.50																															
	8.00																															
	8.50																															
	9.00																															
	9.50																															

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Slipped / Hard to penetrate samples
 Basalt Rock
 Rock Core

LOGGED BY : CHECKED BY : APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE
BORE HOLE No.: VBH-172

Sheet No. 1 of 1

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2290615.234 E 291273.347

Structure : Viaduct

Ground Elevation (m) : 21.218

Chainage m. : 210000

Type of Core Barrel : Nx Triple tube

Collar Elevation (m) : 21.218

Date Started : 7.4.2017

Casing Size : 150mm / Nx

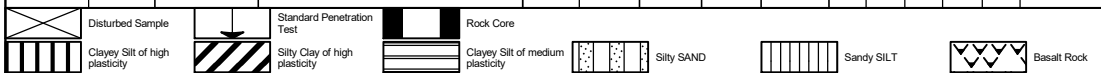
Total Depth (m) : 12.50

Date Completed : 8.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations										
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60									80	100		Test Section	Lugeon								
20.218	0.50	DS - 1	Stiff, brown Clayey SILT of high plasticity (MH)																																		Overburden From 0.00 to 4.00m, Clayey SILT / Silty CLAY From 4.00 to 7.50m, Sandy SILT / Silty SAND Bed rock encountered at 7.50m depth below EGL. From 7.50 to 12.50m, Reddish brown colour, completely weathered, highly fractured, fine grained, BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)			
	1.00	SPT - 1			3	4	6	10	-	-	-	-																												
19.218	1.50																																							
	2.00	SPT - 2																																						
	2.50																																							
18.218	3.00	SPT - 3																																						
	3.50																																							
17.218	4.00		Very stiff, brown Clayey SILT of medium plasticity (MI)		7	12	16	28	-	-	-	-																												
	4.50	SPT - 4																																						
16.218	5.00		Medium dense to dense, brown Silty SAND (SM-ML)																																					
	5.50	SPT - 5																																						
15.218	6.00																																							
	6.50	SPT - 6																																						
14.218	7.00		Dense, brown Sandy SILT (ML)																																					
	7.50	SPT - 7																																						
13.218	8.00		Reddish brown colour, completely weathered, highly fractured, fine grained, BASALT (More than half of rock material is decomposed and disintegrated into soil. The original mass structure is still largely intact)																																					
	8.50	RC - 1																																						
12.218	9.00																																							
	9.50	RC - 2																																						
	10.00																																							
10.218	10.50																																							
	11.00	RC - 3																																						
	11.50																																							
9.218	12.00																																							
	12.50	RC - 4																																						

VIADUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_18/12/17



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____

GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2291596.101 E 291468.025

Structure : Viaduct

Ground Elevation (m) : 17.829

Chainage m. : 211000

Type of Core Barrel : Nx Triple tube

Collar Elevation (m) : 17.829




Date Started : 6.4.2017

Casing Size : 150mm / Nx

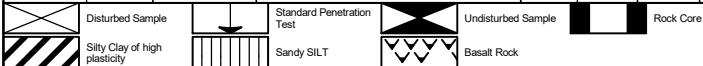
Total Depth (m) : 8.00

Date Completed : 7.4.2017

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability				Special Observations and Interpretations																
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60	80	100	Penetration Rate (mm/min)	RQD (%)		Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section	Lugeon								
16.829	0.50	DS - 1	Stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		-	-	-	-	-	-	-	-	-	Overburden	-	-	-	-	-	-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	Overburden From 0.00 to 2.50m, Silty CLAY / Sandy SILT						
15.829	1.00	SPT - 1			3	4	8	12	-	-	-	-	-		-	NA	NA	NA	150mm	150mm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
15.829	1.50	UDS - 1			-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
14.829	2.00	SPT - 2	Dense, brown Sandy SILT, non plastic in nature (ML)		7	13	24	37	-	-	-	-	-	-	Completely weathered BASALT rock	15.60	0.00	>15	-	-	-	-	-	NA	NA	NA	-	-	-	-	-	-	-	-	Bed rock encountered at 2.50m depth below EGL.					
14.829	2.50	RC - 1	3.00m	-	-	-	-	100	-	-	-	-	-	64		15.60	0.00	>15	-	-	-	-	-	-	-	-	-	-	-	-	-	From 2.50 to 3.00m, Completely Weathered Rock								
13.829	3.00	RC - 2	Brownish grey colour, highly to moderately weathered, highly fractured, fine grained, BASALT		-	-	-	-	70	-	30	-	-	40	Aphanitic texture, vesicular and amygdaloidal structure	16.90	0.00	>15	-	-	-	-	-	16.90	0.00	>15	76mm	Nx	7.40m	Partial	Brownish grey	Not done	Not done	-	-	-	-	-	-	From 3.00 to 8.00m, Brownish grey colour, highly to moderately weathered, highly fractured, fine grained, BASALT
12.829	3.50	RC - 3			60	15.60	30.00	>15	-	-	-	-	-	-		60	15.60	30.00	>15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11.829	4.00	RC - 4			50	14.40	0.00	>15	-	-	-	43	-	35		23	-	50	14.40	0.00	>15	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
10.829	4.50	RC - 5			8.00m	-	-	-	-	-	-	-	-	-		-	88	14.00	60.00	>15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ground water table encountered at 7.40m depth below existing ground level, measured on 08/04/2017				
9.829	5.00	RC - 5	8.00m	-	-	-	-	-	-	-	-	30	34	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	5.50	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	6.00	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	6.50	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	7.00	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	7.50	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
9.829	8.00	RC - 5	8.00m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								

VIADUCT CORE LOGS VIADUCT_KM 200 TO 225 GPJ_GAD-58_GDT_18/12/17



LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2293557.835 E 291857.382	Dia. of The Hole : 150mm
Collar Elevation (m) : 10.332	Chainage (m) : 213000	Date Started : 06.04.2017
Ground Elevation (m) : 10.332	Ground Water Table(m): 3.00	Date Completed : 06.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
10.332	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level.			
9.832	-0.50													
9.332	1.00	Stiff to very stiff, brown Silty CLAY of medium plasticity with gravels (CI)		3.50	SPT-1	1.00-1.45	4	6	9	15				
8.832	1.50				UDS-1	1.50-1.80								
8.332	2.00				SPT-2	2.00-2.45	5	6	11	17				
7.832	2.50				SPT-3	3.00-3.45	5	7	13	20				
7.332	3.00													
6.832	3.50													
6.332	4.00													
5.832	4.50				Stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-4	4.00-4.45	4		11	15	26
5.332	5.00							UDS-2	4.50-4.80					
4.832	5.50				Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-5	5.00-5.45	11	12	17	29	
4.332	6.00	SPT-6	6.00-6.45	13				16	20	36				
3.832	6.50													
3.332	7.00													
2.832	7.50													
2.332	8.00	SPT-7	7.00-7.45	14				18	21	39				
1.832	8.50	Hard, brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-8	8.00-8.45	14	18	22	40				
1.332	9.00				SPT-9	9.00-9.45	16	21	27	48				
0.832	9.50													
-0.332	10.00				SPT-10	10.00-10.45	16	21	29	50				
-0.168	10.50	Very hard, brown Clayey SILT of high plasticity (MH)		0.45	SPT-11	11.00-11.45	18	23	30	53				
-0.668	11.00													

Ground water table encountered at 3.00m below existing ground level, measured on 07/04/2017.

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Silty Clay of low plasticity
 Clayey Silt of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2294538.702 E 292052.060	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.269	Chainage (m) : 214000	Date Started : 06.04.2017
Ground Elevation (m) : 14.269	Ground Water Table(m): Not Met With	Date Completed : 06.04.2017
Total Depth (m) : 12.07	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
14.269	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.07m depth below existing ground level.
13.769	0.50										
13.269	1.00	Medium stiff to very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.50	SPT-1	1.00-1.45	2	3	5	8	Ground water table was not encountered upto 12.07m drilled depth below existing ground level, measured on 07/04/2017.
12.769	1.50				UDS-1	1.50-1.80					
12.269	2.00				SPT-2	2.00-2.45	4	6	8	14	
11.769	2.50				SPT-3	3.00-3.45	7	9	10	19	
11.269	3.00				SPT-4	4.00-4.45	9	12	13	25	
10.769	3.50	Stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		0.50	UDS-2	4.50-4.80					
10.269	4.00				SPT-5	5.00-5.45	9	12	16	28	
9.769	4.50	Very stiff, brown Clayey SILT of high plasticity (MH)		2.00	SPT-6	6.00-6.45	10	13	16	29	
9.269	5.00				SPT-7	7.00-7.27	35	70/12	-	>100	
8.769	5.50				SPT-8	8.00-8.22	50	60/7	-	>100	
8.269	6.00	Completely weathered rock transformed into Soil (Very dense, grey Silty SAND (SM))		3.00	SPT-9	9.00-9.09	100/9	-	-	>100	High SPT value observed due to presence of Residual Soil
7.769	6.50				SPT-10	10.00-10.08	73/8	-	-	>100	
7.269	7.00				SPT-11	11.00-11.09	100/9	-	-	>100	
6.769	7.50	Very dense, grey Silty Sandy GRAVELS (GP-GM)		1.00	SPT-12	12.00-12.07	100/7	-	-	>100	
6.269	8.00										
5.769	8.50	Very dense, grey medium to coarse SAND with gravels (SP-SM)		1.07							
5.269	9.00										
4.769	9.50										
4.269	10.00										
3.769	10.50										
3.269	11.00										
2.769	11.50										
2.269	12.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Clayey Silt of high plasticity	Silty Sand	Sandy Gravel with Silt	Fine, medium, coarse Sand
Sandy SILT	Silty Clay of high plasticity	Silty Clay of medium plasticity				

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2295519.569 E 292246.739	Dia. of The Hole : 150mm
Collar Elevation (m) : 7.933	Chainage (m) : 215000	Date Started : 05.04.2017
Ground Elevation (m) : 7.933	Ground Water Table(m): Not Met With	Date Completed : 07.04.2017
Total Depth (m) : 10.24	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
7.933	0.00	Black Sandy SILT, non plastic in nature (ML)	[Symbol]	1.00	DS-1	0.00-0.50					Borehole terminated at 10.24m depth below existing ground level.
7.433	0.50										
6.933	1.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)	[Symbol]	4.00	SPT-1	1.00-1.45	5	6	7	13	Ground water table was not encountered upto 10.24m drilled depth below existing ground level, measured on 08/04/2017.
6.433	1.50				UDS-1	1.50-1.80					
5.933	2.00				SPT-2	2.00-2.45	6	10	14	24	
5.433	2.50				SPT-3	3.00-3.45	8	6	11	17	
4.933	3.00				SPT-4	4.00-4.45	8	11	12	23	
4.433	3.50										
3.933	4.00										
3.433	4.50										
2.933	5.00				SPT-5	5.00-5.45	9	12	18	30	
2.433	5.50										
1.933	6.00	Very stiff to hard, brown Clayey SILT of high plasticity (MH)	[Symbol]	3.00	SPT-6	6.00-6.45	6	13	17	30	
1.433	6.50				SPT-7	7.00-7.45	10	16	18	34	
0.933	7.00										
0.433	7.50										
-0.067	8.00	Hard, brown Silty CLAY of high plasticity (CH)	[Symbol]	2.00	SPT-8	8.00-8.45	13	17	18	35	
-0.567	8.50										
-1.067	9.00										
-1.567	9.50										
-2.067	10.00	Very hard, brown Silty CLAY of medium plasticity with gravels (CI)	[Symbol]	0.24	SPT-9	9.00-9.45	15	18	21	39	
	10.24				SPT-10	10.00-10.24	35	67/9	-	>100	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty Clay of medium plasticity
Sandy SILT	Silty Clay of high plasticity	Clayey Silt of high plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2296500.437 E 292441.417	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.591	Chainage (m) : 216000	Date Started : 05.04.2017
Ground Elevation (m) : 16.591	Ground Water Table(m): 5.60	Date Completed : 06.04.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
16.591	0.00	Stiff, brown Clayey SILT of high plasticity (MH)		1.50		DS-1	0.00-0.50					Borehole terminated at 13.45m depth below existing ground level.			
16.091	0.50														
15.591	1.00														
15.091	1.50			1.50m		SPT-1	1.00-1.45	3	4	7	11				
14.591	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		3.50		UDS-1	1.50-1.80								
14.091	2.50														
13.591	3.00														
13.091	3.50								SPT-3	3.00-3.45	4	6	9	15	
12.591	4.00														
12.091	4.50			5.00m		SPT-4	4.00-4.45	3	4	9	13				
11.591	5.00					UDS-2	4.50-4.80								
11.091	5.50	Very stiff to hard, brown Clayey SILT of high plasticity (MH)		4.00		SPT-5	5.00-5.45	5	8	12	20	Ground water table encountered at 5.60m depth below existing ground level, measured on 07/04/2017.			
10.591	6.00														
10.091	6.50								SPT-6	6.00-6.45	6		10	13	23
9.591	7.00														
9.091	7.50								SPT-7	7.00-7.45	7		12	18	30
8.591	8.00														
8.091	8.50			9.00m		SPT-8	8.00-8.45	7	15	19	34				
7.591	9.00	Hard, brown Silty CLAY of high plasticity, medium expansive (CH)		4.45		SPT-9	9.00-9.45	9	15	21	36				
7.091	9.50														
6.591	10.00														
6.091	10.50								SPT-10	10.00-10.45	10	15	25	40	
5.591	11.00														
5.091	11.50					SPT-11	11.00-11.45	12	16	28	44				
4.591	12.00														
4.091	12.50			13.45m		SPT-12	12.00-12.45	14	17	30	47				
3.591	13.00														
						SPT-13	13.00-13.45	15	19	31	50				

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Clayey Silt of high plasticity
 Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2298462.171 E 292830.773 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.913 Chainage (m) : 218000 Date Started : 05.04.2017
Ground Elevation (m) : 16.913 Ground Water Table(m): Not Met With Date Completed : 05.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
16.913	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.		
16.413	0.50												
15.913	1.00	Stiff, brown Silty CLAY of high plasticity, low expansive (CH)		0.50	SPT-1	1.00-1.45	2	3	6	9	Ground water table was not encountered in the borehole.		
15.413	1.50												
14.913	2.00	Stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		0.50	UDS-1	1.50-1.80							
14.413	2.50	Medium dense, brownish grey Silty SAND (SM-ML)		1.00	SPT-2	2.00-2.45	4	7	9	16			
13.913	3.00												
13.413	3.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-3	3.00-3.45	6	9	12	21			
12.913	4.00												
12.413	4.50				SPT-4	4.00-4.45	7	11	13	24			
11.913	5.00				UDS/DS-2	4.50-4.80							
11.413	5.50				SPT-5	5.00-5.45	11	15	21	36			
10.913	6.00	Hard, brown Silty CLAY of high plasticity, low expansive (CH)		4.45	SPT-6	6.00-6.45	11	14	21	35			
10.413	6.50												
9.913	7.00							SPT-7	7.00-7.45	12	16	23	39
9.413	7.50												
8.913	8.00				SPT-8	8.00-8.45	12	19	25	44			
8.413	8.50												
7.913	9.00				SPT-9	9.00-9.45	14	10	35	45			
7.413	9.50												
6.913	10.00				SPT-10	10.00-10.45	16	19	30	49			

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity
 Slipped / Hard to penetrate samples
 Silty Sand

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2299443.038 E 293025.452 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.472 Chainage (m) : 219000 Date Started : 05.04.2017
Ground Elevation (m) : 15.472 Ground Water Table(m): 2.10 Date Completed : 05.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.472	0.00											
14.972	0.50	Brown Silty CLAY of medium plasticity, low expansive (CI)		1.00	DS-1	0.00-0.50						Borehole terminated at 11.45m depth below existing ground level.
14.472	1.00											
13.972	1.50	Stiff, brown Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	4	5	7	12		Ground water table encountered at 2.10m depth below existing ground level, measured on 06/04/2017.
13.472	2.00				UDS-1	1.50-1.80						
12.972	2.50				SPT-2	2.00-2.45	4	6	7	13		
12.472	3.00	Stiff to very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-3	3.00-3.45	6	9	11	20		
11.972	3.50											
11.472	4.00				SPT-4	4.00-4.45	6	8	12	20		
10.972	4.50				UDS-2	4.50-4.80						
10.472	5.00				SPT-5	5.00-5.45	10	13	15	28		
9.972	5.50											
9.472	6.00				SPT-6	6.00-6.45	10	13	18	31		
8.972	6.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.50	SPT-7	7.00-7.45	14	16	21	37		
8.472	7.00											
7.972	7.50				SPT-8	8.00-8.45	12	17	26	43		
7.472	8.00											
6.972	8.50				SPT-9	9.00-9.45	13	17	23	40		
6.472	9.00											
5.972	9.50				SPT-10	10.00-10.45	14	21	37	58		
5.472	10.00	Hard to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)		2.45								
4.972	10.50				SPT-11	11.00-11.45	15	24	29	53		
4.472	11.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of medium plasticity
 Clayey Silt of high plasticity
 Silty Clay of high plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2300423.905 E 293220.130 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.099 Chainage (m) : 220000 Date Started : 05.04.2017
Ground Elevation (m) : 16.099 Ground Water Table(m): Not Met With Date Completed : 05.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.099	0.00	Brown Silty CLAY of medium plasticity, low expansive (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.
15.599	0.50										
15.099	1.00	Medium stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	2	3	3	6	Ground water table was not encountered in the borehole.
14.599	1.50										
14.099	2.00	Stiff, brown Silty CLAY of medium plasticity, medium expansive (CI)		1.50	UDS-1	1.50-1.80					Ground water table was not encountered in the borehole.
13.599	2.50										
13.099	3.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	SPT-2	2.00-2.45	4	6	7	13	Ground water table was not encountered in the borehole.
12.599	3.50										
12.099	4.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	SPT-3	3.00-3.45	4	5	7	12	Ground water table was not encountered in the borehole.
11.599	4.50										
11.099	5.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	SPT-4	4.00-4.45	6	7	10	17	Ground water table was not encountered in the borehole.
10.599	5.50										
10.099	6.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	UDS/DS-2	4.50-4.80					Ground water table was not encountered in the borehole.
9.599	6.50										
9.099	7.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	SPT-5	5.00-5.45	9	13	20	33	Ground water table was not encountered in the borehole.
8.599	7.50										
8.099	8.00	Stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		5.00	SPT-6	6.00-6.45	12	17	22	39	Ground water table was not encountered in the borehole.
7.599	8.50										
7.099	9.00	Hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-7	7.00-7.45	13	19	23	42	Ground water table was not encountered in the borehole.
6.599	9.50										
6.099	10.00	Hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-8	8.00-8.45	15	18	24	42	Ground water table was not encountered in the borehole.
		Hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-9	9.00-9.45	16	17	28	45	Ground water table was not encountered in the borehole.
		Hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-10	10.00-10.45	18	21	28	49	Ground water table was not encountered in the borehole.

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2301404.772 E 293414.808	Dia. of The Hole : 150mm
Collar Elevation (m) : 11.593	Chainage (m) : 221000	Date Started : 04.04.2017
Ground Elevation (m) : 11.593	Ground Water Table(m): Not Met With	Date Completed : 04.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
11.593	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level.		
11.093	0.50												
10.593	1.00	Loose, brown Sandy SILT, non plastic in nature (ML-SM)		1.00	SPT-1	1.00-1.45	2	3	3	6	Ground water table was not encountered in the borehole.		
10.093	1.50				UDS-1	1.50-1.80							
9.593	2.00	Stiff, brown Silty CLAY of low plasticity (CL)		1.00	SPT-2	2.00-2.45	3	4	6	10			
9.093	2.50												
8.593	3.00	Stiff to hard, brown Silty CLAY of medium plasticity (CI)		5.00	SPT-3	3.00-3.45	5	7	8	15			
8.093	3.50												
7.593	4.00												
7.093	4.50				SPT-4	4.00-4.45	10	12	15	27			
6.593	5.00				UDS-2	4.50-4.80							
6.093	5.50	SPT-5	5.00-5.45	13	16	18	34						
5.593	6.00												
5.093	6.50							SPT-6	6.00-6.45	14	17	20	37
4.593	7.00												
4.093	7.50	SPT-7	7.00-7.45	14	18	22	40						
3.593	8.00	Hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-8	8.00-8.45	16	19	24	43			
3.093	8.50												
2.593	9.00				SPT-9	9.00-9.45	13	22	26	48			
2.093	9.50												
1.593	10.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-10	10.00-10.45	18	27	20	47			
1.093	10.50												
0.593	11.00				SPT-11	11.00-11.45	28	22	29	51			

--	--	--	--	--	--	--	--

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2302392.855 E 293563.678	Dia. of The Hole : 150mm
Collar Elevation (m) : 12.860	Chainage (m) : 222000	Date Started : 04.04.2017
Ground Elevation (m) : 12.860	Ground Water Table(m): 2.90	Date Completed : 04.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
12.860	0.00	Stiff, brown Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level.	
12.360	0.50											
11.860	1.00											
11.360	1.50	Stiff, brown Clayey SILT of high plasticity, low expansive (MH)		0.50	SPT-1	1.00-1.45	4	6	7	13		
10.860	2.00				UDS-1	1.50-1.80						
10.360	2.50	Stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		3.00	SPT-2	2.00-2.45	4	7	8	15		
9.860	3.00											
9.360	3.50				SPT-3	3.00-3.45	6	7	10	17		
8.860	4.00											
8.360	4.50				SPT-4	4.00-4.45	8	11	13	24		
7.860	5.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.00	UDS/DS-2	4.50-4.80						
7.360	5.50				SPT-5	5.00-5.45	9	13	16	29		
6.860	6.00											
6.360	6.50				SPT-6	6.00-6.45	13	17	21	38		
5.860	7.00											
5.360	7.50				SPT-7	7.00-7.45	21	26	29	55		
4.860	8.00	Very hard, brown Clayey SILT of medium plasticity (MI)		2.45								
4.360	8.50				SPT-8	8.00-8.45	20	31	31	62		
3.860	9.00											
3.360	9.50				SPT-9	9.00-9.45	23	30	33	63		
2.860	10.00											
2.360	10.50											
1.860	11.00											

Disturbed Sample	Silty Clay of high plasticity	Standard Penetration Test	Clayey Silt of high plasticity	Undisturbed Sample	Silty Clay of medium plasticity	Slipped / Hard to penetrate samples	Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2303391.651 E 293553.980 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 15.718 **Chainage (m) :** 223000 **Date Started :** 03.04.2017
Ground Elevation (m) : 15.718 **Ground Water Table(m):** 5.10 **Date Completed :** 04.04.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.718	0.00	Brown Silty CLAY of medium plasticity, low expansive (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level.	
15.218	0.50											
14.718	1.00	Medium dense, brownish grey Silty SAND (SM-ML)		2.00	SPT-1	1.00-1.45	3	4	14	18		
14.218	1.50				UDS-1	1.50-1.80						
13.718	2.00				SPT-2	2.00-2.45	4	6	9	15		
13.218	2.50											
12.718	3.00	Very stiff, brown Silty CLAY of low plasticity with gravels (CL)		4.00	SPT-3	3.00-3.45	6	7	10	17		Ground water table encountered at 5.10m depth below existing ground level, measured on 05/04/2017.
12.218	3.50											
11.718	4.00				SPT-4	4.00-4.45	8	9	12	21		
11.218	4.50				UDS-2	4.50-4.80						
10.718	5.00				SPT-5	5.00-5.45	14	12	14	26		
10.218	5.50											
9.718	6.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		4.45	SPT-6	6.00-6.45	11	14	17	31		
9.218	6.50											
8.718	7.00				SPT-7	7.00-7.45	12	15	21	36		
8.218	7.50											
7.718	8.00				SPT-8	8.00-8.45	15	17	22	39		
7.218	8.50				SPT-9	9.00-9.45	19	18	25	43		
6.718	9.00											
6.218	9.50				SPT-10	10.00-10.45	20	21	25	46		
5.718	10.00											
5.218	10.50				SPT-11	11.00-11.45	25	30	31	61		
4.718	11.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty SAND
 Undisturbed Sample
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2304376.527 E 293385.345	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.380	Chainage (m) : 224000	Date Started : 03.04.2017
Ground Elevation (m) : 14.380	Ground Water Table(m): 3.10	Date Completed : 04.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
14.380	0.00	Medium stiff, brown Silty CLAY of medium plasticity, medium expansive (CI)		1.50		DS-1	0.00-0.50					Borehole terminated at 12.45m depth below existing ground level.	
13.880	0.50												
13.380	1.00												
12.880	1.50	Stiff to very stiff, brown Clayey SILT of high plasticity, low expansive (MH)		3.00		SPT-1	1.00-1.45	2	3	4	7		
12.380	2.00					UDS-1	1.50-1.80						
11.880	2.50					SPT-2	2.00-2.45	2	4	6	10		
11.380	3.00					SPT-3	3.00-3.45	4	7	11	18		Ground water table encountered at 3.10m depth below existing ground level, measured on 05/04/2017.
10.880	3.50					SPT-4	4.00-4.45	6	9	13	22		
10.380	4.00					UDS-2	4.50-4.80						
9.880	4.50		SPT-5	5.00-5.45	9	12	15	27					
9.380	5.00		SPT-6	6.00-6.45	11	13	17	30					
8.880	5.50	Very stiff to hard to very hard, brown Silty CLAY of high plasticity (CH)		7.95		SPT-7	7.00-7.45	13	16	19	35		
8.380	6.00					SPT-8	8.00-8.45	16	17	21	38		
7.880	6.50					SPT-9	9.00-9.45	18	17	25	42		
7.380	7.00					SPT-10	10.00-10.45	21	24	30	54		
6.880	7.50					SPT-11	11.00-11.45	22	23	33	56		
6.380	8.00					SPT-12	12.00-12.45	23	24	36	60		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of medium plasticity		Clayey Silt of high plasticity		Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2305352.916 E 293169.323 Dia. of The Hole : 150mm
Collar Elevation (m) : 13.013 Chainage (m) : 225000 Date Started : 03.04.2017
Ground Elevation (m) : 13.013 Ground Water Table(m): 3.10 Date Completed : 03.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
13.013	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level.	
12.513	0.50											
12.013	1.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	9	7	9	16		
11.513	1.50				UDS-1	1.50-1.80						
11.013	2.00	Very stiff to hard, brown Silty CLAY of high plasticity, low expansive (CH)		7.50	SPT-2	2.00-2.45	5	9	12	21		
10.513	2.50											
10.013	3.00				SPT-3	3.00-3.45	7	10	18	28		Ground water table encountered at 3.10m depth below existing ground level, measured on 04/04/2017.
9.513	3.50											
9.013	4.00				SPT-4	4.00-4.45	10	12	19	31		
8.513	4.50				UDS-2	4.50-4.80						
8.013	5.00				SPT-5	5.00-5.45	18	16	19	35		
7.513	5.50											
7.013	6.00				SPT-6	6.00-6.45	15	18	20	38		
6.513	6.50											
6.013	7.00	SPT-7	7.00-7.45	16	19	27	46					
5.513	7.50											
5.013	8.00	SPT-8	8.00-8.45	20	22	24	46					
4.513	8.50											
4.013	9.00	Very hard, brown Silty CLAY of medium plasticity with gravels (CI)		1.45	SPT-9	9.00-9.45	22	22	41	63		
3.513	9.50											
3.013	10.00				SPT-10	10.00-10.45	21	29	36	65		

Disturbed Sample Silty Clay of high plasticity Standard Penetration Test Silty Clay of medium plasticity Undisturbed Sample

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2306329.304 E 292953.300	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.857	Chainage (m) : 226000	Date Started : 07.04.2017
Ground Elevation (m) : 16.857	Ground Water Table(m): 2.45	Date Completed : 08.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.857	0.00	Black Clayey SILT of medium plasticity (MI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.	
16.357	0.50											
15.857	1.00	Medium stiff / stiff, blackish grey Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	2	3	5	8		
15.357	1.50				UDS-1	1.50-1.80						
14.857	2.00	Very stiff to hard, blackish grey Clayey SILT of high plasticity, low expansive (MH)		2.50	SPT-2	2.00-2.45	10	10	19	29		Ground water table encountered at 2.45m depth below existing ground level, measured on 09/04/2017.
14.357	2.50											
13.857	3.00				SPT-3	3.00-3.45	16	17	20	37		
13.357	3.50											
12.857	4.00	Very stiff to hard, yellowish brown Silty CLAY of high plasticity (CH)		2.00	SPT-4	4.00-4.45	16	15	14	29		
12.357	4.50				UDS/DS-2	4.50-4.80						
11.857	5.00				SPT-5	5.00-5.45	16	18	16	34		
11.357	5.50											
10.857	6.00	Hard to very hard, yellowish brown Clayey SILT of high plasticity (MH)		4.00	SPT-6	6.00-6.45	17	19	21	40		
10.357	6.50											
9.857	7.00				SPT-7	7.00-7.45	18	20	26	46		
9.357	7.50											
8.857	8.00				SPT-8	8.00-8.45	19	21	25	46		
8.357	8.50											
7.857	9.00	Very hard, yellowish brown Silty CLAY of medium plasticity (CI)		0.45	SPT-9	9.00-9.45	20	21	29	50		
7.357	9.50											
6.857	10.00				SPT-10	10.00-10.45	20	26	36	62		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Sipped / Hard to penetrate samples
Clayey Silt of medium plasticity	Silty Clay of medium plasticity	Clayey Silt of high plasticity	Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2307305.692 E 292737.277	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.845	Chainage (m) : 227000	Date Started : 03.04.2017
Ground Elevation (m) : 18.845	Ground Water Table(m) : Not Met With	Date Completed : 03.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.845	0.00	Medium stiff / stiff, black Silty CLAY of medium plasticity (Cl)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole.	
18.345	0.50											
17.845	1.00											
17.345	1.50	Stiff, blackish grey Silty CLAY of high plasticity, low expansive (CH)		1.50	SPT-1	1.00-1.45	3	4	4	8		
16.845	2.00				UDS-1	1.50-1.80						
16.345	2.50				SPT-2	2.00-2.45	4	5	9	14		
15.845	3.00	Very stiff, yellowish brown Silty CLAY of medium plasticity with gravels (Cl)		4.00								
15.345	3.50				SPT-3	3.00-3.45	6	10	12	22		
14.845	4.00											
14.345	4.50				SPT-4	4.00-4.45	4	8	14	22		
13.845	5.00				UDS/DS-2	4.50-4.80						
13.345	5.50				SPT-5	5.00-5.45	10	11	18	29		
12.845	6.00											
12.345	6.50				SPT-6	6.00-6.45	11	12	19	31		
11.845	7.00											
11.345	7.50				SPT-7	7.00-7.45	9	13	20	33		
10.845	8.00											
10.345	8.50				SPT-8	8.00-8.45	16	14	22	36		
9.845	9.00	Hard, yellowish brown Silty CLAY of medium plasticity (Cl)		4.00								
9.345	9.50											
8.845	10.00				SPT-9	9.00-9.45	20	19	21	40		
8.345	10.50				SPT-10	10.00-10.45	20	22	25	47		
7.845	11.00	Very hard, yellowish brown Silty CLAY of medium plasticity with gravels (Cl)		0.45								
	11.45				SPT-11	11.00-11.45	22	23	32	55		

Disturbed Sample Silty Clay of medium plasticity	Standard Penetration Test Silty Clay of high plasticity	Undisturbed Sample Medium plastic Clay with gravels	Slipped / Hard to penetrate samples
---	--	--	-------------------------------------

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2308282.080 E 292521.253	Dia. of The Hole : 150mm
Collar Elevation (m) : 12.684	Chainage (m) : 228000	Date Started : 03.04.2017
Ground Elevation (m) : 12.684	Ground Water Table(m): Not Met With	Date Completed : 03.04.2017
Total Depth (m) : 16.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
12.684	0.00	Stiff to very stiff, black Silty CLAY of high plasticity (CH)		5.00	DS-1	0.00-0.50					Borehole terminated at 16.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole.
12.184	0.50										
11.684	1.00										
11.184	1.50				SPT-1	1.00-1.45	2	3	5	8	
10.684	2.00				UDS-1	1.50-1.80					
10.184	2.50				SPT-2	2.00-2.45	6	9	10	19	
9.684	3.00										
9.184	3.50				SPT-3	3.00-3.45	5	7	9	16	
8.684	4.00										
8.184	4.50				SPT-4	4.00-4.45	5	8	10	18	
7.684	5.00	UDS/DS-2	4.50-4.80								
7.184	5.50	Very stiff to hard, yellowish brown Silty CLAY of medium plasticity (CI)		4.00	SPT-5	5.00-5.45	7	11	12	23	
6.684	6.00										
6.184	6.50				SPT-6	6.00-6.45	10	13	17	30	
5.684	7.00										
5.184	7.50				SPT-7	7.00-7.45	10	14	19	33	
4.684	8.00										
4.184	8.50				SPT-8	8.00-8.45	13	18	23	41	
3.684	9.00										
3.184	9.50	Dense to very dense, yellowish brown Sandy SILT, non plastic in nature (ML)		7.45	SPT-9	9.00-9.45	12	21	24	45	
2.684	10.00										
2.184	10.50				SPT-10	10.00-10.45	13	19	25	44	
1.684	11.00										
1.184	11.50				SPT-11	11.00-11.45	16	24	25	49	
0.684	12.00										
0.184	12.50				SPT-12	12.00-12.45	18	25	30	55	
-0.316	13.00										
-0.816	13.50	SPT-13	13.00-13.45	21	28	32	60				
-1.316	14.00										
-1.816	14.50	SPT-14	14.00-14.45	24	31	35	66				
-2.316	15.00										
-2.816	15.50	SPT-15	15.00-15.45	27	34	38	72				
-3.316	16.00										
					SPT-16	16.00-16.45	28	35	42	77	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Clay of medium plasticity	Sandy SILT	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2309258.469 E 292305.230 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 19.218 **Chainage (m) :** 229000 **Date Started :** 03.04.2017
Ground Elevation (m) : 19.218 **Ground Water Table(m):** 3.90 **Date Completed :** 03.04.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.218	0.00										
18.718	0.50	Yellowish brown, Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.
18.218	1.00										
17.718	1.50	Medium stiff, black Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	2	3	3	6	
17.218	2.00	Stiff, yellowish brown Clayey SILT of medium plasticity, low expansive (MI)		0.50	UDS-1	1.50-1.80					
16.718	2.50	Medium stiff, black Silty CLAY of medium plasticity (CI)		1.00	SPT-2	2.00-2.45	3	4	5	9	
16.218	3.00										
15.718	3.50				SPT-3	3.00-3.45	6	6	7	13	
15.218	4.00	Medium dense, yellowish brown Sandy SILT, non plastic in nature (ML-SM)		2.00	SPT-4	4.00-4.45	6	8	9	17	
14.718	4.50				UDS/DS-2	4.50-4.80					
14.218	5.00										
13.718	5.50				SPT-5	5.00-5.45	10	9	17	26	
13.218	6.00	Very stiff, yellowish brown Silty CLAY of high plasticity, low expansive (CH)		2.00	SPT-6	6.00-6.45	12	13	17	30	
12.718	6.50										
12.218	7.00				SPT-7	7.00-7.45	14	13	20	33	
11.718	7.50										
11.218	8.00	Hard, yellowish brown Clayey SILT of medium plasticity (MI)		2.00	SPT-8	8.00-8.45	13	12	22	34	
10.718	8.50										
10.218	9.00				SPT-9	9.00-9.45	17	21	25	46	
9.718	9.50										
9.218	10.00	Hard to very hard, yellowish brown Silty CLAY of medium plasticity (CI)		2.45	SPT-10	10.00-10.45	19	23	29	52	
8.718	10.50										
8.218	11.00				SPT-11	11.00-11.45	19	25	32	57	

Ground water table encountered at 3.90m depth below existing ground level, measured on 04/04/2017.

Disturbed Sample Sandy SILT
 Standard Penetration Test Silty Clay of medium plasticity
 Undisturbed Sample Clayey Silt of medium plasticity
 Slipped / Hard to penetrate samples Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2310234.857 E 292089.207	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.923	Chainage (m) : 230000	Date Started : 03.04.2017
Ground Elevation (m) : 17.923	Ground Water Table(m) : Not Met With	Date Completed : 03.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.923	0.00	Medium stiff to very stiff, black Silty CLAY of high plasticity, low to medium expansive (CH)		5.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole.	
17.423	0.50											
16.923	1.00											
16.423	1.50				SPT-1	1.00-1.45	2	3	3	6		
15.923	2.00				UDS-1	1.50-1.80						
15.423	2.50				SPT-2	2.00-2.45	3	4	4	8		
14.923	3.00											
14.423	3.50				SPT-3	3.00-3.45	4	5	7	12		
13.923	4.00											
13.423	4.50				SPT-4	4.00-4.45	6	8	10	18		
12.923	5.00				UDS/DS-2	4.50-4.80						
12.423	5.50	SPT-5	5.00-5.45	7	12	15	27					
11.923	6.00											
11.423	6.50	SPT-6	6.00-6.45	9	16	18	34					
10.923	7.00											
10.423	7.50	SPT-7	7.00-7.45	12	16	19	35					
9.923	8.00	Very stiff to very hard, black Silty CLAY of medium plasticity (CI)		6.45	SPT-8	8.00-8.45	15	18	22	40		
9.423	8.50											
8.923	9.00											
8.423	9.50				SPT-9	9.00-9.45	17	19	29	48		
7.923	10.00											
7.423	10.50				SPT-10	10.00-10.45	19	20	29	49		
6.923	11.00											
					SPT-11	11.00-11.45	21	25	30	55		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2311211.245 E 291873.183	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.821	Chainage (m) : 231000	Date Started : 02.04.2017
Ground Elevation (m) : 18.821	Ground Water Table(m): 2.90	Date Completed : 02.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
18.821	0.00										
18.321	0.50	Brown, Sandy SILT, non plastic in nature with gravels (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.
17.821	1.00										
17.321	1.50	Loose / Medium stiff, blackish brown Clayey GRAVELS of medium plasticity, low expansive (GC)		0.50	SPT-1	1.00-1.45	2	3	3	6	
16.821	2.00					UDS-1	1.50-1.80				
16.321	2.50										
16.321	2.50				SPT-2	2.00-2.45	3	3	4	7	
15.821	3.00										Ground water table encountered at 2.90m depth below existing ground level, measured on 03/04/2017.
15.321	3.50				SPT-3	3.00-3.45	3	4	6	10	
14.821	4.00	Medium stiff to very stiff, blackish brown Silty CLAY of high plasticity, low expansive (CH)		5.50							
14.321	4.50					SPT-4	4.00-4.45	4	5	6	11
13.821	5.00				UDS/DS-2	4.50-4.80					
13.321	5.50				SPT-5	5.00-5.45	5	9	12	21	
12.821	6.00										
12.321	6.50				SPT-6	6.00-6.45	8	10	11	21	
11.821	7.00										
11.321	7.50	Very stiff to hard, blackish brown Silty CLAY of medium plasticity (CI)		4.00							
10.821	8.00					SPT-7	7.00-7.45	11	13	17	30
10.321	8.50										
10.321	8.50				SPT-8	8.00-8.45	14	15	17	32	
9.821	9.00										
9.321	9.50				SPT-9	9.00-9.45	15	20	20	40	
8.821	10.00										
8.321	10.50				SPT-10	10.00-10.45	17	20	24	44	
7.821	11.00										
7.321	11.50	Hard to very hard, blackish brown Silty CLAY of high plasticity, medium expansive (CH)		1.00	SPT-11	11.00-11.45	19	22	28	50	
6.821	12.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45							
	12.45					SPT-12	12.00-12.45	19	25	37	62

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Sipped / Hard to penetrate samples
Gravelly Sandy SILT	Clayey gravels, poorly graded gravel-sand-clay mixtures	Silty Clay of high plasticity	Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2312187.633 E 291657.160	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.696	Chainage (m) : 232000	Date Started : 02.04.2017
Ground Elevation (m) : 18.696	Ground Water Table(m) : Not Met With	Date Completed : 02.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
18.696	0.00	Stiff, black Silty CLAY of high plasticity, low expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole.		
18.196	0.50												
17.696	1.00												
17.196	1.50				SPT-1	1.00-1.45	3	3	6	9			
16.696	2.00				UDS-1	1.50-1.80							
16.196	2.50				SPT-2	2.00-2.45	3	5	7	12			
15.696	3.00												
15.196	3.50				SPT-3	3.00-3.45	2	4	8	12			
14.696	4.00												
14.196	4.50				SPT-4	4.00-4.45	3	6	7	13			
13.696	5.00				Medium dense to dense, yellowish brown Silty SAND (SM-ML)		3.00	UDS/DS-2	4.50-4.80				
13.196	5.50	SPT-5	5.00-5.45	8				16	17	33			
12.696	6.00												
12.196	6.50	SPT-6	6.00-6.45	7				18	18	36			
11.696	7.00												
11.196	7.50	SPT-7	7.00-7.45	10				19	20	39			
10.696	8.00												
10.196	8.50	SPT-8	8.00-8.45	9				25	45	70			
9.696	9.00	Hard, yellowish brown Silty CLAY of medium plasticity (CI)		5.45									
9.196	9.50							SPT-9	9.00-9.45	8	22	26	48
8.696	10.00												
8.196	10.50				SPT-10	10.00-10.45	17	21	22	43			
7.696	11.00												
					SPT-11	11.00-11.45	19	23	25	48			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Sand	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2313164.021 E 291441.137 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 15.094 **Chainage (m) :** 233000 **Date Started :** 01.04.2017
Ground Elevation (m) : 15.094 **Ground Water Table(m):** 4.80 **Date Completed :** 02.04.2017
Total Depth (m) : 13.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.094	0.00	Black, Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.	
14.594	0.50											
14.094	1.00	Medium stiff / Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		1.00	SPT-1	1.00-1.45	2	3	5	8		
13.594	1.50				UDS-1	1.50-1.80						
13.094	2.00	Stiff to very stiff, yellowish brown Clayey SILT of medium plasticity (MI)		6.00	SPT-2	2.00-2.45	3	5	8	13		
12.594	2.50											
12.094	3.00				SPT-3	3.00-3.45	6	8	9	17		
11.594	3.50											
11.094	4.00				SPT-4	4.00-4.45	9	10	12	22		
10.594	4.50				UDS/DS-2	4.50-4.80						
10.094	5.00				SPT-5	5.00-5.45	8	10	13	23		
9.594	5.50	Hard to very hard, yellowish brown Silty CLAY of medium plasticity (CI)		5.00	SPT-6	6.00-6.45	9	11	14	25		
9.094	6.00											
8.594	6.50				SPT-7	7.00-7.45	11	14	15	29		
8.094	7.00											
7.594	7.50				SPT-8	8.00-8.45	16	18	23	41		
7.094	8.00	Very hard, yellowish brown Clayey SILT of medium plasticity (MI)		0.45	SPT-9	9.00-9.45	14	17	21	38		
6.594	8.50											
6.094	9.00				SPT-10	10.00-10.45	14	16	25	41		
5.594	9.50											
5.094	10.00				SPT-11	11.00-11.45	19	21	24	45		
4.594	10.50											
4.094	11.00				SPT-12	12.00-12.45	27	29	39	68		
3.594	11.50											
3.094	12.00											
2.594	12.50											
2.094	13.00											

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity
 Slipped / Hard to penetrate samples

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2314140.410 E 291225.114	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.747	Chainage (m) : 234000	Date Started : 02.04.2017
Ground Elevation (m) : 18.747	Ground Water Table(m) : 2.10	Date Completed : 02.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
18.747	0.00	Medium stiff, black Silty CLAY of medium plasticity, low expansive (CI)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.				
18.247	0.50														
17.747	1.00														
17.247	1.50				SPT-1	1.00-1.45	2	3	3	6					
16.747	2.00				UDS-1	1.50-1.80									
16.247	2.50	Stiff, yellowish brown Clayey SILT of high plasticity (MH)		3.00	SPT-2	2.00-2.45	3	4	4	8		Ground water table encountered at 2.10m depth below existing ground level, measured on 03/04/2017.			
15.747	3.00														
15.247	3.50							SPT-3	3.00-3.45	3			5	6	11
14.747	4.00														
14.247	4.50							SPT-4	4.00-4.45	4			6	8	14
13.747	5.00				UDS/DS-2	4.50-4.80									
13.247	5.50	Very stiff to hard, yellowish brown Silty CLAY of medium plasticity (CI)		4.00	SPT-5	5.00-5.45	6	8	9	17					
12.747	6.00														
12.247	6.50							SPT-6	6.00-6.45	10	12		16	28	
11.747	7.00														
11.247	7.50							SPT-7	7.00-7.45	10	14		16	30	
10.747	8.00														
10.247	8.50				SPT-8	8.00-8.45	13	16	20	36					
9.747	9.00	Hard, yellowish brown Silty CLAY of high plasticity, low expansive (CH)		3.00	SPT-9	9.00-9.45	15	12	22	34					
9.247	9.50														
8.747	10.00							SPT-10	10.00-10.45	16	19	25	44		
8.247	10.50														
7.747	11.00							SPT-11	11.00-11.45	18	22	27	49		
7.247	11.50														
6.747	12.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-12	12.00-12.45	20	21	36	57					

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Clayey Silt of high plasticity	Silty Clay of high plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2315116.798 E 291009.090 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 18.349 **Chainage (m) :** 235000 **Date Started :** 01.04.2017
Ground Elevation (m) : 18.349 **Ground Water Table(m):** 2.10 **Date Completed :** 02.04.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
18.349	0.00	Medium stiff, black Silty CLAY of medium plasticity (Cl)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.			
17.849	0.50													
17.349	1.00													
16.849	1.50				SPT-1	1.00-1.45	2	2	4	6				
16.349	2.00	Stiff to very hard, black Silty CLAY of high plasticity, low expansive (CH)		9.95	UDS-1	1.50-1.80					Ground water table encountered at 2.10m depth below existing ground level, measured on 03/04/2017.			
15.849	2.50													
15.349	3.00							SPT-2	2.00-2.45	2		3	7	10
14.849	3.50													
14.349	4.00													
13.849	4.50							SPT-3	3.00-3.45	4		6	8	14
13.349	5.00													
12.849	5.50							UDS/DS-2	4.50-4.80					
12.349	6.00							SPT-4	4.00-4.45	5		7	11	18
11.849	6.50													
11.349	7.00							SPT-5	5.00-5.45	7		9	13	22
10.849	7.50													
10.349	8.00				SPT-6	6.00-6.45	9	16	15	31				
9.849	8.50													
9.349	9.00				SPT-7	7.00-7.45	11	14	20	34				
8.849	9.50													
8.349	10.00				SPT-8	8.00-8.45	12	17	21	38				
7.849	10.50													
7.349	11.00				SPT-9	9.00-9.45	17	22	25	47				
					SPT-10	10.00-10.45	16	23	29	52				
					SPT-11	11.00-11.45	19	25	31	56				

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2316085.974 E 290764.656	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.039	Chainage (m) : 236000	Date Started : 01.04.2017
Ground Elevation (m) : 20.039	Ground Water Table(m) : 4.30	Date Completed : 01.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
20.039	0.00	Medium stiff to hard, grey to yellowish brown Silty CLAY of medium plasticity, low expansive (CI)		12.45	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.
19.539	0.50										
19.039	1.00										
18.539	1.50				SPT-1	1.00-1.45	2	3	4	7	
18.039	2.00				UDS-1	1.50-1.80					
17.539	2.50				SPT-2	2.00-2.45	3	3	5	8	
17.039	3.00										
16.539	3.50				SPT-3	3.00-3.45	6	7	8	15	
16.039	4.00										
15.539	4.50				SPT-4	4.00-4.45	6	8	11	19	
15.039	5.00				UDS/DS-2	4.50-4.80					
14.539	5.50				SPT-5	5.00-5.45	8	11	19	30	
14.039	6.00										
13.539	6.50	SPT-6	6.00-6.45	9	12	16	28				
13.039	7.00										
12.539	7.50	SPT-7	7.00-7.45	12	14	18	32				
12.039	8.00										
11.539	8.50	SPT-8	8.00-8.45	13	14	22	36				
11.039	9.00										
10.539	9.50	SPT-9	9.00-9.45	19	21	19	40				
10.039	10.00										
9.539	10.50	SPT-10	10.00-10.45	22	25	20	45				
9.039	11.00										
8.539	11.50	SPT-11	11.00-11.45	24	24	28	52				
8.039	12.00										
		SPT-12	12.00-12.45	23	25	29	54				

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2317013.010 E 290391.101	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.664	Chainage (m) : 237000	Date Started : 01.04.2017
Ground Elevation (m) : 17.664	Ground Water Table(m): 2.90	Date Completed : 01.04.2017
Total Depth (m) : 14.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
17.664	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 14.45m depth below EGL.
17.164	0.50										
16.664	1.00	Medium stiff, yellowish brown Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	2	3	3	6	
16.164	1.50										
15.664	2.00	Stiff, yellowish brown Silty CLAY of high plasticity, low expansive (CH)		0.50	UDS-1	1.50-1.80					
15.164	2.50										
14.664	3.00	Stiff, yellowish brown Silty CLAY of low plasticity (CL)		2.00	SPT-2	2.00-2.45	3	4	5	9	
14.164	3.50										
13.664	4.00										
13.164	4.50	Very stiff to hard, yellowish brown Silty CLAY of medium plasticity with gravels (CI)		3.00	SPT-4	4.00-4.45	5	8	11	19	
12.664	5.00										
12.164	5.50										
11.664	6.00										
11.164	6.50										
10.664	7.00	Dense, yellowish brown Sandy SILT, non plastic in nature (ML / ML-SM)		2.00	SPT-5	5.00-5.45	8	13	15	28	
10.164	7.50										
9.664	8.00										
9.164	8.50	Very dense, yellowish brown Silty SAND (SM-ML)		5.45	SPT-6	6.00-6.45	11	17	19	36	
8.664	9.00										
8.164	9.50										
7.664	10.00										
7.164	10.50										
6.664	11.00										
6.164	11.50										
5.664	12.00										
5.164	12.50										
4.664	13.00										
4.164	13.50										
3.664	14.00										

Ground water table encountered at 2.90m depth below existing ground level, measured on 02/04/2017.

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples	Sandy SILT	Silty SAND
Silty Clay of high plasticity	Silty Clay of medium plasticity	Silty Clay of low plasticity	Medium plastic Clay with gravels		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2317927.956 E 289987.525	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.071	Chainage (m) : 238000	Date Started : 01.04.2017
Ground Elevation (m) : 17.071	Ground Water Table(m): 3.80	Date Completed : 01.04.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.071	0.00	Grey Silty SAND with gravels (SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.	
16.571	0.50											
16.071	1.00	Medium stiff, black Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	2	3	4	7		
15.571	1.50											
15.071	2.00	Stiff to very stiff, yellowish brown Silty CLAY of medium plasticity, low expansive (CI)		3.50	UDS-1	1.50-1.80						
14.571	2.50				SPT-2	2.00-2.45	2	3	6	9		
14.071	3.00											
13.571	3.50				SPT-3	3.00-3.45	3	5	8	13		
13.071	4.00											
12.571	4.50				SPT-4	4.00-4.45	6	9	12	21		
12.071	5.00				UDS/DS-2	4.50-4.80						
11.571	5.50				SPT-5	5.00-5.45	8	9	14	23		
11.071	6.00											
10.571	6.50				SPT-6	6.00-6.45	9	11	15	26		
10.071	7.00											
9.571	7.50	SPT-7	7.00-7.45	11	13	16	29					
9.071	8.00	UDS/DS-3	7.50-7.80									
8.571	8.50	Very stiff to very hard, blackish brown Silty CLAY of high plasticity, low expansive (CH)		7.00	SPT-8	8.00-8.45	11	15	20	35		
8.071	9.00											
7.571	9.50				SPT-9	9.00-9.45	16	25	30	55		
7.071	10.00											
6.571	10.50				SPT-10	10.00-10.45	20	24	32	56		
6.071	11.00											
5.571	11.50	SPT-11	11.00-11.45	23	27	35	62					
5.071	12.00											
4.571	12.50	Very hard, blackish brown Silty CLAY of medium plasticity (CI)		1.45	SPT-12	12.00-12.45	25	28	39	67		
4.071	13.00				SPT-13	13.00-13.45	27	30	41	71		

Ground water table encountered at 3.80m depth below existing ground level, measured on 02/04/2017.

Disturbed Sample
 Silty Sand with gravels
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity
 Slipped / Hard to penetrate samples

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2318842.902 E 289583.950	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.202	Chainage (m) : 239000	Date Started : 31.03.2017
Ground Elevation (m) : 17.202	Ground Water Table(m): 3.10	Date Completed : 31.03.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
17.202	0.00	Stiff, grey Clayey SILT of medium plasticity, low expansive (MI)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.				
16.702	0.50														
16.202	1.00														
15.702	1.50				SPT-1	1.00-1.45	4	6	8	14					
15.202	2.00				UDS-1	1.50-1.80									
14.702	2.50				SPT-2	2.00-2.45	5	7	8	15					
14.202	3.00	Stiff to very stiff, grey Silty CLAY of low plasticity (CL)		3.00								Ground water table encountered at 3.10m depth below existing ground level, measured on 01/04/2017.			
13.702	3.50							SPT-3	3.00-3.45	7			9	12	21
13.202	4.00														
12.702	4.50							SPT-4	4.00-4.45	6			11	14	25
12.202	5.00				UDS/DS-2	4.50-4.80									
11.702	5.50				SPT-5	5.00-5.45	9	12	16	28					
11.202	6.00	Very stiff to hard, blackish grey Clayey SILT of medium plasticity (MI)		3.00											
10.702	6.50							SPT-6	6.00-6.45	10	12		18	30	
10.202	7.00														
9.702	7.50							SPT-7	7.00-7.45	10	14		21	35	
9.202	8.00	Hard, blackish grey Silty CLAY of low plasticity (CL)		1.00											
8.702	8.50							SPT-8	8.00-8.45	11	14		21	35	
8.202	9.00	Hard, blackish grey Silty CLAY of high plasticity, low expansive (CH)		1.00											
7.702	9.50							SPT-9	9.00-9.45	12	16	19	35		
7.202	10.00	Very dense, blackish grey Fine to Medium SAND (SP-SM)		1.00											
6.702	10.50							SPT-10	10.00-10.45	23	31	39	70		
6.202	11.00	Very hard, blackish grey Clayey SILT of medium plasticity (MI)		1.45											
5.702	11.50							SPT-11	11.00-11.45	18	24	36	60		
5.202	12.00							SPT-12	12.00-12.45	22	29	40	69		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Clayey silt of medium plasticity	Silty clay of low plasticity	Silty clay of high plasticity	Fine, medium, coarse sand

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2320672.795 E 288776.798 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 15.826 **Chainage (m) :** 241000 **Date Started :** 31.03.2017
Ground Elevation (m) : 15.826 **Ground Water Table(m):** 3.20 **Date Completed :** 31.03.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.826	0.00	Grey Silty SAND (SM-ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.	
15.326	0.50											
14.826	1.00											
14.326	1.50	Medium stiff / Stiff, black Silty CLAY of medium plasticity (Cl)		0.50	SPT-1	1.00-1.45	2	3	5	8		
13.826	2.00	Stiff, black Clayey SILT of medium plasticity, low expansive (MI)		0.50	UDS-1	1.50-1.80						
13.326	2.50	Very stiff, blackish grey Silty CLAY of high plasticity (CH)		4.00	SPT-2	2.00-2.45	8	6	12	18		
12.826	3.00											
12.326	3.50				SPT-3	3.00-3.45	9	7	12	19		
11.826	4.00				SPT-4	4.00-4.45	11	13	12	25		
11.326	4.50				UDS/DS-2	4.50-4.80						
10.826	5.00	Very stiff to very hard, blackish grey Silty CLAY of medium plasticity, low expansive (CI)		4.45	SPT-5	5.00-5.45	13	14	16	30		
10.326	5.50											
9.826	6.00				SPT-6	6.00-6.45	15	20	19	39		
9.326	6.50											
8.826	7.00				SPT-7	7.00-7.45	16	12	19	31		
8.326	7.50	Very stiff to very hard, blackish grey Silty CLAY of medium plasticity, low expansive (CI)		4.45	SPT-8	8.00-8.45	18	19	21	40		
7.826	8.00											
7.326	8.50				SPT-9	9.00-9.45	20	25	26	51		
6.826	9.00	Very stiff to very hard, blackish grey Silty CLAY of medium plasticity, low expansive (CI)		4.45								
6.326	9.50				SPT-10	10.00-10.45	22	29	31	60		
5.826	10.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Sand Silty Clay of medium plasticity Clayey Silt of medium plasticity Silty Clay of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2321587.741 E 288373.223	Dia. of The Hole : 150mm
Collar Elevation (m) : 13.193	Chainage (m) : 242000	Date Started : 31.03.2017
Ground Elevation (m) : 13.193	Ground Water Table(m) : 2.50	Date Completed : 31.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
13.193	0.00	Stiff to hard, black Silty CLAY of high plasticity, medium expansive (CH)		10.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.
12.693	0.50										
12.193	1.00										
11.693	1.50				SPT-1	1.00-1.45	3	5	7	12	
11.193	2.00				UDS-1	1.50-1.80					
10.693	2.50				SPT-2	2.00-2.45	3	6	6	12	
10.193	3.00										
9.693	3.50				SPT-3	3.00-3.45	3	6	8	14	
9.193	4.00										
8.693	4.50				SPT-4	4.00-4.45	4	6	9	15	
8.193	5.00				UDS/DS-2	4.50-4.80					
7.693	5.50	SPT-5	5.00-5.45	5	8	10	18				
7.193	6.00										
6.693	6.50	SPT-6	6.00-6.45	7	8	23	31				
6.193	7.00										
5.693	7.50	SPT-7	7.00-7.45	12	15	19	34				
5.193	8.00										
4.693	8.50	SPT-8	8.00-8.45	19	19	20	39				
4.193	9.00										
3.693	9.50	SPT-9	9.00-9.45	15	19	23	42				
3.193	10.00										
2.693	10.50	Hard to very hard, blackish grey Silty CLAY of medium plasticity (CI)		1.45	SPT-10	10.00-10.45	17	21	25	46	Ground water table encountered at 2.5m depth below existing ground level, measured on 01/04/2017.
2.193	11.00				SPT-11	11.00-11.45	19	23	29	52	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2322502.687 E 287969.647	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.027	Chainage (m) : 243000	Date Started : 31.03.2017
Ground Elevation (m) : 15.027	Ground Water Table(m) : 2.85	Date Completed : 31.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
15.027	0.00	Medium stiff to stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.		
14.527	0.50												
14.027	1.00												
13.527	1.50												
13.027	2.00				UDS-1	1.50-1.80							
12.527	2.50				SPT-2	2.00-2.45	3	4	4	8			
12.027	3.00												
11.527	3.50				SPT-3	3.00-3.45	4	5	7	12		Ground water table encountered at 2.85m depth below existing ground level, measured on 01/04/2017.	
11.027	4.00												
10.527	4.50	Stiff to very stiff, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-4	4.00-4.45	5	6	9	15			
10.027	5.00				UDS/DS-2	4.50-4.80							
9.527	5.50				SPT-5	5.00-5.45	10	12	15	27			
9.027	6.00												
8.527	6.50				SPT-6	6.00-6.45	12	16	15	31			
8.027	7.00												
7.527	7.50	Hard to very hard, brown Silty CLAY of high plasticity (CH)		4.45	SPT-7	7.00-7.45	14	18	20	38			
7.027	8.00												
6.527	8.50							SPT-8	8.00-8.45	16	21	24	45
6.027	9.00												
5.527	9.50							SPT-9	9.00-9.45	16	23	27	50
5.027	10.00												
4.527	10.50				SPT-10	10.00-10.45	18	20	30	50			
4.027	11.00												
					SPT-11	11.00-11.45	21	26	34	60			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2323417.634 E 287566.072 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 14.567 **Chainage (m) :** 244000 **Date Started :** 30.03.2017
Ground Elevation (m) : 14.567 **Ground Water Table(m):** 4.30 **Date Completed :** 30.03.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
14.567	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.		
14.067	0.50												
13.567	1.00	Medium stiff to stiff, black Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-1	1.00-1.45	2	2	3	5			
13.067	1.50				UDS-1	1.50-1.80							
12.567	2.00				SPT-2	2.00-2.45	3	3	5	8			
12.067	2.50												
11.567	3.00				SPT-3	3.00-3.45	4	5	7	12			
10.567	4.00	Very stiff to hard, brown Silty CLAY of high plasticity (CH)		5.00	SPT-4	4.00-4.45	8	10	14	24		Ground water table encountered at 4.30m depth below existing ground level, measured on 31/03/2017.	
10.067	4.50				UDS-2	4.50-4.80							
9.567	5.00				SPT-5	5.00-5.45	9	12	16	28			
9.067	5.50												
8.567	6.00				SPT-6	6.00-6.45	12	13	17	30			
8.067	6.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-7	7.00-7.45	14	18	19	37			
7.567	7.00												
7.067	7.50				SPT-8	8.00-8.45	15	19	22	41			
6.567	8.00												
6.067	8.50				SPT-9	9.00-9.45	17	21	26	47			
5.567	9.00	Very hard, brown Silty CLAY of high plasticity (CH)		0.45	SPT-10	10.00-10.45	20	24	28	52			
5.067	9.50												
4.567	10.00												
4.067	10.50												
3.567	11.00												
	11.45				SPT-11	11.00-11.45	22	28	32	60			

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2324332.580 E 287162.496 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 16.568 **Chainage (m) :** 245000 **Date Started :** 30.03.2017
Ground Elevation (m) : 16.568 **Ground Water Table(m):** 4.10 **Date Completed :** 30.03.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
16.568	0.00	Black Silty CLAY of high plasticity (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.			
16.068	0.50													
15.568	1.00													
15.068	1.50	Medium stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		6.00	SPT-1	1.00-1.45	1	2	3	5				
14.568	2.00				UDS-1	1.50-1.80								
14.068	2.50				SPT-2	2.00-2.45	3	5	8	13				
13.568	3.00													
13.068	3.50				SPT-3	3.00-3.45	5	7	9	16				
12.568	4.00													
12.068	4.50				SPT-4	4.00-4.45	7	10	12	22			Ground water table encountered at 4.10m depth below existing ground level, measured on 31/03/2017.	
11.568	5.00				UDS-2	4.50-4.80								
11.068	5.50				SPT-5	5.00-5.45	8	10	13	23				
10.568	6.00													
10.068	6.50	SPT-6	6.00-6.45	10	12	16	28							
9.568	7.00													
9.068	7.50	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		4.00	SPT-7	7.00-7.45	11	16	14	30				
8.568	8.00													
8.068	8.50				SPT-8	8.00-8.45	16	15	17	32				
7.568	9.00													
7.068	9.50				SPT-9	9.00-9.45	18	22	22	44				
6.568	10.00													
6.068	10.50													
5.568	11.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		1.45	SPT-10	10.00-10.45	20	21	22	43				
5.068	11.50				SPT-11	11.00-11.45	22	25	20	45				
4.568	12.00				SPT-12	12.00-12.45	25	26	30	56				

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2327077.419 E 285951.769	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.596	Chainage (m) : 248000	Date Started : 29.03.2017
Ground Elevation (m) : 15.596	Ground Water Table(m) : 2.10	Date Completed : 29.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
15.596	0.00	Medium stiff / stiff, black Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.				
15.096	0.50														
14.596	1.00														
14.096	1.50				SPT-1	1.00-1.45	2	3	5	8					
13.596	2.00	Stiff to very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		9.95	UDS-1	1.50-1.80						Ground water table encountered at 2.10m depth below existing ground level, measured on 30/03/2017.			
13.096	2.50							SPT-2	2.00-2.45	3			5	6	11
12.596	3.00														
12.096	3.50							SPT-3	3.00-3.45	6			8	10	18
11.596	4.00														
11.096	4.50							SPT-4	4.00-4.45	8			12	14	26
10.596	5.00							UDS-2	4.50-4.80						
10.096	5.50							SPT-5	5.00-5.45	9	13		15	28	
9.596	6.00														
9.096	6.50							SPT-6	6.00-6.45	12	14		19	33	
8.596	7.00														
8.096	7.50				SPT-7	7.00-7.45	13	16	21	37					
7.596	8.00														
7.096	8.50				SPT-8	8.00-8.45	15	18	22	40					
6.596	9.00														
6.096	9.50				SPT-9	9.00-9.45	19	22	26	48					
5.596	10.00														
5.096	10.50				SPT-10	10.00-10.45	19	21	30	51					
4.596	11.00														
					SPT-11	11.00-11.45	21	26	30	56					

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2327992.365 E 285548.194	Dia. of The Hole : 150mm
Collar Elevation (m) : 13.316	Chainage (m) : 249000	Date Started : 29.03.2017
Ground Elevation (m) : 13.316	Ground Water Table(m): 2.10	Date Completed : 30.03.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
13.316	0.00										
12.816	0.50	Black Sandy SILT (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.
12.316	1.00										
11.816	1.50	Stiff, black Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	2	5	6	11	Ground water table encountered at 2.10m depth below existing ground level, measured on 31/03/2017.
11.316	2.00				UDS-1	1.50-1.80					
10.816	2.50				SPT-2	2.00-2.45	4	7	7	14	
10.316	3.00										
9.816	3.50				SPT-3	3.00-3.45	6	8	9	17	
9.316	4.00										
8.816	4.50	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		6.50	SPT-4	4.00-4.45	8	10	9	19	
8.316	5.00				UDS-2	4.50-4.80					
7.816	5.50				SPT-5	5.00-5.45	10	13	11	24	
7.316	6.00										
6.816	6.50				SPT-6	6.00-6.45	11	13	12	25	
6.316	7.00										
5.816	7.50				SPT-7	7.00-7.45	13	10	16	26	
5.316	8.00										
4.816	8.50				SPT-8	8.00-8.45	14	11	19	30	
4.316	9.00										
3.816	9.50				SPT-9	9.00-9.45	16	14	17	31	
3.316	10.00										
2.816	10.50	Very stiff to hard, brown Clayey SILT of medium plasticity (MI)		5.00	SPT-10	10.00-10.45	17	13	20	33	
2.316	11.00										
1.816	11.50				SPT-11	11.00-11.45	20	19	21	40	
1.316	12.00										
0.816	12.50				SPT-12	12.00-12.45	25	20	30	50	
0.316	13.00										
	13.45	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-13	13.00-13.45	25	26	27	53	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Sandy SILT		Clayey Silt of medium plasticity		Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2328907.312 E 285144.618	Dia. of The Hole : 150mm
Collar Elevation (m) : 6.902	Chainage (m) : 250000	Date Started : 29.03.2017
Ground Elevation (m) : 6.902	Ground Water Table(m): 2.50	Date Completed : 30.03.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
6.902	0.00	Black Sandy SILT (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.		
6.402	0.50												
5.902	1.00	Medium stiff, black Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	2	3	4	7			
5.402	1.50												
4.902	2.00	Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		1.50	UDS-1	1.50-1.80							
4.402	2.50				SPT-2	2.00-2.45	2	4	7	11			
3.902	3.00												
3.402	3.50	Medium dense, brown Sandy SILT (ML-SM)		3.00	SPT-3	3.00-3.45	5	8	10	18		Ground water table encountered at 2.50m depth below existing ground level, measured on 31/03/2017.	
2.902	4.00												
2.402	4.50				SPT-4	4.00-4.45	7	9	11	20			
1.902	5.00												
1.402	5.50				SPT-5	5.00-5.45	8	10	13	23			
0.902	6.00	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		3.00	SPT-6	6.00-6.45	10	13	17	30			
0.402	6.50												
-0.098	7.00				SPT-7	7.00-7.45	16	18	22	40			
-0.598	7.50												
-1.098	8.00				SPT-8	8.00-8.45	17	18	24	42			
-1.598	8.50												
-2.098	9.00	Hard to very hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-9	9.00-9.45	15	20	23	43			
-2.598	9.50												
-3.098	10.00				SPT-10	10.00-10.45	20	26	31	57			
-3.598	10.50												
-4.098	11.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-11	11.00-11.45	23	29	36	65			
-4.598	11.50												
-5.098	12.00				SPT-12	12.00-12.45	27	41	46	87			

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2329829.331 E 284758.165 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.973 Chainage (m) : 251000 Date Started : 29.03.2017
Ground Elevation (m) : 12.973 Ground Water Table(m): 2.15 Date Completed : 29.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
12.973	0.00	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.		
12.473	0.50												
11.973	1.00												
11.473	1.50												
10.973	2.00												
10.473	2.50												Ground water table encountered at 2.15m depth below existing ground level, measured on 30/03/2017
9.973	3.00												
9.473	3.50												
8.973	4.00												
8.473	4.50												
7.973	5.00												
7.473	5.50												
6.973	6.00	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		10.45	SPT-1	1.00-1.45	2	3	6	9			
6.473	6.50												
5.973	7.00												
5.473	7.50												
4.973	8.00												
4.473	8.50												
3.973	9.00												
3.473	9.50												
2.973	10.00												
2.473	10.50												
1.973	11.00												

Disturbed Sample
 Silty Clay of low plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2330795.423 E 284504.487	Dia. of The Hole : 150mm
Collar Elevation (m) : 13.062	Chainage (m) : 252000	Date Started : 29.03.2017
Ground Elevation (m) : 13.062	Ground Water Table(m): 3.18	Date Completed : 29.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
13.062	0.00	Medium stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
12.562	0.50										
12.062	1.00										
11.562	1.50				SPT-1	1.00-1.45	2	3	3	6	
11.062	2.00				UDS-1	1.50-1.80					
10.562	2.50				SPT-2	2.00-2.45	3	4	6	10	
10.062	3.00										
9.562	3.50				SPT-3	3.00-3.45	5	7	9	16	
9.062	4.00										
8.562	4.50				Very stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-4	4.00-4.45	6	
8.062	5.00	UDS-2	4.50-4.80								
7.562	5.50	SPT-5	5.00-5.45	9				11	19	30	
7.062	6.00										
6.562	6.50	Hard, brown Clayey SILT of medium plasticity (MI)		2.00	SPT-6	6.00-6.45	10	13	21	34	
6.062	7.00										
5.562	7.50				SPT-7	7.00-7.45	12	18	22	40	
5.062	8.00										
4.562	8.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-8	8.00-8.45	14	16	28	44	
4.062	9.00										
3.562	9.50				SPT-9	9.00-9.45	20	21	25	46	
3.062	10.00				SPT-10	10.00-10.45	25	28	28	56	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2331790.213 E 284414.595 Dia. of The Hole : 150mm
Collar Elevation (m) : 11.822 Chainage (m) : 253000 Date Started : 28.03.2017
Ground Elevation (m) : 11.822 Ground Water Table(m): 3.50 Date Completed : 29.03.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
11.822	0.00	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.
11.322	0.50										
10.822	1.00				SPT-1	1.00-1.45	3	5	8	13	
10.322	1.50				UDS-1	1.50-1.80					
9.822	2.00				SPT-2	2.00-2.45	4	7	10	17	Ground water table encountered at 3.50m depth below existing ground level, measured on 30/03/2017
9.322	2.50										
8.822	3.00				SPT-3	3.00-3.45	7	9	14	23	
8.322	3.50										
7.822	4.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		5.00	SPT-5	4.00-4.45	5	7	12	19	
7.322	4.50				UDS-2	4.50-4.80					
6.822	5.00				SPT-5	5.00-5.45	5	9	11	20	
6.322	5.50										
5.822	6.00				SPT-6	6.00-6.45	6	9	14	23	
5.322	6.50										
4.822	7.00				SPT-7	7.00-7.45	7	11	19	30	
4.322	7.50										
3.822	8.00				SPT-8	8.00-8.45	8	13	17	30	
3.322	8.50										
2.822	9.00										
2.322	9.50				SPT-9	9.00-9.45	11	16	20	36	
1.822	10.00	Dense to very dense, brown Sandy SILT, non pastic in nature (ML)		3.45	SPT-10	10.00-10.45	13	18	24	42	
1.322	10.50										
0.822	11.00				SPT-11	11.00-11.44	18	34	75/14	>100	
0.322	11.50										
-0.178	12.00				SPT-12	12.00-12.42	22	39	75/12	>100	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2332788.252 E 284470.764 Dia. of The Hole : 150mm
Collar Elevation (m) : 13.719 Chainage (m) : 254000 Date Started : 28.03.2017
Ground Elevation (m) : 13.719 Ground Water Table(m): 3.00 Date Completed : 29.03.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
13.719	0.00	Stiff to very stiff, black Silty CLAY of high plasticity, low expansive (CH)		7.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.				
13.219	0.50														
12.719	1.00														
12.219	1.50							SPT-1	1.00-1.45	2		4	5	9	
11.719	2.00							UDS-1	1.50-1.80						
11.219	2.50							SPT-2	2.00-2.45	5		7	10	17	
10.719	3.00														
10.219	3.50							SPT-3	3.00-3.45	8		11	13	24	
9.719	4.00													Ground water table encountered at 3.00m depth below existing ground level, measured on 30/03/2017	
9.219	4.50							SPT-4	4.00-4.45	9		11	16		27
8.719	5.00							UDS-2	4.50-4.80						
8.219	5.50							SPT-5	5.00-5.45	9		13	14		27
7.719	6.00														
7.219	6.50				SPT-6	6.00-6.45	10	12	13	25					
6.719	7.00														
6.219	7.50	Hard, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-7	7.00-7.45	12	14	19	33					
5.719	8.00														
5.219	8.50				SPT-8	8.00-8.45	11	14	18	32					
4.719	9.00														
4.219	9.50	Dense, Brownish grey Sandy SILT, non plastic in nature (ML-SM)		3.00	SPT-9	9.00-9.45	14	17	21	38					
3.719	10.00														
3.219	10.50							SPT-10	10.00-10.45	15	17	24	41		
2.719	11.00														
2.219	11.50				SPT-11	11.00-11.45	17	21	28	49					
1.719	12.00														
		Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-12	12.00-12.45	27	43	43	86					

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2333784.998 E 284551.366	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.855	Chainage (m) : 255000	Date Started : 27.03.2017
Ground Elevation (m) : 15.855	Ground Water Table(m): 3.00	Date Completed : 28.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.855	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.
15.355	0.50										
14.855	1.00	Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		3.00	SPT-1	1.00-1.45	3	4	6	10	Ground water table encountered at 3.00m depth below existing ground level, measured on 29/03/2017
14.355	1.50				UDS-1	1.50-1.80					
13.855	2.00				SPT-2	2.00-2.45	4	7	8	15	
13.355	2.50				SPT-3	3.00-3.45	5	6	9	15	
12.855	3.00	Hard, black Silty CLAY of low plasticity (CL)		3.00	SPT-4	4.00-4.45	7	13	20	33	
12.355	3.50				UDS-2	4.50-4.80					
11.855	4.00				SPT-5	5.00-5.45	9	19	21	40	
11.355	4.50				SPT-6	6.00-6.45	12	14	20	34	
10.855	5.00				SPT-7	7.00-7.45	7	13	17	30	
10.355	5.50				SPT-8	8.00-8.45	8	15	19	34	
9.855	6.00	Very stiff to hard, black Silty CLAY of high plasticity (CH)		2.00	SPT-9	9.00-9.45	9	25	30	55	
9.355	6.50										
8.855	7.00	Very hard, black Silty CLAY of low plasticity (CL)		0.45							
8.355	7.50										
7.855	8.00										
7.355	8.50										
6.855	9.00										

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2335778.491 E 284712.570 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.623 Chainage (m) : 257000 Date Started : 27.03.2017
Ground Elevation (m) : 15.623 Ground Water Table(m): 3.45 Date Completed : 29.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
15.623	0.00	Stiff, black Silty CLAY of high plasticity, low to medium medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.		
15.123	0.50												
14.623	1.00												
14.123	1.50												
13.623	2.00												
13.123	2.50												
12.623	3.00												
12.123	3.50												
11.623	4.00												Ground water table encountered at 3.45m depth below existing ground level, measured on 30/03/2017
11.123	4.50												
10.623	5.00												
10.123	5.50												
9.623	6.00												
9.123	6.50												
8.623	7.00												
8.123	7.50	Very stiff to very hard, brown Silty CLAY of medium plasticity (CI)		7.45	SPT-4	4.00-4.45	9	10	12	22			
7.623	8.00												
7.123	8.50												
6.623	9.00												
6.123	9.50												
5.623	10.00												
5.123	10.50												
4.623	11.00												

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2336775.237 E 284793.171 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 16.326 **Chainage (m) :** 258000 **Date Started :** 27.03.2017
Ground Elevation (m) : 16.326 **Ground Water Table(m):** 3.10 **Date Completed :** 27.03.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
16.326	0.00	Stiff to very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		4.50	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.				
15.826	0.50														
15.326	1.00														
14.826	1.50														
14.326	2.00														
13.826	2.50														
13.326	3.00														
12.826	3.50														
12.326	4.00														
11.826	4.50														
11.326	5.00				Very stiff to hard, brown Clayey SILT of medium plasticity (MI)		5.50	UDS-1	1.50-1.80						Ground water table encountered at 3.10m depth below existing ground level, measured on 28/03/2017
10.826	5.50														
10.326	6.00														
9.826	6.50														
9.326	7.00														
8.826	7.50														
8.326	8.00														
7.826	8.50														
7.326	9.00														
6.826	9.50														
6.326	10.00	Hard to very hard, brown Clayey SILT of high plasticity (MH)		2.45				SPT-1	1.00-1.45	2	3	5	8		
5.826	10.50														
5.326	11.00														
4.826	11.50														
4.326	12.00														

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Clayey Silt of high plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2337771.984 E 284873.773 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.954 Chainage (m) : 259000 Date Started : 26.03.2017
Ground Elevation (m) : 15.954 Ground Water Table(m): 2.45 Date Completed : 27.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
15.954	0.00	Stiff, black Silty CLAY of high plasticity, low to medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.			
15.454	0.50													
14.954	1.00													
14.454	1.50				SPT-1	1.00-1.45	2	3	5	8				
13.954	2.00				UDS-1	1.50-1.80								
13.454	2.50				SPT-2	2.00-2.45	4	6	7	13				
12.954	3.00													
12.454	3.50				SPT-3	3.00-3.45	6	2	9	11				
11.954	4.00				Stiff to very stiff, black Silty CLAY of medium plasticity (CI)		2.00							Ground water table encountered at 2.45m depth below existing ground level, measured on 28/03/2017
11.454	4.50							SPT-4	4.00-4.45	8		11	13	
10.954	5.00													
10.454	5.50	Very stiff, brown Clayey SILT of medium plasticity (MI)		1.00	SPT-5	5.00-5.45	12	13	18	31				
9.954	6.00													
9.454	6.50	Hard, brown Silty CLAY of high plasticity (CH)		4.45	SPT-6	6.00-6.45	14	17	23	40				
8.954	7.00													
8.454	7.50				SPT-7	7.00-7.45	13	19	24	43				
7.954	8.00													
7.454	8.50				SPT-8	8.00-8.45	15	20	26	46				
6.954	9.00													
6.454	9.50				SPT-9	9.00-9.45	17	19	28	47				
5.954	10.00													
								SPT-10	10.00-10.45	19	22	30	52	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2338768.730 E 284954.375	Dia. of The Hole : 150mm
Collar Elevation (m) : 13.879	Chainage (m) : 260000	Date Started : 26.03.2017
Ground Elevation (m) : 13.879	Ground Water Table(m): 3.00	Date Completed : 26.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
13.879	0.00	Medium stiff, black Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
13.379	0.50											
12.879	1.00											
12.379	1.50				SPT-1	1.00-1.45	2	2	3	5		
11.879	2.00				UDS-1	1.50-1.80						
11.379	2.50											
10.879	3.00	Stiff, brown Silty CLAY of low plasticity with gravels (CL)		1.00	SPT-2	2.00-2.45	3	3	5	8	Ground water table encountered at 3.00m depth below existing ground level, measured on 27/03/2017	
11.379	2.50											
10.379	3.50				SPT-3	3.00-3.45	4	5	6	11		
9.879	4.00											
9.379	4.50	Medium dense to dense, brown Sandy SILT non plastic in nature (ML)		3.00	SPT-4	4.00-4.45	4	6	7	13		
8.879	5.00											
8.379	5.50				SPT-5	5.00-5.45	6	8	9	17		
7.879	6.00											
7.379	6.50				SPT-6	6.00-6.45	8	14	19	33		
6.879	7.00	Hard, brown Silty CLAY of medium plasticity (CI)		3.00								
6.379	7.50				SPT-7	7.00-7.45	10	13	19	32		
5.879	8.00											
5.379	8.50				SPT-8	8.00-8.45	13	16	22	38		
4.879	9.00											
4.379	9.50				SPT-9	9.00-9.45	15	17	22	39		
3.879	10.00	Hard, brown Silty CLAY of high plasticity (CH)		1.45								
3.379	10.50				SPT-10	10.00-10.45	15	19	25	44		
2.879	11.00							SPT-11	11.00-11.45	18	20	27

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty Clay of medium plasticity
Silty Clay of high plasticity	Silty Clay of low plasticity	Sandy SILT	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2339765.476 E 285034.977	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.867	Chainage (m) : 261000	Date Started : 26.03.2017
Ground Elevation (m) : 17.867	Ground Water Table(m): 3.00	Date Completed : 26.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
17.867	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.		
17.367	0.50												
16.867	1.00	Stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-1	1.00-1.45	2	3	5	8			
16.367	1.50				UDS-1	1.50-1.80							
15.867	2.00				SPT-2	2.00-2.45	4	6	8	14			
15.367	2.50												
14.867	3.00	Stiff to hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-3	3.00-3.45	5	6	9	15		Ground water table encountered at 3.00m depth below existing ground level, measured on 27/03/2017	
14.367	3.50												
13.867	4.00				SPT-4	4.00-4.45	7	12	16	28			
13.367	4.50												
12.867	5.00				SPT-5	5.00-5.45	11	14	20	34			
12.367	5.50	Dense, brown Sandy SILT, non plastic in nature (ML)		1.00	SPT-6	6.00-6.45	13	18	23	41			
11.867	6.00												
11.367	6.50				SPT-7	7.00-7.45	16	19	25	44			
10.867	7.00	Hard to very hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-8	8.00-8.45	25	27	30	57			
10.367	7.50												
9.867	8.00				SPT-9	9.00-9.45	24	28	32	60			
9.367	8.50												
8.867	9.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-10	10.00-10.45	27	29	33	62			
8.367	9.50												
7.867	10.00												

Disturbed Sample	Silty Clay of high plasticity	Standard Penetration Test	Undisturbed Sample	Clayey Silt of medium plasticity	Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2340762.223 E 285115.579 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 19.259 **Chainage (m) :** 262000 **Date Started :** 25.03.2017
Ground Elevation (m) : 19.259 **Ground Water Table(m):** 2.59 **Date Completed :** 26.03.2017
Total Depth (m) : 13.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.259	0.00	Stiff to very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL. Ground water table encountered at 2.59m depth below existing ground level, measured on 27/03/2017
18.759	0.50										
18.259	1.00										
17.759	1.50				SPT-1	1.00-1.45	4	5	6	11	
17.259	2.00	UDS-1	1.50-1.80								
16.759	2.50	SPT-2	2.00-2.45	5	7	9	16				
16.259	3.00										
15.759	3.50	SPT-3	3.00-3.45	13	15	16	31				
15.259	4.00										
14.759	4.50	Stiff, black Clayey SILT of medium plasticity (MI)		1.00	SPT-4	4.00-4.45	3	4	5	9	
14.259	5.00				UDS-2	4.50-4.80					
13.759	5.50	Stiff to hard, brown Silty CLAY of low plasticity (CL)		7.00	SPT-5	5.00-5.45	4	6	9	15	
13.259	6.00										
12.759	6.50				SPT-6	6.00-6.45	6	8	10	18	
12.259	7.00										
11.759	7.50				SPT-7	7.00-7.45	5	9	12	21	
11.259	8.00										
10.759	8.50				SPT-8	8.00-8.45	13	16	21	37	
10.259	9.00										
9.759	9.50				SPT-9	9.00-9.45	12	18	22	40	
9.259	10.00										
8.759	10.50	SPT-10	10.00-10.45	14	19	24	43				
8.259	11.00										
7.759	11.50	SPT-11	11.00-11.45	17	18	28	46				
7.259	12.00										
6.759	12.50	Very hard, brown Silty CLAY of medium plasticity (CI)		1.45	SPT-12	12.00-12.45	20	29	38	67	
6.259	13.00				SPT-13	13.00-13.45	38	35	47	82	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2341758.969 E 285196.181 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.543 Chainage (m) : 263000 Date Started : 25.03.2017
Ground Elevation (m) : 19.543 Ground Water Table(m): 3.00 Date Completed : 26.03.2017
Total Depth (m) : 13.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
19.543	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL. Ground water table encountered at 3.00m depth below existing ground level, measured on 27/03/2017		
19.043	-0.50												
18.543	1.00	Stiff, brown Silty CLAY of high plasticity, medium plasticity (CH)		4.00	SPT-1	1.00-1.45	3	5	7	12			
18.043	1.50				UDS-1	1.50-1.80							
17.543	2.00				SPT-2	2.00-2.45	3	3	6	9			
17.043	2.50												
16.543	3.00				SPT-3	3.00-3.45	4	5	8	13			
16.043	3.50												
15.543	4.00	very stiff, brown Silty CLAY of medium plasticity (CI)		1.00	SPT-4	4.00-4.45	4	6	9	15			
15.043	4.50				UDS-2	4.50-4.80							
14.543	5.00				SPT-5	5.00-5.45	8	11	14	25			
14.043	5.50	Medium dense to dense, brown Sandy SILT non plastic in nature (ML)		2.00	SPT-6	6.00-6.45	7	10	14	24			
13.543	6.00				SPT-7	7.00-7.45	13	18	25	43			
13.043	6.50	Hard to very hard, brown Silty CLAY of low plasticity (CL)		3.00	SPT-8	8.00-8.45	16	24	29	53			
12.543	7.00												
12.043	7.50				SPT-9	9.00-9.44	25	34	75/14	>100			
11.543	8.00				SPT-10	10.00-10.45	15	20	23	43			
11.043	8.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		2.45	SPT-11	11.00-11.45	16	21	26	47			
10.543	9.00												
10.043	9.50				SPT-12	12.00-12.45	24	29	35	64			
9.543	10.00												
9.043	10.50				SPT-13	13.00-13.45	26	32	40	72			
8.543	11.00												
8.043	11.50												
7.543	12.00												
7.043	12.50												
6.543	13.00												

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of medium plasticity
 Silty Clay of high plasticity
 Sandy SILT
 Silty Clay of low plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2342755.715 E 285276.782	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.631	Chainage (m) : 264000	Date Started : 25.03.2017
Ground Elevation (m) : 18.631	Ground Water Table(m): 3.00	Date Completed : 26.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
18.631	0.00	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.
18.131	0.50										
17.631	1.00				SPT-1	1.00-1.45	1	3	4	7	
17.131	1.50				UDS-1	1.50-1.80					
16.631	2.00				SPT-2	2.00-2.45	2	4	6	10	Ground water table encountered at 3.00m depth below existing ground level, measured on 27/03/2017
16.131	2.50										
15.631	3.00				SPT-3	3.00-3.45	4	7	9	16	
15.131	3.50	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		3.00	SPT-4	4.00-4.45	9	13	15	28	
14.631	4.00				UDS-2	4.50-4.80					
14.131	4.50				SPT-5	5.00-5.45	7	14	18	32	
13.631	5.00				SPT-6	6.00-6.45	9	15	19	34	
13.131	5.50	Hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-7	7.00-7.45	11	16	23	39	
12.631	6.00										
12.131	6.50				SPT-8	8.00-8.45	14	21	27	48	
11.631	7.00	Very hard, brown Clayey SILT of medium plasticity (MI)		1.45	SPT-9	9.00-9.45	15	20	29	49	
11.131	7.50										
10.631	8.00				SPT-10	10.00-10.45	18	29	32	61	
10.131	8.50				SPT-11	11.00-11.45	20	27	35	62	
9.631	9.00										
9.131	9.50										
8.631	10.00										
8.131	10.50										
7.631	11.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Clayey Silt of medium plasticity
Silty Clay of high plasticity	Silty Clay of low plasticity	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2344749.208 E 285437.986 Dia. of The Hole : 150mm
Collar Elevation (m) : 17.176 Chainage (m) : 266000 Date Started : 12.04.2017
Ground Elevation (m) : 17.176 Ground Water Table(m): 2.50 Date Completed : 13.04.2017
Total Depth (m) : 11.38 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
17.176	0.00	Black Clayey SILT of high plasticity, low expansive (MH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.38m depth below EGL.
16.676	0.50										
16.176	1.00	Stiff to very stiff, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-1	1.00-1.45	2	3	6	9	Ground water table encountered at 2.5m depth below existing ground level, measured on 14/04/2017
15.676	1.50				UDS-1	1.50-1.80					
15.176	2.00				SPT-2	2.00-2.45	4	5	8	13	
14.676	2.50				SPT-3	3.00-3.45	7	9	11	20	
14.176	3.00										
13.676	3.50	Very stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-4	4.00-4.45	7	10	12	22	
13.176	4.00				UDS/DS-2	4.50-4.80					
12.676	4.50				SPT-5	5.00-5.45	9	12	14	26	
12.176	5.00	Dense to very dense, black Silty SAND (SM)		4.00	SPT-6	6.00-6.45	12	17	24	41	
11.676	5.50				SPT-7	7.00-7.45	21	36	41	77	
11.176	6.00				SPT-8	8.00-8.26	27	75/11	-	>100	
10.676	6.50				SPT-9	9.00-9.45	23	37	46	83	
10.176	7.00				SPT-10	10.00-10.18	39	75/3	-	>100	
9.676	7.50				Very dense, black Silty SAND with gravels (SM)		1.38	SPT-11	11.00-11.38	29	41
9.176	8.00										
8.676	8.50										
8.176	9.00										
7.676	9.50										
7.176	10.00										
6.676	10.50										
6.176	11.00										

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Clayey Silt of high plasticity
 Clayey Silt of medium plasticity
 Silty Clay of medium plasticity
 Silty Sand
 Silty Sand with gravels

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2345745.955 E 285518.588 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.842 Chainage (m) : 267000 Date Started : 12.04.2017
Ground Elevation (m) : 16.842 Ground Water Table(m): 3.50 Date Completed : 13.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.842	0.00	Medium stiff to stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
16.342	0.50											
15.842	1.00											
15.342	1.50				SPT-1	1.00-1.45	1	2	3	5		
14.842	2.00	UDS-1	1.50-1.80									
14.342	2.50	SPT-2	2.00-2.45	2	4	5	9					
13.842	3.00											
13.342	3.50	SPT-3	3.00-3.45	2	5	8	13					
12.842	4.00											
12.342	4.50	Medium dense, black Sandy SILT, non plastic in nature (ML)		0.50	SPT-4	4.00-4.45	4	6	9	15		Ground water table encountered at 3.50m depth below existing ground level, measured on 14/04/2017
11.842	5.00				UDS-2	4.50-4.80						
11.342	5.50	Very dense, brown Silty CLAY of low plasticity (CL)		2.50	SPT-5	5.00-5.45	7	9	13	22		
10.842	6.00											
10.342	6.50				SPT-6	6.00-6.45	10	13	19	32		
9.842	7.00											
9.342	7.50	Hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-7	7.00-7.45	11	15	20	35		
8.842	8.00											
8.342	8.50				SPT-8	8.00-8.45	10	16	20	36		
7.842	9.00											
7.342	9.50	SPT-9	9.00-9.45	12	17	23	40					
6.842	10.00											
6.342	10.50	Hard, brown Clayey SILT of medium plasticity (MI)		1.45	SPT-10	10.00-10.45	13	19	24	43		
5.842	11.00				SPT-11	11.00-11.45	15	21	27	48		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty Clay of low plasticity
 Clayey Silt of medium plasticity

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2346742.701 E 285599.190 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 17.220 **Chainage (m) :** 268000 **Date Started :** 12.04.2017
Ground Elevation (m) : 17.220 **Ground Water Table(m):** 3.50 **Date Completed :** 13.04.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.220	0.00	Stiff, brown Clayey SILT of medium plasticity (MI)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
16.720	0.50											
16.220	1.00											
15.720	1.50	Very stiff, brown Clayey SILT of high plasticity, medium expansive (MH)		2.50	SPT-1	1.00-1.45	4	6	8	14		
15.220	2.00				UDS-1	1.50-1.80						
14.720	2.50				SPT-2	2.00-2.45	5	8	10	18		
14.220	3.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		5.00	SPT-3	3.00-3.45	6	9	11	20		
13.720	3.50											
13.220	4.00				SPT-4	4.00-4.45	8	10	12	22		
12.720	4.50	Dense, brown Sandy SILT, non plastic in nature (ML)		2.00	UDS/DS-2	4.50-4.80						Ground water table encountered at 3.50m depth below existing ground level, measured on 14/04/2017
12.220	5.00											
11.720	5.50				SPT-5	5.00-5.45	10	12	5	17		
11.220	6.00	Very dense, brown Silty SAND (SM)		0.45	SPT-6	6.00-6.45	5	16	18	34		
10.720	6.50											
10.220	7.00				SPT-7	7.00-7.45	12	17	20	37		
9.720	7.50	Very dense, brown Silty SAND (SM)		0.45								
9.220	8.00				SPT-8	8.00-8.45	12	16	20	36		
8.720	8.50											
8.220	9.00	Very dense, brown Silty SAND (SM)		0.45	SPT-9	9.00-9.45	15	20	24	44		
7.720	9.50											
7.220	10.00				SPT-10	10.00-10.45	10	21	25	46		
6.720	10.50	Very dense, brown Silty SAND (SM)		0.45								
6.220	11.00				SPT-11	11.00-11.45	21	24	27	51		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Clayey Silt of medium plasticity
 Clayey Silt of high plasticity
 Silty Clay of medium plasticity
 Slipped / Hard to penetrate samples
 Sandy SILT
 Silty Sand

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2347739.447 E 285679.792 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.243 Chainage (m) : 269000 Date Started : 14.04.2017
Ground Elevation (m) : 19.243 Ground Water Table(m): 2.50 Date Completed : 14.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.243	0.00	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.	
18.743	0.50											
18.243	1.00											
17.743	1.50											
17.243	2.00	Stiff to very stiff, black Silty CLAY of medium plasticity (CI)		2.00	UDS-1	1.50-1.80					Ground water table encountered at 2.50m depth below existing ground level, measured on 15/04/2017	
16.743	2.50											
16.243	3.00											
15.743	3.50											
15.243	4.00	Medium dense to very dense, black Sandy SILT, non plastic in nature (ML/ ML-SM)		6.45								
14.743	4.50											
14.243	5.00											
13.743	5.50											
13.243	6.00			6.45								
12.743	6.50											
12.243	7.00											
11.743	7.50											
11.243	8.00			6.45								
10.743	8.50											
10.243	9.00											
9.743	9.50											
9.243	10.00			6.45								
8.743	10.50											
8.243	11.00											
7.743	11.50											
7.243	12.00											
				12.45m								

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2348736.194 E 285760.393 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 19.032 **Chainage (m) :** 270000 **Date Started :** 14.04.2017
Ground Elevation (m) : 19.032 **Ground Water Table(m):** 3.00 **Date Completed :** 14.04.2017
Total Depth (m) : 10.35 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.032	0.00	Black Silty SAND (SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.35m depth below EGL.
18.532	0.50										
18.032	1.00	Stiff, black Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	3	5	7	12	
17.532	1.50										
17.032	2.00	Stiff, Black Clayey SILT of high plasticity, low expansive (MH)		0.50	UDS-1	1.50-1.80					
16.532	2.50	Stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-2	2.00-2.45	4	6	9	15	
16.032	3.00										
15.532	3.50				SPT-3	3.00-3.45	6	7	8	15	
15.032	4.00	Medium dense, brown Sandy SILT, non plastic in nature (ML)		3.00	SPT-4	4.00-4.45	8	9	11	20	
14.532	4.50				UDS/DS-2	4.50-4.80					
14.032	5.00										
13.532	5.50				SPT-5	5.00-5.45	9	19	14	33	
13.032	6.00	Dense to very dense, brown Silty SAND (SM-ML)		3.35	SPT-6	6.00-6.45	10	14	18	32	
12.532	6.50										
12.032	7.00				SPT-7	7.00-7.45	11	14	16	30	
11.532	7.50										
11.032	8.00				SPT-8	8.00-8.45	15	18	20	38	
10.532	8.50										
10.032	9.00				SPT-9	9.00-9.45	16	19	21	40	
9.532	9.50										
9.032	10.00				SPT-10	10.00-10.35	21	50	75/5	>100	

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Sand
 Silty Clay of high plasticity
 Clayey Silt of high plasticity
 Sandy SILT

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2349730.760 E 285861.497 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.956 Chainage (m) : 271000 Date Started : 15.04.2017
Ground Elevation (m) : 16.956 Ground Water Table(m): 3.00 Date Completed : 15.04.2017
Total Depth (m) : 14.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.956	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 14.45m depth below EGL. Ground water table encountered at 3.00m depth below existing ground level, measured on 16/04/2017	
16.456	0.50											
15.956	1.00	Medium stiff, black Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	2	3	4	7		
15.456	1.50											
14.956	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		2.50	UDS-1	1.50-1.80						
14.456	2.50				SPT-2	2.00-2.45	3	5	7	12		
13.956	3.00				SPT-3	3.00-3.45	6	8	9	17		
13.456	3.50											
12.956	4.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		1.00	SPT-4	4.00-4.45	7	9	11	20		
12.456	4.50				UDS/DS-2	4.50-4.80						
11.956	5.00	Medium dense to very dense, brown Silty SAND (SM)		6.00	SPT-5	5.00-5.45	8	12	16	28		
11.456	5.50											
10.956	6.00				SPT-6	6.00-6.45	11	15	17	32		
10.456	6.50											
9.956	7.00				SPT-7	7.00-7.45	12	18	23	41		
9.456	7.50											
8.956	8.00				SPT-8	8.00-8.45	15	19	25	44		
8.456	8.50											
7.956	9.00				SPT-9	9.00-9.45	19	23	31	54		
7.456	9.50											
6.956	10.00	Very dense, brown Sandy SILT, non plastic in nature (ML-SM)		3.45	SPT-10	10.00-10.45	20	28	33	61		
6.456	10.50											
5.956	11.00				SPT-11	11.00-11.45	25	30	39	69		
5.456	11.50											
4.956	12.00				SPT-12	12.00-12.45	28	32	38	70		
4.456	12.50											
3.956	13.00				SPT-13	13.00-13.45	30	34	41	75		
3.456	13.50											
2.956	14.00				SPT-14	14.00-14.45	33	38	45	83		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Silty Sand
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2350708.882 E 286068.766 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.649 Chainage (m) : 272000 Date Started : 15.04.2017
Ground Elevation (m) : 19.649 Ground Water Table(m): 2.80 Date Completed : 15.04.2017
Total Depth (m) : 14.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
19.649	0.00	Stiff to very stiff, black Clayey SILT of high plasticity, low expansive (MH)	[Vertical Lines]	4.00	⊗ DS-1	0.00-0.50					Borehole terminated at 14.45m depth below EGL. Ground water table encountered at 2.80m depth below existing ground level, measured on 16/04/2017		
19.149	0.50												
18.649	1.00												
18.149	1.50												
17.649	2.00				⬇ SPT-1	1.00-1.45	2	4	7	11			
17.149	2.50				⬇ UDS-1	1.50-1.80							
16.649	3.00												
16.149	3.50				⬇ SPT-2	2.00-2.45	4	5	8	13			
15.649	4.00												
15.149	4.50	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)	[Diagonal Lines]	2.00	⬇ SPT-3	3.00-3.45	7	10	13	23			
14.649	5.00												
14.149	5.50												
13.649	6.00				⬇ SPT-4	4.00-4.45	9	11	15	26			
13.149	6.50	Medium dense to very dense, brown Sandy SILT, non plastic in nature (ML)	[Vertical Lines]	8.45	⊗ UDS/DS-2	4.50-4.80							
12.649	7.00												
12.149	7.50							⬇ SPT-5	5.00-5.45	8	12	14	26
11.649	8.00												
11.149	8.50							⬇ SPT-6	6.00-6.45	7	11	16	27
10.649	9.00												
10.149	9.50							⬇ SPT-7	7.00-7.45	13	14	23	37
9.649	10.00												
9.149	10.50							⬇ SPT-8	8.00-8.45	12	21	24	45
8.649	11.00												
8.149	11.50				⬇ SPT-9	9.00-9.45	14	27	31	58			
7.649	12.00												
7.149	12.50				⬇ SPT-10	10.00-10.45	19	28	37	65			
6.649	13.00												
6.149	13.50				⬇ SPT-11	11.00-11.45	16	23	29	52			
5.649	14.00												
					⬇ SPT-12	12.00-12.45	17	24	27	51			
					⬇ SPT-13	13.00-13.45	19	25	28	53			
					⬇ SPT-14	14.00-14.45	21	27	32	59			

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2351686.531 E 286278.455 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.540 Chainage (m) : 273000 Date Started : 15.04.2017
Ground Elevation (m) : 20.540 Ground Water Table(m): 2.50 Date Completed : 15.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.540	0.00	Brown Clayey SILT of medium plasticity (MI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.	
20.040	0.50											
19.540	1.00	Stiff, brown Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	3	5	6	11		
19.040	1.50											
18.540	2.00	Very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		1.50	UDS-1	1.50-1.80						
18.040	2.50											
17.540	3.00											
17.040	3.50											
16.540	4.00	Medium dense to dense, brown Sandy SILT, non plastic in nature (ML)		6.00	SPT-3	3.00-3.45	6	6	7	13		Ground water table encountered at 2.50m depth below existing ground level, measured on 16/04/2017
16.040	4.50											
15.540	5.00											
15.040	5.50											
14.540	6.00											
14.040	6.50											
13.540	7.00	Hard, brown Clayey SILT of high plasticity (MH)		1.45	SPT-4	4.00-4.45	7	9	10	19		
13.040	7.50											
12.540	8.00											
12.040	8.50											
11.540	9.00				SPT-5	5.00-5.45	10	10	24	34		
11.040	9.50											
10.540	10.00				SPT-6	6.00-6.45	9	17	19	36		
					SPT-7	7.00-7.45	12	18	21	39		
					SPT-8	8.00-8.45	14	16	22	38		
					SPT-9	9.00-9.45	16	19	24	43		
					SPT-10	10.00-10.45	17	21	26	47		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Clayey Silt of medium plasticity
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2353775.773 E 286263.099 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.499 Chainage (m) : 275100 Date Started : 16.04.2017
Ground Elevation (m) : 20.499 Ground Water Table(m): 3.20 Date Completed : 16.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.499	0.00	Medium stiff / stiff, black Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
19.999	0.50											
19.499	1.00											
18.999	1.50	Very stiff, brown Sandy SILT of low plasticity (ML-CL)		1.50	SPT-1	1.00-1.45	2	3	5	8		
18.499	2.00				UDS-1	1.50-1.80						
17.999	2.50				SPT-2	2.00-2.45	7	9	11	20		
17.499	3.00	Medium dense, brown Sandy SILT, non plastic in nature (ML)		3.00	SPT-3	3.00-3.45	7	11	14	25		Ground water table encountered at 3.20m depth below existing ground level, measured on 17/04/2017
16.999	3.50											
16.499	4.00				SPT-4	4.00-4.45	9	11	16	27		
15.999	4.50				UDS/DS-2	4.50-4.80						
15.499	5.00				SPT-5	5.00-5.45	11	13	14	27		
14.999	5.50	Hard to very hard, brown Silty CLAY of low plasticity (CL)		5.45	SPT-6	6.00-6.45	14	21	28	49		
14.499	6.00											
13.999	6.50				SPT-7	7.00-7.45	22	28	35	63		
13.499	7.00											
12.999	7.50				SPT-8	8.00-8.45	24	29	41	70		
12.499	8.00											
11.999	8.50				SPT-9	9.00-9.45	22	29	34	63		
11.499	9.00											
10.999	9.50				SPT-10	10.00-10.45	24	34	35	69		
10.499	10.00											
9.999	10.50											
9.499	11.00				SPT-11	11.00-11.45	15	21	30	51		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Clayey SILT
 Undisturbed Sample
 Sandy SILT
 Slipped / Hard to penetrate samples
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2356585.378 E 285546.125 Dia. of The Hole : 150mm
Collar Elevation (m) : 21.582 Chainage (m) : 278000 Date Started : 16.04.2017
Ground Elevation (m) : 21.582 Ground Water Table(m): 3.00 Date Completed : 16.04.2017
Total Depth (m) : 15.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
21.582	0.00	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 15.45m depth below EGL.	
21.082	-0.50											
20.582	1.00	Medium stiff, black Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	2	3	3	6	Ground water table encountered at 3.00m depth below existing ground level, measured on 17/04/2017	
20.082	1.50											
19.582	2.00	Stiff, black Clayey SILT of high plasticity, low expansive (MH)		0.50	UDS-1	1.50-1.80						
19.082	2.50	Stiff, brown Silty CLAY of medium plasticity (CI)		1.00	SPT-2	2.00-2.45	2	4	6	10		
18.582	3.00											
18.082	3.50	Medium dense, brown Sandy SILT, non plastic in nature (ML-SM)		1.00	SPT-3	3.00-3.45	3	4	8	12		
17.582	4.00											
17.082	4.50	Medium dense, brown Silty SAND (SM-ML)		3.00	SPT-4	4.00-4.45	5	7	9	16		
16.582	5.00				UDS/DS-2	4.50-4.80						
16.082	5.50				SPT-5	5.00-5.45	7	10	12	22		
15.582	6.00				SPT-6	6.00-6.45	9	13	16	29		
15.082	6.50				SPT-7	7.00-7.45	11	15	18	33		
14.582	7.00	Medium dense to very dense, Sandy SILT, non plastic in nature (ML/ ML-SM)		8.45	SPT-8	8.00-8.45	16	19	21	40		
14.082	7.50				SPT-9	9.00-9.45	14	18	23	41		
13.582	8.00				SPT-10	10.00-10.45	17	20	26	46		
13.082	8.50				SPT-11	11.00-11.45	22	28	31	59		
12.582	9.00				SPT-12	12.00-12.45	26	33	44	77		
12.082	9.50				SPT-13	13.00-13.45	28	35	40	75		
11.582	10.00				SPT-14	14.00-14.45	30	36	42	78		
11.082	10.50				SPT-15	15.00-15.45	34	40	45	85		
10.582	11.00											
10.082	11.50											
9.582	12.00											
9.082	12.50											
8.582	13.00											
8.082	13.50											
7.582	14.00											
7.082	14.50											
6.582	15.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Clayey Silt of high plasticity
 Slipped / Hard to penetrate samples
 Sandy SILT
 Silty SAND

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2357552.792 E 285292.928 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 19.011 **Chainage (m) :** 279000 **Date Started :** 16.04.2017
Ground Elevation (m) : 19.011 **Ground Water Table(m):** 2.90 **Date Completed :** 17.04.2017
Total Depth (m) : 13.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.011	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL. Ground water table encountered at 2.90m depth below existing ground level, measured on 18/04/2017
18.511	0.50										
18.011	1.00	Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		0.50	SPT-1	1.00-1.45	3	4	6	10	
17.511	1.50										
17.011	2.00	Stiff, brown Silty CLAY of low plasticity (CL)		2.50	UDS-1	1.50-1.80					
16.511	2.50				SPT-2	2.00-2.45	4	5	7	12	
16.011	3.00				SPT-3	3.00-3.45	5	7	7	14	
15.511	3.50										
15.011	4.00	Very stiff, brown Sandy SILT of low plasticity (ML-CL)		2.00	SPT-4	4.00-4.45	6	9	11	20	
14.511	4.50				UDS/DS-2	4.50-4.80					
14.011	5.00				SPT-5	5.00-5.45	9	13	16	29	
13.511	5.50	Very stiff, brown Silty CLAY of medium plasticity (CI)		1.00	SPT-6	6.00-6.45	11	13	15	28	
13.011	6.00										
12.511	6.50	Dense to very dense, Silty SAND (SM-ML)		6.45	SPT-7	7.00-7.45	13	16	21	37	
12.011	7.00										
11.511	7.50				SPT-8	8.00-8.45	17	24	39	63	
11.011	8.00										
10.511	8.50				SPT-9	9.00-9.45	14	23	41	64	
10.011	9.00										
9.511	9.50				SPT-10	10.00-10.45	23	29	42	71	
9.011	10.00										
8.511	10.50				SPT-11	11.00-11.45	20	29	38	67	
8.011	11.00										
7.511	11.50				SPT-12	12.00-12.45	21	27	37	64	
7.011	12.00										
6.511	12.50				SPT-13	13.00-13.45	23	29	40	69	
6.011	13.00										

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Sandy SILT
 Silty Clay of medium plasticity
 Silty Clay of low plasticity
 Clayey SILT
 Silty SAND

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2359487.621 E 284786.532 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 27.638 **Chainage (m) :** 281000 **Date Started :** 17.04.2017
Ground Elevation (m) : 27.638 **Ground Water Table(m):** 2.30 **Date Completed :** 18.04.2017
Total Depth (m) : 10.32 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
27.638	0.00	Black Silty SAND (SM-ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.32m depth below EGL. Ground water table encountered at 2.30m depth below existing ground level, measured on 19/04/2017	
27.138	0.50											
26.638	1.00	Stiff, black Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	3	4	6	10		
26.138	1.50											
25.638	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.50	UDS-1	1.50-1.80						
25.138	2.50											
24.638	3.00				SPT-2	2.00-2.45	4	6	8	14		
24.138	3.50											
23.638	4.00				SPT-3	3.00-3.45	7	8	10	18		
23.138	4.50											
22.638	5.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		3.00	UDS/DS-2	4.50-4.80						
22.138	5.50											
21.638	6.00				SPT-5	5.00-5.45	10	14	16	30		
21.138	6.50											
20.638	7.00	Hard, brown Silty CLAY of low plasticity (CL)		1.00	SPT-6	6.00-6.45	9	15	15	30		
20.138	7.50											
19.638	8.00				SPT-7	7.00-7.45	11	13	17	30		
19.138	8.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		1.32	SPT-8	8.00-8.45	15	18	20	38		
18.638	9.00											
18.138	9.50				SPT-9	9.00-9.45	17	21	24	45		
17.638	10.00											
					SPT-10	10.00-10.32	24	50	75/2	>100		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty SAND
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2360455.036 E 284533.334	Dia. of The Hole : 150mm
Collar Elevation (m) : 26.928	Chainage (m) : 282000	Date Started : 17.04.2017
Ground Elevation (m) : 26.928	Ground Water Table(m): 2.50	Date Completed : 18.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
26.928	0.00	Stiff, black Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.			
26.428	0.50													
25.928	1.00													
25.428	1.50	Stiff, black Clayey SILT of medium plasticity, low expansive (MI)		0.50	SPT-1	1.00-1.45	3	4	5	9	Ground water table encountered at 2.50m depth below existing ground level, measured on 19/04/2017			
24.928	2.00				UDS-1	1.50-1.80								
24.428	2.50				SPT-2	2.00-2.45	4	6	8	14				
23.928	3.00	Stiff to very stiff, black Silty CLAY of medium plasticity (CI)		2.00										
23.428	3.50							SPT-3	3.00-3.45	7		9	12	21
22.928	4.00													
22.428	4.50	Medium dense to very dense, brown Silty SAND (SM-ML)		4.00										
21.928	5.00				SPT-4	4.00-4.45	7	11	13	24				
21.428	5.50							UDS/DS-2	4.50-4.80					
20.928	6.00													
20.428	6.50							SPT-5	5.00-5.45	11		13	15	28
19.928	7.00													
19.428	7.50				SPT-6	6.00-6.45	16	20	29	49				
18.928	8.00	Very dense, brown Medium to Coarse SAND (SP)		3.45										
18.428	8.50							SPT-7	7.00-7.45	21	32	46	78	
17.928	9.00													
17.428	9.50							SPT-8	8.00-8.45	26	32	47	79	
16.928	10.00													
16.428	10.50				SPT-9	9.00-9.45	22	37	41	78				
15.928	11.00													
					SPT-10	10.00-10.45	24	32	42	74				
					SPT-11	11.00-11.45	27	31	39	70				

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Clayey Silt of medium plasticity	Silty Sand	Fine, medium, coarse Sand

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2361422.450 E 284280.137 Dia. of The Hole : 150mm
Collar Elevation (m) : 25.459 Chainage (m) : 283000 Date Started : 17.04.2017
Ground Elevation (m) : 25.459 Ground Water Table(m): 2.20 Date Completed : 18.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
25.459	0.00	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL. Ground water table encountered at 2.20m depth below existing ground level, measured on 19/04/2017	
24.959	0.50											
24.459	1.00	Soft, black Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	1	2	2	4		
23.959	1.50											
23.459	2.00	Black Sandy SILT, non plastic in nature (ML-SM)		0.50	UDS-1	1.50-1.80						
22.959	2.50	Stiff to very stiff, black Silty CLAY of high plasticity, low to medium expansive (CH)		2.00	SPT-2	2.00-2.45	2	4	8	12		
22.459	3.00				SPT-3	3.00-3.45	3	4	9	13		
21.959	3.50											
21.459	4.00											
20.959	4.50	Very stiff to hard, yellowish brown Silty CLAY of medium plasticity, low expansive (CI)		4.00	SPT-4	4.00-4.45	7	7	10	17		
20.459	5.00				UDS/DS-2	4.50-4.80						
19.959	5.50				SPT-5	5.00-5.45	7	6	10	16		
19.459	6.00				SPT-6	6.00-6.45	7	11	15	26		
18.959	6.50											
18.459	7.00	Hard to very hard, yellowish brown Silty CLAY of low plasticity (CL)		3.00	SPT-7	7.00-7.45	9	17	17	34		
17.959	7.50											
17.459	8.00											
16.959	8.50				SPT-8	8.00-8.45	15	18	24	42		
16.459	9.00	Very hard, yellow Clayey SILT of medium plasticity (MI)		1.00	SPT-9	9.00-9.45	17	21	26	47		
15.959	9.50											
15.459	10.00				SPT-10	10.00-10.45	20	29	24	53		
14.959	10.50	Very hard, yellow Silty CLAY of high plasticity (CH)		0.45	SPT-11	11.00-11.45	18	27	34	61		
14.459	11.00											
13.959	11.50	Very hard, yellow Silty CLAY of high plasticity (CH)		0.45	SPT-12	12.00-12.45	22	29	37	66		
13.459	12.00											

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Clay of high plasticity
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2363357.279 E 283773.741 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 20.330 **Chainage (m) :** 285000 **Date Started :** 18.04.2017
Ground Elevation (m) : 20.330 **Ground Water Table(m):** 2.10 **Date Completed :** 18.04.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
20.330	0.00	Stiff to very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.		
19.830	0.50												
19.330	1.00												
18.830	1.50				SPT-1	1.00-1.45	2	4	5	9			
18.330	2.00				UDS-1	1.50-1.80							
17.830	2.50				SPT-2	2.00-2.45	7	9	11	20		Ground water table encountered at 2.10m depth below existing ground level, measured on 19/04/2017	
17.330	3.00												
16.830	3.50				SPT-3	3.00-3.45	6	10	12	22			
16.330	4.00												
15.830	4.50				SPT-4	4.00-4.45	9	12	22	34			
15.330	5.00	UDS/DS-2	4.50-4.80										
14.830	5.50	SPT-5	5.00-5.45	11	13	22	35						
14.330	6.00												
13.830	6.50	Very stiff to very hard, brown Silty CLAY of medium plasticity (CI)		7.00	SPT-6	6.00-6.45	16	21	24	45			
13.330	7.00												
12.830	7.50				SPT-7	7.00-7.45	14	30	27	57			
12.330	8.00												
11.830	8.50				SPT-8	8.00-8.45	14	25	31	56			
11.330	9.00												
10.830	9.50				SPT-9	9.00-9.45	22	26	29	55			
10.330	10.00												
	10.45				Very hard, brown Clayey SILT of medium plasticity (MI)		0.45	SPT-10	10.00-10.45	28	37	41	78

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2365292.114 E 283267.365	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.503	Chainage (m) : 287000	Date Started : 18.04.2017
Ground Elevation (m) : 16.503	Ground Water Table(m): 2.60	Date Completed : 18.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.503	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
16.003	0.50											
15.503	1.00	Stiff, black Clayey SILT of high plasticity, low expansive (MH)		0.50	SPT-1	1.00-1.45	3	4	5	9		
15.003	1.50											
14.503	2.00	Very stiff, black Silty CLAY of low plasticity (CL)		3.50	UDS-1	1.50-1.80						
14.003	2.50				SPT-2	2.00-2.45	4	7	9	16		
13.503	3.00											
13.003	3.50				SPT-3	3.00-3.45	5	7	8	15		
12.503	4.00											
12.003	4.50				SPT-4	4.00-4.45	6	9	12	21		
11.503	5.00				UDS/DS-2	4.50-4.80						
11.003	5.50	Very stiff to hard, yellow Silty CLAY of medium plasticity (CI)		3.00	SPT-5	5.00-5.45	8	13	16	29		
10.503	6.00											
10.003	6.50				SPT-6	6.00-6.45	10	16	18	34		
9.503	7.00											
9.003	7.50	Hard to very hard, yellow Silty CLAY of low plasticity (CL)		3.45	SPT-7	7.00-7.45	13	17	21	38		
8.503	8.00											
8.003	8.50				SPT-8	8.00-8.45	16	20	25	45		
7.503	9.00											
7.003	9.50				SPT-9	9.00-9.45	19	23	26	49		
6.503	10.00				SPT-10	10.00-10.45	16	27	24	51		
6.003	10.50											
5.503	11.00				SPT-11	11.00-11.45	22	29	37	66		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Clayey Silt of high plasticity	Silty Clay of low plasticity	Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2366271.419 E 283069.469 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.790 Chainage (m) : 288000 Date Started : 19.04.2017
Ground Elevation (m) : 15.790 Ground Water Table(m): 1.80 Date Completed : 19.04.2017
Total Depth (m) : 13.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.790	0.00	Stiff, black Silty CLAY of high plasticity (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.	
15.290	0.50											
14.790	1.00											
14.290	1.50	Stiff to very stiff, black Clayey SILT of high plasticity, low expansive (MH)		3.00	SPT-1	1.00-1.45	2	3	6	9	Ground water table encountered at 1.80m depth below existing ground level, measured on 20/04/2017	
13.790	2.00				UDS-1	1.50-1.80						
13.290	2.50				SPT-2	2.00-2.45	4	7	8	15		
12.790	3.00				SPT-3	3.00-3.45	7	9	10	19		
12.290	3.50											
11.790	4.00	Very stiff to very hard, dark brown Silty CLAY of medium plasticity, low expansive (CI)		8.95	SPT-4	4.00-4.45	8	11	13	24		
11.290	4.50				UDS/DS-2	4.50-4.80						
10.790	5.00				SPT-5	5.00-5.45	9	12	17	29		
10.290	5.50											
9.790	6.00				SPT-6	6.00-6.45	11	13	16	29		
9.290	6.50											
8.790	7.00				SPT-7	7.00-7.45	9	12	17	29		
8.290	7.50											
7.790	8.00				SPT-8	8.00-8.45	14	18	21	39		
7.290	8.50											
6.790	9.00				SPT-9	9.00-9.45	21	27	32	59		
6.290	9.50											
5.790	10.00				SPT-10	10.00-10.45	17	25	37	62		
5.290	10.50											
4.790	11.00	SPT-11	11.00-11.45	22	27	40	67					
4.290	11.50											
3.790	12.00	SPT-12	12.00-12.45	21	29	36	65					
3.290	12.50											
2.790	13.00	SPT-13	13.00-13.45	18	26	30	56					

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of high plasticity
 Clayey Silt of high plasticity
 Silty Clay of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2368260.048 E 283161.415 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 14.311 **Chainage (m) :** 290000 **Date Started :** 20.04.2017
Ground Elevation (m) : 14.311 **Ground Water Table(m):** 2.70 **Date Completed :** 20.04.2017
Total Depth (m) : 13.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
14.311	0.00	Medium stiff to stiff, black Silty CLAY of medium plasticity (Cl)		3.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL. Ground water table encountered at 2.70m depth below existing ground level, measured on 21/04/2017			
13.811	-0.50													
13.311	1.00													
12.811	1.50				SPT-1	1.00-1.45	2	3	4	7				
12.311	2.00				UDS-1	1.50-1.80								
11.811	2.50				SPT-2	2.00-2.45	3	4	6	10				
11.311	3.00													
10.811	3.50	Very stiff to very hard, brown Clayey SILT of medium plasticity (MI)		10.00	SPT-3	3.00-3.45	5	7	9	16				
10.311	4.00													
9.811	4.50							SPT-4	4.00-4.45	3		5	8	13
9.311	5.00							UDS/DS-2	4.50-4.80					
8.811	5.50							SPT-5	5.00-5.45	7		10	12	22
8.311	6.00													
7.811	6.50							SPT-6	6.00-6.45	6	9	13	22	
7.311	7.00													
6.811	7.50							SPT-7	7.00-7.45	8	12	17	29	
6.311	8.00													
5.811	8.50				SPT-8	8.00-8.45	11	15	21	36				
5.311	9.00													
4.811	9.50				SPT-9	9.00-9.45	13	16	24	40				
4.311	10.00													
3.811	10.50				SPT-10	10.00-10.45	17	22	26	48				
3.311	11.00													
2.811	11.50				SPT-11	11.00-11.45	21	29	30	59				
2.311	12.00													
1.811	12.50				SPT-12	12.00-12.45	20	29	35	64				
1.311	13.00	Very hard, brown Silty CLAY of medium plasticity (Cl)		0.45										
	13.45				SPT-13	13.00-13.45	25	30	40	70				

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2369215.393 E 283452.967 Dia. of The Hole : 150mm
Collar Elevation (m) : 13.562 Chainage (m) : 291000 Date Started : 20.04.2017
Ground Elevation (m) : 13.562 Ground Water Table(m): 3.80 Date Completed : 20.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
13.562	0.00	Stiff, black Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.
13.062	0.50										
12.562	1.00										
12.062	1.50	Stiff to very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		3.50	SPT-1	1.00-1.45	3	5	6	11	Ground water table encountered at 3.80m depth below existing ground level, measured on 21/04/2017
11.562	2.00				UDS-1	1.50-1.80					
11.062	2.50				SPT-2	2.00-2.45	6	7	8	15	
10.562	3.00				SPT-3	3.00-3.45	5	8	10	18	
10.062	3.50				SPT-4	4.00-4.45	8	11	14	25	
9.562	4.00	Very stiff to hard, black Silty CLAY of high plasticity (CH)		3.00	UDS/DS-2	4.50-4.80					
9.062	4.50				SPT-5	5.00-5.45	17	12	17	29	
8.562	5.00										
8.062	5.50				SPT-6	6.00-6.45	9	12	13	25	
7.562	6.00										
7.062	6.50				SPT-7	7.00-7.45	12	15	19	34	
6.562	7.00										
6.062	7.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		4.45	SPT-8	8.00-8.45	14	21	24	45	
5.562	8.00										
5.062	8.50				SPT-9	9.00-9.45	20	27	31	58	
4.562	9.00										
4.062	9.50				SPT-10	10.00-10.45	23	29	36	65	
3.562	10.00										
3.062	10.50				SPT-11	11.00-11.45	17	24	37	61	
2.562	11.00										
2.062	11.50				SPT-12	12.00-12.45	20	26	32	58	
1.562	12.00										

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2370124.154 E 283869.846	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.372	Chainage (m) : 292000	Date Started : 20.04.2017
Ground Elevation (m) : 14.372	Ground Water Table(m): 4.00	Date Completed : 20.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
14.372	0.00	Stiff to very hard, dark brown Silty CLAY of high plasticity, medium expansive (CH)		11.00		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.		
13.872	0.50													
13.372	1.00													
12.872	1.50							SPT-1	1.00-1.45	3	4		7	11
12.372	2.00								UDS-1	1.50-1.80				
11.872	2.50							SPT-2	2.00-2.45	4	6		8	14
11.372	3.00													
10.872	3.50							SPT-3	3.00-3.45	6	7		10	17
10.372	4.00													
9.872	4.50							SPT-4	4.00-4.45	8	11		13	24
9.372	5.00								UDS/DS-2	4.50-4.80				
8.872	5.50				SPT-5	5.00-5.45	7	9	13	22				
8.372	6.00													
7.872	6.50				SPT-6	6.00-6.45	12	16	18	34				
7.372	7.00													
6.872	7.50				SPT-7	7.00-7.45	14	18	21	39				
6.372	8.00													
5.872	8.50				SPT-8	8.00-8.45	15	23	27	50				
5.372	9.00													
4.872	9.50				SPT-9	9.00-9.45	19	24	37	61				
4.372	10.00													
3.872	10.50				SPT-10	10.00-10.45	21	28	32	60				
3.372	11.00													
		Very hard, brown Silty CLAY of medium plasticity (CI)		0.45		SPT-11	11.00-11.45	22	28	39	67			

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		Slipped / Hard to penetrate samples
	Silty Clay of high plasticity		Silty Clay of medium plasticity				

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2371027.142 E 284299.511	Dia. of The Hole : 150mm
Collar Elevation (m) : 9.225	Chainage (m) : 293000	Date Started : 20.04.2017
Ground Elevation (m) : 9.225	Ground Water Table(m): 2.00	Date Completed : 20.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
9.225	0.00	Black Silty SAND (SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.
8.725	-0.50										
8.225	1.00	Stiff, black Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	2	4	5	9	Ground water table encountered at 2.00m depth below existing ground level, measured on 21/04/2017
7.725	1.50				UDS-1	1.50-1.80					
7.225	2.00	Stiff to very stiff, black Silty CLAY of medium plasticity, medium expansive (CI)		3.50	SPT-2	2.00-2.45	4	5	8	13	
6.725	2.50				SPT-3	3.00-3.45	3	6	8	14	
6.225	3.00				SPT-4	4.00-4.45	5	7	9	16	
5.725	3.50				UDS/DS-2	4.50-4.80					
5.225	4.00				SPT-5	5.00-5.45	7	10	13	23	
4.725	4.50				SPT-6	6.00-6.45	9	12	16	28	
4.225	5.00	Very stiff to hard, brown Clayey SILT of high plasticity, low expansive (MH)		3.00	SPT-7	7.00-7.45	11	16	18	34	
3.725	5.50				SPT-8	8.00-8.45	13	17	21	38	
3.225	6.00				SPT-9	9.00-9.45	16	19	24	43	
2.725	6.50				SPT-10	10.00-10.45	10	22	28	50	
2.225	7.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-11	11.00-11.45	21	29	38	67	
1.725	7.50				SPT-12	12.00-12.45	27	31	43	74	
1.225	8.00										
0.725	8.50	Very dense, brown Silty SAND (SM)		1.45							
-0.225	9.00										
-0.725	9.50										
-1.225	10.00										
-1.725	10.50										
-2.225	11.00										
-2.725	11.50										
-2.775	12.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Sand	Silty Clay of high plasticity	Silty Clay of medium plasticity	Clayey Silt of high plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2371930.130 E 284729.176 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.451 Chainage (m) : 294000 Date Started : 21.04.2017
Ground Elevation (m) : 12.451 Ground Water Table(m): 3.10 Date Completed : 21.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks					
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE						
12.451	0.00	Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.					
11.951	0.50															
11.451	1.00															
10.951	1.50															
10.451	2.00															
9.951	2.50															
9.451	3.00															
8.951	3.50															
8.451	4.00															
7.951	4.50				Very stiff to very hard, brown Silty CLAY of medium plasticity (CI)		8.00	SPT-4	4.00-4.45	9		7	11	18	Ground water table encountered at 3.10m depth below existing ground level, measured on 22/04/2017	
7.451	5.00							UDS/DS-2	4.50-4.80							
6.951	5.50							SPT-5	5.00-5.45	6		8	12	20		
6.451	6.00															
5.951	6.50	SPT-6	6.00-6.45	13				10	18	28						
5.451	7.00															
4.951	7.50	SPT-7	7.00-7.45	14				19	20	39						
4.451	8.00															
3.951	8.50	SPT-8	8.00-8.45	16				18	22	40						
3.451	9.00															
2.951	9.50	SPT-9	9.00-9.45	13				20	25	45						
2.451	10.00															
1.951	10.50	SPT-10	10.00-10.45	17	22	28	50									
1.451	11.00															
0.951	11.50	SPT-11	11.00-11.45	24	27	35	62									
0.451	12.00	Very dense, brown Sandy SILT, non plastic in nature (ML)		0.45	SPT-12	12.00-12.45	23	28	34	62						
	12.45															

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of medium plasticity
 Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2372833.119 E 285158.842	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.000	Chainage (m) : 295000	Date Started : 21.04.2017
Ground Elevation (m) : 17.000	Ground Water Table(m): 3.20	Date Completed : 21.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
17.000	0.00	Medium stiff, black Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.		
16.500	0.50												
15.500	1.50				SPT-1	1.00-1.45	2	3	5	8			
15.000	2.00				UDS-1	1.50-1.80							
14.500	2.50	Stiff to very stiff, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-2	2.00-2.45	4	6	7	13	Ground water table encountered at 3.20m depth below existing ground level, measured on 22/04/2017		
14.000	3.00												
13.500	3.50				SPT-3	3.00-3.45	4	7	9	16			
13.000	4.00												
12.500	4.50				SPT-4	4.00-4.45	7	9	11	20			
12.000	5.00				UDS/DS-2	4.50-4.80							
11.500	5.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.00	SPT-5	5.00-5.45	5	7	11	18			
11.000	6.00												
10.500	6.50				SPT-6	6.00-6.45	10	13	16	29			
10.000	7.00												
9.500	7.50				SPT-7	7.00-7.45	10	14	19	33			
9.000	8.00												
8.500	8.50												
8.000	9.00	Hard, brown Silty CLAY of high plasticity (CH)		1.00	SPT-8	8.00-8.45	13	15	23	38			
7.500	9.50												
7.000	10.00				SPT-9	9.00-9.45	18	22	18	40			
6.500	10.50	Very dense, yellow Silty SAND (SM)		2.45	SPT-10	10.00-10.45	29	27	31	58			
6.000	11.00												
5.500	11.50				SPT-11	11.00-11.45	18	23	28	51			
5.000	12.00							SPT-12	12.00-12.45	19	27	36	63

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Clayey Silt of medium plasticity	Silty Clay of medium plasticity	Silty Sand

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2374639.095 E 286018.172	Dia. of The Hole : 150mm
Collar Elevation (m) : 23.472	Chainage (m) : 297000	Date Started : 22.04.2017
Ground Elevation (m) : 23.472	Ground Water Table(m): 3.20	Date Completed : 22.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
23.472	0.00	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.
22.972	0.50										
22.472	1.00	Medium stiff / stiff, black Silty CLAY of medium plasticity (Cl)		0.50	SPT-1	1.00-1.45	2	3	5	8	
21.972	1.50										
21.472	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.50	UDS-1	1.50-1.80					
21.072	2.50				SPT-2	2.00-2.45	3	4	7	11	
20.572	3.00				SPT-3	3.00-3.45	5	3	8	11	
20.072	3.50				SPT-4	4.00-4.45	8	10	13	23	
19.572	4.00				UDS/DS-2	4.50-4.80					
18.972	4.50	Very stiff, brown Silty CLAY of medium plasticity (Cl)		1.00	SPT-5	5.00-5.45	7	10	12	22	
18.472	5.00										
17.972	5.50	Medium dense to dense, yellow Silty SAND with gravels (SM)		2.00	SPT-6	6.00-6.45	11	13	19	32	
17.472	6.00				SPT-7	7.00-7.45	17	21	24	45	
16.972	6.50										
16.472	7.00	Very hard, yellow Silty CLAY of high plasticity with gravels (CH)		3.00	SPT-8	8.00-8.45	19	23	27	50	
15.972	7.50				SPT-9	9.00-9.45	21	28	31	59	
15.472	8.00				SPT-10	10.00-10.45	29	30	37	67	
14.972	8.50										
14.472	9.00	Very dense, yellow Silty SAND (SM-ML)		0.45	SPT-11	11.00-11.45	27	35	42	77	
13.972	9.50										
13.472	10.00										
12.972	10.50										
12.472	11.00										

Ground water table encountered at 3.20m depth below existing ground level, measured on 23/04/2017

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Silty Clay of medium plasticity	Silty Clay of high plasticity	Silty SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2375555.189 E 286417.791	Dia. of The Hole :	150mm	
Collar Elevation (m) :	27.630	Chainage (m) :	298000	Date Started :	24.04.2017
Ground Elevation (m) :	27.630	Ground Water Table(m):	1.90	Date Completed :	25.04.2017
Total Depth (m) :	11.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
27.630	0.00	Medium stiff, black Silty CLAY of high plasticity, low expansive (CH)		1.50		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table encountered at 1.90m depth below existing ground level, measured on 26/04/2017
27.130	0.50											
26.630	1.00											
26.130	1.50	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		2.50		SPT-1	1.00-1.45	2	2	3	5	
25.630	2.00					UDS-1	1.50-1.80					
25.130	2.50					SPT-2	2.00-2.45	3	4	6	10	
24.630	3.00					SPT-3	3.00-3.45	9	10	12	22	
24.130	3.50	Very stiff to hard, yellowish brown Clayey SILT of high plasticity, low expansive (MH)		3.00		SPT-4	4.00-4.45	7	10	11	21	
23.630	4.00					UDS/DS-2	4.50-4.80					
23.130	4.50					SPT-5	5.00-5.45	9	11	16	27	
22.630	5.00					SPT-6	6.00-6.45	12	20	25	45	
22.130	5.50					SPT-7	7.00-7.45	17	23	27	50	
21.630	6.00	Hard to very hard, yellow Silty CLAY of medium plasticity (CI)		4.00		SPT-8	8.00-8.45	16	20	24	44	
21.130	6.50					SPT-9	9.00-9.45	18	23	26	49	
20.630	7.00					SPT-10	10.00-10.45	20	22	36	58	
20.130	7.50					SPT-11	11.00-11.45	20	24	37	61	
19.630	8.00											
19.130	8.50											
18.630	9.00											
18.130	9.50											
17.630	10.00											
17.130	10.50											
16.630	11.00	Hard to very hard, yellow Silty CLAY of high plasticity (CH)		0.45		SPT-11	11.00-11.45	20	24	37	61	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		Slipped / Hard to penetrate samples
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Clayey Silt of high plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2376520.796 E 286673.314	Dia. of The Hole : 150mm
Collar Elevation (m) : 27.408	Chainage (m) : 299000	Date Started : 09.06.2017
Ground Elevation (m) : 27.408	Ground Water Table(m): Not Met With	Date Completed : 09.06.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
27.408	0.00	Hard to very hard, black and brown, Silty CLAY of medium plasticity, low expansive (Cl)		12.45	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole			
26.908	0.50													
26.408	1.00													
25.908	1.50							SPT-1	1.00-1.45	9		16	19	35
25.408	2.00							UDS-1	1.50-1.80					
24.908	2.50							SPT-2	2.00-2.45	17		18	25	43
24.408	3.00													
23.908	3.50							SPT-3	3.00-3.45	20		26	24	50
23.408	4.00													
22.908	4.50							SPT-4	4.00-4.45	19		21	30	51
22.408	5.00							UDS/DS-2	4.50-4.80					
21.908	5.50							SPT-5	5.00-5.45	32		18	22	40
21.408	6.00													
20.908	6.50				SPT-6	6.00-6.45	14	24	27	51				
20.408	7.00													
19.908	7.50				SPT-7	7.00-7.45	15	30	33	63				
19.408	8.00													
18.908	8.50				SPT-8	8.00-8.45	31	30	40	70				
18.408	9.00													
17.908	9.50				SPT-9	9.00-9.45	33	31	36	67				
17.408	10.00													
16.908	10.50				SPT-10	10.00-10.45	32	34	40	74				
16.408	11.00													
15.908	11.50				SPT-11	11.00-11.45	37	41	44	85				
15.408	12.00													
					SPT-12	12.00-12.45	30	36	44	80				

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2377510.384 E 286816.918	Dia. of The Hole : 150mm
Collar Elevation (m) : 24.297	Chainage (m) : 300000	Date Started : 08.06.2017
Ground Elevation (m) : 24.297	Ground Water Table(m): Not Met With	Date Completed : 08.06.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
24.297	0.00	Stiff to very stiff, black Silty CLAY of medium plasticity (CI)		3.00		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table was not encountered upto the termination depth of borehole			
23.797	0.50														
23.297	1.00														
22.797	1.50								SPT-1	1.00-1.45	6		5	9	14
22.297	2.00								UDS-1	1.50-1.80					
21.797	2.50								SPT-2	2.00-2.45	6		7	11	18
21.297	3.00														
20.797	3.50								SPT-3	3.00-3.45	8		9	11	20
20.297	4.00														
19.797	4.50								SPT-4	4.00-4.45	7		11	14	25
19.297	5.00				Very stiff to very hard, yellowish brown Silty CLAY of medium plasticity (CI)		8.45		UDS/DS-2	4.50-4.80					
18.797	5.50								SPT-5	5.00-5.45	8	11	14	25	
18.297	6.00														
17.797	6.50								SPT-6	6.00-6.45	11	16	21	37	
17.297	7.00														
16.797	7.50								SPT-7	7.00-7.45	16	21	24	45	
16.297	8.00														
15.797	8.50								SPT-8	8.00-8.45	14	26	30	56	
15.297	9.00														
14.797	9.50								SPT-9	9.00-9.45	19	22	31	53	
14.297	10.00														
13.797	10.50					SPT-10	10.00-10.45	21	31	34	65				
13.297	11.00														
						SPT-11	11.00-11.45	24	30	41	71				

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity			

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2378500.804 E 286955.004	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.834	Chainage (m) : 301000	Date Started : 07.06.2017
Ground Elevation (m) : 21.834	Ground Water Table(m) : Not Met With	Date Completed : 07.06.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
21.834	0.00	Black Silty SAND (SM-ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.
21.334	0.50										
20.834	1.00	Very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		4.00	SPT-1	1.00-1.45	10	11	9	20	Ground water table was not encountered upto termination of borehole.
20.334	1.50				UDS-1	1.50-1.80					
19.834	2.00				SPT-2	2.00-2.45	12	10	11	21	
19.334	2.50				SPT-3	3.00-3.45	6	12	14	26	
18.834	3.00				SPT-4	4.00-4.45	7	13	15	28	
18.334	3.50				UDS/DS-2	4.50-4.80					
17.834	4.00				SPT-5	5.00-5.22	52	100/7	-	>100	
17.334	4.50				SPT-6	6.00-6.45	18	28	35	63	
16.834	5.00				SPT-7	7.00-7.45	20	30	36	66	
16.334	5.50				SPT-8	8.00-8.45	22	30	37	67	
15.834	6.00				SPT-9	9.00-9.45	21	34	38	72	
15.334	6.50				SPT-10	10.00-10.45	31	39	44	83	
14.834	7.00	SPT-11	11.00-11.45	33	37	45	82				
14.334	7.50	SPT-12	12.00-12.45	31	40	41	81				
14.834	7.00	Very hard, reddish brown Silty CLAY of medium plasticity with gravels (CI)		7.45							
14.334	7.50										
13.834	8.00										
13.334	8.50										
12.834	9.00										
12.334	9.50										
11.834	10.00										
11.334	10.50										
10.834	11.00										
10.334	11.50										
9.834	12.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Sand	Silty Clay of high plasticity	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2379491.224 E 287093.091	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.659	Chainage (m) : 302000	Date Started : 08.06.2017
Ground Elevation (m) : 20.659	Ground Water Table(m): Not Met With	Date Completed : 08.06.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks					
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE						
20.659	0.00	Black Silty CLAY of medium plasticity (CI)		1.00		DS-1	0.00-0.50					Borehole terminated at 13.45m below EGL.				
19.659	1.00															
19.159	1.50	Very stiff, black brown Clayey SILT of medium plasticity (MI)		0.50		SPT-1	1.00-1.45	8	10	13	23	Ground water table was not encountered upto termination upto termination of borehole.				
18.659	2.00					UDS-1	1.50-1.80									
18.159	2.50					SPT-2	2.00-2.45	9	12	14	26					
17.659	3.00					SPT-3	3.00-3.45	10	13	15	28					
17.159	3.50					SPT-4	4.00-4.45	12	18	20	38					
16.659	4.00					UDS/DS-2	4.50-4.80									
16.159	4.50					SPT-5	5.00-5.45	17	17	23	40					
15.659	5.00					SPT-6	6.00-6.45	30	18	24	42					
15.159	5.50					SPT-7	7.00-7.45	28	30	28	58					
14.659	6.00				Very stiff to very hard, brownish yellow Silty CLAY of medium plasticity (CI)		11.50		SPT-8	8.00-8.45	31		30	31	61	
14.159	6.50								SPT-9	9.00-9.45	29		31	32	63	
13.659	7.00								SPT-10	10.00-10.45	28		35	40	75	
13.159	7.50								SPT-11	11.00-11.45	23		37	35	72	
12.659	8.00		SPT-12	12.00-12.45				27	35	43	78					
12.159	8.50		SPT-13	13.00-13.45				30	39	44	83					
11.659	9.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45					SPT-13	13.00-13.45	30	39	44	83		
11.159	9.50															
10.659	10.00															
10.159	10.50															
9.659	11.00															
9.159	11.50															
8.659	12.00															
8.159	12.50															
7.659	13.00															

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey silt of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2381472.065 E 287369.264	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.448	Chainage (m) : 304000	Date Started : 02.06.2017
Ground Elevation (m) : 20.448	Ground Water Table(m): Not Met With	Date Completed : 03.06.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
20.448	0.00	Very stiff to hard, brownish yellow Silty CLAY of medium plasticity, low expansive (CI)		8.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL. Ground water table was not encountered upto termination of borehole.		
19.948	0.50												
19.448	1.00												
18.948	1.50												
18.448	2.00												
17.948	2.50												
17.448	3.00												
16.948	3.50												
16.448	4.00												
15.948	4.50												
15.448	5.00												
14.948	5.50				Hard to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)		4.45	SPT-1	1.00-1.45	7		8	11
18.448	2.00	UDS-1	1.50-1.80										
17.948	2.50												
17.448	3.00												
16.948	3.50												
16.448	4.00												
15.948	4.50												
15.448	5.00												
15.448	5.00												
14.948	5.50												
14.448	6.00												
13.948	6.50												
13.448	7.00												
12.948	7.50												
12.448	8.00												
11.948	8.50												
11.448	9.00												
10.948	9.50												
10.448	10.00												
9.948	10.50												
9.448	11.00												
8.948	11.50												
8.448	12.00												

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Silty Clay of high plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2382462.485 E 287507.351	Dia. of The Hole : 150mm
Collar Elevation (m) : 19.839	Chainage (m) : 305000	Date Started : 01.06.2017
Ground Elevation (m) : 19.839	Ground Water Table(m): Not Met With	Date Completed : 01.06.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
19.839	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.		
19.339	0.50												
18.839	1.00	Medium dense, black Silty SAND (SM)		1.00	SPT-1	1.00-1.45	10	12	13	25	Ground water table was not encountered upto termination of borehole.		
18.339	1.50				UDS-1	1.50-1.80							
17.839	2.00												
17.339	2.50				SPT-2	2.00-2.45	21	23	24	47			
16.839	3.00												
16.339	3.50				SPT-3	3.00-3.45	23	24	27	51			
15.839	4.00												
15.339	4.50				SPT-4	4.00-4.45	24	27	28	55			
14.839	5.00				UDS-2	4.50-4.80							
14.339	5.50	Hard to very hard, brownish yellow Silty CLAY of medium plasticity, low expansive (CI)		7.00	SPT-5	5.00-5.45	25	28	29	57			
13.839	6.00												
13.339	6.50							SPT-6	6.00-6.45	31		32	34
12.839	7.00												
12.339	7.50							SPT-7	7.00-7.45	20	33	35	68
11.839	8.00												
11.339	8.50							SPT-8	8.00-8.45	31	35	30	65
10.839	9.00												
10.339	9.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		3.00	SPT-9	9.00-9.45	23	34	32	66			
9.839	10.00												
9.339	10.50							SPT-10	10.00-10.45	28	37	40	77
8.839	11.00												
8.339	11.50				SPT-11	11.00-11.45	30	40	41	81			
7.839	12.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45	SPT-12	12.00-12.45	35	44	45	89			
	12.45												

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Sand
 Undisturbed Sample
 Silty Clay of medium plasticity
 Sandy SILT
 Clayey SILT of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2383403.384 E 287638.533	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.322	Chainage (m) : 305950	Date Started : 25.04.2017
Ground Elevation (m) : 17.322	Ground Water Table(m) : 1.90	Date Completed : 25.04.2017
Total Depth (m) : 10.05	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
17.322	0.00	Stiff, black Silty CLAY of medium plasticity, low expansive (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.05m below EGL.				
16.822	0.50														
16.322	1.00														
15.822	1.50				SPT-1	1.00-1.45	3	4	7	11					
15.322	2.00	Stiff, black Clayey SILT of medium plasticity (MI)		1.50	UDS-1	1.50-1.80						Ground water table encountered at 1.90m depth below existing ground level, measured on 25/04/2017			
14.822	2.50							SPT-2	2.00-2.45	4			5	7	12
14.322	3.00														
13.822	3.50				SPT-3	3.00-3.45	6	9	11	20					
13.322	4.00	Dense to very dense, reddish brown Silty SAND with gravels (SM-ML)		7.05											
12.822	4.50							SPT-4	4.00-4.45	10			12	16	28
12.322	5.00							UDS/DS-2	4.50-4.80						
11.822	5.50							SPT-5	5.00-5.45	11	17		19	36	
11.322	6.00							SPT-6	6.00-6.24	12	75/9		-	>100	
10.822	6.50														
10.322	7.00				SPT-7	7.00-7.24	21	75/9	-	>100					
9.822	7.50														
9.322	8.00				SPT-8	8.00-8.29	35	75/14	-	>100					
8.822	8.50														
8.322	9.00				SPT-9	9.00-9.23	49	75/8	-	>100					
7.822	9.50														
7.322	10.00				SPT-10	10.00-10.05	75/5	-	-	>100					

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Sand with gravels
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2384443.325 E 287783.524	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.848	Chainage (m) : 307000	Date Started : 30.05.2017
Ground Elevation (m) : 16.848	Ground Water Table(m) : Not Met With	Date Completed : 30.05.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.848	0.00	Very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.	
16.348	0.50											
15.848	1.00											
15.348	1.50				SPT-1	1.00-1.45	8	10	13	23		
14.848	2.00				UDS-1	1.50-1.80						
14.348	2.50	SPT-2	2.00-2.45	15	11	14	25					
13.848	3.00											
13.348	3.50	Dense, yellow Sandy SILT, non plastic in nature (ML)		2.00	SPT-3	3.00-3.45	16	12	20	32		
12.848	4.00											
12.348	4.50				SPT-4	4.00-4.45	17	18	20	38		
11.848	5.00											
11.348	5.50	Hard to very hard, yellow Silty CLAY of low plasticity (CL)		1.00	UDS/DS-2	4.50-4.80						
10.848	6.00				SPT-5	5.00-5.45	22	27	28	55		
10.348	6.50	Very dense, yellow Silty SAND (SM-ML)		3.00	SPT-6	6.00-6.45	27	28	30	58		
9.848	7.00											
9.348	7.50				SPT-7	7.00-7.45	23	30	40	70		
8.848	8.00											
8.348	8.50				SPT-8	8.00-8.45	30	34	45	79		
7.848	9.00											
7.348	9.50	Very dense, yellow Sandy SILT non plastic in nature (ML-SM)		2.00	SPT-9	9.00-9.45	32	36	44	80		
6.848	10.00											
6.348	10.50				SPT-10	10.00-10.45	31	37	46	83		
5.848	11.00	Very hard, yellow Silty CLAY of medium plasticity (CI)		0.45								
	11.45				SPT-11	11.00-11.45	38	38	42	80		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Sipped / Hard to penetrate samples
Silty Clay of medium plasticity	Sandy SILT	Silty Clay of low plasticity	Silty SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2385433.745 E 287921.610	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.216	Chainage (m) : 308000	Date Started : 03.05.2017
Ground Elevation (m) : 15.216	Ground Water Table(m): 1.20	Date Completed : 03.05.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.216	0.00	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		6.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
14.716	0.50											
14.216	1.00											
13.716	1.50											
13.216	2.00											
12.716	2.50											
12.216	3.00											
11.716	3.50											
11.216	4.00											
10.716	4.50											
10.216	5.00	Hard to very hard, yellow Clayey SILT of high plasticity (MH)		4.00	UDS-1	1.50-1.80					Ground water table encountered at 1.20m depth below existing ground level, measured on 04/05/2017	
9.716	5.50											
9.216	6.00											
8.716	6.50											
8.216	7.00											
7.716	7.50											
7.216	8.00											
6.716	8.50											
6.216	9.00											
5.716	9.50											
5.216	10.00	Very hard, yellow Silty CLAY of high plasticity, medium expansive (CH)		0.45	UDS/DS-2	4.50-4.80						
	10.45											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Silty Clay of high plasticity
 Clayey Silt of high plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2386424.165 E 288059.697	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.972	Chainage (m) : 309000	Date Started : 03.05.2017
Ground Elevation (m) : 14.972	Ground Water Table(m) : 1.50	Date Completed : 03.05.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
14.972	0.00	Medium stiff to very hard, black and brown Silty CLAY of medium plasticity, low expansive (Cl)		11.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table encountered at 1.50m depth below existing ground level, measured on 04/05/2017	
14.472	0.50											
13.972	1.00											
13.472	1.50				SPT-1	1.00-1.45	2	2	4	6		
12.972	2.00				UDS-1	1.50-1.80						
12.472	2.50				SPT-2	2.00-2.45	2	4	5	9		
11.972	3.00											
11.472	3.50				SPT-3	3.00-3.45	3	4	7	11		
10.972	4.00											
10.472	4.50				SPT-4	4.00-4.45	5	7	10	17		
9.972	5.00				UDS/DS-2	4.50-4.80						
9.472	5.50	SPT-5	5.00-5.45	7	9	15	24					
8.972	6.00											
8.472	6.50	SPT-6	6.00-6.45	10	14	18	32					
7.972	7.00											
7.472	7.50	SPT-7	7.00-7.45	12	17	24	41					
6.972	8.00											
6.472	8.50	SPT-8	8.00-8.45	16	19	26	45					
5.972	9.00											
5.472	9.50	SPT-9	9.00-9.45	16	21	25	46					
4.972	10.00											
4.472	10.50	SPT-10	10.00-10.45	19	23	27	50					
3.972	11.00	Very hard, dark brown Clayey SILT of medium plasticity (MI) _{1.45m}		0.45	SPT-11	11.00-11.45	22	26	32	58		

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2388405.006 E 288335.870	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.646	Chainage (m) : 311000	Date Started : 30.04.2017
Ground Elevation (m) : 16.646	Ground Water Table(m): 2.50	Date Completed : 02.05.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.646	0.00	Medium stiff to very stiff, black Silty CLAY of high plasticity, low expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
16.146	0.50											
15.646	1.00											
15.146	1.50				SPT-1	1.00-1.45	1	2	4	6		
14.646	2.00				UDS-1	1.50-1.80						
14.146	2.50				SPT-2	2.00-2.45	5	6	8	14		
13.646	3.00											
13.146	3.50				SPT-3	3.00-3.45	9	10	12	22		Ground water table encountered at 2.50m depth below existing ground level, measured on 03/05/2017
12.646	4.00											
12.146	4.50				Very stiff to very hard, brownish yellow Silty CLAY of medium plasticity (CI)		6.00	SPT-4	4.00-4.45	11		13
11.646	5.00	UDS/DS-2	4.50-4.80									
11.146	5.50	SPT-5	5.00-5.45	13				15	16	31		
10.646	6.00											
10.146	6.50	SPT-6	6.00-6.45	14				17	21	38		
9.646	7.00											
9.146	7.50	SPT-7	7.00-7.45	21				23	29	52		
8.646	8.00											
8.146	8.50	SPT-8	8.00-8.45	25				28	36	64		
7.646	9.00											
7.146	9.50	SPT-9	9.00-9.45	22	27	32	59					
6.646	10.00	Very hard, yellow Silty CLAY of high plasticity, medium expansive (CH)		0.45								
	10.45				SPT-10	10.00-10.45	27	29	39	68		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2389395.426 E 288473.957	Dia. of The Hole : 150mm
Collar Elevation (m) : 16.920	Chainage (m) : 312000	Date Started : 29.04.2017
Ground Elevation (m) : 16.920	Ground Water Table(m): 2.70	Date Completed : 29.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.920	0.00	Stiff, black Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table encountered at 2.70m depth below existing ground level, measured on 30/04/2017	
16.420	0.50											
15.920	1.00											
15.420	1.50	Very stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		2.50	SPT-1	1.00-1.45	2	4	6	10		
14.920	2.00				UDS-1	1.50-1.80						
14.420	2.50				SPT-2	2.00-2.45	4	7	9	16		
13.920	3.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-3	3.00-3.45	7	8	12	20		
13.420	3.50											
12.920	4.00				SPT-4	4.00-4.45	12	14	15	29		
12.420	4.50	Very stiff, brown Silty CLAY of medium plasticity (CI)		2.00	UDS/DS-2	4.50-4.80						
11.920	5.00				SPT-5	5.00-5.45	11	13	16	29		
11.420	5.50											
10.920	6.00	Very hard, brown Clayey SILT of medium plasticity (MI)		2.00	SPT-6	6.00-6.11	50/11	-	-	>100		
10.420	6.50											
9.920	7.00				SPT-7	7.00-7.14	50/14	-	-	>100		
9.420	7.50	Hard to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)		3.45	SPT-8	8.00-8.45	13	18	27	45		
8.920	8.00											
8.420	8.50				SPT-9	9.00-9.45	17	23	32	55		
7.920	9.00											
7.420	9.50				SPT-10	10.00-10.45	24	27	33	60		
6.920	10.00											
6.420	10.50											
5.920	11.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2390387.418 E 288598.919	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.141	Chainage (m) : 313000	Date Started : 30.04.2017
Ground Elevation (m) : 14.141	Ground Water Table(m) : 3.00	Date Completed : 30.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
14.141	0.00	Stiff, black Silty CLAY of low plasticity (CL)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.			
13.641	0.50													
13.141	1.00													
12.641	1.50				SPT-1	1.00-1.45	3	4	5	9				
12.141	2.00	Stiff to very stiff, brown Clayey SILT of medium plasticity (MI)		3.00	UDS-1	1.50-1.80								
11.641	2.50													
11.141	3.00							SPT-2	2.00-2.45	5		5	8	13
10.641	3.50							SPT-3	3.00-3.45	6		8	11	19
10.141	4.00													
9.641	4.50				SPT-4	4.00-4.45	8	11	16	27				
9.141	5.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		4.50	UDS/DS-2	4.50-4.80								
8.641	5.50													
8.141	6.00													
7.641	6.50							SPT-5	5.00-5.45	10	14	18	32	
7.141	7.00							SPT-6	6.00-6.45	16	18	24	42	
6.641	7.50							SPT-7	7.00-7.45	19	23	27	50	
6.141	8.00													
5.641	8.50				SPT-8	8.00-8.45	20	25	29	54				
5.141	9.00	Very dense, yellow Silty SAND (SM-ML)		1.45										
4.641	9.50							SPT-9	9.00-9.45	23	30	38	68	
4.141	10.00							SPT-10	10.00-10.45	29	35	42	77	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of low plasticity	Clayey Silt of medium plasticity	Silty Clay of medium plasticity	Silty Sand

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2392385.086 E 288542.726 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 8.890 **Chainage (m) :** 315000 **Date Started :** 28.04.2017
Ground Elevation (m) : 8.890 **Ground Water Table(m):** 2.60 **Date Completed :** 28.04.2017
Total Depth (m) : 11.28 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
8.890	0.00	Stiff to very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 11.28m below EGL.	
8.390	0.50											
7.890	1.00											
7.390	1.50				SPT-1	1.00-1.45	2	3	5	8		
6.890	2.00				UDS-1	1.50-1.80						
6.390	2.50				SPT-2	2.00-2.45	5	8	10	18		
5.890	3.00											
5.390	3.50				SPT-3	3.00-3.45	9	12	14	26		
4.890	4.00											
4.390	4.50				SPT-4	4.00-4.45	9	10	13	23		
3.890	5.00	UDS/DS-2	4.50-4.80									
3.390	5.50	SPT-5	5.00-5.45	10	14	16	30					
2.890	6.00											
2.390	6.50	SPT-6	6.00-6.45	21	27	35	62					
1.890	7.00	Medium dense to very dense, black Sandy SILT, non plastic in nature (ML / ML-SM)		8.00	SPT-7	7.00-7.45	23	31	38	69	Ground water table encountered at 2.60m depth below existing ground level, measured on 29/04/2017	
1.390	7.50											
0.890	8.00											
0.390	8.50				SPT-8	8.00-8.45	14	24	27	51		
-0.110	9.00											
-0.610	9.50				SPT-9	9.00-9.45	17	21	25	46		
-1.110	10.00											
-1.610	10.50				SPT-10	10.00-10.45	22	28	30	58		
-2.110	11.00											
					Vey dense, brown Silty SAND with gravels (SM-ML)		0.28	SPT-11	11.00-11.28	39		75/13

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty Sand
 Slipped / Hard to penetrate samples

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2393383.607 E 288488.350	Dia. of The Hole : 150mm
Collar Elevation (m) : 7.221	Chainage (m) : 316000	Date Started : 27.04.2017
Ground Elevation (m) : 7.221	Ground Water Table(m) : 2.80	Date Completed : 28.04.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
7.221	0.00	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.	
6.721	0.50											
6.221	1.00											
5.721	1.50	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		6.00	SPT-1	1.00-1.45	4	5	8	13		
5.221	2.00				UDS-1	1.50-1.80						
4.721	2.50				SPT-2	2.00-2.45	5	8	11	19		
4.221	3.00											
3.721	3.50				SPT-3	3.00-3.45	5	7	10	17		
3.221	4.00											
2.721	4.50				SPT-4	4.00-4.45	8	11	14	25		
2.221	5.00				UDS/DS-2	4.50-4.80						
1.721	5.50				SPT-5	5.00-5.45	6	9	12	21		
1.221	6.00											
0.721	6.50				SPT-6	6.00-6.45	9	15	17	32		
0.221	7.00											
-0.279	7.50	Dense to very dense, black Silty SAND (SM)		4.45	SPT-7	7.00-7.45	12	17	21	38	Ground water table encountered at 2.80m depth below existing ground level, measured on 29/04/2017	
-0.779	8.00											
-1.279	8.50				SPT-8	8.00-8.45	28	34	37	71		
-1.779	9.00											
-2.279	9.50				SPT-9	9.00-9.45	32	36	42	78		
-2.779	10.00											
-3.279	10.50				SPT-10	10.00-10.45	28	37	41	78		
-3.779	11.00											
					SPT-11	11.00-11.45	31	39	44	83		

Disturbed Sample
 Silty Clay of low plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Silty Sand
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2394382.127 E 288433.975	Dia. of The Hole : 150mm
Collar Elevation (m) : 6.484	Chainage (m) : 317000	Date Started : 28.04.2017
Ground Elevation (m) : 6.484	Ground Water Table(m) : 2.50	Date Completed : 28.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
6.484	0.00	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
5.984	0.50											
5.484	1.00	Stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		5.00	SPT-1	1.00-1.45	4	3	7	10	Ground water table encountered at 2.50m depth below existing ground level, measured on 29/04/2017	
4.984	1.50				UDS-1	1.50-1.80						
4.484	2.00				SPT-2	2.00-2.45	4	6	19	25		
3.984	2.50											
3.484	3.00				SPT-3	3.00-3.45	5	7	11	18		
2.984	3.50											
2.484	4.00				SPT-4	4.00-4.45	5	9	14	23		
1.984	4.50				UDS/DS-2	4.50-4.80						
1.484	5.00				SPT-5	5.00-5.45	5	14	18	32		
0.984	5.50											
0.484	6.00	Hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-6	6.00-6.45	8	16	19	35		
-0.016	6.50											
-0.516	7.00				SPT-7	7.00-7.45	11	17	20	37		
-1.016	7.50											
-1.516	8.00	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.00	SPT-8	8.00-8.45	13	20	23	43		
-2.016	8.50											
-2.516	9.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-9	9.00-9.45	16	24	28	52		
-3.016	9.50											
-3.516	10.00				SPT-10	10.00-10.45	18	24	29	53		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Sipped / Hard to penetrate
Silty Clay of low plasticity	Silty Clay of high plasticity	Silty Clay of medium plasticity	Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2395380.648 E 288379.599	Dia. of The Hole : 150mm
Collar Elevation (m) : 7.685	Chainage (m) : 318000	Date Started : 27.04.2017
Ground Elevation (m) : 7.685	Ground Water Table(m) : 4.10	Date Completed : 27.04.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
7.685	0.00	Medium stiff to very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		5.00	DS-1	0.00-0.50					Borehole terminated at 13.45m below EGL.				
7.185	0.50														
6.685	1.00														
6.185	1.50							SPT-1	1.00-1.45	3		2	5	7	
5.685	2.00							UDS-1	1.50-1.80						
5.185	2.50							SPT-2	2.00-2.45	5		7	9	16	
4.685	3.00														
4.185	3.50							SPT-3	3.00-3.45	7		10	12	22	
3.685	4.00														
3.185	4.50							SPT-4	4.00-4.45	9		11	13	24	
2.685	5.00							UDS/DS-2	4.50-4.80						
2.185	5.50				Medium dense to dense, brown Silty SAND (SM)		3.00	SPT-5	5.00-5.45	10		12	16	28	Ground water table encountered at 4.10m depth below existing ground level, measured on 28/04/2017
1.685	6.00														
1.185	6.50							SPT-6	6.00-6.45	10	22	25	47		
0.685	7.00														
0.185	7.50				SPT-7	7.00-7.45	16	24	24	48					
-0.315	8.00	Dense to very dense, brown Fine to Medium SAND (SP-SM)		3.00	SPT-8	8.00-8.45	20	24	31	55					
-0.815	8.50														
-1.315	9.00							SPT-9	9.00-9.45	17	21	26	47		
-1.815	9.50														
-2.315	10.00							SPT-10	10.00-10.45	22	27	33	60		
-2.815	10.50	Very dense, brown Silty SAND (SM)		2.45	SPT-11	11.00-11.45	10	22	28	50					
-3.315	11.00														
-3.815	11.50							SPT-12	12.00-12.45	20	24	30	54		
-4.315	12.00														
-4.815	12.50				SPT-13	13.00-13.45	25	38	34	72					
-5.315	13.00														

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Sand
 Undisturbed Sample
 Fine, medium, coarse Sand
 Slipped / Hard to penetrate samples

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2396379.168 E 288325.223	Dia. of The Hole : 150mm
Collar Elevation (m) : 4.732	Chainage (m) : 319000	Date Started : 26.04.2017
Ground Elevation (m) : 4.732	Ground Water Table(m): 4.00	Date Completed : 26.04.2017
Total Depth (m) : 14.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
4.732	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 14.45m below EGL.	
4.232	0.50											
3.732	1.00	Medium stiff / stiff, black Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	2	3	5	8		
3.232	1.50											
2.732	2.00	Stiff, black Silty CLAY of high plasticity, medium expansive (CH)		0.50	UDS-1	1.50-1.80						
2.232	2.50	Stiff, black Clayey SILT of medium plasticity, low expansive (MI)		1.00	SPT-2	2.00-2.45	4	6	8	14		
1.732	3.00											
1.232	3.50	Medium dense to dense, brown Sandy SILT, non plastic in nature (ML)		4.00	SPT-3	3.00-3.45	5	6	9	15		
0.732	4.00											
0.232	4.50											
-0.268	5.00				UDS/DS-2	4.50-4.80						
-0.768	5.50											
-1.268	6.00											
-1.768	6.50											
-2.268	7.00											
-2.768	7.50											
-3.268	8.00											
-3.768	8.50	Dense to very dense, brown Silty SAND (SM)		7.45	SPT-7	7.00-7.45	14	16	21	37		
-3.268	8.00											
-3.768	8.50											
-4.268	9.00											
-4.768	9.50											
-5.268	10.00											
-5.768	10.50											
-6.268	11.00											
-6.768	11.50											
-7.268	12.00											
-7.768	12.50											
-8.268	13.00											
-8.768	13.50											
-9.268	14.00											

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Clayey Silt of high plasticity	Silty Clay of high plasticity	Clayey Silt of medium plasticity
LOGGED BY :	CHECKED BY :	APPROVED BY :	Silty Sand



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2397377.689 E 288270.847	Dia. of The Hole : 150mm
Collar Elevation (m) : 7.294	Chainage (m) : 320000	Date Started : 26.04.2017
Ground Elevation (m) : 7.294	Ground Water Table(m): 2.80	Date Completed : 26.04.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
7.294	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL. Ground water table encountered at 2.80m depth below existing ground level, measured on 27/04/2017
6.794	0.50										
6.294	1.00	Stiff, black Silty CLAY of medium plasticity (CI)		1.00	SPT-1	1.00-1.45	2	6	6	12	
5.794	1.50				UDS-1	1.50-1.80					
5.294	2.00	Medium dense, black Sandy SILT, non plastic in nature (ML)		1.00	SPT-2	2.00-2.45	5	7	9	16	
4.794	2.50										
4.294	3.00	Very stiff, black Silty CLAY of medium plasticity, low expansive (CI)		1.00	SPT-3	3.00-3.45	7	10	13	23	
3.794	3.50										
3.294	4.00	Medium dense, black Sandy SILT, non plastic in nature (ML)		0.50	SPT-4	4.00-4.45	10	12	13	25	
2.794	4.50				UDS/DS-2	4.50-4.80					
2.294	5.00	Very stiff to hard, black Silty CLAY of medium plasticity (CI)		5.50	SPT-5	5.00-5.45	9	12	14	26	
1.794	5.50										
1.294	6.00										
0.794	6.50										
0.294	7.00										
-0.206	7.50										
-0.706	8.00										
-1.206	8.50										
-1.706	9.00										
-2.206	9.50										
-2.706	10.00										
-3.206	10.50				Dense, blackish grey Silty SAND (SM)		2.45	SPT-10	10.00-10.45	14	19
-3.706	11.00										
-4.206	11.50										
-4.706	12.00										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Silty Clay of medium plasticity	Silty SAND	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2399374.730 E 288162.095 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 16.762 **Chainage (m) :** 322000 **Date Started :** 29.03.2017
Ground Elevation (m) : 16.762 **Ground Water Table(m):** Not Met With **Date Completed :** 29.03.2017
Total Depth (m) : 8.25 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.762	0.00	Very stiff to very hard, black and brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 8.25m below EGL.
16.262	0.50										
15.762	1.00										
15.262	1.50	Very stiff to very hard, black and brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.00	SPT-1	1.00-1.45	4	8	15	23	Ground water table was not encountered upto termination of borehole.
14.762	2.00				UDS-1	1.50-1.80					
14.262	2.50				SPT-2	2.00-2.45	16	24	38	62	
13.762	3.00	Very hard, brown Silty CLAY of low plasticity (CL)		5.25	SPT-3	3.00-3.45	18	29	40	69	
13.262	3.50										
12.762	4.00				SPT-4	4.00-4.45	20	33	44	77	
12.262	4.50	Very hard, brown Silty CLAY of low plasticity (CL)		5.25	UDS-2	4.50-4.80					
11.762	5.00				SPT-5	5.00-5.45	21	36	48	84	
11.262	5.50										
10.762	6.00	Very hard, brown Silty CLAY of low plasticity (CL)		5.25	SPT-6	6.00-6.25	25	100/10	-	>100	
10.262	6.50										
9.762	7.00				SPT-7	7.00-7.45	27	44	49	93	
9.262	7.50	Very hard, brown Silty CLAY of low plasticity (CL)		5.25							
8.762	8.00				SPT-8	8.00-8.25	29	100/10	-	>100	

Disturbed Sample Standard Penetration Test Undisturbed Sample
 Silty Clay of high plasticity Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2401371.771 E 288053.343	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.001	Chainage (m) : 324000	Date Started : 28.03.2017
Ground Elevation (m) : 15.001	Ground Water Table(m) : Not Met With	Date Completed : 28.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.001	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00		DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.
14.501	0.50											
14.001	1.00	Very stiff to very hard, brown Silty CLAY of medium plasticity, low expansive with traces of gravels (CI)		9.45		SPT-1	1.00-1.45	8	12	15	27	Ground water table was not encountered upto termination of borehole.
13.501	1.50					UDS-1	1.50-1.80					
13.001	2.00					SPT-2	2.00-2.45	10	16	20	36	
12.501	2.50											
12.001	3.00					SPT-3	3.00-3.45	13	19	26	45	
11.501	3.50											
11.001	4.00					SPT-4	4.00-4.45	16	27	34	61	
10.501	4.50					UDS-2	4.50-4.80					
10.001	5.00					SPT-5	5.00-5.45	15	30	39	69	
9.501	5.50											
9.001	6.00		SPT-6	6.00-6.45	17	33	41	74				
8.501	6.50											
8.001	7.00		SPT-7	7.00-7.45	20	37	45	82				
7.501	7.50											
7.001	8.00		SPT-8	8.00-8.45	19	40	43	83				
6.501	8.50											
6.001	9.00		SPT-9	9.00-9.45	22	44	47	91				
5.501	9.50											
5.001	10.00		SPT-10	10.00-10.45	25	49	50	99				

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2402370.292 E 287998.967	Dia. of The Hole : 150mm
Collar Elevation (m) : 14.929	Chainage (m) : 325000	Date Started : 30.03.2017
Ground Elevation (m) : 14.929	Ground Water Table(m): Not Met With	Date Completed : 30.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
14.929	0.00	Very stiff to hard, black and brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 9.45m below EGL.
14.429	0.50										
13.929	1.00										
13.429	1.50	Very stiff to hard, black and brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-1	1.00-1.45	5	7	13	20	Ground water table was not encountered upto termination of borehole.
12.929	2.00				UDS-1	1.50-1.80					
12.429	2.50				SPT-2	2.00-2.45	10	14	19	33	
11.929	3.00	Hard to very hard, brown Clayey SILT of medium plasticity (MI)		1.50	SPT-3	3.00-3.45	13	19	26	45	
11.429	3.50										
10.929	4.00										
10.429	4.50	Very hard, brown Silty CLAY of medium plasticity, low expansive with traces of gravels (CI)		4.50	SPT-4	4.00-4.45	12	23	36	59	
9.929	5.00				UDS-2	4.50-4.80					
9.429	5.50				SPT-5	5.00-5.45	15	31	40	71	
8.929	6.00	Very hard, brown Silty CLAY of medium plasticity, low expansive with traces of gravels (CI)		4.50	SPT-6	6.00-6.45	19	35	46	81	
8.429	6.50										
7.929	7.00										
7.429	7.50	Very hard, brown Silty CLAY of medium plasticity, low expansive with traces of gravels (CI)		4.50	SPT-7	7.00-7.45	23	39	51	90	
6.929	8.00										
6.429	8.50										
5.929	9.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45	SPT-8	8.00-8.45	20	43	47	90	
	9.45				SPT-9	9.00-9.45	24	46	52	98	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Clayey Silt of medium plasticity		Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2403368.812 E 287944.592	Dia. of The Hole :	150mm	
Collar Elevation (m) :	14.859	Chainage (m) :	326000	Date Started :	27.03.2017
Ground Elevation (m) :	14.859	Ground Water Table(m) :	Not Met With	Date Completed :	27.03.2017
Total Depth (m) :	12.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
14.859	0.00	Very stiff, black and brown Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.			
14.359	0.50													
13.859	1.00													
13.359	1.50	Very stiff to hard, brown Silty CLAY of medium plasticity with traces of gravels (CI)		2.50	SPT-1	1.00-1.45	6	10	12	22	Ground water table was not encountered upto termination of borehole.			
12.859	2.00				UDS-1	1.50-1.80								
12.359	2.50				SPT-2	2.00-2.45	8	13	16	29				
11.859	3.00													
11.359	3.50				SPT-3	3.00-3.45	10	15	21	36				
10.859	4.00													
10.359	4.50				SPT-4	4.00-4.45	11	20	24	44				
9.859	5.00	Hard to very hard, brown Clayey SILT of medium plasticity with traces of gravels (MI)		5.50	UDS-2	4.50-4.80								
9.359	5.50							SPT-5	5.00-5.45	13		23	26	49
8.859	6.00													
8.359	6.50							SPT-6	6.00-6.45	15		27	30	57
7.859	7.00													
7.359	7.50							SPT-7	7.00-7.45	12	30	36	66	
6.859	8.00													
6.359	8.50							SPT-8	8.00-8.45	17	29	40	69	
5.859	9.00													
5.359	9.50				SPT-9	9.00-9.45	20	33	44	77				
4.859	10.00	Very hard, brown Silty CLAY of medium plasticity with traces of gravels (CI)		2.00										
4.359	10.50							SPT-10	10.00-10.45	21	35	47	82	
3.859	11.00													
3.359	11.50				SPT-11	11.00-11.45	19	39	42	81				
2.859	12.00	Very hard, brown Clayey SILT of medium plasticity with traces of gravels (MI)		0.45										
								SPT-12	12.00-12.45	23	43	47	90	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2405365.853 E 287835.840 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.508 Chainage (m) : 328000 Date Started : 28.03.2017
Ground Elevation (m) : 16.508 Ground Water Table(m) : Not Met With Date Completed : 28.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.508	0.00	Very stiff, black and brown Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
16.008	0.50										
15.508	1.00			2.00	SPT-1	1.00-1.45	9	11	16	27	Ground water table was not encountered upto termination of borehole.
15.008	1.50				UDS-1	1.50-1.80					
14.508	2.00										
14.008	2.50	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		4.00	SPT-2	2.00-2.45	12	15	19	34	
13.508	3.00										
13.008	3.50				SPT-3	3.00-3.45	10	18	23	41	
12.508	4.00										
12.008	4.50				SPT-4	4.00-4.45	14	25	33	58	
11.508	5.00			4.00	UDS-2	4.50-4.80					
11.008	5.50										
10.508	6.00				SPT-5	5.00-5.45	16	30	35	65	
10.008	6.50	Very hard, brown Clayey SILT of medium plasticity (MI)		4.00	SPT-6	6.00-6.45	19	33	39	72	
9.508	7.00										
9.008	7.50				SPT-7	7.00-7.45	21	38	41	79	
8.508	8.00										
8.008	8.50			4.00	SPT-8	8.00-8.45	20	42	45	87	
7.508	9.00										
7.008	9.50			4.00	SPT-9	9.00-9.45	23	44	47	91	
6.508	10.00										
	10.45	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-10	10.00-10.45	22	45	53	98	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2406364.374 E 287781.464	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.700	Chainage (m) : 329000	Date Started : 27.03.2017
Ground Elevation (m) : 15.700	Ground Water Table(m) : Not Met With	Date Completed : 27.03.2017
Total Depth (m) : 8.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
15.700	0.00	Hard, black and brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 8.45m depth below EGL. Ground water table was not encountered upto termination of borehole.		
15.200	0.50												
14.700	1.00												
14.200	1.50				SPT-1	1.00-1.45	9	13	19	32			
13.700	2.00				UDS-1	1.50-1.80							
13.200	2.50				SPT-2	2.00-2.45	11	20	27	47			
12.700	3.00												
12.200	3.50	Very hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		5.45	SPT-3	3.00-3.45	15	28	36	64			
11.700	4.00												
11.200	4.50							SPT-4	4.00-4.45	13	30	39	69
10.700	5.00							UDS-2	4.50-4.80				
10.200	5.50							SPT-5	5.00-5.45	16	37	44	81
9.700	6.00												
9.200	6.50							SPT-6	6.00-6.45	19	42	47	89
8.700	7.00												
8.200	7.50				SPT-7	7.00-7.45	22	38	52	90			
7.700	8.00												
					SPT-8	8.00-8.45	25	43	55	98			



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2407362.894 E 287727.088	Dia. of The Hole :	150mm	
Collar Elevation (m) :	15.441	Chainage (m) :	330000	Date Started :	26.03.2017
Ground Elevation (m) :	15.441	Ground Water Table(m) :	Not Met With	Date Completed :	26.03.2017
Total Depth (m) :	10.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.441	0.00	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
14.941	0.50										
14.441	1.00				SPT-1	1.00-1.45	6	10	13	23	
13.941	1.50	UDS-1	1.50-1.80								
13.441	2.00										
12.941	2.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		2.50	SPT-2	2.00-2.45	9	12	17	29	
12.441	3.00										
11.941	3.50				SPT-3	3.00-3.45	11	16	19	35	
11.441	4.00										
10.941	4.50	Very hard, brown Clayey SILT of medium plasticity, low expansive (MI)		2.50	SPT-4	4.00-4.45	10	20	25	45	
10.441	5.00				UDS-2	4.50-4.80					
9.941	5.50				SPT-5	5.00-5.45	13	23	32	55	
9.441	6.00										
8.941	6.50	Very hard, brown Silty CLAY of medium plasticity (CI)		3.45	SPT-6	6.00-6.45	16	29	40	69	
8.441	7.00										
7.941	7.50				SPT-7	7.00-7.45	17	33	43	76	
7.441	8.00										
6.941	8.50				SPT-8	8.00-8.45	17	37	46	83	
6.441	9.00										
5.941	9.50				SPT-9	9.00-9.45	20	39	45	84	
5.441	10.00										
					SPT-10	10.00-10.45	23	42	50	92	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2408361.415 E 287672.712 Dia. of The Hole : 150mm
Collar Elevation (m) : 14.998 Chainage (m) : 331000 Date Started : 25.03.2017
Ground Elevation (m) : 14.998 Ground Water Table(m) : Not Met With Date Completed : 25.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
14.998	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
14.498	0.50										
13.998	1.00	Very stiff, brown Silty CLAY of low plasticity (CL)		1.00	SPT-1	1.00-1.45	8	12	19	31	Ground water table was not encountered upto termination of borehole.
13.498	1.50				UDS-1	1.50-1.80					
12.998	2.00	Hard to very hard, brown Clayey SILT of medium plasticity with gravels (MI)		2.50	SPT-2	2.00-2.45	10	16	24	40	
12.498	2.50										
11.998	3.00				SPT-3	3.00-3.45	14	23	30	53	
11.498	3.50										
10.998	4.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.50	SPT-4	4.00-4.45	12	29	35	64	
10.498	4.50				UDS-2	4.50-4.80					
9.998	5.00	Very hard, brown Silty CLAY of low plasticity (CL)		4.00	SPT-5	5.00-5.45	16	34	39	73	
9.498	5.50										
8.998	6.00				SPT-6	6.00-6.45	19	40	43	83	
8.498	6.50										
7.998	7.00	Very hard, brown Clayey SILT of medium plasticity with gravels (MI)		1.45	SPT-7	7.00-7.45	21	39	45	84	
7.498	7.50										
6.998	8.00				SPT-8	8.00-8.45	24	38	47	85	
6.498	8.50										
5.998	9.00				SPT-9	9.00-9.45	22	43	52	95	
5.498	9.50										
4.998	10.00				SPT-10	10.00-10.45	20	40	56	96	

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Medium plastic Clay with gravels (Below A Line)
 Silty Clay of medium plasticity
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2409359.935 E 287618.336	Dia. of The Hole : 150mm
Collar Elevation (m) : 13.380	Chainage (m) : 332000	Date Started : 26.03.2017
Ground Elevation (m) : 13.380	Ground Water Table(m) : Not Met With	Date Completed : 26.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
13.380	0.00	Black Clayey SILT of high plasticity, low expansive (MH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.			
12.880	0.50													
12.380	1.00	Very stiff to hard, brown Sandy CLAY / CLAY SILT of low plasticity with gravels (ML-CL)		3.50	SPT-1	1.00-1.45	7	9	12	21	Ground water table was not encountered upto termination of borehole.			
11.880	1.50				UDS-1	1.50-1.80								
11.380	2.00				SPT-2	2.00-2.45	11	16	19	35				
10.880	2.50													
10.380	3.00				SPT-3	3.00-3.45	14	21	26	47				
9.880	3.50													
9.380	4.00				SPT-4	4.00-4.45	16	20	28	48				
8.880	4.50				Brown Silty CLAY of medium plasticity, low expansive (Cl)		0.50	UDS-2	4.50-4.80					
8.380	5.00													
7.880	5.50				Very hard, brown Silty CLAY of low plasticity (CL)		6.00	SPT-5	5.00-5.45	14		25	36	61
7.380	6.00													
6.880	6.50	SPT-6	6.00-6.45	17				28	34	62				
6.380	7.00													
5.880	7.50	SPT-7	7.00-7.45	21				26	38	64				
5.380	8.00													
4.880	8.50	SPT-8	8.00-8.45	22				31	44	75				
4.380	9.00													
3.880	9.50	SPT-9	9.00-9.45	20				34	42	76				
3.380	10.00													
2.880	10.50	SPT-10	10.00-10.45	23	30	41	71							
2.380	11.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45										
	11.45				SPT-11	11.00-11.45	24	35	45	80				

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty Clay of low plasticity	Clayey Silt of medium plasticity
Clayey Silt of high plasticity	Clayey SILT	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2410359.166 E 287604.413	Dia. of The Hole : 150mm
Collar Elevation (m) : 12.713	Chainage (m) : 333000	Date Started : 25.03.2017
Ground Elevation (m) : 12.713	Ground Water Table(m) : Not Met With	Date Completed : 25.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
12.713	0.00	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
12.213	0.50										
11.713	1.00				SPT-1	1.00-1.45	7	11	15	26	
11.213	1.50				UDS-1	1.50-1.80					
10.713	2.00	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		2.50	SPT-2	2.00-2.45	9	14	16	30	
10.213	2.50										
9.713	3.00				SPT-3	3.00-3.45	10	18	19	37	
9.213	3.50										
8.713	4.00				SPT-4	4.00-4.45	13	23	27	50	
8.213	4.50				UDS-2	4.50-4.80					
7.713	5.00				SPT-5	5.00-5.45	15	28	32	60	
7.213	5.50										
6.713	6.00				SPT-6	6.00-6.45	17	30	34	64	
6.213	6.50	Very hard, brown Silty CLAY with gravels of low plasticity (CL)		4.95	SPT-7	7.00-7.45	20	35	39	74	
5.713	7.00										
5.213	7.50				SPT-8	8.00-8.45	23	38	45	83	
4.713	8.00										
4.213	8.50										
3.713	9.00										
					SPT-9	9.00-9.45	17	40	49	89	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of low plasticity		Low Plastic Clay

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2411347.830 E 287746.648	Dia. of The Hole : 150mm
Collar Elevation (m) : 12.623	Chainage (m) : 334000	Date Started : 24.03.2017
Ground Elevation (m) : 12.623	Ground Water Table(m) : Not Met With	Date Completed : 24.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
12.623	0.00	Hard, black Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.	
12.123	0.50											
11.623	1.00											
11.123	1.50	Hard to very hard, brown Silty CLAY of low plasticity (CL)		3.00	SPT-1	1.00-1.45	9	13	19	32	Ground water table was not encountered upto termination of borehole.	
10.623	2.00				UDS-1	1.50-1.80						
10.123	2.50				SPT-2	2.00-2.45	12	17	25	42		
9.623	3.00											
9.123	3.50	Very hard, brown Clayey SILT of medium plasticity (MI)		3.50	SPT-3	3.00-3.45	16	27	32	59		
8.623	4.00											
8.123	4.50				SPT-4	4.00-4.45	19	33	39	72		
7.623	5.00	Very hard, brown Silty CLAY of low plasticity (CL)		1.45	UDS-2	4.50-4.80						
7.123	5.50				SPT-5	5.00-5.45	20	37	42	79		
6.623	6.00											
6.123	6.50	Very hard, brown Silty CLAY of low plasticity (CL)		1.45	SPT-6	6.00-6.45	22	36	47	83		
5.623	7.00											
5.123	7.50				SPT-7	7.00-7.45	18	39	50	89		
4.623	8.00	Very hard, brown Silty CLAY of low plasticity (CL)		1.45	SPT-8	8.00-8.45	23	42	48	90		
4.123	8.50											
3.623	9.00				SPT-9	9.00-9.45	25	47	52	99		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of medium plasticity		Silty Clay of low plasticity		Clayey Silt of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2412303.116 E 288040.228 Dia. of The Hole : 150mm
Collar Elevation (m) : 13.738 Chainage (m) : 335000 Date Started : 23.03.2017
Ground Elevation (m) : 13.738 Ground Water Table(m) : Not Met With Date Completed : 24.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
13.738	0.00	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.	
13.238	0.50											
12.738	1.00	Very stiff to very hard, brown Clayey SILT of medium plasticity with gravels (MI)		3.50	SPT-1	1.00-1.45	6	10	14	24	Ground water table was not encountered upto termination of borehole.	
12.238	1.50				UDS-1	1.50-1.80						
11.738	2.00				SPT-2	2.00-2.45	11	17	23	40		
11.238	2.50											
10.738	3.00				SPT-3	3.00-3.45	16	21	27	48		
10.238	3.50											
9.738	4.00				SPT-4	4.00-4.45	19	29	33	62		
9.238	4.50				UDS-2	4.50-4.80						
8.738	5.00				SPT-5	5.00-5.45	21	32	39	71		
8.238	5.50											
7.738	6.00	Very dense, brown Sandy SILT, non plastic in nature (ML)		2.50	SPT-6	6.00-6.45	18	35	40	75		
7.238	6.50											
6.738	7.00				SPT-7	7.00-7.45	20	37	44	81		
6.238	7.50											
5.738	8.00	Very hard, brown Clayey SILT of low plasticity (CL)		3.45	SPT-8	8.00-8.45	17	40	43	83		
5.238	8.50											
4.738	9.00				SPT-9	9.00-9.45	22	39	47	86		
4.238	9.50											
3.738	10.00				SPT-10	10.00-10.45	24	45	46	91		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Medium plastic Clay with gravels (Below A Line)
 Sandy SILT
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2413247.361 E 288369.472 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.038 Chainage (m) : 336000 Date Started : 23.03.2017
Ground Elevation (m) : 15.038 Ground Water Table(m) : Not Met With Date Completed : 23.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.038	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
14.538	0.50											
14.038	1.00	Very stiff to very hard, brown Clayey SILT of medium plasticity (MI)		3.50	SPT-1	1.00-1.45	8	11	14	25	Ground water table was not encountered upto termination of borehole.	
13.538	1.50				UDS-1	1.50-1.80						
13.038	2.00				SPT-2	2.00-2.45	11	15	19	34		
12.538	2.50											
12.038	3.00				SPT-3	3.00-3.45	10	17	23	40		
11.538	3.50											
11.038	4.00				SPT-4	4.00-4.45	13	19	39	58		
10.538	4.50				UDS-2	4.50-4.80						
10.038	5.00				SPT-5	5.00-5.45	9	20	27	47		
9.538	5.50											
9.038	6.00	Hard to very hard, brown Silty CLAY of low plasticity (CL)		5.50	SPT-6	6.00-6.45	12	24	33	57		
8.538	6.50											
8.038	7.00				SPT-7	7.00-7.45	14	27	36	63		
7.538	7.50											
7.038	8.00				SPT-8	8.00-8.45	17	30	39	69		
6.538	8.50											
6.038	9.00	Very hard, brown Clayey SILT of medium plasticity (MI)		1.45	SPT-9	9.00-9.45	15	33	42	75		
5.538	9.50											
5.038	10.00				SPT-10	10.00-10.45	20	39	46	85		
4.538	10.50											
4.038	11.00				SPT-11	11.00-11.45	24	43	51	94		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Clayey Silt of medium plasticity
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2414191.606 E 288698.716 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.355 Chainage (m) : 337000 Date Started : 22.03.2017
Ground Elevation (m) : 15.355 Ground Water Table(m) : Not Met With Date Completed : 22.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
15.355	0.00	Black Clayey SILT of high plasticity (MH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.				
14.855	0.50														
14.355	1.00	Very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		1.00	SPT-1	1.00-1.45	7	11	14	25	Ground water table was not encountered upto termination of borehole.				
13.855	1.50				UDS-1	1.50-1.80									
13.355	2.00	Very stiff to very hard, brown Silty CLAY of medium plasticity with occasional gravels (CI)		4.00	SPT-2	2.00-2.45	10	13	17	30					
12.855	2.50														
12.355	3.00				SPT-3	3.00-3.45	9	17	20	37					
11.855	3.50														
11.355	4.00				SPT-4	4.00-4.45	11	21	25	46					
10.855	4.50				UDS-2	4.50-4.80									
10.355	5.00				SPT-5	5.00-5.45	14	27	30	57					
9.855	5.50														
9.355	6.00														
8.855	6.50				Very hard, brown Silty CLAY of low plasticity (CL)		4.45	SPT-6	6.00-6.45	17		29	37	66	
8.355	7.00														
7.855	7.50	SPT-7	7.00-7.45	21				33	40	73					
7.355	8.00														
6.855	8.50	SPT-8	8.00-8.45	19				36	39	75					
6.355	9.00														
5.855	9.50	SPT-9	9.00-9.45	22				39	43	82					
5.355	10.00														
								SPT-10	10.00-10.45	24	42	48	90		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Clayey Silt of high plasticity
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2415135.851 E 289027.960	Dia. of The Hole :	150mm	
Collar Elevation (m) :	14.555	Chainage (m) :	338000	Date Started :	22.03.2017
Ground Elevation (m) :	14.555	Ground Water Table(m) :	Not Met With	Date Completed :	22.02.2017
Total Depth (m) :	9.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
14.555	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.		
14.055	0.50												
13.555	1.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	9	12	16	28	Ground water table was not encountered upto termination of borehole.		
13.055	1.50				UDS-1	1.50-1.80							
12.555	2.00												
12.055	2.50				SPT-2	2.00-2.45	13	19	23	42			
11.555	3.00												
11.055	3.50				SPT-3	3.00-3.45	17	22	32	54			
10.555	4.00												
10.055	4.50				SPT-4	4.00-4.45	20	31	39	70			
9.555	5.00				UDS-2	4.50-4.80							
9.055	5.50	Hard to very hard, brown Silty CLAY of low plasticity with occasional gravels (CL)		7.95	SPT-5	5.00-5.45	22	33	41	74			
8.555	6.00												
8.055	6.50							SPT-6	6.00-6.45	19	37	47	84
7.555	7.00												
7.055	7.50							SPT-7	7.00-7.45	21	40	45	85
6.555	8.00												
6.055	8.50							SPT-8	8.00-8.45	23	39	48	87
5.555	9.00												
								SPT-9	9.00-9.45	25	43	52	95

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2416080.095 E 289357.203	Dia. of The Hole : 150mm
Collar Elevation (m) : 15.023	Chainage (m) : 339000	Date Started : 21.03.2017
Ground Elevation (m) : 15.023	Ground Water Table(m) : Not Met With	Date Completed : 21.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.023	0.00	Very stiff, black and brown Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
14.523	0.50										
14.023	1.00				SPT-1	1.00-1.45	7	10	13	23	
13.523	1.50				UDS-1	1.50-1.80					
13.023	2.00	Very stiff to hard, brown Silty CLAY of low plasticity with gravels (CL)		2.50	SPT-2	2.00-2.45	9	12	15	27	Ground water table was not encountered upto termination of borehole.
12.523	2.50										
12.023	3.00				SPT-3	3.00-3.45	10	16	20	36	
11.523	3.50										
11.023	4.00				SPT-4	4.00-4.45	11	17	25	42	
10.523	4.50				UDS-2	4.50-4.80					
10.023	5.00	Very dense, brown Sandy SILT, non plastic in nature (ML-SM)		5.50	SPT-5	5.00-5.45	13	21	34	55	
9.523	5.50										
9.023	6.00				SPT-6	6.00-6.45	16	29	40	69	
8.523	6.50										
8.023	7.00				SPT-7	7.00-7.45	19	31	39	70	
7.523	7.50										
7.023	8.00				SPT-8	8.00-8.45	21	35	43	78	
6.523	8.50										
6.023	9.00				SPT-9	9.00-9.45	26	39	46	85	
5.523	9.50										
5.023	10.00	Very dense, brown Sandy SILT / Silty SAND (SM-ML)		0.45	SPT-10	10.00-10.45	24	40	51	91	
	10.45										

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Low Plastic Clay		Sandy SILT
			Silty SAND		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2417024.340 E 289686.447 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.579 Chainage (m) : 340000 Date Started : 21.03.2017
Ground Elevation (m) : 15.579 Ground Water Table(m) : Not Met With Date Completed : 21.03.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.579	0.00	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.	
15.079	0.50											
14.579	1.00											
14.079	1.50	Brown Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	7	11	13	24		
13.579	2.00				UDS-1	1.50-1.80						
13.079	2.50	Dense to very dense, brown Sandy SILT, non plastic in nature (ML)		7.45	SPT-2	2.00-2.45	10	14	19	33		
12.579	3.00											
12.079	3.50				SPT-3	3.00-3.45	13	17	23	40		
11.579	4.00											
11.079	4.50				SPT-4	4.00-4.45	16	22	30	52		
10.579	5.00				UDS-2	4.50-4.80						
10.079	5.50				SPT-5	5.00-5.45	20	29	37	66		
9.579	6.00											
9.079	6.50				SPT-6	6.00-6.45	22	35	39	74		
8.579	7.00											
8.079	7.50	SPT-7	7.00-7.45	21	33	44	77					
7.579	8.00											
7.079	8.50	SPT-8	8.00-8.45	23	38	47	85					
6.579	9.00											
					SPT-9	9.00-9.45	25	40	49	89		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2417968.585 E 290015.691	Dia. of The Hole :	150mm	
Collar Elevation (m) :	16.081	Chainage (m) :	341000	Date Started :	20.03.2017
Ground Elevation (m) :	16.081	Ground Water Table(m) :	Not Met With	Date Completed :	20.03.2017
Total Depth (m) :	10.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
16.081	0.00	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.		
15.581	0.50												
15.081	1.00	Stiff, brown Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	5	9	13	22	Ground water table was not encountered upto termination of borehole.		
14.581	1.50												
14.081	2.00	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		2.50	UDS-1	1.50-1.80							
13.581	2.50					SPT-2	2.00-2.45	10	13	16		29	
13.081	3.00												
12.581	3.50					SPT-3	3.00-3.45	12	15	20		35	
12.081	4.00	Hard, brown Silty CLAY of low plasticity with gravels (CL)		0.50	SPT-4	4.00-4.45	14	19	23	42			
11.581	4.50												
11.081	5.00	Very hard, brown Silty CLAY of low plasticity (CL)		5.50	UDS-2	4.50-4.80							
10.581	5.50					SPT-5	5.00-5.45	13	22	29		51	
10.081	6.00												
9.581	6.50					SPT-6	6.00-6.45	21	30	33	63		
9.081	7.00												
8.581	7.50					SPT-7	7.00-7.45	18	31	37	68		
8.081	8.00												
7.581	8.50					SPT-8	8.00-8.45	20	36	42	78		
7.081	9.00												
6.581	9.50		SPT-9	9.00-9.45	22	39	45	84					
6.081	10.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45									
	10.45					SPT-10	10.00-10.45	27	44	48	92		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		Low Plastic Clay		Clayey Silt of medium plasticity
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity		Grid pattern		Horizontal lines

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2418912.830 E 290344.935 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.955 Chainage (m) : 342000 Date Started : 20.03.2017
Ground Elevation (m) : 16.955 Ground Water Table(m) : Not Met With Date Completed : 20.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.955	0.00	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
16.455	0.50				SPT-1	1.00-1.45	6	10	13	23	
15.955	1.00	Very stiff, brown Clayey SILT of medium plasticity (MI)		1.50	UDS-1	1.50-1.80					
15.455	1.50				SPT-2	2.00-2.45	8	12	16	28	
14.955	2.00	Dense to very dense, brown Sandy SILT, non plastic in nature (ML)		8.45	SPT-3	3.00-3.45	10	14	20	34	
14.455	2.50				SPT-4	4.00-4.45	9	19	25	44	
13.955	3.00				UDS-2	4.50-4.80					
13.455	3.50				SPT-5	5.00-5.45	13	21	30	51	
12.955	4.00				SPT-6	6.00-6.45	18	27	33	60	
12.455	4.50				SPT-7	7.00-7.45	20	30	37	67	
11.955	5.00				SPT-8	8.00-8.45	21	39	40	79	
11.455	5.50				SPT-9	9.00-9.45	24	36	44	80	
10.955	6.00				SPT-10	10.00-10.45	23	40	41	81	
10.455	6.50				SPT-11	11.00-11.45	27	45	50	95	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2419857.075 E 290674.178	Dia. of The Hole :	150mm	
Collar Elevation (m) :	18.230	Chainage (m) :	343000	Date Started :	19.03.2017
Ground Elevation (m) :	18.230	Ground Water Table(m) :	Not Met With	Date Completed :	19.03.2017
Total Depth (m) :	9.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
18.230	0.00	Very stiff, black Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.
17.730	0.50										
17.230	1.00										
16.730	1.50	Hard to very hard, brown Silty CLAY of low plasticity with traces of gravels (CL)		3.00	SPT-1	1.00-1.45	8	10	13	23	Ground water table was not encountered upto termination of borehole.
16.230	2.00				UDS-1	1.50-1.80					
15.730	2.50				SPT-2	2.00-2.45	11	15	20	35	
15.230	3.00	SPT-3	3.00-3.45	20	39	40	79				
14.730	3.50										
14.230	4.00	SPT-4	4.00-4.45	23	32	37	69				
13.730	4.50	Very hard, brown Clayey SILT of medium plasticity (MI)		2.50	UDS-2	4.50-4.80					
13.230	5.00				SPT-5	5.00-5.45	19	29	35	64	
12.730	5.50				SPT-6	6.00-6.45	24	42	55	97	
12.230	6.00										
11.730	6.50										
11.230	7.00	Very hard, brown Silty CLAY of low plasticity (CL)		2.45	SPT-7	7.00-7.45	22	33	43	76	
10.730	7.50										
10.230	8.00				SPT-8	8.00-8.45	25	39	42	81	
9.730	8.50										
9.230	9.00				SPT-9	9.00-9.45	27	34	48	82	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Clayey Silt of low plasticity		Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2420801.320 E 291003.422 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.548 Chainage (m) : 344000 Date Started : 19.03.2017
Ground Elevation (m) : 20.548 Ground Water Table(m) : Not Met With Date Completed : 19.03.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
20.548	0.00	Black Silty CLAY of medium plasticity (Cl)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.
20.048	0.50										
19.548	1.00	Very stiff to very hard, brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	7	9	11	20	Ground water table was not encountered upto termination of borehole.
19.048	1.50				UDS-1	1.50-1.80					
18.548	2.00	Hard to very hard, brown Silty CLAY of low plasticity with gravels (CL)		2.50	SPT-2	2.00-2.45	9	16	21	37	
18.048	2.50										
17.548	3.00				SPT-3	3.00-3.45	22	45	51	96	
17.048	3.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		5.45	SPT-4	4.00-4.45	24	42	55	97	
16.548	4.00				UDS-2	4.50-4.80					
16.048	4.50				SPT-5	5.00-5.45	20	33	43	76	
15.548	5.00										
15.048	5.50				SPT-6	6.00-6.45	27	34	45	79	
14.548	6.00										
14.048	6.50				SPT-7	7.00-7.45	25	39	42	81	
13.548	7.00										
13.048	7.50				SPT-8	8.00-8.45	23	43	40	83	
12.548	8.00										
12.048	8.50	SPT-9	9.00-9.45	29	47	49	96				
11.548	9.00										

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Low Plastic Clay
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2421745.565 E 291332.666 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.145 Chainage (m) : 345000 Date Started : 18.03.2017
Ground Elevation (m) : 19.145 Ground Water Table(m) : Not Met With Date Completed : 18.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.145	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
18.645	0.50										
18.145	1.00				SPT-1	1.00-1.45	7	11	13	24	
17.645	1.50				UDS-1	1.50-1.80					
17.145	2.00	Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		3.00	SPT-2	2.00-2.45	9	13	20	33	
16.645	2.50										
16.145	3.00				SPT-3	3.00-3.45	10	15	19	34	
15.645	3.50										
15.145	4.00				SPT-4	4.00-4.45	12	17	27	44	
14.645	4.50				UDS-2	4.50-4.80					
14.145	5.00	Very Dense, Brown Silty SAND (SM-ML)		3.00	SPT-5	5.00-5.45	14	21	29	50	
13.645	5.50										
13.145	6.00				SPT-6	6.00-6.45	19	30	39	69	
12.645	6.50										
12.145	7.00	Very Dense, Brown Sandy SILT with gravels, non plastic in nature (ML)		1.00	SPT-7	7.00-7.45	23	32	37	69	
11.645	7.50										
11.145	8.00	Very Hard, Brown Silty CLAY of low plasticity (CL)		1.45	SPT-8	8.00-8.45	22	33	43	76	
10.645	8.50										
10.145	9.00				SPT-9	9.00-9.45	21	37	40	77	
9.645	9.50										
9.145	10.00				SPT-10	10.00-10.45	26	39	46	85	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty SAND
 Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2422689.810 E 291661.910 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.615 Chainage (m) : 346000 Date Started : 18.03.2017
Ground Elevation (m) : 18.615 Ground Water Table(m) : Not Met With Date Completed : 18.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.615	0.00	Black Colour, Silty CLAY high plasticity, medium expansive (CH)		1.00		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.
18.115	0.50											
17.615	1.00	Very Stiff to very hard, Brown Colour, Silty CLAY of low plasticity (CL)		10.45		SPT-1	1.00-1.45	6	9	10	19	Ground water table was not encountered upto termination of borehole.
17.115	1.50					UDS-1	1.50-1.80					
16.615	2.00					SPT-2	2.00-2.45	10	15	19	34	
16.115	2.50					SPT-3	3.00-3.45	9	13	17	30	
15.615	3.00					SPT-4	4.00-4.45	12	17	27	44	
15.115	3.50					UDS-2	4.50-4.80					
14.615	4.00					SPT-5	5.00-5.45	14	20	29	49	
14.115	4.50					SPT-6	6.00-6.45	16	27	35	62	
13.615	5.00					SPT-7	7.00-7.45	19	30	39	69	
13.115	5.50					SPT-8	8.00-8.45	21	37	40	77	
12.615	6.00					SPT-9	9.00-9.45	23	39	41	80	
12.115	6.50		SPT-10	10.00-10.45	27	40	44	84				
11.615	7.00		SPT-11	11.00-11.45	24	43	50	93				
11.115	7.50											
10.615	8.00											
10.115	8.50											
9.615	9.00											
9.115	9.50											
8.615	10.00											
8.115	10.50											
7.615	11.00											

Disturbed Sample Standard Penetration Test Undisturbed Sample
 Silty Clay of high plasticity Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2423634.055 E 291991.153	Dia. of The Hole : 150mm
Collar Elevation (m) : 19.392	Chainage (m) : 347000	Date Started : 17.03.2017
Ground Elevation (m) : 19.392	Ground Water Table(m) : Not Met With	Date Completed : 17.03.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
19.392	0.00	Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.
18.892	0.50										
18.392	1.00	Medium Dense to Dense, Brown Colour, Sandy SILT (ML)		3.50	SPT-1	1.00-1.45	7	10	12	22	Ground water table was not encountered upto termination of borehole.
17.892	1.50				UDS-1	1.50-1.80					
17.392	2.00				SPT-2	2.00-2.45	6	11	16	27	
16.892	2.50				SPT-3	3.00-3.45	9	13	17	30	
16.392	3.00				SPT-4	4.00-4.45	11	12	19	31	
15.892	3.50				UDS-2	4.50-4.80					
15.392	4.00				SPT-5	5.00-5.45	10	15	23	38	
14.892	4.50				SPT-6	6.00-6.45	13	19	29	48	
14.392	5.00	Hard to Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		3.50	SPT-7	7.00-7.45	16	21	33	54	
13.892	5.50				SPT-8	8.00-8.45	14	29	35	64	
13.392	6.00				SPT-9	9.00-9.45	18	32	37	69	
12.892	6.50				SPT-10	10.00-10.45	20	37	40	77	
12.392	7.00				SPT-11	11.00-11.45	19	39	41	80	
11.892	7.50				SPT-12	12.00-12.45	21	35	39	74	
11.392	8.00				SPT-13	13.00-13.45	23	38	46	84	
10.892	8.50	Very Hard, brown Colour, Silty CLAY of low plasticity with gravels (CL)		5.45							
10.392	9.00										
9.892	9.50										
9.392	10.00										
8.892	10.50										
8.392	11.00										
7.892	11.50										
7.392	12.00										
6.892	12.50										
6.392	13.00										

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Sandy SILT		Silty Clay of low plasticity
			Low Plastic Clay		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2424578.300 E 292320.397	Dia. of The Hole :	150mm	
Collar Elevation (m) :	18.240	Chainage (m) :	348000	Date Started :	17.03.2017
Ground Elevation (m) :	18.240	Ground Water Table(m) :	Not Met With	Date Completed :	17.03.2017
Total Depth (m) :	12.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.240	0.00	Very Stiff, Back colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.	
17.740	0.50											
17.240	1.00											
16.740	1.50	Very Stiff to very hard, Brown colour, Silty CLAY of medium plasticity (CI)		4.00	SPT-1	1.00-1.45	6	8	11	19	Ground water table was not encountered upto termination of borehole.	
16.240	2.00				UDS-1	1.50-1.80						
15.740	2.50				SPT-2	2.00-2.45	9	13	16	29		
15.240	3.00											
14.740	3.50				SPT-3	3.00-3.45	11	15	20	35		
14.240	4.00											
13.740	4.50				SPT-4	4.00-4.45	13	21	26	47		
13.240	5.00				UDS-2	4.50-4.80						
12.740	5.50				SPT-5	5.00-5.45	10	25	30	55		
12.240	6.00	Very hard, Brown colour, Silty CLAY of low plasticity (CL)		6.45								
11.740	6.50				SPT-6	6.00-6.45	19	26	32	58		
11.240	7.00											
10.740	7.50				SPT-7	7.00-7.45	20	22	29	51		
10.240	8.00											
9.740	8.50				SPT-8	8.00-8.45	17	27	33	60		
9.240	9.00											
8.740	9.50				SPT-9	9.00-9.45	18	30	35	65		
8.240	10.00											
7.740	10.50				SPT-10	10.00-10.45	21	33	40	73		
7.240	11.00											
6.740	11.50				SPT-11	11.00-11.45	23	35	45	80		
6.240	12.00											
					SPT-12	12.00-12.45	23	39	47	86		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2425522.545 E 292649.641	Dia. of The Hole : 150mm
Collar Elevation (m) : 17.213	Chainage (m) : 349000	Date Started : 16.03.2017
Ground Elevation (m) : 17.213	Ground Water Table(m) : Not Met With	Date Completed : 16.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
17.213	0.00	Very Stiff, Black colour, Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
16.713	0.50										
16.213	1.00										
15.713	1.50										
15.213	2.00										
14.713	2.50										
14.213	3.00										
13.713	3.50										
13.213	4.00										
12.713	4.50										
12.213	5.00	Hard to Very Hard, Brown Colour, Silty CLAY of medium plasticity with occasional gravels (CI)		8.95	UDS-1	1.50-1.80					Ground water table was not encountered upto termination of borehole.
11.713	5.50										
11.213	6.00										
10.713	6.50										
10.213	7.00										
9.713	7.50										
9.213	8.00										
8.713	8.50										
8.213	9.00										
7.713	9.50										
7.213	10.00										

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2426466.790 E 292978.885	Dia. of The Hole :	150mm	
Collar Elevation (m) :	16.734	Chainage (m) :	350000	Date Started :	16.03.2017
Ground Elevation (m) :	16.734	Ground Water Table(m) :	Not Met With	Date Completed :	16.03.2017
Total Depth (m) :	12.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
16.734	0.00	Very Stiff, Black colour, Silty CLAY of high plasticity, medium expansivse (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.			
16.234	0.50													
15.734	1.00													
15.234	1.50	Very Stiff to Hard, Brown Colour, Silty CLAY of low plasticity (CL)		2.50	SPT-1	1.00-1.45	7	10	13	23	Ground water table was not encountered upto termination of borehole.			
14.734	2.00				UDS-1	1.50-1.80								
14.234	2.50				SPT-2	2.00-2.45	10	11	17	28				
13.734	3.00													
13.234	3.50				SPT-3	3.00-3.45	12	14	21	35				
12.734	4.00													
12.234	4.50				SPT-4	4.00-4.45	11	16	23	39				
11.734	5.00	Dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		3.50	UDS-2	4.50-4.80								
11.234	5.50							SPT-5	5.00-5.45	13		17	22	39
10.734	6.00													
10.234	6.50							SPT-6	6.00-6.45	10		19	25	44
9.734	7.00													
9.234	7.50				SPT-7	7.00-7.45	14	23	29	52				
8.734	8.00	Very Hard, Brown Colour, Silty CLAY of low plasticity with occassional gravels (CL)		4.45										
8.234	8.50							SPT-8	8.00-8.45	12	27	29	56	
7.734	9.00													
7.234	9.50							SPT-9	9.00-9.45	15	29	32	61	
6.734	10.00													
6.234	10.50				SPT-10	10.00-10.45	17	31	37	68				
5.734	11.00													
5.234	11.50				SPT-11	11.00-11.45	16	33	39	72				
4.734	12.00													
					SPT-12	12.00-12.45	19	37	44	81				

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of low plasticity		Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2427411.035 E 293308.128 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.964 Chainage (m) : 351000 Date Started : 15.03.2017
Ground Elevation (m) : 19.964 Ground Water Table(m): Not Met With Date Completed : 15.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.964	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.	
19.464	0.50											
18.964	1.00											
18.464	1.50											
17.964	2.00				UDS-1	1.50-1.80						
17.464	2.50	Very Stiff to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		9.45								
17.464	2.50					SPT-2	2.00-2.45	9	11	15	26	
16.964	3.00											
16.464	3.50					SPT-3	3.00-3.45	10	13	16	29	
15.964	4.00											
15.464	4.50					SPT-4	4.00-4.45	13	17	20	37	
14.964	5.00					UDS-2	4.50-4.80					
14.464	5.50					SPT-5	5.00-5.45	12	18	28	46	
13.964	6.00											
13.464	6.50					SPT-6	6.00-6.45	17	21	29	50	
12.964	7.00											
12.464	7.50		SPT-7	7.00-7.45	19	27	30	57				
11.964	8.00											
11.464	8.50		SPT-8	8.00-8.45	20	28	33	61				
10.964	9.00											
10.464	9.50		SPT-9	9.00-9.45	16	24	37	61				
9.964	10.00											
9.464	10.50		SPT-10	10.00-10.45	15	29	40	69				
8.964	11.00											
					SPT-11	11.00-11.45	21	30	42	72		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2428355.280 E 293637.372	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.888	Chainage (m) : 352000	Date Started : 15.03.2017
Ground Elevation (m) : 18.888	Ground Water Table(m): Not Met With	Date Completed : 15.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.888	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 9.45m below EGL. Ground water table was not encountered upto termination of borehole.	
18.388	0.50											
17.888	1.00											
17.388	1.50					SPT-1	1.00-1.45	10	12	13		25
16.888	2.00					UDS-1	1.50-1.80					
16.388	2.50					SPT-2	2.00-2.45	9	14	17		31
15.888	3.00											
15.388	3.50					SPT-3	3.00-3.45	11	17	21		38
14.888	4.00											
14.388	4.50			SPT-4	4.00-4.45	12	22	29	51			
13.888	5.00			UDS-2	4.50-4.80							
13.388	5.50			SPT-5	5.00-5.45	14	26	36	62			
12.888	6.00	Hard to Very Hard, Brown Colour, Silty CLAY of medium plasticity, medium expansive (CI)		6.45								
12.388	6.50						SPT-6	6.00-6.45	16	29	35	64
11.888	7.00											
11.388	7.50						SPT-7	7.00-7.45	18	31	39	70
10.888	8.00											
10.388	8.50						SPT-8	8.00-8.45	20	36	44	80
9.888	9.00											
							SPT-9	9.00-9.45	21	40	45	85

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2429299.525 E 293966.616 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.234 Chainage (m) : 353000 Date Started : 14.03.2017
Ground Elevation (m) : 18.234 Ground Water Table(m): Not Met With Date Completed : 14.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
18.234	0.00	Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00		DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.		
17.734	0.50													
17.234	1.00													
16.734	1.50													
16.234	2.00					UDS-1	1.50-1.80							
15.734	2.50	Medium Dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		9.45		SPT-2	2.00-2.45	10	12	18	30			
15.234	3.00													
14.734	3.50								SPT-3	3.00-3.45	14	20	24	44
14.234	4.00													
13.734	4.50								SPT-4	4.00-4.45	16	23	26	49
13.234	5.00								UDS-2	4.50-4.80				
12.734	5.50								SPT-5	5.00-5.45	15	20	28	48
12.234	6.00													
11.734	6.50								SPT-6	6.00-6.45	14	24	31	55
11.234	7.00													
10.734	7.50								SPT-7	7.00-7.45	18	29	40	69
10.234	8.00													
9.734	8.50					SPT-8	8.00-8.45	17	32	43	75			
9.234	9.00													
8.734	9.50					SPT-9	9.00-9.45	21	35	39	74			
8.234	10.00													
7.734	10.50					SPT-10	10.00-10.45	20	37	49	86			
7.234	11.00													
						SPT-11	11.00-11.45	22	36	43	79			

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2430243.770 E 294295.860 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.408 Chainage (m) : 354000 Date Started : 14.03.2017
Ground Elevation (m) : 18.408 Ground Water Table(m): Not Met With Date Completed : 14.03.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
18.408	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.
17.908	0.50										
17.408	1.00										
16.908	1.50	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-1	1.00-1.45	7	10	13	23	Ground water table was not encountered upto termination of borehole.
16.408	2.00				UDS-1	1.50-1.80					
15.908	2.50				SPT-2	2.00-2.45	9	11	15	26	
15.408	3.00	Very Stiff, Brown Colour, Silty CLAY of low plasticity (CL)		1.50	SPT-3	3.00-3.45	10	12	16	28	
14.908	3.50										
14.408	4.00										
13.908	4.50	Dense, Sandy SILT, non plastic nature (ML)		2.50	SPT-4	4.00-4.45	8	13	18	31	
13.408	5.00				UDS-2	4.50-4.80					
12.908	5.50				SPT-5	5.00-5.45	9	16	23	39	
12.408	6.00	Dense, Sandy SILT, non plastic nature (ML)		2.50	SPT-6	6.00-6.45	11	19	27	46	
11.908	6.50										
11.408	7.00										
10.908	7.50	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-7	7.00-7.45	13	24	28	52	
10.408	8.00										
9.908	8.50										
9.408	9.00	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-8	8.00-8.45	15	27	30	57	
8.908	9.50										
8.408	10.00										
7.908	10.50	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-9	9.00-9.45	17	25	34	59	
7.408	11.00										
6.908	11.50										
6.408	12.00	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-10	10.00-10.45	21	29	39	68	
		Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-11	11.00-11.45	23	30	40	70	
		Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.45	SPT-12	12.00-12.45	25	38	39	77	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of low plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2431188.015 E 294625.103 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.079 Chainage (m) : 355000 Date Started : 12.03.2017
Ground Elevation (m) : 19.079 Ground Water Table(m): Not Met With Date Completed : 12.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.079	0.00	Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.	
18.579	0.50											
18.079	1.00											
17.579	1.50				SPT-1	1.00-1.45	3	6	8	14		
17.079	2.00				UDS-1	1.50-1.80						
16.579	2.50	Very Stiff, Brown Colour, Silty CLAY of medium plasticity (CI)		2.00	SPT-2	2.00-2.45	5	8	11	19		
16.079	3.00											
15.579	3.50				SPT-3	3.00-3.45	7	10	13	23		
15.079	4.00	Medium dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		4.00	SPT-4	4.00-4.45	6	12	15	27		
14.579	4.50				UDS-2	4.50-4.80						
14.079	5.00											
13.579	5.50				SPT-5	5.00-5.45	8	14	28	42		
13.079	6.00											
12.579	6.50				SPT-6	6.00-6.45	10	26	30	56		
12.079	7.00											
11.579	7.50	SPT-7	7.00-7.45	14	27	33	60					
11.079	8.00	Very hard, brown Silty CLAY of low plasticity (CL)		3.45	SPT-8	8.00-8.45	16	29	36	65		
10.579	8.50											
10.079	9.00											
9.579	9.50				SPT-9	9.00-9.45	18	31	41	72		
9.079	10.00											
8.579	10.50	SPT-10	10.00-10.45	21	33	49	82					
8.079	11.00											
					SPT-11	11.00-11.45	27	40	55	95		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Sandy SILT
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2432132.260 E 294954.347 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.015 Chainage (m) : 356000 Date Started : 12.03.2017
Ground Elevation (m) : 19.015 Ground Water Table(m): Not Met With Date Completed : 12.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.015	0.00										Borehole terminated at 11.45m below EGL.	
18.515	0.50	Black Colour, Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50						
18.015	1.00		1.00m								Ground water table was not encountered upto termination of borehole.	
17.515	1.50	Very Stiff to very hard, Brown Colour, Silty CLAY of low plasticity, with occasional gravels (CL)			SPT-1	1.00-1.45	8	11	14	25		
17.015	2.00				UDS-1	1.50-1.80						
16.515	2.50				SPT-2	2.00-2.45	10	15	17	32		
16.015	3.00											
15.515	3.50					SPT-3	3.00-3.45	17	22	21		43
15.015	4.00											
14.515	4.50			4.50m		SPT-4	4.00-4.45	19	24	27		51
14.015	5.00		Brown Colour, Sandy SILT, non plastic in nature (ML)	5.00m	0.50	UDS-2	4.50-4.80					
13.515	5.50					SPT-5	5.00-5.45	21	24	39		63
13.015	6.00											
12.515	6.50				SPT-6	6.00-6.45	19	27	29	56		
12.015	7.00											
11.515	7.50				SPT-7	7.00-7.45	22	22	25	47		
11.015	8.00	Hard to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)										
10.515	8.50				6.45	SPT-8	8.00-8.45	28	33	35	68	
10.015	9.00											
9.515	9.50					SPT-9	9.00-9.45	29	37	41	78	
9.015	10.00											
8.515	10.50				SPT-10	10.00-10.45	28	35	44	79		
8.015	11.00											
					SPT-10	11.00-11.45	27	36	42	78		

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2433076.505 E 295283.591	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.532	Chainage (m) : 357000	Date Started : 11.03.2017
Ground Elevation (m) : 18.532	Ground Water Table(m): Not Met With	Date Completed : 11.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.532	0.00	Stiff to Very Hard, Black and Brown Colour, Silty CLAY of high plasticity, low to medium expansive (CH)		4.50	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL. Ground water table was not encountered upto termination of borehole.	
18.032	0.50											
17.532	1.00											
17.032	1.50				SPT-1	1.00-1.45	4	6	8	14		
16.532	2.00				UDS-1	1.50-1.80						
16.032	2.50				SPT-2	2.00-2.45	7	9	12	21		
15.532	3.00											
15.032	3.50				SPT-3	3.00-3.45	8	11	14	25		
14.532	4.00											
14.032	4.50				SPT-4	4.00-4.45	10	17	27	44		
13.532	5.00	Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		5.95	UDS-2	4.50-4.80						
13.032	5.50				SPT-5	5.00-5.45	13	21	30	51		
12.532	6.00											
12.032	6.50				SPT-6	6.00-6.45	14	27	33	60		
11.532	7.00											
11.032	7.50				SPT-7	7.00-7.45	16	29	36	65		
10.532	8.00											
10.032	8.50				SPT-8	8.00-8.45	18	31	41	72		
9.532	9.00											
9.032	9.50				SPT-9	9.00-9.45	21	33	37	70		
8.532	10.00											

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2434020.750 E 295612.835	Dia. of The Hole : 150mm
Collar Elevation (m) : 18.431	Chainage (m) : 358000	Date Started : 11.03.2017
Ground Elevation (m) : 18.431	Ground Water Table(m): Not Met With	Date Completed : 11.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
18.431	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.			
17.931	0.50													
17.431	1.00													
16.931	1.50				SPT-1	1.00-1.45	6	8	10	18				
16.431	2.00	Very Stiff to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		6.50	UDS-1	1.50-1.80								
15.931	2.50							SPT-2	2.00-2.45	9		11	13	24
15.431	3.00													
14.931	3.50							SPT-3	3.00-3.45	8		12	15	27
14.431	4.00													
13.931	4.50							SPT-4	4.00-4.45	10		16	18	34
13.431	5.00							UDS-2	4.50-4.80					
12.931	5.50				SPT-5	5.00-5.45	13	17	21	38				
12.431	6.00													
11.931	6.50				SPT-6	6.00-6.45	16	19	23	42				
11.431	7.00													
10.931	7.50				SPT-7	7.00-7.45	18	29	39	68				
10.431	8.00	Very hard, Brown Colour, Silty CLAY of medium plasticity with gravels (CI)		3.45										
9.931	8.50							SPT-8	8.00-8.45	16	35	37	72	
9.431	9.00													
8.931	9.50							SPT-9	9.00-9.45	21	40	45	85	
8.431	10.00													
7.931	10.50				SPT-10	10.00-10.45	20	43	47	90				
7.431	11.00													
					SPT-11	11.00-11.45	23	41	49	90				

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Medium plastic Clay with gravels

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2434964.995 E 295942.078 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.857 Chainage (m) : 359000 Date Started : 28.05.2017
Ground Elevation (m) : 19.857 Ground Water Table(m): Not Met With Date Completed : 28.05.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
19.857	0.00	Hard, black Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.		
19.357	0.50												
18.857	1.00												
18.357	1.50				SPT-1	1.00-1.45	10	15	18	33	Ground water table was not encountered upto termination of borehole.		
17.857	2.00				UDS-1	1.50-1.80							
17.357	2.50	Hard, yellowish grey colour, Silty CLAY of medium plasticity with gravels (CI)		4.00	SPT-2	2.00-2.45	15	17	20	37			
16.857	3.00												
16.357	3.50							SPT-3	3.00-3.45	21	18	23	41
15.857	4.00												
15.357	4.50							SPT-4	4.00-4.45	17	19	25	44
14.857	5.00							UDS-2	4.50-4.80				
14.357	5.50				SPT-5	5.00-5.45	18	23	25	48			
13.857	6.00	Very hard, yellowish grey colour Silty CLAY of medium plasticity (CI)		6.45	SPT-6	6.00-6.45	21	26	25	51			
13.357	6.50												
12.857	7.00							SPT-7	7.00-7.45	22	29	30	59
12.357	7.50												
11.857	8.00							SPT-8	8.00-8.45	29	27	31	58
11.357	8.50												
10.857	9.00				SPT-9	9.00-9.45	23	32	35	67			
10.357	9.50												
9.857	10.00				SPT-10	10.00-10.45	30	35	42	77			
9.357	10.50												
8.857	11.00				SPT-11	11.00-11.45	34	37	45	82			
8.357	11.50												
7.857	12.00				SPT-12	12.00-12.45	41	39	40	79			

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2435909.240 E 296271.322 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 21.474 **Chainage (m) :** 360000 **Date Started :** 10.03.2017
Ground Elevation (m) : 21.474 **Ground Water Table(m):** Not Met With **Date Completed :** 10.03.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
21.474	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.
20.974	0.50										
20.474	1.00				SPT-1	1.00-1.45	3	7	10	17	
19.974	1.50				UDS-1	1.50-1.80					
19.474	2.00	Very Stiff to Hard, Silty CLAY of medium plasticity (CI)		2.50	SPT-2	2.00-2.45	6	9	12	21	Ground water table was not encountered upto termination of borehole.
18.974	2.50										
18.474	3.00				SPT-3	3.00-3.45	5	11	15	26	
17.974	3.50										
17.474	4.00				SPT-4	4.00-4.45	8	14	18	32	
16.974	4.50				UDS-2	4.50-4.80					
16.474	5.00	Hard to very hard, Clayey SILT of medium plasticity with gravels (MI)		3.50	SPT-5	5.00-5.45	9	19	23	42	
15.974	5.50										
15.474	6.00				SPT-6	6.00-6.45	15	21	32	53	
14.974	6.50										
14.474	7.00	Very Hard, Silty CLAY of medium plasticity (CI)		2.45	SPT-7	7.00-7.45	18	25	37	62	
13.974	7.50										
13.474	8.00				SPT-8	8.00-8.45	16	28	35	63	
12.974	8.50										
12.474	9.00				SPT-9	9.00-9.45	14	30	42	72	
11.974	9.50										
11.474	10.00				SPT-10	10.00-10.45	15	33	45	78	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2436853.485 E 296600.566 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 20.847 **Chainage (m) :** 361000 **Date Started :** 10.03.2017
Ground Elevation (m) : 20.847 **Ground Water Table(m):** Not Met With **Date Completed :** 10.03.2017
Total Depth (m) : 13.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
20.847	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 13.45m below EGL.
19.847	1.00				SPT-1	1.00-1.45	7	9	11	20	
19.347	1.50				UDS-1	1.50-1.80					
18.847	2.00	Very Stiff to Hard, Brown Colour, Silty CLAY of medium plasticity with gravels (CI)		2.50	SPT-2	2.00-2.45	9	11	16	27	Ground water table was not encountered upto termination of borehole.
18.347	2.50				SPT-3	3.00-3.45	13	18	20	38	
17.847	3.00										
17.347	3.50										
16.847	4.00	Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		0.50	SPT-4	4.00-4.45	14	19	23	42	
16.347	4.50				UDS-2	4.50-4.80					
15.847	5.00	Brown Colour, Silty CLAY of medium plasticity (CI)		0.50							
15.347	5.50	Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		2.00	SPT-5	5.00-5.45	16	20	27	47	
14.847	6.00				SPT-6	6.00-6.45	19	21	29	50	
14.347	6.50										
13.847	7.00	Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		4.00	SPT-7	7.00-7.45	23	30	33	63	
13.347	7.50				SPT-8	8.00-8.45	21	31	47	78	
12.847	8.00										
12.347	8.50										
11.847	9.00										
11.347	9.50										
10.847	10.00										
10.347	10.50										
9.847	11.00	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		2.00	SPT-11	11.00-11.45	22	38	42	80	
9.347	11.50				SPT-12	12.00-12.45	26	37	52	89	
8.847	12.00										
8.347	12.50										
7.847	13.00	Very hard, brown Colour, Clayey SILT of medium plasticity (MI)		0.45	SPT-13	13.00-13.45	25	31	48	79	

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Sandy SILT
 Silty Clay of low plasticity
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2437781.614 E 296970.856	Dia. of The Hole :	150mm	
Collar Elevation (m) :	21.816	Chainage (m) :	362000	Date Started :	27.02.2017
Ground Elevation (m) :	21.816	Ground Water Table(m):	Not Met With	Date Completed :	28.02.2017
Total Depth (m) :	10.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
21.816	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL. Ground water table was not encountered upto termination of borehole.
21.316	0.50										
20.816	1.00				SPT-1	1.00-1.45	4	8	12	20	
20.316	1.50				UDS-1	1.50-1.80					
19.816	2.00	Very Stiff to Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		2.50	SPT-2	2.00-2.45	7	12	13	25	
19.316	2.50										
18.816	3.00				SPT-3	3.00-3.45	9	17	12	29	
18.316	3.50										
17.816	4.00	Hard, Brown Colour, Silty CLAY with gravels of medium plasticity with gravels (CI)		2.50	SPT-4	4.00-4.45	11	14	29	43	
17.316	4.50										
16.816	5.00				UDS-2	4.50-4.80					
16.316	5.50				SPT-5	5.00-5.45	19	22	21	43	
15.816	6.00	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		3.45	SPT-6	6.00-6.45	20	19	25	44	
15.316	6.50										
14.816	7.00				SPT-7	7.00-7.45	21	28	26	54	
14.316	7.50										
13.816	8.00				SPT-8	8.00-8.45	23	29	31	60	
13.316	8.50										
12.816	9.00				SPT-9	9.00-9.45	27	25	28	53	
12.316	9.50										
11.816	10.00				SPT-10	10.00-10.45	20	29	34	63	

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Medium plastic Clay with gravels
	Silty Clay of low plasticity				

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2438642.262 E 297478.363 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 20.191 **Chainage (m) :** 363000 **Date Started :** 26.02.2017
Ground Elevation (m) : 20.191 **Ground Water Table(m):** Not Met With **Date Completed :** 26.02.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.191	0.00	Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL. Ground water table was not encountered upto termination of borehole.	
19.691	0.50											
19.191	1.00											
18.691	1.50											
18.191	2.00	Very Stiff to hard, Brown Colour, Silty CLAY of medium plasticity (CI)		2.50	UDS-1	1.50-1.80						
17.691	2.50				SPT-2	2.00-2.45	9	11	13	24		
17.191	3.00											
16.691	3.50				SPT-3	3.00-3.45	10	12	14	26		
16.191	4.00	Very Hard, Brown Colour, Silty CLAY of high plasticity (CH)		1.50	SPT-4	4.00-4.45	11	18	19	37		
15.691	4.50				UDS-2	4.50-4.80						
15.191	5.00											
14.691	5.50				SPT-5	5.00-5.45	12	23	32	55		
14.191	6.00	Hard to Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		4.45	SPT-6	6.00-6.45	12	26	36	62		
13.691	6.50											
13.191	7.00				SPT-7	7.00-7.45	11	19	28	47		
12.691	7.50											
12.191	8.00				SPT-8	8.00-8.45	8	16	25	41		
11.691	8.50											
11.191	9.00				SPT-9	9.00-9.45	13	26	38	64		
10.691	9.50											
10.191	10.00				SPT-10	10.00-10.45	12	24	26	50		

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2439475.292 E 298031.589	Dia. of The Hole :	150mm	
Collar Elevation (m) :	20.056	Chainage (m) :	364000	Date Started :	28.02.2017
Ground Elevation (m) :	20.056	Ground Water Table(m):	Not Met With	Date Completed :	28.02.2017
Total Depth (m) :	10.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.056	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
19.556	0.50											
19.056	1.00											
18.556	1.50	Brown Colour, Silty CLAY of medium plasticity with gravels (CI)		0.50	SPT-1	1.00-1.45	5	8	10	18	Ground water table was not encountered upto termination of borehole.	
18.056	2.00				UDS-1	1.50-1.80						
17.556	2.50	Very Stiff to Hard, Brown Colour, Silty CLAY of low plasticity (CL)		5.00	SPT-2	2.00-2.45	7	11	14	25		
17.056	3.00											
16.556	3.50				SPT-3	3.00-3.45	12	13	16	29		
16.056	4.00											
15.556	4.50				SPT-4	4.00-4.45	14	19	21	40		
15.056	5.00				UDS-2	4.50-4.80						
14.556	5.50				SPT-5	5.00-5.45	19	22	24	46		
14.056	6.00											
13.556	6.50	Very hard, Brown Colour, Silty CLAY of low plasticity with gravels (CL)		7.00m	SPT-6	6.00-6.45	18	21	25	46		
13.056	7.00											
12.556	7.50				SPT-7	7.00-7.45	20	24	27	51		
12.056	8.00											
11.556	8.50	Very hard, Brown Colour, Silty CLAY of low plasticity with gravels (CL)		3.00	SPT-8	8.00-8.45	26	25	31	56		
11.056	9.00											
10.556	9.50				SPT-9	9.00-9.45	28	24	29	53		
10.056	10.00	Very hard, Brown Colour, Silty CLAY of low plasticity (CL)		10.00m								
	10.45m				SPT-10	10.00-10.45	21	23	28	51		

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates :	N 2440308.318 E 298584.823	Dia. of The Hole :	150mm	
Collar Elevation (m) :	20.876	Chainage (m) :	365000	Date Started :	01.03.2017
Ground Elevation (m) :	20.876	Ground Water Table(m):	Not Met With	Date Completed :	01.03.2017
Total Depth (m) :	8.45	Drilling Method :	Hydraulic Rotary Drilling		

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
20.876	0.00	Stiff, Black and Brown Colour, Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 8.45m below EGL.			
20.376	0.50													
19.876	1.00													
19.376	1.50	Very Stiff, Brown Colour, Silty CLAY of medium plasticity (CI)		1.00	SPT-1	1.00-1.45	2	6	7	13	Ground water table was not encountered upto termination of borehole.			
18.876	2.00				UDS-1	1.50-1.80								
18.376	2.50				SPT-2	2.00-2.45	8	12	17	29				
17.876	3.00													
17.376	3.50	Hard to Very Hard, Brown Colour, Silty CLAY of low plasticity with occasional gravels (CL)		5.45	SPT-3	3.00-3.45	11	17	27	44				
16.876	4.00													
16.376	4.50							SPT-4	4.00-4.45	14		20	27	47
15.876	5.00							UDS-2	4.50-4.80					
15.376	5.50							SPT-5	5.00-5.45	20	24	28	52	
14.876	6.00													
14.376	6.50				SPT-6	6.00-6.45	22	25	31	56				
13.876	7.00													
13.376	7.50				SPT-7	7.00-7.45	21	23	28	51				
12.876	8.00													
					SPT-8	8.00-8.45	19	26	27	53				

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2441141.344 E 299138.057	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.443	Chainage (m) : 366000	Date Started : 01.03.2017
Ground Elevation (m) : 20.443	Ground Water Table(m): Not Met With	Date Completed : 01.03.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
20.443	0.00	Stiff to Very Stiff, Black and Brown Colour, Silty CLAY of high plasticity, medium expansive (CH)		3.00	DS-1	0.00-0.50					Borehole terminated at 9.45m below EGL.
19.943	0.50										
19.443	1.00										
18.943	1.50	Stiff to Very Stiff, Black and Brown Colour, Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-1	1.00-1.45	2	4	7	11	Ground water table was not encountered upto termination of borehole.
18.443	2.00				UDS-1	1.50-1.80					
17.943	2.50				SPT-2	2.00-2.45	9	11	14	25	
17.443	3.00	Very Stiff to Hard, Brown Colour, Silty CLAY of low plasticity with gravels (CL)		1.50	SPT-3	3.00-3.45	10	13	16	29	
16.943	3.50										
16.443	4.00				SPT-4	4.00-4.45	12	19	28	47	
15.943	4.50	Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		1.50	UDS-2	4.50-4.80					
15.443	5.00										
14.943	5.50				SPT-5	5.00-5.45	15	21	29	50	
14.443	6.00	Hard to Very Hard, Brown Silty CLAY of low plasticity (CL)		3.45	SPT-6	6.00-6.45	17	22	27	49	
13.943	6.50										
13.443	7.00				SPT-7	7.00-7.45	14	24	26	50	
12.943	7.50	Hard to Very Hard, Brown Silty CLAY of low plasticity (CL)		3.45	SPT-8	8.00-8.45	18	24	30	54	
12.443	8.00										
11.943	8.50				SPT-9	9.00-9.45	20	28	38	66	
11.443	9.00										

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of low plasticity		Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2441974.370 E 299691.292	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.834	Chainage (m) : 367000	Date Started : 27.02.0207
Ground Elevation (m) : 20.834	Ground Water Table(m): Not Met With	Date Completed : 27.02.0207
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.834	0.00	Stiff, Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.	
20.334	0.50											
19.834	1.00											
19.334	1.50	Very Stiff, Brown Colour, Silty CLAY of medium plasticity (CI)		2.50	SPT-1	1.00-1.45	2	4	6	10	Ground water table was not encountered upto termination of borehole.	
18.834	2.00				UDS-1	1.50-1.80						
18.334	2.50				SPT-2	2.00-2.45	7	8	11	19		
17.834	3.00											
17.334	3.50				SPT-3	3.00-3.45	8	11	14	25		
16.834	4.00	Very Stiff, Brown Colour, Silty CLAY of low plasticity (CL)		1.00	SPT-4	4.00-4.45	11	13	17	30		
16.334	4.50				UDS-2	4.50-4.80						
15.834	5.00	Dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		7.45	SPT-5	5.00-5.45	14	19	20	39		
15.334	5.50											
14.834	6.00											
14.334	6.50				SPT-6	6.00-6.45	17	21	26	47		
13.834	7.00											
13.334	7.50				SPT-7	7.00-7.45	17	23	30	53		
12.834	8.00											
12.334	8.50				SPT-8	8.00-8.45	20	26	34	60		
11.834	9.00											
11.334	9.50				SPT-9	9.00-9.45	27	36	41	77		
10.834	10.00											
10.334	10.50	SPT-10	10.00-10.45	22	46	51	97					
9.834	11.00											
9.334	11.50	SPT-11	11.00-11.45	29	50	58	108					
8.834	12.00											

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Silty Clay of high plasticity	Silty Clay of medium plasticity	Silty Clay of low plasticity
	Sandy SILT	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2442807.396 E 300244.526	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.007	Chainage (m) : 368000	Date Started : 26.02.2017
Ground Elevation (m) : 21.007	Ground Water Table(m): Not Met With	Date Completed : 26.02.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
21.007	0.00	Stiff to Very Stiff, Black and Brown Colour, Silty CLAY of high plasticity, medium expansive (CH)		4.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL. Ground water table was not encountered upto termination of borehole.			
20.507	0.50													
20.007	1.00													
19.507	1.50							SPT-1	1.00-1.45	3		6	8	14
19.007	2.00							UDS-1	1.50-1.80					
18.507	2.50							SPT-2	2.00-2.45	5		7	9	16
18.007	3.00													
17.507	3.50							SPT-3	3.00-3.45	7		10	12	22
17.007	4.00													
16.507	4.50				Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		0.50	SPT-4	4.00-4.45	11		16	20	36
16.007	5.00	Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		5.50	UDS-2	4.50-4.80								
15.507	5.50							SPT-5	5.00-5.45	19	26	31	57	
15.007	6.00													
14.507	6.50							SPT-6	6.00-6.45	14	24	34	58	
14.007	7.00													
13.507	7.50							SPT-7	7.00-7.45	10	31	38	69	
13.007	8.00													
12.507	8.50							SPT-8	8.00-8.45	22	26	40	66	
12.007	9.00													
11.507	9.50							SPT-9	9.00-9.45	25	36	47	83	
11.007	10.00	Very Hard, Brown Colour, Clayey SILT of medium plasticity (MI)		0.45	SPT-10	10.00-10.45	26	37	46	83				

Disturbed Sample	Silty Clay of high plasticity	Standard Penetration Test	Silty Clay of medium plasticity	Undisturbed Sample	Sandy SILT	Clayey Silt of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2443640.422 E 300797.760 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 20.956 **Chainage (m) :** 369000 **Date Started :** 25.02.2017
Ground Elevation (m) : 20.956 **Ground Water Table(m):** Not Met With **Date Completed :** 25.02.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.956	0.00	Very Stiff, Black and Brown Colour, Silty CLAY of medium plasticity with occasional gravels (CI)		4.50	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL. Ground water table was not encountered upto termination of borehole.	
20.456	0.50											
19.956	1.00											
19.456	1.50				SPT-1	1.00-1.45	4	7	11	18		
18.956	2.00				UDS-1	1.50-1.80						
18.456	2.50				SPT-2	2.00-2.45	9	11	13	24		
17.956	3.00											
17.456	3.50				SPT-3	3.00-3.45	8	10	14	24		
16.956	4.00											
16.456	4.50				SPT-4	4.00-4.45	11	13	16	29		
15.956	5.00	Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		5.95	UDS-2	4.50-4.80						
15.456	5.50				SPT-5	5.00-5.45	14	20	34	54		
14.956	6.00											
14.456	6.50				SPT-6	6.00-6.45	21	25	38	63		
13.956	7.00											
13.456	7.50				SPT-7	7.00-7.45	18	29	41	70		
12.956	8.00											
12.456	8.50				SPT-8	8.00-8.45	23	36	46	82		
11.956	9.00											
11.456	9.50				SPT-9	9.00-9.45	21	41	55	96		
10.956	10.00											

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Undisturbed Sample
 Sandy SILT

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2444473.447 E 301350.994	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.606	Chainage (m) : 370000	Date Started : 02.03.2017
Ground Elevation (m) : 21.606	Ground Water Table(m): Not Met With	Date Completed : 02.03.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
21.606	0.00	Very Stiff, Dark brown colour, Clayey SILT of medium plasticity (MI)		1.50	DS-1	0.00-0.50					Borehole terminated at 13.45m below EGL.		
21.106	0.50												
20.606	1.00	Dark Brown Colour, Sandy SILT, non plastic in nature (ML)		0.50	SPT-1	1.00-1.45	7	9	11	20	Ground water table was not encountered upto termination of borehole.		
20.106	1.50												
19.606	2.00				UDS-1	1.50-1.80							
19.106	2.50				SPT-2	2.00-2.45	8	10	13	23			
18.606	3.00												
18.106	3.50				SPT-3	3.00-3.45	10	12	17	29			
17.606	4.00												
17.106	4.50				SPT-4	4.00-4.45	9	19	21	40			
16.606	5.00				UDS-2	4.50-4.80							
16.106	5.50				SPT-5	5.00-5.45	11	18	25	43			
15.606	6.00												
15.106	6.50				SPT-6	6.00-6.45	12	17	29	46			
14.606	7.00												
14.106	7.50	Medium Dense to Very Dense, Brown Colour, Silty SAND (SM-ML)		11.45	SPT-7	7.00-7.45	14	19	26	45			
13.606	8.00												
13.106	8.50							SPT-8	8.00-8.45	13	21	30	51
12.606	9.00												
12.106	9.50							SPT-9	9.00-9.45	11	29	32	61
11.606	10.00												
11.106	10.50							SPT-10	10.00-10.45	15	31	35	66
10.606	11.00												
10.106	11.50							SPT-11	11.00-11.45	18	32	38	70
9.606	12.00												
9.106	12.50							SPT-12	12.00-12.45	21	35	41	76
8.606	13.00												
								SPT-13	13.00-13.45	28	42	51	93

Disturbed Sample
 Clayey Silt of medium plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2445306.473 E 301904.228 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.757 Chainage (m) : 371000 Date Started : 03.03.2017
Ground Elevation (m) : 19.757 Ground Water Table(m): Not Met With Date Completed : 03.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
19.757	0.00	Black Colour, Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.		
19.257	0.50												
18.757	1.00	Very Stiff, Brown Colour, Silty CLAY of low plasticity occasional gravels (CL)		1.00	SPT-1	1.00-1.45	6	10	13	23	Ground water table was not encountered upto termination of borehole.		
18.257	1.50				UDS-1	1.50-1.80							
17.757	2.00												
17.257	2.50				SPT-2	2.00-2.45	10	16	19	35			
16.757	3.00												
16.257	3.50				SPT-3	3.00-3.45	11	17	22	39			
15.757	4.00												
15.257	4.50				SPT-4	4.00-4.45	12	19	23	42			
14.757	5.00				UDS-2	4.50-4.80							
14.257	5.50				SPT-5	5.00-5.45	11	21	28	49			
13.757	6.00												
13.257	6.50	Dense to Very Dense, Brown Sandy SILT, non plastic in nature (ML/ML-SM)		9.45	SPT-6	6.00-6.45	14	23	26	49			
12.757	7.00												
12.257	7.50							SPT-7	7.00-7.45	15	31	33	64
11.757	8.00												
11.257	8.50							SPT-8	8.00-8.45	17	32	34	66
10.757	9.00												
10.257	9.50				SPT-9	9.00-9.45	21	36	39	75			
9.757	10.00												
9.257	10.50				SPT-10	10.00-10.45	22	34	41	75			
8.757	11.00												
					SPT-11	11.00-11.45	28	40	51	91			

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Low Plastic Clay
 Undisturbed Sample
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2446139.499 E 302457.462 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.928 Chainage (m) : 372000 Date Started : 03.03.2017
Ground Elevation (m) : 20.928 Ground Water Table(m): Not Met With Date Completed : 03.03.2017
Total Depth (m) : 8.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.928	0.00	Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 8.45m below EGL.	
20.428	0.50											
19.928	1.00	Very Stiff, Brown colour, Silty CLAY of medium plasticity (CI)		0.50	SPT-1	1.00-1.45	8	10	16	26	Ground water table was not encountered upto termination of borehole.	
19.428	1.50											
18.928	2.00	Hard to Very Hard Brown Colour Sandy SILT of low plasticity (ML-CL)		2.50	UDS-1	1.50-1.80						
18.428	2.50											
17.928	3.00											
17.428	3.50				SPT-3	3.00-3.45	13	17	38	55		
16.928	4.00	Hard to Very Hard, Brown Colour Silty CLAY of low plasticity with occasional gravels (CL)		4.45								
16.428	4.50				SPT-4	4.00-4.45	11	10	37	47		
15.928	5.00											
15.428	5.50				SPT-5	5.00-5.45	14	21	33	54		
14.928	6.00											
14.428	6.50				SPT-6	6.00-6.45	10	23	34	57		
13.928	7.00											
13.428	7.50				SPT-7	7.00-7.45	15	27	37	64		
12.928	8.00											
					SPT-8	8.00-8.45	16	31	38	69		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of medium plasticity
 Clayey SILT
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2447805.551 E 303563.930 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 21.114 **Chainage (m) :** 374000 **Date Started :** 04.03.2017
Ground Elevation (m) : 21.114 **Ground Water Table(m):** Not Met With **Date Completed :** 04.03.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
21.614	0.00	Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.
20.614	0.50										
20.114	1.00	Very Stiff to hard, Brown colour Silty CLAY of medium plasticity with gravels (CI)		3.50	SPT-1	1.00-1.45	8	10	12	22	Ground water table was not encountered upto termination of borehole.
19.614	1.50				UDS-1	1.50-1.80					
19.114	2.00				SPT-2	2.00-2.45	10	13	19	32	
18.614	2.50				SPT-3	3.00-3.45	11	14	21	35	
18.114	3.00				SPT-4	4.00-4.45	13	17	25	42	
17.614	3.50				UDS-2	4.50-4.80					
17.114	4.00				SPT-5	5.00-5.45	12	19	27	46	
16.614	4.50				SPT-6	6.00-6.45	14	22	30	52	
16.114	5.00				SPT-7	7.00-7.45	16	30	33	63	
15.614	5.50				SPT-8	8.00-8.45	15	29	38	67	
15.114	6.00	Hard to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		5.95	SPT-9	9.00-9.45	17	24	40	64	
14.614	6.50				SPT-10	10.00-10.45	18	27	39	66	
14.114	7.00										
13.614	7.50										
13.114	8.00										
12.614	8.50										
12.114	9.00										
11.614	9.50										
11.114	10.00										

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Medium plastic Clay with gravels
 Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2448638.577 E 304117.164 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 20.408 **Chainage (m) :** 375000 **Date Started :** 04.03.2017
Ground Elevation (m) : 20.408 **Ground Water Table(m):** Not Met With **Date Completed :** 04.03.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.408	0.00	Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.00		DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.
19.908	0.50											
19.408	1.00											
18.908	1.50	Very Stiff to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		11.45		SPT-1	1.00-1.45	7	9	12	21	Ground water table was not encountered upto termination of borehole.
18.408	2.00					UDS-1	1.50-1.80					
17.908	2.50					SPT-2	2.00-2.45	8	10	14	24	
17.408	3.00					SPT-3	3.00-3.45	10	13	17	30	
16.908	3.50					SPT-4	4.00-4.45	9	14	19	33	
16.408	4.00					UDS-2	4.50-4.80					
15.908	4.50					SPT-5	5.00-5.45	11	19	24	43	
15.408	5.00					SPT-6	6.00-6.45	11	21	29	50	
14.908	5.50					SPT-7	7.00-7.45	10	22	28	50	
14.408	6.00					SPT-8	8.00-8.45	13	29	33	62	
13.908	6.50					SPT-9	9.00-9.45	14	30	35	65	
13.408	7.00					SPT-10	10.00-10.45	12	29	39	68	
12.908	7.50		SPT-11	11.00-11.45	15	32	40	72				
12.408	8.00		SPT-12	12.00-12.45	16	33	41	74				
11.908	8.50											
11.408	9.00											
10.908	9.50											
10.408	10.00											
9.908	10.50											
9.408	11.00											
8.908	11.50											
8.408	12.00											

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2449471.603 E 304670.398	Dia. of The Hole : 150mm
Collar Elevation (m) : 20.602	Chainage (m) : 376000	Date Started : 05.03.2017
Ground Elevation (m) : 20.602	Ground Water Table(m): Not Met With	Date Completed : 05.03.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
20.602	0.00	Black Colour, Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.			
20.102	0.50													
19.602	1.00													
19.102	1.50	Very Stiff to Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		3.50	SPT-1	1.00-1.45	7	9	13	22	Ground water table was not encountered upto termination of borehole.			
18.602	2.00				UDS-1	1.50-1.80								
18.102	2.50				SPT-2	2.00-2.45	9	11	14	25				
17.602	3.00													
17.102	3.50				SPT-3	3.00-3.45	10	13	18	31				
16.602	4.00													
16.102	4.50				SPT-4	4.00-4.45	11	14	17	31				
15.602	5.00				Brown Colour, Sandy SILT, non plastic in nature (ML)		0.50	UDS-2	4.50-4.80					
15.102	5.50							SPT-5	5.00-5.45	13		19	25	44
14.602	6.00				Hard to Very Hard, Brown Clayey SILT of medium plasticity (MI)		4.00							
14.102	6.50	SPT-6	6.00-6.45	12				24	28	52				
13.602	7.00													
13.102	7.50	SPT-7	7.00-7.45	9				23	29	52				
12.602	8.00													
12.102	8.50	SPT-8	8.00-8.45	14				25	31	56				
11.602	9.00	Very Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		3.00										
11.102	9.50				SPT-9	9.00-9.45	15	26	33	59				
10.602	10.00													
10.102	10.50				SPT-10	10.00-10.45	13	28	34	62				
9.602	11.00	Very hard brown Colour, Silty CLAY of low plasticity (CL)		0.45										
9.102	11.50				SPT-11	11.00-11.45	10	31	38	69				
8.602	12.00				SPT-12	12.00-12.45	16	33	40	73				

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Clayey Silt of medium plasticity	Silty Clay of low plasticity
Silty Clay of high plasticity	Silty Clay of medium plasticity	Sandy SILT		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2450304.628 E 305223.632	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.209	Chainage (m) : 377000	Date Started : 05.03.2017
Ground Elevation (m) : 21.209	Ground Water Table(m): Not Met With	Date Completed : 05.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
21.209	0.00	Black Colour, Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.		
20.709	0.50												
20.209	1.00	Very stiff, Brown Colour, Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	5	7	12	19	Ground water table was not encountered upto termination of borehole.		
19.709	1.50												
19.209	2.00	Very Stiff to Very Hard, Silty CLAY of medium plasticity (CI)		8.50	UDS-1	1.50-1.80							
18.709	2.50				SPT-2	2.00-2.45	7	11	14	25			
18.209	3.00				SPT-3	3.00-3.45	10	14	16	30			
17.709	3.50												
17.209	4.00				SPT-4	4.00-4.45	8	12	19	31			
16.709	4.50												
16.209	5.00				UDS-2	4.50-4.80							
15.709	5.50				SPT-5	5.00-5.45	11	14	21	35			
15.209	6.00												
14.709	6.50										SPT-6	6.00-6.45	13
14.209	7.00												
13.709	7.50	SPT-7	7.00-7.45	16							26	36	62
13.209	8.00												
12.709	8.50	SPT-8	8.00-8.45	14	30	33	63						
12.209	9.00												
11.709	9.50	SPT-9	9.00-9.45	17	32	37	69						
11.209	10.00												
10.709	10.50	Very Hard, Brown Colour, Silty CLAY of high plasticity (CH)		1.45	SPT-10	10.00-10.45	19	29	34	63			
10.209	11.00				SPT-11	11.00-11.45	20	31	38	69			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty Clay of high plasticity
Sandy SILT	Silty Clay of low plasticity	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2451137.654 E 305776.866	Dia. of The Hole : 150mm
Collar Elevation (m) : 21.429	Chainage (m) : 378000	Date Started : 06.03.2017
Ground Elevation (m) : 21.429	Ground Water Table(m): Not Met With	Date Completed : 06.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
21.429	0.00	Medium Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		2.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.		
20.929	0.50												
20.429	1.00												
19.929	1.50				SPT-1	1.00-1.45	5	7	10	17			
19.429	2.00				UDS-1	1.50-1.80							
18.929	2.50	Very Stiff, Brown Colour, Silty CLAY of low plasticity (CL)		1.00	SPT-2	2.00-2.45	8	10	12	22			
18.429	3.00												
17.929	3.50	Very Stiff to Hard, Brown Colour, Silty CLAY of medium plasticity (CI)		2.00	SPT-3	3.00-3.45	11	13	15	28			
17.429	4.00												
16.929	4.50							SPT-4	4.00-4.45	13		15	17
16.429	5.00				UDS-2	4.50-4.80							
15.929	5.50	Hard to Very Hard, Brown Colour, Silty CLAY of high plasticity (CH)		2.00	SPT-5	5.00-5.45	14	18	21	39			
15.429	6.00												
14.929	6.50							SPT-6	6.00-6.45	12	25	32	57
14.429	7.00												
13.929	7.50	Very Hard, Brown Colour, Silty CLAY of low Plasticity (CL)		4.00	SPT-7	7.00-7.45	15	28	38	66			
13.429	8.00												
12.929	8.50							SPT-8	8.00-8.45	17	30	40	70
12.429	9.00												
11.929	9.50				SPT-9	9.00-9.45	19	33	46	79			
11.429	10.00												
10.929	10.50				SPT-10	10.00-10.45	21	37	44	81			
10.429	11.00												
	11.45	Very Hard, Brown Colour, Clayey SILT of low plasticity (ML-CL)		0.45	SPT-11	11.00-11.45	20	34	52	86			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Silty Clay of high plasticity	Clayey SILT
Sandy SILT	Silty Clay of low plasticity	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2451970.680 E 306330.100	Dia. of The Hole : 150mm
Collar Elevation (m) : 22.537	Chainage (m) : 379000	Date Started : 06.03.2017
Ground Elevation (m) : 22.537	Ground Water Table(m): Not Met With	Date Completed : 06.03.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
22.537	0.00	Very Stiff to hard, Black and Brown Colour, Silty CLAY of medium plasticity (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL. Ground water table was not encountered upto termination of borehole.			
22.037	0.50													
21.537	1.00													
21.037	1.50							SPT-1	1.00-1.45	8		12	16	28
20.537	2.00							UDS-1	1.50-1.80					
20.037	2.50							SPT-2	2.00-2.45	11		16	20	36
19.537	3.00													
19.037	3.50							SPT-3	3.00-3.45	13		20	25	45
18.537	4.00													
18.037	4.50							SPT-4	4.00-4.45	17		22	23	45
17.537	5.00				Dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		4.00	UDS-2	4.50-4.80					
17.037	5.50											SPT-5	5.00-5.45	16
16.537	6.00													
16.037	6.50							SPT-6	6.00-6.45	20	33	55	88	
15.537	7.00													
15.037	7.50	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		1.00				SPT-7	7.00-7.45	22	38	46	84	
14.537	8.00													
14.037	8.50	Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		1.00	SPT-8	8.00-8.45	15	30	51	81				
13.537	9.00													
13.037	9.50	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		2.00	SPT-9	9.00-9.45	22	36	59	95				
12.537	10.00													
12.037	10.50							SPT-10	10.00-10.45	26	32	44	76	
11.537	11.00	Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		1.45	SPT-11	11.00-11.45	29	31	60	91				
11.037	11.50													
10.537	12.00							SPT-12	12.00-12.45	27	35	54	89	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Silty Clay of medium plasticity	Sandy SILT	Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2452803.706 E 306883.334	Dia. of The Hole : 150mm
Collar Elevation (m) : 23.055	Chainage (m) : 380000	Date Started : 07.03.2017
Ground Elevation (m) : 23.055	Ground Water Table(m): Not Met With	Date Completed : 07.03.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
23.055	0.00	Black Colour, Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.	
22.555	0.50											
22.055	1.00	Very Stiff to Hard, Brown Colour Silty CLAY of medium plasticity (CI)		3.00	SPT-1	1.00-1.45	7	11	16	27	Ground water table was not encountered upto termination of borehole.	
21.555	1.50				UDS-1	1.50-1.80						
21.055	2.00				SPT-2	2.00-2.45	9	14	19	33		
20.555	2.50											
20.055	3.00				SPT-3	3.00-3.45	11	17	21	38		
19.555	3.50	Dense to Very Dense, Sandy SILT, non plastic in nature (ML)		7.45	SPT-4	4.00-4.45	13	16	23	39		
19.055	4.00				UDS-2	4.50-4.80						
18.555	4.50				SPT-5	5.00-5.45	12	21	25	46		
18.055	5.00											
17.555	5.50				SPT-6	6.00-6.45	14	23	30	53		
17.055	6.00											
16.555	6.50				SPT-7	7.00-7.45	13	24	31	55		
16.055	7.00											
15.555	7.50				SPT-8	8.00-8.45	16	26	29	55		
15.055	8.00											
14.555	8.50				SPT-9	9.00-9.45	18	28	34	62		
14.055	9.00											
13.555	9.50	SPT-10	10.00-10.45	19	31	33	64					
13.055	10.00											
12.555	10.50	SPT-11	11.00-11.45	21	34	40	74					
12.055	11.00											

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample
	Silty Clay of high plasticity		Silty Clay of medium plasticity		Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2453636.732 E 307436.568 Dia. of The Hole : 150mm
Collar Elevation (m) : 19.786 Chainage (m) : 381000 Date Started : 08.03.2017
Ground Elevation (m) : 19.786 Ground Water Table(m): Not Met With Date Completed : 08.03.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
19.786	0.00	Black Colour, Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL. Ground water table was not encountered upto termination of borehole.	
19.286	0.50											
18.786	1.00	Very Stiff to Hard, Brown Colour, Silty CLAY of low plasticity (CL)		3.00	SPT-1	1.00-1.45	8	12	16	28		
18.286	1.50				UDS-1	1.50-1.80						
17.786	2.00				SPT-2	2.00-2.45	9	13	17	30		
17.286	2.50											
16.786	3.00				SPT-3	3.00-3.45	13	20	25	45		
16.286	3.50											
15.786	4.00	Dense to Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		7.45	SPT-4	4.00-4.45	13	16	23	39		
15.286	4.50				UDS-2	4.50-4.80						
14.786	5.00				SPT-5	5.00-5.45	14	18	25	43		
14.286	5.50											
13.786	6.00				SPT-6	6.00-6.45	15	19	30	49		
13.286	6.50											
12.786	7.00				SPT-7	7.00-7.45	17	21	29	50		
12.286	7.50											
11.786	8.00				SPT-8	8.00-8.45	9	23	28	51		
11.286	8.50											
10.786	9.00				SPT-9	9.00-9.45	17	26	32	58		
10.286	9.50											
9.786	10.00	SPT-10	10.00-10.45	10	30	34	64					
9.286	10.50											
8.786	11.00	SPT-11	11.00-11.45	15	30	51	81					

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity
 Silty Clay of low plasticity
 Sandy SILT

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2454469.758 E 307989.802 Dia. of The Hole : 150mm
Collar Elevation (m) : 23.688 Chainage (m) : 382000 Date Started : 09.03.2017
Ground Elevation (m) : 23.688 Ground Water Table(m): Not Met With Date Completed : 09.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
23.688	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.
23.188	0.50										
22.688	1.00				SPT-1	1.00-1.45	5	7	10	17	Ground water table was not encountered upto termination of borehole.
22.188	1.50				UDS-1	1.50-1.80					
21.688	2.00	Very Hard, Brown Colour, Silty CLAY of low plasticity (CL)		8.45	SPT-2	2.00-2.45	16	30	45	75	
21.188	2.50										
20.688	3.00				SPT-3	3.00-3.45	14	32	43	75	
20.188	3.50										
19.688	4.00				SPT-4	4.00-4.45	16	35	46	81	
19.188	4.50				UDS-2	4.50-4.80					
18.688	5.00				SPT-5	5.00-5.45	15	32	44	76	
18.188	5.50										
17.688	6.00				SPT-6	6.00-6.45	17	34	42	76	
17.188	6.50										
16.688	7.00	SPT-7	7.00-7.45	19	39	45	84				
16.188	7.50										
15.688	8.00	SPT-8	8.00-8.45	21	42	51	93				
15.188	8.50										
14.688	9.00	SPT-9	9.00-9.45	23	45	48	93				
14.188	9.50										
13.688	10.00	SPT-10	10.00-10.45	22	43	47	90				

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of low plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2455302.784 E 308543.036	Dia. of The Hole : 150mm
Collar Elevation (m) : 25.057	Chainage (m) : 383000	Date Started : 08.03.2017
Ground Elevation (m) : 25.057	Ground Water Table(m): Not Met With	Date Completed : 08.03.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
25.057	0.00	Very Stiff, Black Colour, Silty CLAY of high plasticity, low expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.
24.557	0.50										
24.057	1.00				SPT-1	1.00-1.45	6	9	11	20	
23.557	1.50				UDS-1	1.50-1.80					
23.057	2.00	Very Stiff, Brown Colour, Silty CLAY of low plasticity (CL)		2.50	SPT-2	2.00-2.45	8	10	12	22	Ground water table was not encountered upto termination of borehole.
22.557	2.50										
22.057	3.00				SPT-3	3.00-3.45	7	12	15	27	
21.557	3.50										
21.057	4.00	Very Hard, Brown Colour, Clayey SILT of medium plasticity (MI)		3.50	SPT-4	4.00-4.45	9	14	17	31	
20.557	4.50				UDS-2	4.50-4.80					
20.057	5.00				SPT-5	5.00-5.45	18	30	42	72	
19.557	5.50										
19.057	6.00	Very Hard, Brown Colour, Clayey SILT of medium plasticity (MI)		3.50	SPT-6	6.00-6.45	19	32	39	71	
18.557	6.50										
18.057	7.00				SPT-7	7.00-7.45	21	34	40	74	
17.557	7.50										
17.057	8.00	Very Dense, Brown Colour, Sandy SILT, non plastic in nature (ML)		2.00	SPT-8	8.00-8.45	23	38	44	82	
16.557	8.50										
16.057	9.00				SPT-9	9.00-9.45	20	35	41	76	
15.557	9.50	Very Hard, Brown Colour, Clayey SILT of medium plasticity (MI)		0.45	SPT-10	10.00-10.45	25	40	43	83	
15.057	10.00										

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Clayey Silt of medium plasticity
 Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2456135.809 E 309096.270 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 25.236 **Chainage (m) :** 384000 **Date Started :** 08.04.2017
Ground Elevation (m) : 25.236 **Ground Water Table(m):** Not Met With **Date Completed :** 08.04.2017
Total Depth (m) : 11.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
25.236	0.00	Black Clayey SILT of high plasticity, low expansive (MH)		1.00		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.			
24.736	0.50														
24.236	1.00														
23.736	1.50							SPT-1	1.00-1.45	6	10		13	23	
23.236	2.00								UDS-1	1.50-1.80					
22.736	2.50								SPT-2	2.00-2.45	9		14	19	33
22.236	3.00														
21.736	3.50								SPT-3	3.00-3.45	13		18	23	41
21.236	4.00														
20.736	4.50								SPT-4	4.00-4.45	10		22	26	48
20.236	5.00				Very stiff to very hard, yellow Silty CLAY of medium plasticity, low expansive with occassional gravels (Cl)		10.45		UDS/DS-2	4.50-4.80					
19.736	5.50								SPT-5	5.00-5.45	15	27	30	57	
19.236	6.00														
18.736	6.50								SPT-6	6.00-6.45	19	30	37	67	
18.236	7.00														
17.736	7.50								SPT-7	7.00-7.45	21	33	40	73	
17.236	8.00														
16.736	8.50								SPT-8	8.00-8.45	17	35	45	80	
16.236	9.00														
15.736	9.50								SPT-9	9.00-9.45	16	37	48	85	
15.236	10.00														
14.736	10.50					SPT-10	10.00-10.45	22	40	49	89				
14.236	11.00														
						SPT-11	11.00-11.45	25	43	54	97				

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Clayey Silt of high plasticity
 Silty Clay of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2457052.138 E 309704.828	Dia. of The Hole : 150mm
Collar Elevation (m) : 25.000	Chainage (m) : 385100	Date Started : 05.04.2017
Ground Elevation (m) : 25.000	Ground Water Table(m): Not Met With	Date Completed : 05.04.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
25.000	0.00	Very stiff, black Silty CLAY of high plasticity, medium expansive (CH)		2.00		DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
24.500	0.50												
24.000	1.00												
23.500	1.50												
23.000	2.00												
22.500	2.50	Dense to very dense, brownish yellow Sandy SILT, non plastic in nature (ML-SM)		5.00		SPT-2	2.00-2.45	10	17	20	37		
22.000	3.00												
21.500	3.50												
21.000	4.00												
20.500	4.50												
20.000	5.00												
19.500	5.50												
19.000	6.00												
18.500	6.50												
18.000	7.00												
17.500	7.50	Very dense, brownish yellow Silty SAND (SM-ML)		2.45		SPT-7	7.00-7.45	19	37	48	85		
17.000	8.00												
16.500	8.50												
16.000	9.00												

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		Slipped / Hard to penetrate samples
	Silty Clay of high plasticity		Sandy SILT		Silty SAND		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct Coordinates : N 2457801.861 E 310202.738 Dia. of The Hole : 150mm
Collar Elevation (m) : 20.959 Chainage (m) : 386000 Date Started : 09.04.2017
Ground Elevation (m) : 20.959 Ground Water Table(m): Not Met With Date Completed : 09.04.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
20.959	0.00	Dense to very dense, grey to light brown Sandy SILT, non plastic in nature (ML/ML-SM)		3.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
20.459	0.50											
19.959	1.00											
19.459	1.50				SPT-1	1.00-1.45	10	12	19	31		
18.959	2.00				UDS-1	1.50-1.80						
18.459	2.50				SPT-2	2.00-2.45	17	22	31	53		
17.959	3.00											
17.459	3.50				SPT-3	3.00-3.45	14	26	33	59		
16.959	4.00											
16.459	4.50	SPT-4	4.00-4.45	19	30	35	65					
15.959	5.00	UDS-2	4.50-4.80									
15.459	5.50	SPT-5	5.00-5.45	21	39	43	82					
14.959	6.00	Very hard, light brown Silty CLAY of high plasticity, low to medium expansive (CH)		6.45	SPT-6	6.00-6.45	23	44	45	89		
14.459	6.50											
13.959	7.00				SPT-7	7.00-7.45	20	40	48	88		
13.459	7.50											
12.959	8.00				SPT-8	8.00-8.45	24	36	50	86		
12.459	8.50											
11.959	9.00				SPT-9	9.00-9.45	25	43	56	99		

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Undisturbed Sample
 Silty Clay of high plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2458634.887 E 310755.973 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 22.810 **Chainage (m) :** 387000 **Date Started :** 18.08.2017
Ground Elevation (m) : 22.810 **Ground Water Table(m):** Not Met With **Date Completed :** 18.08.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
22.810	0.00	Medium dense / dense, brownish grey Sandy SILT, non plastic in nature (ML/ML-SM)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.
22.310	0.50										
21.810	1.00				SPT-1	1.00-1.45	7	13	17	30	
21.310	1.50				UDS-1	1.50-1.80					
20.810	2.00	Hard, light grey Silty CLAY of medium plasticity (CI)		1.00							
20.310	2.50				SPT-2	2.00-2.45	9	11	23	34	
19.810	3.00	Dense, brownish grey Sandy SILT, non plastic in nature (ML)		1.00							
19.310	3.50				SPT-3	3.00-3.45	14	19	26	45	
18.810	4.00	Hard to very hard, dark grey Clayey SILT of medium plasticity (MI)		5.00							
18.310	4.50				SPT-4	4.00-4.45	12	20	29	49	
17.810	5.00				UDS/DS-2	4.50-4.80					
17.310	5.50				SPT-5	5.00-5.45	20	32	36	68	
16.810	6.00	Very hard, dark grey Silty CLAY of medium plasticity (CI)		1.45							
16.310	6.50				SPT-6	6.00-6.45	19	36	40	76	
15.810	7.00										
15.310	7.50				SPT-7	7.00-7.45	21	33	39	72	
14.810	8.00										
14.310	8.50				SPT-8	8.00-8.45	24	41	38	79	
13.810	9.00										
13.310	9.50				SPT-9	9.00-9.45	22	34	48	82	
12.810	10.00										

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Sandy SILT Silty Clay of medium plasticity Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2459472.971 E 311301.327	Dia. of The Hole : 150mm
Collar Elevation (m) : 26.215	Chainage (m) : 388000	Date Started : 17.05.2017
Ground Elevation (m) : 26.215	Ground Water Table(m): Not Met With	Date Completed : 17.05.2017
Total Depth (m) : 11.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
26.215	0.00	Medium dense, yellowish grey Sandy SILT, non plastic in nature (ML-SM)		2.00		DS-1	0.00-0.50					Borehole terminated at 11.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.			
25.715	0.50														
25.215	1.00														
24.715	1.50								SPT-1	1.00-1.45	9		10	12	22
24.215	2.00					UDS-1	1.50-1.80								
23.715	2.50	Very stiff to hard, brownish grey Silty CLAY of medium plasticity (CI)		5.00		SPT-2	2.00-2.45	11	9	20	29				
23.215	3.00														
22.715	3.50								SPT-3	3.00-3.45	15		17	21	38
22.215	4.00														
21.715	4.50								SPT-4	4.00-4.45	12		15	13	28
21.215	5.00								UDS/DS-2	4.50-4.80					
20.715	5.50					SPT-5	5.00-5.45	16	25	22	47				
20.215	6.00														
19.715	6.50					SPT-6	6.00-6.45	22	21	23	44				
19.215	7.00														
18.715	7.50	Very dense, yellowish grey Sandy SILT, non plastic in nature (ML-SM)		2.00		SPT-7	7.00-7.45	20	27	28	55				
18.215	8.00														
17.715	8.50								SPT-8	8.00-8.45	21	28	31	59	
17.215	9.00														
16.715	9.50	Very hard, brownish grey Clayey SILT of medium plasticity (MI)		2.00		SPT-9	9.00-9.45	25	25	30	55				
16.215	10.00														
15.715	10.50								SPT-10	10.00-10.45	23	28	35	63	
15.215	11.00	Very hard, brownish grey Sandy CLAY of low plasticity (CL)		0.45											
	11.45								SPT-11	11.00-11.45	25	30	40	70	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Silty Clay of medium plasticity	Clayey Silt of medium plasticity	Silty Clay of low plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2460371.609 E 311737.374	Dia. of The Hole : 150mm
Collar Elevation (m) : 27.679	Chainage (m) : 389000	Date Started : 10.04.2017
Ground Elevation (m) : 27.679	Ground Water Table(m): Not Met With	Date Completed : 10.04.2017
Total Depth (m) : 8.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
27.679	0.00	Dense to very dense, blackish grey to light brown Sandy SILT, non plastic in nature (ML/ML-SM)		8.45	DS-1	0.00-0.50					Borehole terminated at 8.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
27.179	0.50											
26.679	1.00											
26.179	1.50				SPT-1	1.00-1.45	12	19	23	42		
25.679	2.00				UDS-1	1.50-1.80						
25.179	2.50				SPT-2	2.00-2.45	19	23	28	51		
24.679	3.00											
24.179	3.50				SPT-3	3.00-3.45	20	30	32	62		
23.679	4.00											
23.179	4.50				SPT-4	4.00-4.45	23	33	35	68		
22.679	5.00				UDS-2	4.50-4.80						
22.179	5.50				SPT-5	5.00-5.45	21	37	39	76		
21.679	6.00											
21.179	6.50				SPT-6	6.00-6.45	23	44	46	90		
20.679	7.00											
20.179	7.50				SPT-7	7.00-7.45	22	47	49	96		
19.679	8.00											
					SPT-8	8.00-8.45	28	48	51	99		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2461330.133 E 312018.299	Dia. of The Hole : 150mm
Collar Elevation (m) : 27.817	Chainage (m) : 390000	Date Started : 11.04.2017
Ground Elevation (m) : 27.817	Ground Water Table(m): Not Met With	Date Completed : 11.04.2017
Total Depth (m) : 10.41	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
27.817	0.00	Black Clayey SILT of high plasticity, low expansive (MH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.41m depth below existing ground level Ground water table was not encountered upto termination of borehole.		
27.317	0.50												
26.817	1.00	Very stiff, yellow Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	7	12	10	22			
26.317	1.50												
25.817	2.00	Very stiff to very hard, yellow Silty CLAY of medium plasticity, low expansive (CI)		3.50	UDS-1	1.50-1.80							
25.317	2.50					SPT-2	2.00-2.45	9	15	12		27	
24.817	3.00												
24.317	3.50					SPT-3	3.00-3.45	12	23	24		47	
23.817	4.00												
23.317	4.50				SPT-4	4.00-4.45	18	32	42	74			
22.817	5.00				UDS/DS-2	4.50-4.80							
22.317	5.50	Very dense, grey Silty SAND (SM-ML)		2.00	SPT-5	5.00-5.45	20	28	46	74			
21.817	6.00												
21.317	6.50					SPT-6	6.00-6.45	25	40	48	88		
20.817	7.00	Very hard, yellow Clayey SILT of medium plasticity (MI)		3.41	SPT-7	7.00-7.45	23	44	51	95			
20.317	7.50												
19.817	8.00							SPT-8	8.00-8.45	28	45	49	94
19.317	8.50												
18.817	9.00												
18.317	9.50				SPT-9	9.00-9.45	26	46	48	94			
17.817	10.00												
					SPT-10	10.00-10.41	24	49	53/11	>100			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples	Clayey Silt of medium plasticity
Clayey Silt of high plasticity	Silty Clay of high plasticity	Silty Clay of medium plasticity	Silty SAND	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2462321.690 E 312140.924 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 28.979 **Chainage (m) :** 391000 **Date Started :** 14.04.2017
Ground Elevation (m) : 28.979 **Ground Water Table(m):** Not Met With **Date Completed :** 14.04.2017
Total Depth (m) : 10.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
28.979	0.00	Hard, lighy yellow Silty CLAY of medium plasticity, low expansive (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.
28.479	0.50				SPT-1	1.00-1.45	10	16	20	36	
27.979	1.00	Dense, yellow Sandy SILT, non plastic in nature (ML)		1.50	UDS-1	1.50-1.80					
27.479	1.50				SPT-2	2.00-2.45	12	20	28	48	
26.979	2.00				SPT-3	3.00-3.45	16	20	23	43	
26.479	2.50				SPT-4	4.00-4.45	17	34	43	77	
25.979	3.00	Dense to very dense, brownish yellow Silty SAND with gravels (SM)		4.00	UDS/DS-2	4.50-4.80					
25.479	3.50				SPT-5	5.00-5.45	21	40	48	88	
24.979	4.00				SPT-6	6.00-6.45	22	42	50	92	
24.479	4.50				SPT-7	7.00-7.45	23	44	49	93	
23.979	5.00				SPT-8	8.00-8.45	21	39	47	86	
23.479	5.50				SPT-9	9.00-9.45	25	45	49	94	
22.979	6.00	Very hard, brownish yellow Clayey SILT of medium plasticity (MI)		3.00	SPT-10	10.00-10.45	22	42	52	94	
22.479	6.50										
21.979	7.00	Very hard, brownish yellow Silty CLAY of medium plasticity, low expansive (CI)		0.45							
21.479	7.50										
20.979	8.00										
20.479	8.50										
19.979	9.00										
19.479	9.50										
18.979	10.00										

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Sandy SILT
 Undisturbed Sample
 Silty SAND
 Slipped / Hard to penetrate samples
 Clayey Silt of medium plasticity

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2462421.462 E 312147.669	Dia. of The Hole : 150mm
Collar Elevation (m) : 29.352	Chainage (m) : 391100	Date Started : 13.04.2017
Ground Elevation (m) : 29.352	Ground Water Table(m) : Not Met With	Date Completed : 13.04.2017
Total Depth (m) : 8.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
29.352	0.00	Hard, black Clayey SILT of medium plasticity (MI)		1.50	DS-1	0.00-0.50					Borehole terminated at 8.45m depth below existing ground level
28.852	0.50										
28.352	1.00				SPT-1	1.00-1.45	15	20	22	42	Ground water table was not encountered upto termination of borehole.
27.852	1.50				UDS-1	1.50-1.80					
27.352	2.00				SPT-2	2.00-2.45	18	28	35	63	
26.852	2.50										
26.352	3.00	Very hard, black Silty CLAY of medium plasticity, low expansive (CI)		3.00	SPT-3	3.00-3.45	21	30	37	67	
25.852	3.50										
25.352	4.00				SPT-4	4.00-4.45	22	35	39	74	
24.852	4.50				UDS/DS-2	4.50-4.80					
24.352	5.00	Very hard, yellow Clayey SILT of medium plasticity, low expansive (MI)		1.50	SPT-5	5.00-5.45	20	41	48	89	
23.852	5.50										
23.352	6.00				SPT-6	6.00-6.45	22	45	50	95	
22.852	6.50										
22.352	7.00	Very hard, yellow Silty CLAY of medium plasticity (CI)		2.45	SPT-7	7.00-7.45	24	47	51	98	
21.852	7.50										
21.352	8.00				SPT-8	8.00-8.45	21	43	49	92	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Clayey Silt of medium plasticity	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2462521.236 E 312154.397	Dia. of The Hole : 150mm
Collar Elevation (m) : 29.466	Chainage (m) : 391200	Date Started : 20.04.2017
Ground Elevation (m) : 29.466	Ground Water Table(m): Not Met With	Date Completed : 20.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
29.466	0.00				DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level
28.966	0.50	Brownish grey Sandy SILT, non plastic in nature (ML)		1.00							
28.466	1.00			1.00m							Ground water table was not encountered upto termination of borehole.
27.966	1.50	Very stiff, dark grey Clayey SILT of medium plasticity (MI)		0.50	SPT-1	1.00-1.45	7	11	15	26	
27.466	2.00				UDS-1	1.50-1.80					
26.966	2.50				SPT-2	2.00-2.45	10	16	19	35	
26.466	3.00										
25.966	3.50				SPT-3	3.00-3.45	13	20	23	43	
25.466	4.00										
24.966	4.50				SPT-4	4.00-4.45	15	23	26	49	
24.466	5.00				UDS-2	4.50-4.80					
23.966	5.50				SPT-5	5.00-5.45	20	39	42	81	
23.466	6.00	Hard to very hard, dark grey to brownish yellow Silty CLAY of medium plasticity (CI)		8.95							
22.966	6.50				SPT-6	6.00-6.45	21	43	40	83	
22.466	7.00										
21.966	7.50				SPT-7	7.00-7.45	25	30	37	67	
21.466	8.00										
20.966	8.50				SPT-8	8.00-8.45	26	30	35	65	
20.466	9.00										
19.966	9.50				SPT-9	9.00-9.45	21	37	40	77	
19.466	10.00			10.45m							
					SPT-10	10.00-10.45	30	39	48	87	

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2462621.009 E 312161.125	Dia. of The Hole : 150mm
Collar Elevation (m) : 29.698	Chainage (m) : 391300	Date Started : 21.04.2017
Ground Elevation (m) : 29.698	Ground Water Table(m) : Not Met With	Date Completed : 21.04.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
29.698	0.00	Brownish grey Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.
29.198	0.50										
28.698	1.00	Hard to very hard, brownish grey Silty CLAY of low plasticity (CL)		3.50	SPT-1	1.00-1.45	6	12	20	32	
28.198	1.50				UDS-1	1.50-1.80					
27.698	2.00				SPT-2	2.00-2.45	8	15	22	37	
27.198	2.50										
26.698	3.00				SPT-3	3.00-3.45	15	25	37	62	
26.198	3.50										
25.698	4.00				SPT-4	4.00-4.45	18	32	42	74	
25.198	4.50				UDS-2	4.50-4.80					
24.698	5.00	SPT-5	5.00-5.45	20	28	46	74				
24.198	5.50										
23.698	6.00	Very hard, brownish grey Silty CLAY of medium plasticity (CI)		4.95	SPT-6	6.00-6.45	25	38	45	83	
23.198	6.50										
22.698	7.00				SPT-7	7.00-7.45	23	40	47	87	
22.198	7.50										
21.698	8.00				SPT-8	8.00-8.45	28	43	49	92	
21.198	8.50										
20.698	9.00	SPT-9	9.00-9.45	31	35	50	85				

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Sandy SILT	Silty Clay of low plasticity	Silty Clay of medium plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2462920.329 E 312181.309	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.022	Chainage (m) : 391600	Date Started : 21.04.2017
Ground Elevation (m) : 31.022	Ground Water Table(m) : Not Met With	Date Completed : 21.04.2017
Total Depth (m) : 8.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
31.022	0.00	Hard, yellowish grey Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 8.45m below existing ground level
30.522	0.50										
30.022	1.00				SPT-1	1.00-1.45	9	17	23	40	Ground water table was not encountered upto termination of borehole.
29.522	1.50										
29.022	2.00	Very hard, yellowish grey Clayey SILT of medium plasticity (MI)		1.50	UDS-1	1.50-1.80					
28.522	2.50										
28.022	3.00				SPT-2	2.00-2.45	11	23	30	53	
27.522	3.50										
27.022	4.00	Very hard, brownish yellow Silty CLAY of medium plasticity (CI)		1.00	SPT-3	3.00-3.45	14	26	34	60	
26.522	4.50										
26.022	5.00	Very hard, brownish yellow Silty CLAY of low plasticity (CL)		3.00	SPT-4	4.00-4.45	20	40	43	83	
25.522	5.50										
25.022	6.00				UDS/DS-2	4.50-4.80					
24.522	6.50										
24.022	7.00				SPT-5	5.00-5.45	18	34	40	74	
23.522	7.50										
23.022	8.00	Very hard, brownish yellow Clayey SILT of low plasticity (CL)		1.45	SPT-6	6.00-6.45	22	44	45	89	
					SPT-7	7.00-7.45	24	39	48	87	
					SPT-8	8.00-8.45	25	39	48	87	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample
 Silty Clay of low plasticity
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463020.103 E 312188.037	Dia. of The Hole : 150mm
Collar Elevation (m) : 30.684	Chainage (m) : 391700	Date Started : 23.04.2017
Ground Elevation (m) : 30.684	Ground Water Table(m) : Not Met With	Date Completed : 23.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
30.684	0.00	Medium dense to very dense, brownish grey Sandy SILT, non plastic in nature (ML)	8.00m	2.45	DS-1	0.00-0.50					Borehole terminated at 10.45m below existing ground level	
30.184	0.50											
29.684	1.00											
29.184	1.50				SPT-1	1.00-1.45	7	12	17	29		Ground water table was not encountered upto termination of borehole.
28.684	2.00				UDS-1	1.50-1.80						
28.184	2.50				SPT-2	2.00-2.45	11	20	23	43		
27.684	3.00											
27.184	3.50				SPT-3	3.00-3.45	14	24	25	49		
26.684	4.00											
26.184	4.50				SPT-4	4.00-4.45	19	39	43	82		
25.684	5.00	UDS/DS-2	4.50-4.80									
25.184	5.50	SPT-5	5.00-5.45	21	40	48	88					
24.684	6.00											
24.184	6.50	SPT-6	6.00-6.45	20	42	50	92					
23.684	7.00											
23.184	7.50	SPT-7	7.00-7.45	23	43	48	91					
22.684	8.00											
22.184	8.50	Very hard, yellowish grey Silty CLAY of medium plasticity (CI)	2.45	2.45	SPT-8	8.00-8.45	21	39	47	86		
21.684	9.00											
21.184	9.50				SPT-9	9.00-9.45	25	45	49	94		
20.684	10.00				SPT-10	10.00-10.45	24	41	53	94		

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463219.650 E 3 12201.493	Dia. of The Hole : 150mm
Collar Elevation (m) : 30.802	Chainage (m) : 391900	Date Started : 25.04.2017
Ground Elevation (m) : 30.802	Ground Water Table(m): Not Met With	Date Completed : 25.04.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
30.802	0.00	Brownish grey Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level
30.302	0.50										
29.802	1.00	Very stiff to very hard, brownish grey Silty CLAY of medium plasticity (Cl)		8.45	SPT-1	1.00-1.45	8	12	15	27	Ground water table was not encountered upto termination of borehole.
29.302	1.50				UDS-1	1.50-1.80					
28.802	2.00				SPT-2	2.00-2.45	11	17	23	40	
28.302	2.50										
27.802	3.00				SPT-3	3.00-3.45	12	24	26	50	
27.302	3.50										
26.802	4.00				SPT-4	4.00-4.45	19	39	41	80	
26.302	4.50				UDS-2	4.50-4.80					
25.802	5.00				SPT-5	5.00-5.45	17	30	40	70	
25.302	5.50										
24.802	6.00	SPT-6	6.00-6.45	21	43	46	89				
24.302	6.50										
23.802	7.00	SPT-7	7.00-7.45	26	41	47	88				
23.302	7.50										
22.802	8.00	SPT-8	8.00-8.45	25	37	48	85				
22.302	8.50										
21.802	9.00	SPT-9	9.00-9.45	29	40	51	91				

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2463319.423 E 312208.221 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 31.055 **Chainage (m) :** 392000 **Date Started :** 24.05.2017
Ground Elevation (m) : 31.055 **Ground Water Table(m):** 7.80 **Date Completed :** 24.05.2017
Total Depth (m) : 14.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.055	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 14.45m depth below existing ground level	
30.555	0.50											
30.055	1.00	Very stiff, brownish yellow Silty CLAY of low plasticity (CL)		2.00	SPT-1	1.00-1.45	7	8	14	22		
29.555	1.50				UDS-1	1.50-1.80						
29.055	2.00				SPT-2	2.00-2.45	7	9	15	24		
28.555	2.50											
28.055	3.00	Medium dense to dense, brownish grey Sandy SILT, non plastic in nature (ML)		3.00	SPT-3	3.00-3.45	9	13	16	29		
27.555	3.50											
27.055	4.00				SPT-4	4.00-4.45	10	16	18	34		
26.555	4.50				UDS/DS-2	4.50-4.80						
26.055	5.00				SPT-5	5.00-5.45	12	23	26	49		
25.555	5.50											
25.055	6.00	Dense to very dense, brownish grey Sandy SILT, non plastic in nature with gravels (ML)		4.00	SPT-6	6.00-6.45	10	20	23	43		
24.555	6.50											
24.055	7.00				SPT-7	7.00-7.45	13	19	25	44		
23.555	7.50											
23.055	8.00				SPT-8	8.00-8.45	16	22	29	51		
22.555	8.50											
22.055	9.00	Hard to very hard, brown Silty CLAY of medium plasticity with gravels (CI)		2.00	SPT-9	9.00-9.45	21	25	34	59		
21.555	9.50											
21.055	10.00				SPT-10	10.00-10.45	19	23	29	52		
20.555	10.50											
20.055	11.00	Very dense, brownish grey Sandy SILT, non plastic in nature with gravels (ML)		2.45	SPT-11	11.00-11.45	11	26	26	52		
19.555	11.50											
19.055	12.00				SPT-12	12.00-12.45	13	27	29	56		
18.555	12.50											
18.055	13.00				SPT-13	13.00-13.45	19	30	33	63		
17.555	13.50											
17.055	14.00				SPT-14	14.00-14.45	18	28	30	58		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Sandy SILT
 Silty Clay of low plasticity
 Silty Clay of medium plasticity

LOGGED BY : _____
 CHECKED BY : _____
 APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463419.196 E 312214.949	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.186	Chainage (m) : 392100	Date Started : 29.04.2017
Ground Elevation (m) : 31.186	Ground Water Table(m) : Not Met With	Date Completed : 30.04.2017
Total Depth (m) : 8.25	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
31.186	0.00	Black Clayey SILT of medium plasticity (MI)		1.00	DS-1	0.00-0.50					Borehole terminated at 8.25m depth below existing ground level
30.686	0.50										
30.186	1.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		7.25	SPT-1	1.00-1.45	14	20	24	44	Ground water table was not encountered upto termination of borehole.
29.686	1.50				UDS-1	1.50-1.80					
29.186	2.00				SPT-2	2.00-2.45	15	22	29	51	
28.686	2.50										
28.186	3.00				SPT-3	3.00-3.45	18	25	38	63	
27.686	3.50										
27.186	4.00				SPT-4	4.00-4.45	27	38	48	86	
26.686	4.50				UDS-2	4.50-4.80					
26.186	5.00	SPT-5	5.00-5.45	29	37	50	87				
25.686	5.50										
25.186	6.00	SPT-6	6.00-6.45	30	34	50	84				
24.686	6.50										
24.186	7.00	SPT-7	7.00-7.40	25	48	52/10	>100				
23.686	7.50										
23.186	8.00	SPT-8	8.00-8.25	92	51/10	-	>100				

Disturbed Sample
 Clayey Silt of medium plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463518.970 E 312221.677	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.325	Chainage (m) : 392200	Date Started : 28.04.2017
Ground Elevation (m) : 31.325	Ground Water Table(m) : Not Met With	Date Completed : 28.04.2017
Total Depth (m) : 9.20	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.325	0.00	Black Silty CLAY of high plasticity (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.20m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
30.825	0.50											
30.325	1.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-1	1.00-1.45	10	17	29	46		
29.825	1.50				UDS-1	1.50-1.80						
29.325	2.00				SPT-2	2.00-2.45	25	37	47	84		
28.825	2.50				SPT-3	3.00-3.45	23	45	45	90		
28.325	3.00											
27.825	3.50	Very hard, brown Silty CLAY of low plasticity (CL)		5.20	SPT-4	4.00-4.45	18	30	38	68		
27.325	4.00				UDS/DS-2	4.50-4.80						
26.825	4.50				SPT-5	5.00-5.45	22	37	44	81		
26.325	5.00				SPT-6	6.00-6.45	24	42	39	81		
25.825	5.50				SPT-7	7.00-7.45	19	38	48	86		
25.325	6.00				SPT-8	8.00-8.28	26	53/13	-	>100		
24.825	6.50											
24.325	7.00				SPT-9	9.00-9.20	35	52/5	-	>100		
24.325	7.50											
23.825	7.50											
23.325	8.00											
22.825	8.50											
22.325	9.00											

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of high plasticity	Silty Clay of medium plasticity	Silty Clay of low plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463618.743 E 3 12228.405	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.318	Chainage (m) : 392300	Date Started : 26.04.2017
Ground Elevation (m) : 31.318	Ground Water Table(m) : Not Met With	Date Completed : 27.04.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
31.318	0.00	Black Silty CLAY of high plasticity (CH)		1.00		DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level		
30.818	0.50													
30.318	1.00	Hard to very hard, brown Silty CLAY of medium plasticity (Cl)		9.45		SPT-1	1.00-1.45	13	17	20	37		Ground water table was not encountered upto termination of borehole.	
29.818	1.50					UDS-1	1.50-1.80							
29.318	2.00													
28.818	2.50													
28.318	3.00													
27.818	3.50													
27.318	4.00													
26.818	4.50													
26.318	5.00													
25.818	5.50													
25.318	6.00													
24.818	6.50													
24.318	7.00													
23.818	7.50													
23.318	8.00													
22.818	8.50													
22.318	9.00													
21.818	9.50													
21.318	10.00													

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463718.517 E 312235.133	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.421	Chainage (m) : 392400	Date Started : 21.05.2017
Ground Elevation (m) : 31.421	Ground Water Table(m) : 7.00	Date Completed : 22.05.2017
Total Depth (m) : 12.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
31.421	0.00	Dense to very dense, blackish grey Sandy SILT, non plastic in nature (ML/ML-SM)	7.00m	7.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below existing ground level
30.921	0.50				SPT-1	1.00-1.45	10	13	17	30	
30.421	1.00				UDS-1	1.50-1.80					
29.921	1.50				SPT-2	2.00-2.45	9	16	20	36	
29.421	2.00										
28.921	2.50				SPT-3	3.00-3.45	11	15	21	36	
28.421	3.00										
27.921	3.50				SPT-4	4.00-4.45	13	20	22	42	
27.421	4.00				UDS/DS-2	4.50-4.80					
26.921	4.50				SPT-5	5.00-5.45	12	23	25	48	
26.421	5.00				SPT-6	6.00-6.45	14	25	29	54	
25.921	5.50										
25.421	6.00										
24.921	6.50										
24.421	7.00										
23.921	7.50	Very hard, brown Silty CLAY of low plasticity (CL)	3.00m	3.00	SPT-7	7.00-7.45	15	27	29	56	Ground water table encountered at 7.00m depth below existing ground level, measured on 23/05/2017
23.421	8.00				SPT-8	8.00-8.45	18	24	28	52	
22.921	8.50				SPT-9	9.00-9.45	20	25	28	53	
22.421	9.00										
21.921	9.50										
21.421	10.00	Very hard, brown Silty CLAY of medium plasticity (CI)	10.00m	2.00	SPT-10	10.00-10.45	26	28	32	60	
20.921	10.50				SPT-11	11.00-11.45	21	25	39	64	
20.421	11.00										
19.921	11.50										
19.421	12.00	Very dense, brownish grey Sandy SILT, non plastic in nature (ML)	12.00m	0.45	SPT-12	12.00-12.45	15	24	45	69	
	12.45										

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Sandy SILT	Silty Clay of low plasticity	Silty Clay of medium plasticity	

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct **Coordinates :** N 2463818.290 E 3 12241.861 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 31.539 **Chainage (m) :** 392500 **Date Started :** 22.05.2017
Ground Elevation (m) : 31.539 **Ground Water Table(m):** 7.00 **Date Completed :** 22.05.2017
Total Depth (m) : 12.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.539	0.00	Medium dense to very dense, brownish grey Sandy SILT, non plastic in nature with occasional gravels (ML/ML-SM)		12.45	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below existing ground level	
31.039	0.50											
30.539	1.00											
30.039	1.50				SPT-1	1.00-1.45	8	13	14	27		
29.539	2.00				UDS-1	1.50-1.80						
29.039	2.50				SPT-2	2.00-2.45	10	13	17	30		
28.539	3.00											
28.039	3.50				SPT-3	3.00-3.45	11	15	21	36		
27.539	4.00											
27.039	4.50				SPT-4	4.00-4.45	13	18	24	42		
26.539	5.00				UDS/DS-2	4.50-4.80						
26.039	5.50				SPT-5	5.00-5.45	23	30	32	62		
25.539	6.00											
25.039	6.50	SPT-6	6.00-6.45	22	28	34	62					
24.539	7.00											
24.039	7.50	SPT-7	7.00-7.45	18	25	33	58	Ground water table encountered at 7.00m depth below existing ground level, measured on 23/05/2017				
23.539	8.00											
23.039	8.50	SPT-8	8.00-8.45	19	27	35	62					
22.539	9.00											
22.039	9.50	SPT-9	9.00-9.45	18	29	42	71					
21.539	10.00											
21.039	10.50	SPT-10	10.00-10.45	25	29	34	63					
20.539	11.00											
20.039	11.50	SPT-11	11.00-11.45	24	29	33	62					
19.539	12.00											
					SPT-12	12.00-12.45	26	33	45	78		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2463918.063 E 3 12248.589	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.503	Chainage (m) : 392600	Date Started : 23.05.2017
Ground Elevation (m) : 31.503	Ground Water Table(m) : 7.30	Date Completed : 23.05.2017
Total Depth (m) : 13.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.503	0.00	Black Sandy SILT, non plastic in nature (ML)	[Pattern]	1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m below existing ground level	
31.003	0.50											
30.503	1.00											
30.003	1.50	Hard, brown Silty CLAY of low plasticity (CL)	[Pattern]	3.00	SPT-1	1.00-1.45	12	16	19	35		
29.503	2.00				UDS-1	1.50-1.80						
29.003	2.50				SPT-2	2.00-2.45	9	18	20	38		
28.503	3.00											
28.003	3.50				SPT-3	3.00-3.45	10	20	22	42		
27.503	4.00											
27.003	4.50	Very dense, brownish grey Sandy SILT, non plastic in nature (ML)	[Pattern]	3.00	SPT-4	4.00-4.45	13	26	37	63		
26.503	5.00				UDS/DS-2	4.50-4.80						
26.003	5.50				SPT-5	5.00-5.45	26	44	48	92		
25.503	6.00											
25.003	6.50				SPT-6	6.00-6.45	22	29	34	63		
24.503	7.00											
24.003	7.50	Very hard, brown Silty CLAY of low plasticity with gravels (CL)	[Pattern]	4.00	SPT-7	7.00-7.45	24	27	39	66		
23.503	8.00											
23.003	8.50				SPT-8	8.00-8.45	26	30	38	68		
22.503	9.00											
22.003	9.50				SPT-9	9.00-9.45	24	29	39	68		
21.503	10.00											
21.003	10.50				SPT-10	10.00-10.45	19	24	33	57		
20.503	11.00											
20.003	11.50	Very hard, brown Silty CLAY of medium plasticity with gravels (CI)	[Pattern]	2.00	SPT-11	11.00-11.45	20	25	38	63		
19.503	12.00											
19.003	12.50				SPT-12	12.00-12.45	22	26	34	60		
18.503	13.00	Very dense, brownish grey Sandy SILT, non plastic in nature (ML)	[Pattern]	0.45	SPT-13	13.00-13.45	28	24	30	54		
	13.45											

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Silty Clay of medium plasticity
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464017.837 E 312255.317	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.159	Chainage (m) : 392700	Date Started : 01.05.2017
Ground Elevation (m) : 31.159	Ground Water Table(m) : Not Met With	Date Completed : 02.05.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
31.159	0.00	Hard to very hard, dark brown Silty CLAY of medium plasticity (Cl)		6.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.
30.659	0.50										
30.159	1.00										
29.659	1.50				SPT-1	1.00-1.45	10	15	22	37	
29.159	2.00				UDS-1	1.50-1.80					
28.659	2.50				SPT-2	2.00-2.45	14	25	23	48	
28.159	3.00										
27.659	3.50				SPT-3	3.00-3.45	20	32	45	77	
27.159	4.00										
26.659	4.50				SPT-4	4.00-4.23	20	52/8	-	>100	
26.159	5.00	UDS/DS-2	4.50-4.80								
25.659	5.50	SPT-5	5.00-5.45	23	41	43	84				
25.159	6.00										
24.659	6.50	Very hard, brown Silty CLAY of low plasticity (CL)		3.45	SPT-6	6.00-6.45	27	40	47	87	
24.159	7.00										
23.659	7.50				SPT-7	7.00-7.45	30	46	44	90	
23.159	8.00										
22.659	8.50				SPT-8	8.00-8.45	25	45	48	93	
22.159	9.00										
					SPT-9	9.00-9.45	31	42	50	92	

Disturbed Sample	Silty Clay of medium plasticity	Standard Penetration Test	Silty Clay of low plasticity	Undisturbed Sample	Slipped / Hard to penetrate samples
LOGGED BY :	CHECKED BY :	APPROVED BY :			



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464117.610 E 312262.045	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.317	Chainage (m) : 392800	Date Started : 03.05.2017
Ground Elevation (m) : 31.317	Ground Water Table(m) : Not Met With	Date Completed : 03.05.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
31.317	0.00	Hard, dark brown Silty CLAY of medium plasticity (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level
30.817	0.50										
30.317	1.00										
29.817	1.50				SPT-1	1.00-1.45	10	17	19	36	
29.317	2.00				UDS-1	1.50-1.80					
28.817	2.50				SPT-2	2.00-2.45	13	19	21	40	
28.317	3.00										
27.817	3.50				SPT-3	3.00-3.45	17	22	27	49	
27.317	4.00										
26.817	4.50				Very hard, brown Silty CLAY of low plasticity (CL)		2.00	SPT-4	4.00-4.45	22	
26.317	5.00	UDS-2	4.50-4.80								
25.817	5.50	SPT-5	5.00-5.45	28				30	35	65	
25.317	6.00										
24.817	6.50	Very dense, brown Sandy SILT, non plastic in nature (ML/ML-SM)		4.45	SPT-6	6.00-6.45	24	34	40	74	
24.317	7.00										
23.817	7.50				SPT-7	7.00-7.45	22	38	50	88	
23.317	8.00										
22.817	8.50				SPT-8	8.00-8.45	28	38	48	86	
22.317	9.00										
21.817	9.50	SPT-9	9.00-9.45	26	35	45	80				
21.317	10.00										
					SPT-10	10.00-10.45	25	40	50	90	

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Silty Clay of medium plasticity	Silty Clay of low plasticity	Sandy SILT

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464227.361 E 312269.446	Dia. of The Hole : 150mm
Collar Elevation (m) : 32.009	Chainage (m) : 392910	Date Started : 04.05.2017
Ground Elevation (m) : 32.009	Ground Water Table(m) : Not Met With	Date Completed : 05.05.2017
Total Depth (m) : 9.18	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
32.009	0.00	Dark brown Silty CLAY of medium plasticity (Cl)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.18m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
31.509	0.50											
31.009	1.00											
30.509	1.50	Dense to very dense, brownish grey Sandy SILT, non plastic in nature with occasional gravels (ML/ML-SM)		5.00	SPT-1	1.00-1.45	9	12	20	32		
30.009	2.00				UDS-1	1.50-1.80						
29.509	2.50				SPT-2	2.00-2.45	15	21	25	46		
29.009	3.00											
28.509	3.50				SPT-3	3.00-3.45	16	25	32	57		
28.009	4.00											
27.509	4.50											
27.009	5.00											
26.509	5.50											
26.009	6.00											
25.509	6.50	Very hard, brown Silty CLAY of low plasticity (CL)		2.00	SPT-6	6.00-6.26	33	52/11	-	>100		
25.009	7.00											
24.509	7.50				SPT-7	7.00-7.25	34	52/10	-	>100		
24.009	8.00											
23.509	8.50	Very dense, grey Silty SAND (SM)		1.18	SPT-8	8.00-8.35	39	41	52/5	>100		
23.009	9.00											

Disturbed Sample	Standard Penetration Test	Undisturbed Sample	Slipped / Hard to penetrate samples
Silty Clay of medium plasticity	Sandy SILT	Silty Clay of low plasticity	Silty SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464317.157 E 312275.501	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.028	Chainage (m) : 393000	Date Started : 06.05.2017
Ground Elevation (m) : 31.028	Ground Water Table(m): Not Met With	Date Completed : 06.05.2017
Total Depth (m) : 9.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.028	0.00	Very stiff to very hard, dark brown Silty CLAY of medium plasticity (Cl)		4.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.	
30.528	0.50											
30.028	1.00											
29.528	1.50				SPT-1	1.00-1.45	9	13	17	30		
29.028	2.00				UDS-1	1.50-1.80						
28.528	2.50											
28.028	3.00											
27.528	3.50				SPT-2	2.00-2.45	13	18	23	41		
27.028	4.00											
26.528	4.50	Very hard, brown Clayey SILT of medium plasticity with occasional gravels (MI)		5.00	SPT-4	4.00-4.45	19	33	40	73		
26.028	5.00											
25.528	5.50				UDS-2	4.50-4.80						
25.028	6.00											
24.528	6.50				SPT-5	5.00-5.45	23	36	43	79		
24.028	7.00											
23.528	7.50				SPT-6	6.00-6.45	25	38	49	87		
23.028	8.00											
22.528	8.50											
22.028	9.00	Very hard, brown Silty CLAY of medium plasticity (Cl)		0.45	SPT-7	7.00-7.45	21	41	37	78		
					SPT-8	8.00-8.45	26	45	47	92		
					SPT-9	9.00-9.45	29	48	45	93		

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Clayey Silt of medium plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464416.931 E 312282.229	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.293	Chainage (m) : 393100	Date Started : 09.05.2017
Ground Elevation (m) : 31.293	Ground Water Table(m) : Not Met With	Date Completed : 09.05.2017
Total Depth (m) : 9.25	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
31.293	0.00	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.25m depth below existing ground level	
30.793	0.50											
30.293	1.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		3.00	SPT-1	1.00-1.45	7	10	14	24	Ground water table was not encountered upto termination of borehole.	
29.793	1.50				UDS/DS-1	1.50-1.80						
29.293	2.00				SPT-2	2.00-2.45	13	20	24	44		
28.793	2.50				SPT-3	3.00-3.45	17	23	29	52		
28.293	3.00											
27.793	3.50	Very dense, brown Sandy SILT, non plastic in nature (ML/ML-SM)		5.25	SPT-4	4.00-4.45	21	28	33	61		
27.293	4.00				UDS-2	4.50-4.80						
26.793	4.50				SPT-5	5.00-5.45	20	35	30	65		
26.293	5.00											
25.793	5.50				SPT-6	6.00-6.45	30	41	46	87		
25.293	6.00											
24.793	6.50				SPT-7	7.00-7.45	29	43	50	93		
24.293	7.00											
23.793	7.50				SPT-8	8.00-8.28	32	52/13	-	>100		
23.293	8.00											
22.793	8.50											
22.293	9.00											

Disturbed Sample	Standard Penetration Test	Slipped / Hard to penetrate samples	Undisturbed Sample
Sandy SILT	Silty Clay of medium plasticity		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464516.704 E 312288.957	Dia. of The Hole : 150mm
Collar Elevation (m) : 31.681	Chainage (m) : 393200	Date Started : 21.05.2017
Ground Elevation (m) : 31.681	Ground Water Table(m): 7.50	Date Completed : 21.05.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
31.681	0.00	Man made material (Road pavement)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level		
31.181	0.50												
30.681	1.00	Medium dense, brownish grey Sandy SILT, non plastic in nature (ML)		1.00	SPT-1	1.00-1.45	3	4	6	10			
30.181	1.50				UDS-1	1.50-1.80							
29.681	2.00				SPT-2	2.00-2.45	8	10	11	21		Ground water table encountered at 7.50m depth below existing ground level, measured on 22/05/2017	
29.181	2.50												
28.681	3.00				SPT-3	3.00-3.45	10	13	16	29			
28.181	3.50												
27.681	4.00				SPT-4	4.00-4.45	11	17	22	39			
27.181	4.50				UDS-2	4.50-4.80							
26.681	5.00				SPT-5	5.00-5.45	10	19	26	45			
26.181	5.50												
25.681	6.00	Medium dense to very dense, brownish grey Sandy SILT, non plastic in nature (ML/ML-SM)		8.00	SPT-6	6.00-6.45	12	21	30	51			
25.181	6.50												
24.681	7.00				SPT-7	7.00-7.45	16	20	33	53			
24.181	7.50												
23.681	8.00				SPT-8	8.00-8.45	19	21	36	57			
23.181	8.50												
22.681	9.00												
22.181	9.50												
21.681	10.00	Very dense, grey Silty SAND (SM-ML)		0.45	SPT-9	9.00-9.45	18	22	37	59			
	10.45				SPT-10	10.00-10.45	20	24	41	65			

Disturbed Sample	Standard Penetration Test	Undisturbed Sample
Man Made Materials	Sandy SILT	Silty SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Viaduct	Coordinates : N 2464616.477 E 312295.685	Dia. of The Hole : 150mm
Collar Elevation (m) : 32.060	Chainage (m) : 393300	Date Started : 10.05.2017
Ground Elevation (m) : 32.060	Ground Water Table(m) : Not Met With	Date Completed : 10.05.2017
Total Depth (m) : 10.45	Drilling Method : Hydraulic Rotary Drilling	

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
32.060	0.00				DS-1	0.00-0.50					Borehole terminated at 10.45m depth below existing ground level Ground water table was not encountered upto termination of borehole.
31.560	0.50	Dark brown Sandy SILT, non plastic in nature (ML)		1.00							
31.060	1.00			1.00m							
30.560	1.50	Very stiff, brown Silty CLAY of low plasticity (CL)		1.00	SPT-1	1.00-1.45	6	11	15	26	
30.060	2.00			2.00m	UDS-1	1.50-1.80					
29.560	2.50	Dense, brown Sandy SILT, non plastic in nature (ML)		1.00	SPT-2	2.00-2.45	10	17	20	37	
29.060	3.00			3.00m							
28.560	3.50				SPT-3	3.00-3.45	14	22	26	48	
28.060	4.00										
27.560	4.50				SPT-4	4.00-4.45	20	27	36	63	
27.060	5.00	Hard to very hard, brown Silty CLAY of low plasticity (CL)		4.00	UDS/DS-2	4.50-4.80					
26.560	5.50				SPT-5	5.00-5.45	23	32	39	71	
26.060	6.00										
25.560	6.50				SPT-6	6.00-6.45	27	38	40	78	
25.060	7.00			7.00m							
24.560	7.50				SPT-7	7.00-7.45	25	42	36	78	
24.060	8.00										
23.560	8.50				SPT-8	8.00-8.45	32	40	46	86	
23.060	9.00	Very dense, brown Sandy SILT, non plastic in nature (ML-SM)		3.45							
22.560	9.50				SPT-9	9.00-9.45	38	45	43	88	
22.060	10.00										
	10.45m				SPT-10	10.00-10.45	39	43	50	93	

Disturbed Sample
 Sandy SILT
 Standard Penetration Test
 Silty Clay of low plasticity
 Undisturbed Sample
 Slipped / Hard to penetrate samples

LOGGED BY :

CHECKED BY :

APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE
BORE HOLE No.: BH-03

Sheet No. 1 of 1

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2248870.026 E 285810.238

Structure : Vapi Station at km 167/940

Ground Elevation (m) : 29.733

Chainage m. : 167740

Type of Core Barrel : Double / Triple Tube

Collar Elevation (m) : 29.733

Date Started : 01.05.2017

Casing Size : Nx

Total Depth (m) : 11.00

Date Completed : 02.05.2017

Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition	Percent Core Recovery					Permeability	Special Observations and Interpretations																		
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60			80	100	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section	Lugeon						
28.733	1.00	DS - 1	Medium stiff, dark grey Clayey SILT of high plasticity (MH)																		NA																	From 0.00 to 1.50m, Dark grey colour, Clayey SILT of high plasticity (MH)	
27.733	2.00	SPT - 1 UDS - 1			2	2	5	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA															From 1.50 to 5.00m, Brownish yellow Clayey SILT of medium plasticity (MI)	
26.733	3.00	SPT - 2	Very stiff, brownish yellow Clayey SILT of medium plasticity (MI)		8	7	10	17	-	-	-	-	-	-	-	-	-	-	-	-	-	NA															5.00 to 6.00m, Grey Fine to coarse SAND (SP)		
25.733	4.00	SPT - 3			9	11	13	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA															Bed rock encountered at 6.00m below EGL.	
24.733	5.00	SPT - 4			12	16	14	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA															From 6.00 to 11.00m, Grey Colour, slightly weathered, fine grained, hard, dense, moderately strong Amygdaloidal BASALT	
23.733	6.00	SPT - 5 WS - 1	Very dense, grey Fine to Coarse SAND (SP)		65/12	-	-	-	>100	-	-	-	-	-	-	-	-	-	-	-	-	NA																	
22.733	7.00	RC - 1	Grey Colour, slightly weathered, fine grained, hard, dense, moderately strong Amygdaloidal BASALT							16	-	10	20	55								23.20	53.00	3													Ground water table encountered at 5.10m depth below existing ground level, measured on 03/05/2017		
21.733	8.00	RC - 2										24	-	-	-	76							18.50	50.00	3														
20.733	9.00	RC - 3										6	-	-	-	94							16.30	90.00	2														
19.733	10.00	RC - 4										2	-	27	71	-								21.10	64.00	8													
18.733	11.00	RC - 5										-	-	-	-	100								21.70	94.00	1													

STATION LOGS CORE LOG WAPI STATION.GPJ GAD-58.GDT 18/11/17

	Disturbed Sample		Standard Penetration Test		Undisturbed Sample		No Recovery		Rock Core
	Basalt		High plastic Clay (Below A Line)		Medium plastic Clay (Below A Line)		Fine / medium SAND		

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 30.132

Collar Elevation (m) : 30.132

Total Depth (m) : 7.00

Coordinates : N 2248962.577 E 285848.110

Chainage m. : 167840

Date Started : 01.05.2017

Date Completed : 01.05.2017

Structure : Vapi Station at km 167/940

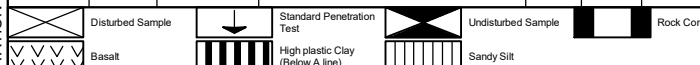
Type of Core Barrel : Double / Triple Tube

Casing Size : 150mm

Drilling Method : Hydraulic Feed Rotary Drilling

STATION LOGS CORE LOG WAPI STATION.GPJ GAD-58.GDT 18/11/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description Log	Standard Penetration Test Record					Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Permeability		Special Observations and Interpretations						
				15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm	0		20	40	60	80	100	Penetration Rate (mm/min)	RQD (%)		Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water
29.132	1.00	DS - 1	Reddish brown Sandy SILT, non plastic in nature (ML)																									From 0.00 to 1.00m, Reddish brown Sandy SILT, non plastic in nature (ML)
		SPT - 1		4	7	10	17	-	-	-	-	-																From 1.00 to 2.00m, Dark grey Clayey SILT of high plasticity (MH)
28.132	2.00	UDS - 1	Very stiff, dark grey Clayey SILT of high plasticity (MH)																									Bed rock encountered at 2.00m depth below EGL.
27.132	3.00	RC - 1	Reddish grey to grey colour, completely to highly weathered, fine grained, weak to very weak, low dense, vesicular Basalt (All the rock material is decomposed to soil. The original mass structure is still largely intact)					71	-	29	-	-		58		16.30	0.00	>15										From 2.00 to 4.50m, Reddish grey to grey colour, completely to highly weathered, fine grained, weak to very weak, low dense, vesicular Basalt (All the rock material is decomposed to soil. The original mass structure is still largely intact)
26.132	4.00	RC - 2						36	-	7	-	58		70.67		25.65	0.00	>15			Not Met With							From 4.50 to 5.00m, Greenish grey colour, highly weathered, fine grained, low dense, Vesicular BASALT
25.132	5.00	RC - 3	Greenish grey colour, highly weathered, fine grained, low dense, Vesicular BASALT											88		32.21	52.00	4		76mm	Nx	Complete	Nil	Not done	Not done		From 5.00 to 6.00m, Greenish grey colour, moderately weathered, fine grained, low dense, strong Vesicular BASALT	
24.132	6.00																											From 6.00 to 7.00m, Greenish grey colour, highly weathered, fine grained, low dense, moderately strong Vesicular Basalt
23.132	7.00	RC - 4	Greenish grey colour, highly weathered, fine grained, low dense, moderately strong Vesicular Basalt					79	2	19	-	-		85		28.45	0.00	>15										Ground water table was not encountered upto drilled depth.



LOGGED BY : CHECKED BY : APPROVED BY :

GEOLOGICAL LOG OF DRILL HOLE
Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2249065.124 E 285778.352

Structure : Vapi Station at km 167/940

Ground Elevation (m) : 31.038

Chainage m. : 167908

Type of Core Barrel : Double / Triple Tube

Collar Elevation (m) : 31.038


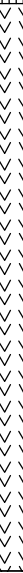
Date Started : 28.04.2017

Casing Size : 150mm



Total Depth (m) : 7.50



Date Completed : 04.05.2017


Drilling Method : Hydraulic Feed Rotary Drilling

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability		Special Observations and Interpretations								
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		0	20	40	60	80									100	Test Section		Lugeon							
30.038	1.00	DS - 1	Dense to very dense, brownish grey Sandy SILT, non plastic in nature with gravels (ML-SM)																															From 0.00 to 2.5m, Overburden consisting Sandy SILT with gravels				
		SPT - 1			9	14	21	35	-	-	-	-	-												100mm	150mm									Bed rock encountered at 2.5m depth below EGL			
29.038	2.00	SPT - 2			21	35	46	81	-	-	-	-	-																						From 2.5 to 7.50m, Grey colour, moderately to slightly weathered, fine grained, hard, dense, Amygdaloidal BASALT			
28.038	3.00	RC - 1	Grey colour, moderately to slightly weathered, fine grained, hard, dense, moderately strong to strong Amygdaloidal BASALT with Biotide minerals								50	-	50	-	-			16.10	0.00	>15																		
27.038	4.00	RC - 2																	36.50	72.66	3																	Ground water table was not encountered at drilled depth.
26.038	5.00	RC - 3																	30.60	84.00	2.67																	
25.038	6.00	RC - 4																	32.60	53.33	4																	
24.038	7.00											33	-	11	37	19																						

STATION LOGS CORE LOG WAPI STATION.GPJ GAD-58.GDT 18/11/17

 Disturbed Sample
 Basalt

 Standard Penetration Test
 Sandy Silt

 Rock Core

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Coordinates : N 2249147.679 E 285923.855

Structure : Vapi Station at km 167/940

Ground Elevation (m) : 32.419

Chainage m. : 168040

Type of Core Barrel : Double / Triple Tube

Collar Elevation (m) : 32.419

Date Started : 02.05.2017

Casing Size : 150mm

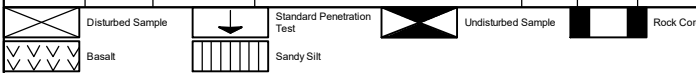
Total Depth (m) : 10.00

Date Completed : 03.05.2017

Drilling Method : Hydraulic Feed Rotary Drilling

STATION LOGS CORE LOG WAPI STATION.GPJ GAD-58.GDT 18/11/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology		Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery						Special Observations and Interpretations															
			Description	Log	15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		Description	0	20	40	60	80		100	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Permeability Test Section	Lugeon				
31.419	1.00	DS - 1	Medium dense, yellowish brown Sandy SILT, non plastic in nature (ML-SM/ML)						-	-	-	-	-	Overburden								NA	NA	NA	100mm	150mm/NX	3.60m	NA	NA	NA	NA	NA	From 0.00 to 3.00m, Sandy SILT, non plastic in nature (ML) Bed rock encountered at 3.00m depth below EGL			
		SPT - 1			3	6	9	15	-	-	-	-	-											NA	NA	NA										
30.419	2.00	UDS - 1									-	-	-		-	-									NA	NA	NA									
		SPT - 2			4	12	16	28	-	-	-	-	-												NA	NA	NA									
29.419	3.00	SPT - 3	Completely weathered Rock transformed into Soil ((All the rock material is decomposed to soil. The original mass structure is still largely intact)		75/11	-	-	>100	-	-	-	-	-	Completely Weathered Rock	0								NA	NA	NA									From 3.00 to 8.00m, Completely weathered Rock transformed into Soil (All the rock material is decomposed to soil. The original mass structure is still largely intact) From 8.00 to 10.00m, Grey colour, highly to moderately weathered, fine grained, fragmented, low dense, moderately strong BASALT Ground water table encountered at 3.60m depth below existing ground level, measured on 04/05/2017		
28.419	4.00	RC - 1			-	-	-	-	100	-	-	-	-											0.00	0.00	0.00										
		SPT - 4			75/5	-	-	>100	-	-	-	-	-											0.00	0.00	0.00										
27.419	5.00	RC - 2			-	-	-	-	100	-	-	-	-											0.00	0.00	0.00										
26.419	6.00	SPT - 5			75/5	-	-	>100	-	-	-	-	-											23.20	0.00	0.00	>15									
		RC - 3			-	-	-	-	100	-	-	-	-											0.00	0.00	0.00	8-15	76mm	Uncased	Partial	Brownish grey	Not done	Not done			
25.419	7.00	RC - 4	-	-	-	-	85	-	-	15	-										25.60	0.00	0.00	8-15												
24.419	8.00	RC - 5	-	-	-	-	100	-	-	-	-										23.20	0.00	0.00	>15												
23.419	9.00	RC - 6	Grey colour, highly to moderately weathered, fine grained, fragmented, low dense, moderately strong BASALT		-	-	-	-	43	3	41	13	-	Aphanitic texture, Vasicular structure, highly fractured, and jointed rock								24.39	0.00	0.00	>15											
22.419	10.00	RC - 7			-	-	-	-	54	2	7	8	28										26.30	38.00	38.00	8-15										



LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



GEOLOGICAL LOG OF DRILL HOLE

Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Borehole Orientation : Vertical

Ground Elevation (m) : 33.602

Collar Elevation (m) : 33.602

Total Depth (m) : 11.00

Coordinates : N 2249240.230 E 285961.728

Chainage m. : 168140

Date Started : 02.05.2017

Date Completed : 03.05.2017

Structure : Vapi Station at km 167/940

Type of Core Barrel : Double / Triple Tube

Casing Size : 150mm

Drilling Method : Hydraulic Feed Rotary Drilling

STATION LOGS CORE LOG WAPI STATION.GPJ GAD-58.GDT 18/11/17

Elevation (m)	Depth (m)	Sample Type Number	Lithology Description	Log	Standard Penetration Test Record				Size of Core Pieces (%)					Structural Condition Description	Percent Core Recovery					Permeability	Special Observations and Interpretations													
					15cm	15cm	15cm	N VALUE	< 10 mm	10 to 25 mm	25 to 75 mm	75 to 150 mm	> 150 mm		0	20	40	60	80			100	Penetration Rate (mm/min)	RQD (%)	Fracture Frequency / m	Size of Hole	Casing	Water Level (m)	Drill water loss	Colour of return water	Test Section	Lugeon		
32.602	1.00	DS - 1	Dark grey Sandy SILT, non plastic in nature with gravels (ML-SM)																															From 0.00 to 1.00m, Sandy SILT with gravels
31.602	2.00	SPT - 1 UDS/DS - 1			3	4	6	10	-	-	-	-	-																				From 1.00 to 4.00m, Clayey SILT	
30.602	3.00	SPT - 2	Stiff to hard, dark grey Clayey SILT of medium plasticity (MI)		7	4	11	15	-	-	-	-	-																				Bed rock encountered at 4.00m depth below EGL.	
29.602	4.00	SPT - 3			16	16	19	35	-	-	-	-	-																				From 4.00 to 6.00m, Completely Weathered Rock transformed into Soil	
28.602	5.00	SPT - 4 RC - 1	Completely Weathered Rock transformed into Soil (All the rock material is decomposed to soil. The original mass structure is still largely intact)		21	24	65/10	>100	-	-	-	-	-																				From 6.00 to 8.00m, Grey colour, highly weathered, fine grained, semi hard, medium dense, moderately strong BASALT	
27.602	6.00	SPT - 5 RC - 2			75/10	-	-	-	>100	-	-	-	-	-																				
26.602	7.00	RC - 3	Grey colour, highly weathered, fine grained, semi hard, medium dense, moderately strong BASALT		-	-	-	-	91	-	9	-	-			32																	From 8.00 to 11.00m, Grey colour, slightly weathered, fine grained, semi hard, medium dense, moderately strong BASALT	
25.602	8.00	RC - 4			-	-	-	-	35	-	22	43	-			49																		
24.602	9.00	RC - 5	Grey colour, slightly weathered, fine grained, semi hard, medium dense, moderately strong BASALT (Between 10.50 to 11.00m, Discolouring of rock due to weathering observed)		-	-	-	-	10	-	29	60	-			86																		Ground water table encountered at 2.50m depth below existing ground level, measured on 04/05/2017
23.602	10.00	RC - 6			-	-	-	-	14	-	4	19	64			74																		
22.602	11.00	RC - 7			-	-	-	-	-	-	-	-	100			100																		

Disturbed Sample
 Standard Penetration Test
 Slipped / Hard to penetrate samples
 Rock Core
 Basalt
 Medium plastic Clay (Below A Line)
 Sandy Silt

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2296824.123 E 292505.661 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.275 Chainage (m) : 216330.00 Date Started : 21.04.2017
Ground Elevation (m) : 12.275 Ground Water Table(m) : 6.10 Date Completed : 21.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
11.775	0.50	Black Silty CLAY of low plasticity (CL)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
11.275	1.00	Stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		0.50	SPT-1	1.00-1.45	3	4	5	9	
10.775	1.50				UDS-1	1.50-1.80					
10.275	2.00	Very stiff to hard, brown Silty CLAY of low plasticity (CL)		5.50	SPT-2	2.00-2.45	4	6	9	15	
9.775	2.50				SPT-3	3.00-3.45	6	8	11	19	
9.275	3.00				SPT-4	4.00-4.45	7	11	14	25	
8.775	3.50				SPT-5	5.00-5.45	11	14	17	31	
8.275	4.00				SPT-6	6.00-6.45	16	19	21	40	
7.775	4.50				SPT-7	7.00-7.45	18	11	36	47	
7.275	5.00				SPT-8	8.00-8.45	21	26	20	46	
6.775	5.50				SPT-9	9.00-9.45	29	29	32	61	
6.275	6.00				SPT-10	10.00-10.45	31	32	39	71	
5.775	6.50				Hard to very hard, brown Silty CLAY of high plasticity (CH)		3.00				
5.275	7.00										
4.775	7.50	Hard to very hard, brown Silty CLAY of low plasticity (CL)		0.45							
4.275	8.00										
3.775	8.50										
3.275	9.00										
2.775	9.50										
2.275	10.00										

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample
 Low Plastic Clay
 Standard Penetration Test
 High Plastic Clay
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2296922.210 E 292525.128 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.125 Chainage (m) : 216430.00 Date Started : 21.04.2017
Ground Elevation (m) : 12.125 Ground Water Table(m) : 6.70 Date Completed : 21.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
11.625	0.50	Brown Silty SAND (SM-ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
11.125	1.00	Stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	3	4	6	10		
10.625	1.50				UDS-1	1.50-1.80						
10.125	2.00	Brown Clayey SILT of medium plasticity (MI)		0.50								
9.625	2.50	Stiff to hard, brown Silty CLAY of high plasticity (CH)		8.00	SPT-2	2.00-2.45	4	5	7	12		
9.125	3.00											
8.625	3.50				SPT-3	3.00-3.45	6	8	9	17		
8.125	4.00											
7.625	4.50				SPT-4	4.00-4.45	6	8	9	17		
7.125	5.00				UDS-2	4.50-4.80						
6.625	5.50				SPT-5	5.00-5.45	11	10	19	29		
6.125	6.00											
5.625	6.50				SPT-6	6.00-6.45	14	16	21	37		
5.125	7.00											
4.625	7.50				SPT-7	7.00-7.45	17	14	29	43		
4.125	8.00											
3.625	8.50	SPT-8	8.00-8.45	18	21	25	46					
3.125	9.00											
2.625	9.50	SPT-9	9.00-9.45	20	21	27	48					
2.125	10.00											
1.625	10.50	Hard to very hard, brown Silty CLAY of high plasticity, low expansive (CH)		1.45	SPT-10	10.00-10.45	19	25	30	55		
1.125	11.00				SPT-11	11.00-11.45	21	30	36	66		

Ground water table encountered at 6.70m depth below existing ground level, measured on 22/04/2017

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample
 Silty Sand
 Standard Penetration Test
 Low Plastic Clay
 Undisturbed Sample
 Medium plastic Clay (Below A Line)
 High Plastic Clay

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297014.950 E 292558.070 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.214 Chainage (m) : 216530.00 Date Started : 07.04.2017
Ground Elevation (m) : 12.214 Ground Water Table(m) : 5.90 Date Completed : 08.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
11.714	0.50	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.				
11.214	1.00														
10.714	1.50				SPT-1	1.00-1.45	2	4	5	9					
10.214	2.00				UDS-1	1.50-1.80									
9.714	2.50				SPT-2	2.00-2.45	4	7	9	16					
9.214	3.00														
8.714	3.50				SPT-3	3.00-3.45	5	9	12	21					
8.214	4.00														
7.714	4.50				Very stiff to hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-4	4.00-4.45	8		9	12	21	Ground water table encountered at 5.90m depth below existing ground level, measured on 09/04/2017
7.214	5.00							UDS-2	4.50-4.80						
6.714	5.50	SPT-5	5.00-5.45	9				11	14	25					
6.214	6.00														
5.714	6.50	SPT-6	6.00-6.45	18				16	13	29					
5.214	7.00	Hard, brown Silty CLAY of high plasticity, medium expansive (CH)		4.00	SPT-7	7.00-7.45	16	11	34	45					
4.714	7.50														
4.214	8.00				SPT-8	8.00-8.45	13	19	25	44					
3.714	8.50														
3.214	9.00				SPT-9	9.00-9.45	19	21	27	48					
2.714	9.50														
2.214	10.00	Very dense, brown Silty SAND with gravels (SM-ML)		0.45	SPT-10	10.00-10.45	17	23	28	51					
1.714	10.50														
1.214	11.00				SPT-11	11.00-11.45	22	29	32	61					

VAIDUCT LOGS: BILIMORA STATION.GPJ_GAD-58.GDT 15/11/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Medium Plastic Clay
 Medium plastic Clay (Below A Line)
 High Plastic Clay
 Silty Sand

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297118.383 E 292564.064 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.925 Chainage (m) : 216630.00 Date Started : 07.04.2017
Ground Elevation (m) : 12.925 Ground Water Table(m) : 7.70 Date Completed : 08.04.2017
Total Depth (m) : 13.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
12.425	0.50	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.
11.925	1.00										
11.425	1.50	Medium stiff to very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-1	1.00-1.45	1	2	3	5	
10.925	2.00				UDS-1	1.50-1.80					
10.425	2.50				SPT-2	2.00-2.45	3	5	6	11	
9.925	3.00				SPT-3	3.00-3.45	5	7	9	16	
9.425	3.50				SPT-4	4.00-4.45	8	8	9	17	
8.925	4.00				UDS/DS-2	4.50-4.80					
8.425	4.50				SPT-5	5.00-5.45	5	8	9	17	
7.925	5.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		7.00	SPT-6	6.00-6.45	7	10	13	23	
7.425	5.50				SPT-7	7.00-7.45	11	15	19	34	
6.925	6.00				SPT-8	8.00-8.45	11	17	24	41	
6.425	6.50				SPT-9	9.00-9.45	13	18	26	44	
5.925	7.00				SPT-10	10.00-10.45	13	19	29	48	
5.425	7.50				SPT-11	11.00-11.45	14	19	28	47	
4.925	8.00			Dense to very dense, brown Silty SAND (SM-ML/SM)		2.45	SPT-12	12.00-12.45	17	22	31
4.425	8.50		SPT-13			13.00-13.45	20	27	33	60	
3.925	9.00										
3.425	9.50										

Ground water table encountered at 7.70m depth below existing ground level, measured on 09/04/2017

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Medium Plastic Clay
 High Plastic Clay
 Silty Sand

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297216.470 E 292583.532 Dia. of The Hole : 150mm
Collar Elevation (m) : 13.405 Chainage (m) : 216730.00 Date Started : 07.04.2017
Ground Elevation (m) : 13.405 Ground Water Table(m) : 7.60 Date Completed : 08.04.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
12.905	0.50	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
12.405	1.00	Stiff, brown Clayey SILT of high plasticity (MH)		0.50	SPT-1	1.00-1.45	3	5	8	13	
11.905	1.50				UDS-1	1.50-1.80					
11.405	2.00	Stiff to very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		3.50	SPT-2	2.00-2.45	6	8	12	20	
10.905	2.50				SPT-3	3.00-3.45	8	12	16	28	
10.405	3.00				SPT-4	4.00-4.45	7	9	14	23	
9.905	3.50				UDS/DS-2	4.50-4.80					
9.405	4.00				SPT-5	5.00-5.45	9	13	17	30	
8.905	4.50				SPT-6	6.00-6.45	11	14	18	32	
8.405	5.00	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.00	SPT-7	7.00-7.45	12	17	19	36	
7.905	5.50				SPT-8	8.00-8.45	10	17	21	38	
7.405	6.00				SPT-9	9.00-9.45	10	14	22	36	
6.905	6.50				SPT-10	10.00-10.45	14	16	20	36	
6.405	7.00	Hard, brown Clayey SILT of high plasticity, low expansive (MH)		1.45							Ground water table encountered at 7.60m depth below existing ground level, measured on 09/04/2017
5.905	7.50										
5.405	8.00										
4.905	8.50										
4.405	9.00										
3.905	9.50										
3.405	10.00										

VAIDUCT LOGS: BILIMORA STATION.GPJ_GAD-58.GDT 15/11/17

Disturbed Sample Medium Plastic Clay
 Standard Penetration Test High plastic Clay (Below A line)
 Undisturbed Sample High Plastic Clay
 Slipped / Hard to penetrate samples
 LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297314.556 E 292603.000 Dia. of The Hole : 150mm
Collar Elevation (m) : 12.774 Chainage (m) : 216830.00 Date Started : 08.04.2017
Ground Elevation (m) : 12.774 Ground Water Table(m) : 7.20 Date Completed : 09.04.2017
Total Depth (m) : 13.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
12.274	0.50	Medium stiff to very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		4.50	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.				
11.774	1.00														
11.274	1.50					SPT-1	1.00-1.45	2	3	4		7			
10.774	2.00					UDS-1	1.50-1.80								
10.274	2.50					SPT-2	2.00-2.45	4	7	10		17			
9.774	3.00														
9.274	3.50					SPT-3	3.00-3.45	9	10	14		24			
8.774	4.00														
8.274	4.50					SPT-4	4.00-4.45	8	12	15		27			
7.774	5.00				Very stiff, brown Clayey SILT of high plasticity, medium expansive (MH)		3.50	UDS/DS-2	4.50-4.80						
7.274	5.50								SPT-5	5.00-5.45		11	13	15	28
6.774	6.00														
6.274	6.50								SPT-6	6.00-6.45		9	12	16	28
5.774	7.00														
5.274	7.50		SPT-7	7.00-7.45				11	14	13	27				
4.774	8.00														
4.274	8.50	Hard, brown Silty CLAY of high plasticity (CH)		5.00	SPT-8	8.00-8.45	9	12	19	31	Ground water table encountered at 7.20m depth below existing ground level, measured on 10/04/2017				
3.774	9.00														
3.274	9.50					SPT-9	9.00-9.45	10	13	22		35			
2.774	10.00														
2.274	10.50					SPT-10	10.00-10.45	19	11	21		32			
1.774	11.00														
1.274	11.50					SPT-11	11.00-11.45	13	17	25		42			
0.774	12.00														
0.274	12.50		SPT-12	12.00-12.45	16	24	25	49							
-0.226	13.00	Very dense, brown Silty SAND with gravels (SM-GM)		0.45											
	13.45					SPT-13	13.00-13.45	16	24	35	59				

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample High Plastic Clay
 Standard Penetration Test High plastic Clay (Below A line)
 Undisturbed Sample Silty Sand with gravels
 Slipped / Hard to penetrate samples

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297412.643 E 292622.468 Dia. of The Hole : 150mm
Collar Elevation (m) : 11.817 Chainage (m) : 216930.00 Date Started : 08.04.2017
Ground Elevation (m) : 11.817 Ground Water Table(m) : 6.50 Date Completed : 09.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
11.317	0.50	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m depth below EGL.		
10.817	1.00	Medium stiff, brown Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	2	3	4	7			
10.317	1.50	Stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		2.50	UDS-1	1.50-1.80							
9.817	2.00				SPT-2	2.00-2.45	4	6	7	13			
9.317	2.50				SPT-3	3.00-3.45	5	6	9	15			
8.817	3.00												
8.317	3.50	Very stiff, brown Clayey SILT of medium plasticity (MI)		4.00	SPT-4	4.00-4.45	7	10	17	27	Ground water table encountered at 6.50m depth below existing ground level, measured on 10/04/2017		
7.817	4.00				UDS/DS-2	4.50-4.80							
7.317	4.50				SPT-5	5.00-5.45	5	11	13	24			
6.817	5.00												
6.317	5.50				SPT-6	6.00-6.45	7	12	16	28			
5.817	6.00												
5.317	6.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.00	SPT-7	7.00-7.45	8	14	17	31			
4.817	7.00												
4.317	7.50				SPT-8	8.00-8.45	10	15	19	34			
3.817	8.00												
3.317	8.50				SPT-9	9.00-9.45	10	14	18	32			
2.817	9.00												
2.317	9.50	Very stiff to hard, brown Silty CLAY of medium plasticity (CI)		4.00	SPT-10	10.00-10.45	14	16	24	40			
1.817	10.00												
1.317	10.50				SPT-11	11.00-11.45	16	18	29	47			
0.817	11.00												
0.317	11.50	Very dense, brown Fine to Medium SAND (SP-SM)		0.45	SPT-12	12.00-12.45	19	22	34	56			
-0.183	12.00												

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Sandy Silt
 High Plastic Clay
 Medium Plastic Clay
 Medium plastic Clay (Below A Line)

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297510.730 E 292641.935 Dia. of The Hole : 150mm
Collar Elevation (m) : 9.829 Chainage (m) : 217030.00 Date Started : 09.04.2017
Ground Elevation (m) : 9.829 Ground Water Table(m) : 3.80 Date Completed : 10.04.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
9.329	0.50	Black Sandy SILT, non plastic in nature (ML)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m depth below EGL.	
8.829	1.00											
8.329	1.50	Stiff, brown Silty CLAY of high plasticity, low to medium expansive (CH)		3.00	SPT-1	1.00-1.45	3	5	6	11		
7.829	2.00				UDS-1	1.50-1.80						
7.329	2.50				SPT-2	2.00-2.45	3	6	8	14		
6.829	3.00											
6.329	3.50				SPT-3	3.00-3.45	2	6	9	15		
5.829	4.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-4	4.00-4.45	6	8	10	18		
5.329	4.50				UDS/DS-2	4.50-4.80						
4.829	5.00				SPT-5	5.00-5.45	7	9	13	22		
4.329	5.50	Hard, brown Clayey SILT of medium plasticity (MI)		2.00	SPT-6	6.00-6.45	9	17	18	35		
3.829	6.00											
3.329	6.50	Hard, brown Clayey SILT of medium plasticity (MI)		2.00	SPT-7	7.00-7.45	14	15	20	35		
2.829	7.00											
2.329	7.50	Dense, brown Silty SAND with gravels (SM-ML)		1.00	SPT-8	8.00-8.45	11	16	22	38		
1.829	8.00											
1.329	8.50	Dense, brown Silty SAND with gravels (SM-ML)		1.00	SPT-9	9.00-9.45	14	18	25	43		
0.829	9.00											
0.329	9.50	Hard to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)		2.45	SPT-10	10.00-10.45	17	21	24	45		
-0.171	10.00											
-0.671	10.50				SPT-11	11.00-11.45	15	20	32	52		
-1.171	11.00											

Ground water table encountered at 3.80m depth below existing ground level, measured on 11/04/2017

VAIDUCT LOGS: BILIMORA STATION.GPJ_GAD-58.GDT 15/11/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples (Below A Line)
 Silty Sand
 Sandy Silt
 High Plastic Clay
 Medium Plastic Clay

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station at km 216/730 Coordinates : N 2297608.817 E 292661.403 Dia. of The Hole : 150mm
Collar Elevation (m) : 11.059 Chainage (m) : 217130.00 Date Started : 08.04.2017
Ground Elevation (m) : 11.059 Ground Water Table(m) : 5.50 Date Completed : 09.04.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
10.559	0.50	Stiff to hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		6.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.
10.059	1.00										
9.559	1.50				SPT-1	1.00-1.45	3	5	7	12	
9.059	2.00				UDS-1	1.50-1.80					
8.559	2.50				SPT-2	2.00-2.45	5	7	10	17	
8.059	3.00										
7.559	3.50				SPT-3	3.00-3.45	8	10	18	28	
7.059	4.00										
6.559	4.50				SPT-4	4.00-4.45	11	14	20	34	
6.059	5.00										
5.559	5.50								Ground water table encountered at 5.50m depth below existing ground level, measured on 10/04/2017		
5.059	6.00										
4.559	6.50	Hard to very hard, brown Silty CLAY of high plasticity, medium expansive (CH)		3.00	SPT-6	6.00-6.45	13	18		21	39
4.059	7.00										
3.559	7.50				SPT-7	7.00-7.45	15	19	22	41	
3.059	8.00										
2.559	8.50										
2.059	9.00	Hard, brown Silty CLAY of medium plasticity (Cl)		0.45	SPT-8	8.00-8.45	20	28	36	64	
	9.45				SPT-9	9.00-9.45	15	19	21	40	

VAIDUCT LOGS: BILIMORA STATION.GPJ GAD-58.GDT 15/11/17

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Medium Plastic Clay
 High Plastic Clay

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2298599.653 E 292858.060 Dia. of The Hole : 150mm

Collar Elevation (m) : 18.227 Chainage (m) : 218140 Date Started : 16.11.2017

Ground Elevation (m) : 18.227 Ground Water Table(m) : 8.60 Date Completed : 17.11.2017

Total Depth (m) : 15.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
18.227	0.00	Stiff, brown Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 15.45m depth below EGL.			
17.727	0.50													
17.227	1.00													
16.727	1.50				SPT-1	1.00-1.45	3	4	6	10				
16.227	2.00	Very stiff to hard, brown Silty CLAY of medium plasticity, low expansive (CI)		6.50	UDS-1	1.50-1.80								
15.727	2.50					SPT-2	2.00-2.45	5	6	11		17		
15.227	3.00													
14.727	3.50							SPT-3	3.00-3.45	6		9	12	21
14.227	4.00													
13.727	4.50							SPT-4	4.00-4.45	8		11	14	25
13.227	5.00							UDS-2	4.50-4.80					
12.727	5.50				SPT-5	5.00-5.45	9	12	16	28				
12.227	6.00													
11.727	6.50				SPT-6	6.00-6.45	9	14	18	32				
11.227	7.00													
10.727	7.50				SPT-7	7.00-7.45	11	16	21	37				
10.227	8.00													
9.727	8.50	Hard to very hard, brown Silty CLAY of high plasticity, low expansive (CH)		7.00	SPT-8	8.00-8.45	14	18	23	41	Ground water table encountered at 8.60m depth below existing ground level, measured on 18/11/2017			
9.227	9.00													
8.727	9.50							SPT-9	9.00-9.45	17		24	27	51
8.227	10.00													
7.727	10.50							SPT-10	10.00-10.45	22		28	38	66
7.227	11.00													
6.727	11.50							SPT-11	11.00-11.45	23		27	39	66
6.227	12.00													
5.727	12.50				SPT-12	12.00-12.45	26	38	45	83				
5.227	13.00													
4.727	13.50				SPT-13	13.00-13.45	25	39	47	86				
4.227	14.00													
3.727	14.50				SPT-14	14.00-14.45	26	41	48	89				
3.227	15.00	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45										
	15.45				SPT-15	15.00-15.45	28	45	50	95				

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2298697.740 E 292877.528 Dia. of The Hole : 150mm

Collar Elevation (m) : 18.379 Chainage (m) : 218240 Date Started : 18.11.2017

Ground Elevation (m) : 18.379 Ground Water Table(m) : 8.50 Date Completed : 19.11.2017

Total Depth (m) : 16.12 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.379	0.00	Stiff to very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		4.00	DS-1	0.00-0.50					Borehole terminated at 16.12m depth below EGL.	
17.879	0.50											
17.379	1.00											
16.879	1.50											
16.379	2.00											
15.879	2.50											
15.379	3.00											
14.879	3.50											
14.379	4.00											
13.879	4.50				Very stiff to hard, brown Silty CLAY of medium plasticity, low expansive (CI)		12.00	SPT-4	4.00-4.45	10		14
13.379	5.00	UDS-2	4.50-4.80									
12.879	5.50											
12.379	6.00											
11.879	6.50											
11.379	7.00											
10.879	7.50											
10.379	8.00											
9.879	8.50											
9.379	9.00											
8.879	9.50											
8.379	10.00											
7.879	10.50											
7.379	11.00											
6.879	11.50											
6.379	12.00											
5.879	12.50											
5.379	13.00											
4.879	13.50											
4.379	14.00											
3.879	14.50											
3.379	15.00											
2.879	15.50											
2.379	16.00											
		Very dense, grey Silty SAND with gravels (SM)		0.12	SPT-16	16.00-16.12	52/12	-	-	>100		

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty SAND
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2298795.827 E 292896.996 Dia. of The Hole : 150mm
Collar Elevation (m) : 17.249 Chainage (m) : 218340 Date Started : 20.11.2017
Ground Elevation (m) : 17.249 Ground Water Table(m) : 8.30 Date Completed : 21.11.2017
Total Depth (m) : 15.07 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks				
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE					
17.249	0.00	Stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 15.07m depth below EGL.				
16.749	0.50														
16.249	1.00														
15.749	1.50				SPT-1	1.00-1.45	3	5	7	12					
15.249	2.00				UDS-1	1.50-1.80									
14.749	2.50				SPT-2	2.00-2.45	5	6	9	15					
14.249	3.00														
13.749	3.50				SPT-3	3.00-3.45	4	11	17	28					
13.249	4.00														
12.749	4.50				SPT-4	4.00-4.45	9	13	17	30					
12.249	5.00				UDS-2	4.50-4.80									
11.749	5.50				SPT-5	5.00-5.45	11	17	19	36					
11.249	6.00														
10.749	6.50				SPT-6	6.00-6.45	12	20	22	42					
10.249	7.00														
9.749	7.50				SPT-7	7.00-7.45	9	12	21	33					
9.249	8.00														
8.749	8.50				SPT-8	8.00-8.45	7	12	16	28					
8.249	9.00	Very stiff to hard, brown Silty CLAY of medium plasticity, low expansive (CI)		12.00							Ground water table encountered at 8.30m depth below existing ground level, measured on 22/11/2017				
7.749	9.50							SPT-9	9.00-9.45	7		13	19	32	
7.249	10.00														
6.749	10.50							SPT-10	10.00-10.45	9		12	22	34	
6.249	11.00														
5.749	11.50							SPT-11	11.00-11.45	14		15	23	38	
5.249	12.00														
4.749	12.50							SPT-12	12.00-12.45	11		15	23	38	
4.249	13.00														
3.749	13.50							SPT-13	13.00-13.45	11		14	21	35	
3.249	14.00														
2.749	14.50							SPT-14	14.00-14.45	12		15	24	39	
2.249	15.00														
					Very dense, grey Silty Sandy GRAVELS (GM-SM)		0.07	SPT-15	15.00-15.07	52/7		-	-	>100	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Well graded sands, gravelly sands; little or no fines
 Undisturbed Sample

LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2298893.913 E 292916.464 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.678 Chainage (m) : 218440 Date Started : 30.11.2017
Ground Elevation (m) : 15.678 Ground Water Table(m) : 3.10 Date Completed : 02.12.2017
Total Depth (m) : 14.20 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.678	0.00	Medium stiff to stiff, brownish grey Silty CLAY of medium plasticity (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 14.20m depth below EGL.
15.178	0.50										
14.678	1.00				SPT-1	1.00-1.45	2	3	5	8	
14.178	1.50				UDS-1	1.50-1.80					
13.678	2.00				SPT-2	2.00-2.45	4	5	8	13	
12.678	3.00	Very stiff, brownish grey Silty CLAY of medium plasticity (CI)		1.50	SPT-3	3.00-3.45	6	8	11	19	Ground water table encountered at 3.10m depth below existing ground level, measured on 03/12/2017
12.178	3.50										
11.678	4.00				SPT-4	4.00-4.45	6	12	14	26	
11.178	4.50	UDS-2	4.50-4.80								
10.678	5.00	Very stiff, brownish grey Silty CLAY of high plasticity, low expansive (CH)		1.50	SPT-5	5.00-5.45	9	11	15	26	
10.178	5.50	Very stiff to hard, greyish brown Silty CLAY of medium plasticity (CI)		4.00	SPT-6	6.00-6.45	8	12	14	26	
9.678	6.00										
9.178	6.50				SPT-7	7.00-7.45	10	14	15	29	
8.678	7.00										
8.178	7.50				SPT-8	8.00-8.45	11	15	17	32	
7.678	8.00	Hard to very hard, greyish brown Silty CLAY of medium plasticity with gravels (CI)		2.00	SPT-9	9.00-9.45	14	17	20	37	
7.178	8.50										
6.678	9.00				SPT-10	10.00-10.45	14	19	22	41	
6.178	9.50										
5.678	10.00				SPT-11	11.00-11.45	18	24	29	53	
5.178	10.50	Very hard, greyish brown Silty CLAY of medium plasticity (CI)		2.00	SPT-12	12.00-12.27	24	52/12	-	>100	
4.678	11.00										
4.178	11.50				SPT-13	13.00-13.18	44	50/3	-	>100	
3.678	12.00	Very dense, grey Silty SAND with gravels (SM)		0.20	SPT-14	14.00-14.20	48	50/5	-	>100	
3.178	12.50										
2.678	13.00										
2.178	13.50										
1.678	14.00										

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample
 Medium plastic Clay with gravels
 Silty Sand with gravels

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2298992.000 E 292935.931 Dia. of The Hole : 150mm
 Collar Elevation (m) : 15.595 Chainage (m) : 218540 Date Started : 29.11.2017
 Ground Elevation (m) : 15.595 Ground Water Table(m) : 3.60 Date Completed : 30.11.2017
 Total Depth (m) : 13.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.595	0.00	Hard, brown Silty CLAY of medium plasticity with gravels (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 13.45m depth below EGL.	
15.095	0.50											
14.595	1.00											
14.095	1.50	Stiff to very stiff, yellowish brown Silty CLAY of medium plasticity with gravels (CI)		3.00	SPT-1	1.00-1.45	7	14	22	36		
13.595	2.00				UDS-1	1.50-1.80						
13.095	2.50				SPT-2	2.00-2.45	5	4	7	11		
12.595	3.00											
12.095	3.50				SPT-3	3.00-3.45	6	9	13	22		
11.595	4.00	Very stiff, brown Silty CLAY of medium plasticity (CI)		1.50	SPT-4	4.00-4.45	8	12	15	27		Ground water table encountered at 3.60m depth below existing ground level, measured on 01/12/2017
11.095	4.50				UDS-2	4.50-4.80						
10.595	5.00				SPT-5	5.00-5.45	10	13	16	29		
10.095	5.50	Hard to very hard, brownish grey Silty CLAY of high plasticity, lowexpansive (CH)		4.00								
9.595	6.00				SPT-6	6.00-6.45	12	14	15	29		
9.095	6.50											
8.595	7.00				SPT-7	7.00-7.45	13	16	20	36		
8.095	7.50											
7.595	8.00	Hard to very hard, brownish grey Silty CLAY of high plasticity, lowexpansive (CH)		4.00	SPT-8	8.00-8.45	13	18	21	39		
7.095	8.50											
6.595	9.00				SPT-9	9.00-9.45	14	17	22	39		
6.095	9.50	Hard to very hard, brownish grey Silty CLAY of medium plasticity (CI)		3.45								
5.595	10.00				SPT-10	10.00-10.45	16	19	24	43		
5.095	10.50											
4.595	11.00				SPT-11	11.00-11.45	18	28	43	71		
4.095	11.50											
3.595	12.00	Hard to very hard, brownish grey Silty CLAY of medium plasticity (CI)		3.45	SPT-12	12.00-12.45	20	37	40	77		
3.095	12.50											
2.595	13.00				SPT-13	13.00-13.45	23	36	38	74		

Disturbed Sample
 Medium plastic Clay with gravels
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Silty Clay of High plasticity

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2299090.087 E 292955.399 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.627 Chainage (m) : 218640 Date Started : 02.12.2017
Ground Elevation (m) : 15.627 Ground Water Table(m) : 3.00 Date Completed : 03.12.2017
Total Depth (m) : 15.38 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
15.627	0.00	Stiff, brown Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 15.38m depth below EGL. Ground water table encountered at 3.00m depth below existing ground level, measured on 04/12/2017			
15.127	0.50													
14.627	1.00				SPT-1	1.00-1.45	3	4	5	9				
14.127	1.50	Stiff to very stiff, greyish brown Silty CLAY of medium plasticity (CI)		3.00	UDS-1	1.50-1.80								
13.627	2.00													
13.127	2.50							SPT-2	2.00-2.45	4		5	7	12
12.627	3.00							SPT-3	3.00-3.45	5		7	10	17
12.127	3.50													
11.627	4.00				SPT-4	4.00-4.45	7	11	12	23				
11.127	4.50	Grey Silty SAND with gravels (SM)		0.50	UDS-2	4.50-4.80								
10.627	5.00													
10.127	5.50	Very stiff, brownish grey Silty CLAY of high plasticity with gravels, low expansive (CH)		4.00	SPT-5	5.00-5.45	10	12	14	26				
9.627	6.00													
9.127	6.50							SPT-6	6.00-6.45	9		11	15	26
8.627	7.00													
8.127	7.50							SPT-7	7.00-7.45	10	13	16	29	
7.627	8.00													
7.127	8.50				SPT-8	8.00-8.45	11	14	15	29				
6.627	9.00													
6.127	9.50	Hard to very hard, brownish grey Silty CLAY of high plasticity, low expansive (CH)		4.00	SPT-9	9.00-9.45	13	16	19	35				
5.627	10.00													
5.127	10.50							SPT-10	10.00-10.45	15	18	23	41	
4.627	11.00													
4.127	11.50				SPT-11	11.00-11.45	18	22	28	50				
3.627	12.00													
3.127	12.50				SPT-12	12.00-12.45	20	26	32	58				
2.627	13.00													
2.127	13.50	Very dense, grey Silty SAND with gravels (SM-ML)		1.00	SPT-13	13.00-13.40	30	42	52/10	>100				
1.627	14.00													
1.127	14.50	Very hard, brownish grey Silty CLAY of medium plasticity with gravels (CI)		1.38	SPT-14	14.00-14.37	26	44	50/7	>100				
0.627	15.00							SPT-15	15.00-15.38	29	39	50/8	>100	

Disturbed Sample
 Silty Clay of high plasticity
 Standard Penetration Test
 Silty Clay of medium plasticity
 Undisturbed Sample
 Silty Sand with gravels
 Medium plastic Clay with gravels

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2299188.173 E 292974.867 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.420 Chainage (m) : 218740 Date Started : 07.12.2017
Ground Elevation (m) : 15.420 Ground Water Table(m) : 3.40 Date Completed : 08.12.2017
Total Depth (m) : 14.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.42	0.00	Stiff, greyish brown Silty CLAY of medium plasticity (Cl)		4.00	DS-1	0.00-0.50					Borehole terminated at 14.45m depth below EGL.
14.920	0.50										
14.420	1.00				SPT-1	1.00-1.45	5	5	9	14	
13.920	1.50				UDS-1	1.50-1.80					
13.420	2.00	Vey stiff, greyish brown Silty CLAY of medium plasticity, low expansive (Cl)		5.00	SPT-2	2.00-2.45	3	5	6	11	Ground water table encountered at 3.40m depth below existing ground level, measured on 09/12/2017
12.920	2.50										
12.420	3.00				SPT-3	3.00-3.45	4	6	7	13	
11.920	3.50										
11.420	4.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		5.45	SPT-4	4.00-4.45	6	8	10	18	
10.920	4.50				UDS-2	4.50-4.80					
10.420	5.00				SPT-5	5.00-5.45	8	10	12	22	
9.920	5.50										
9.420	6.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		5.45	SPT-6	6.00-6.45	9	11	15	26	
8.920	6.50										
8.420	7.00				SPT-7	7.00-7.45	8	12	16	28	
7.920	7.50										
7.420	8.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		5.45	SPT-8	8.00-8.45	9	13	17	30	
6.920	8.50										
6.420	9.00				SPT-9	9.00-9.45	11	15	18	33	
5.920	9.50										
5.420	10.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		5.45	SPT-10	10.00-10.45	14	17	22	39	
4.920	10.50										
4.420	11.00				SPT-11	11.00-11.45	15	19	25	44	
3.920	11.50										
3.420	12.00	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (Cl)		5.45	SPT-12	12.00-12.45	18	22	26	48	
2.920	12.50										
2.420	13.00				SPT-13	13.00-13.45	22	30	42	72	
1.920	13.50										
1.420	14.00				SPT-14	14.00-14.45	25	36	48	84	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bilimora Station (New Location) Coordinates : N 2299286.260 E 292994.335 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.031 Chainage (m) : 218840 Date Started : 21.11.2017
Ground Elevation (m) : 16.031 Ground Water Table(m) : 2.70 Date Completed : 22.11.2017
Total Depth (m) : 14.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
16.031	0.00	Medium stiff to stiff, dark grey Silty CLAY of medium plasticity, low expansive (CI)		3.00	DS-1	0.00-0.50					Borehole terminated at 14.45m depth below EGL.
15.531	0.50										
15.031	1.00				SPT-1	1.00-1.45	2	3	4	7	
14.531	1.50				UDS-1	1.50-1.80					
14.031	2.00	Very stiff, brown Silty CLAY of medium plasticity, low expansive (CI)		5.00	SPT-2	2.00-2.45	4	6	7	13	Ground water table encountered at 2.70m depth below existing ground level, measured on 23/11/2017
13.531	2.50										
13.031	3.00				SPT-3	3.00-3.45	6	7	10	17	
12.531	3.50				SPT-4	4.00-4.45	7	11	14	25	
12.031	4.00			8.00	UDS-2	4.50-4.80					
11.531	4.50										
11.031	5.00				SPT-5	5.00-5.45	8	11	15	26	
10.531	5.50										
10.031	6.00			6.45	SPT-6	6.00-6.45	9	11	17	28	
9.531	6.50										
9.031	7.00				SPT-7	7.00-7.45	8	12	18	30	
8.531	7.50										
8.031	8.00			6.45	SPT-8	8.00-8.45	9	14	19	33	
7.531	8.50										
7.031	9.00				SPT-9	9.00-9.45	11	14	20	34	
6.531	9.50										
6.031	10.00			6.45	SPT-10	10.00-10.45	12	14	21	35	
5.531	10.50										
5.031	11.00				SPT-11	11.00-11.45	11	15	22	37	
4.531	11.50										
4.031	12.00			6.45	SPT-12	12.00-12.45	12	16	23	39	
3.531	12.50										
3.031	13.00				SPT-13	13.00-13.45	11	17	24	41	
2.531	13.50										
2.031	14.00			14.45m	SPT-14	14.00-14.45	11	16	21	37	

Disturbed Sample
 Silty Clay of medium plasticity
 Standard Penetration Test
 Silty Clay of high plasticity
 Undisturbed Sample

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2342935.130 E 285291.291 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.477 Chainage (m) : 264180 Date Started : 04.05.2017
Ground Elevation (m) : 18.477 Ground Water Table(m) : 3.10 Date Completed : 05.05.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.977	0.50	Medium stiff, brown Clayey SILT of high plasticity (MH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.	
17.477	1.00				SPT-1	1.00-1.45	1	2	3	5		
16.977	1.50	Stiff, brown Silty CLAY of high plasticity, low expansive (CH)		0.50	UDS-1	1.50-1.80						
16.477	2.00				SPT-2	2.00-2.45	2	4	4	8		
15.977	2.50	Medium stiff to very stiff, brown Silty CLAY of medium plasticity (CI)		4.00	SPT-3	3.00-3.45	4	5	7	12		Ground water table encountered at 3.10m below existing ground level, measured on 06/05/2017
15.477	3.00				SPT-4	4.00-4.45	6	8	11	19		
14.977	3.50				UDS-2	4.50-4.80						
14.477	4.00				SPT-5	5.00-5.45	9	11	15	26		
13.977	4.50				SPT-6	6.00-6.45	11	15	21	36		
13.477	5.00				SPT-7	7.00-7.45	13	19	24	43		
12.977	5.50	Hard to very hard, brown Clayey SILT of medium plasticity (MI)		4.00	SPT-8	8.00-8.45	15	20	26	46		
12.477	6.00				SPT-9	9.00-9.45	17	22	29	51		
11.977	6.50				SPT-10	10.00-10.45	21	26	32	58		
11.477	7.00				SPT-11	11.00-11.45	25	29	38	67		
10.977	7.50	Very hard, brown Silty CLAY of medium plasticity (CI)		1.45								
10.477	8.00											
9.977	8.50											
9.477	9.00											
8.977	9.50											
8.477	10.00											
7.977	10.50											
7.477	11.00											

Disturbed Sample
 High plastic Clay (Below A line)
 Standard Penetration Test
 High Plastic Clay
 Undisturbed Sample
 Medium Plastic Clay
 Medium plastic Clay (Below A Line)

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343061.839 E 285311.942 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.777 Chainage (m) : 264307 Date Started : 04.05.2017
Ground Elevation (m) : 18.777 Ground Water Table(m) : 3.00 Date Completed : 05.05.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks		
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE			
18.277	0.50	Soft, brown Silty CLAY of high plasticity, medium expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.		
17.777	1.00												
17.277	1.50				SPT-1	1.00-1.45	1	2	2	4			
16.777	2.00	Stiff to hard, brown Silty CLAY of low plasticity (CL)		6.50	UDS-1	1.50-1.80						Ground water table encountered at 3.00m below existing ground level, on 06/05/2017	
16.277	2.50				SPT-2	2.00-2.45	4	6	9	15			
15.777	3.00												
15.277	3.50				SPT-3	3.00-3.45	7	7	10	17			
14.777	4.00												
14.277	4.50				SPT-4	4.00-4.45	6	8	10	18			
13.777	5.00				UDS-2	4.50-4.80							
13.277	5.50				SPT-5	5.00-5.45	8	10	12	22			
12.777	6.00												
12.277	6.50				SPT-6	6.00-6.45	16	16	21	37			
11.777	7.00												
11.277	7.50	SPT-7	7.00-7.45	17	20	27	47						
10.777	8.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		3.00									
10.277	8.50				SPT-8	8.00-8.45	16	24	31	55			
9.777	9.00												
9.277	9.50				SPT-9	9.00-9.45	21	25	34	59			
8.777	10.00												
8.277	10.50	SPT-10	10.00-10.45	24	32	39	71						
7.777	11.00	Very hard, brown Clayey SILT of medium plasticity (MI)		0.45									
	11.45				SPT-11	11.00-11.45	29	38	42	80			

Disturbed Sample High Plastic Clay
 Standard Penetration Test
 Undisturbed Sample Medium Plastic Clay
 Medium plastic Clay (Below A Line)

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343134.479 E 285307.411 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.756 Chainage (m) : 264380 Date Started : 14.04.2017
Ground Elevation (m) : 18.756 Ground Water Table(m) : 3.50 Date Completed : 14.04.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.256	0.50	Medium stiff, brown Clayey SILT of high plasticity, medium expansive (MH)		1.50	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL.	
17.756	1.00				SPT-1	1.00-1.45	2	3	5	8		
17.256	1.50	Stiff to very stiff, brown Silty CLAY of high plasticity, low expansive (CH)		3.50	UDS-1	1.50-1.80						
16.756	2.00				SPT-2	2.00-2.45	2	4	6	10		
16.256	2.50				SPT-3	3.00-3.45	5	7	10	17		
15.756	3.00				SPT-4	4.00-4.45	6	9	11	20		
15.256	3.50	Very stiff to hard, brownish grey Clayey SILT of medium plasticity (MI)		4.00	UDS-2	4.50-4.80						Ground water table encountered at 3.50m below existing ground level, measured on 15/04/2017
14.756	4.00				SPT-5	5.00-5.45	8	9	13	22		
14.256	4.50				SPT-6	6.00-6.45	7	10	16	26		
13.756	5.00				SPT-7	7.00-7.45	9	14	18	32		
13.256	5.50				SPT-8	8.00-8.45	11	15	20	35		
12.756	6.00				Hard, brownish grey Silty CLAY of low plasticity (CL)		3.00	SPT-9	9.00-9.45	13		
12.256	6.50	SPT-10	10.00-10.45	17				20	25	45		
11.756	7.00	SPT-11	11.00-11.45	19				23	29	52		
11.256	7.50	Very hard, brownish grey Clayey SILT of medium plasticity (MI)		0.45				SPT-12	12.00-12.45	21	28	34
10.756	8.00											
10.256	8.50											
9.756	9.00											
9.256	9.50											
8.756	10.00											
8.256	10.50											
7.756	11.00											
7.256	11.50											
6.756	12.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 High plastic Clay (Below A line)
 High Plastic Clay
 Medium plastic Clay (Below A Line)
 Low Plastic Clay

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343171.000 E 285309.000 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.351 Chainage (m) : 264417 Date Started : 07.05.2017
Ground Elevation (m) : 18.351 Ground Water Table(m) : 2.80 Date Completed : 08.05.2017
Total Depth (m) : 12.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
17.851	0.50	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 12.45m below EGL. Ground water table encountered at 2.80m below existing ground level, on 09/05/2017
17.351	1.00	Medium stiff, brown Silty CLAY of high plasticity, low expansive (CH)		0.50	SPT-1	1.00-1.45	2	2	3	5	
16.851	1.50		UDS-1	1.50-1.80							
16.351	2.00	Stiff, brown Clayey SILT of high plasticity, medium expansive (MH)	3.50	SPT-2	2.00-2.45	2	3	6	9		
15.851	2.50			SPT-3	3.00-3.45	4	6	8	14		
15.351	3.00			SPT-4	4.00-4.45	5	7	9	16		
14.851	3.50			UDS-2	4.50-4.80						
14.351	4.00			SPT-5	5.00-5.45	5	9	13	22		
13.851	4.50			SPT-6	6.00-6.45	8	12	17	29		
13.351	5.00	Very stiff to very hard, brownish grey Silty CLAY of low plasticity (CL)	7.45	SPT-7	7.00-7.45	10	15	20	35		
12.851	5.50			SPT-8	8.00-8.45	13	19	20	39		
12.351	6.00			SPT-9	9.00-9.45	14	19	26	45		
11.851	6.50			SPT-10	10.00-10.45	17	23	28	51		
11.351	7.00			SPT-11	11.00-11.45	21	27	26	53		
10.851	7.50			SPT-12	12.00-12.45	25	31	39	70		

Disturbed Sample
 Sandy Silt
 Standard Penetration Test
 High Plastic Clay
 Undisturbed Sample
 High plastic Clay (Below A line)
 Low Plastic Clay

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343348.005 E 285332.698 Dia. of The Hole : 150mm
Collar Elevation (m) : 18.927 Chainage (m) : 264594 Date Started : 06.05.2017
Ground Elevation (m) : 18.927 Ground Water Table(m) : 2.90 Date Completed : 06.05.2017
Total Depth (m) : 11.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
18.427	0.50	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 11.45m below EGL.	
17.927	1.00	Medium stiff, brown Silty CLAY of high plasticity (CH)		0.50	SPT-1	1.00-1.45	2	2	4	6		
16.927	2.00	Stiff, brown Clayey SILT of high plasticity, medium expensive (MH)		1.50	UDS-1	1.50-1.80						
16.427	2.50			SPT-2	2.00-2.45	2	4	7	11			
15.927	3.00	Very stiff, brownish grey Silty CLAY of low plasticity (CL)		1.50	SPT-3	3.00-3.45	6	8	11	19		Ground water table encountered at 2.90m below existing ground level, measured on 07/05/2017
15.427	3.50			SPT-4	4.00-4.45	6	8	13	21			
14.927	4.00			UDS-2	4.50-4.80							
14.427	4.50			SPT-5	5.00-5.45	8	11	15	26			
13.927	5.00	Medium dense to very dense, grey Sandy SILT, non plastic in nature (ML/ML-SM)		6.95	SPT-6	6.00-6.45	10	13	18	31		
13.427	5.50			SPT-7	7.00-7.45	14	26	31	57			
12.927	6.00			SPT-8	8.00-8.45	14	20	30	50			
12.427	6.50			SPT-9	9.00-9.45	16	23	28	51			
11.927	7.00			SPT-10	10.00-10.45	22	27	35	62			
11.427	7.50			SPT-11	11.00-11.45	25	31	39	70			
10.927	8.00											
10.427	8.50											
9.927	9.00											
9.427	9.50											
8.927	10.00											
8.427	10.50											
7.927	11.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Sandy Silt
 High Plastic Clay
 High plastic Clay (Below A line)
 Low Plastic Clay

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343432.828 E 285301.505 Dia. of The Hole : 150mm
Collar Elevation (m) : 17.586 Chainage (m) : 264679 Date Started : 06.05.2017
Ground Elevation (m) : 17.586 Ground Water Table(m) : 3.00 Date Completed : 06.05.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.086	0.50	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
16.586	1.00	Loose, brown Silty SAND (SM-ML)		0.50	SPT-1	1.00-1.45	2	3	5	8		
16.086	1.50	Medium dense to dense, brownish grey Sandy SILT, non plastic in nature (ML)		5.50	UDS-1	1.50-1.80						
15.586	2.00				SPT-2	2.00-2.45	4	6	9	15		
15.086	2.50				SPT-3	3.00-3.45	5	6	11	17		
14.586	3.00				SPT-4	4.00-4.45	9	13	16	29		
14.086	3.50	Hard, brownish grey Clayey SILT of medium plasticity (MI)		2.00	UDS/DS-2	4.50-4.80						Ground water table encountered at 3.00m below existing ground level, measured on 07/05/2017
13.586	4.00				SPT-5	5.00-5.45	12	18	21	39		
13.086	4.50				SPT-6	6.00-6.45	12	22	28	50		
12.586	5.00				SPT-7	7.00-7.45	14	21	29	50		
12.086	5.50				SPT-8	8.00-8.45	17	22	28	50		
11.586	6.00				SPT-9	9.00-9.45	19	21	29	50		
11.086	6.50	Very dense, grey Silty SAND (SM)		1.45	SPT-10	10.00-10.45	20	25	34	59		
10.586	7.00											
10.086	7.50											
9.586	8.00											
9.086	8.50											
8.586	9.00											
8.086	9.50											
7.586	10.00											

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Slipped / Hard to penetrate samples
 Sandy Silt
 USCS Silty Sand
 Medium plastic Clay (Below A Line)

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343559.012 E 285348.623 Dia. of The Hole : 150mm
Collar Elevation (m) : 17.218 Chainage (m) : 264805 Date Started : 07.05.2017
Ground Elevation (m) : 17.218 Ground Water Table(m) : 3.00 Date Completed : 07.05.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks			
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE				
16.718	0.50	Medium stiff, black Silty CLAY of high plasticity, low expansive (CH)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.			
16.218	1.00													
15.718	1.50				SPT-1	1.00-1.45	2	2	5	7				
15.218	2.00	Stiff to very stiff, brown Silty CLAY of low plasticity (CL)		2.50	UDS-1	1.50-1.80								
14.718	2.50													
14.218	3.00							SPT-2	2.00-2.45	4		7	9	16
13.718	3.50													
13.218	4.00									Ground water table encountered at 3.00m below existing ground level, measured on 08/05/2017				
12.718	4.50				SPT-3	3.00-3.45	9	11	14			25		
12.218	5.00													
11.718	5.50				UDS-2	4.50-4.80								
11.218	6.00													
10.718	6.50				SPT-4	4.00-4.45	11	13	16		29			
10.218	7.00	Medium dense to very dense, brownish grey Sandy SILT, non plastic in nature (ML)		6.00										
9.718	7.50													
9.218	8.00							SPT-5	5.00-5.45		14	20	33	53
8.718	8.50													
8.218	9.00													
7.718	9.50				SPT-6	6.00-6.45	16	24	30	54				
7.218	10.00													
	10.45	Very dense, grey Silty SAND (SM)		0.45	SPT-7	7.00-7.45	20	27	32	59				
					SPT-8	8.00-8.45	24	31	39	70				
					SPT-9	9.00-9.45	29	38	44	82				
					SPT-10	10.00-10.45	25	31	42	73				

Disturbed Sample High Plastic Clay
 Standard Penetration Test
 Undisturbed Sample Sandy Silt
 USCS Silty Sand

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343622.637 E 285346.972 Dia. of The Hole : 150mm
Collar Elevation (m) : 17.554 Chainage (m) : 264869 Date Started : 08.05.2017
Ground Elevation (m) : 17.554 Ground Water Table(m) : 3.00 Date Completed : 08.05.2017
Total Depth (m) : 10.20 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
17.054	0.50	Stiff, black Silty CLAY of low plasticity (CL)		1.50	DS-1	0.00-0.50					Borehole terminated at 10.20m below EGL.	
16.554	1.00				SPT-1	1.00-1.45	3	4	6	10		
16.054	1.50	Medium dense to very dense, brown Sandy SILT, non plastic in nature (ML)		5.50	UDS-1	1.50-1.80						
15.554	2.00				SPT-2	2.00-2.45	3	5	6	11		
15.054	2.50											
14.554	3.00				SPT-3	3.00-3.45	6	8	9	17		
14.054	3.50											
13.554	4.00											
13.054	4.50	Very dense, brown Silty SAND (SM)		1.00	SPT-4	4.00-4.45	7	11	15	26		Ground water table encountered at 3.00m below existing ground level, measured on 09/05/2017
12.554	5.00				UDS-2	4.50-4.80						
12.054	5.50				SPT-5	5.00-5.45	13	18	22	40		
11.554	6.00											
11.054	6.50											
10.554	7.00											
10.054	7.50	Very dense, brownish grey Sandy SILT, non plastic in nature (ML)		1.00	SPT-7	7.00-7.45	19	24	30	54		
9.554	8.00				SPT-8	8.00-8.45	24	29	37	66		
9.054	8.50	Very dense, brownish grey Silty SAND (SM)		1.20	SPT-9	9.00-9.23	37	75/8	-	>100		
8.554	9.00				SPT-10	10.00-10.20	41	75/5	-	>100		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Low Plastic Clay
 Sandy Silt
 USCS Silty Sand

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Surat Station at km 264 / 580 Coordinates : N 2343750.000 E 285219.000 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.847 Chainage (m) : 264996 Date Started : 08.05.2017
Ground Elevation (m) : 16.847 Ground Water Table(m) : 3.00 Date Completed : 08.05.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
16.347	0.50				DS-1	0.00-0.50					Borehole terminated at 10.45m below EGL.	
15.847	1.00											
15.347	1.50				SPT-1	1.00-1.45	2	4	7	11		
14.847	2.00				UDS-1	1.50-1.80						
14.347	2.50				SPT-2	2.00-2.45	4	7	9	16		
13.847	3.00											
13.347	3.50				SPT-3	3.00-3.45	6	6	8	14		
12.847	4.00											
12.347	4.50				SPT-4	4.00-4.45	4	8	10	18		
11.847	5.00	Medium dense to very dense, brownish grey Sandy SILT, non plastic in nature (ML-SM/ML)		10.00	UDS-2	4.50-4.80						
11.347	5.50				SPT-5	5.00-5.45	14	18	24	42		
10.847	6.00											
10.347	6.50				SPT-6	6.00-6.45	16	24	31	55		
9.847	7.00											
9.347	7.50				SPT-7	7.00-7.45	22	23	27	50		
8.847	8.00											
8.347	8.50				SPT-8	8.00-8.45	20	27	29	56		
7.847	9.00											
7.347	9.50				SPT-9	9.00-9.45	28	31	38	69		
6.847	10.00											
		Very dense, brownish grey Fine SAND (SP-SM)		0.45	SPT-10	10.00-10.45	25	29	35	64		

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Sandy Silt
 Fine / medium SAND

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400083.680 E 288123.488 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.301 Chainage (m) : 322710.00 Date Started : 03.04.2017
Ground Elevation (m) : 15.301 Ground Water Table(m) : Not Met With Date Completed : 03.04.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
14.801	0.50	Black Silty CLAY of high plasticity, low expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.	
14.301	1.00	1.00m										
13.801	1.50	Medium dense, brown Sandy SILT, non plastic in nature (ML)		0.50	SPT-1	1.00-1.45	9	11	14	25		
13.301	2.00	Brown Silty CLAY of high plasticity, low expansive (CH)		0.50	UDS-1	1.50-1.80						
12.801	2.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.00	SPT-2	2.00-2.45	12	27	30	57		
12.301	3.00	3.00m										
11.801	3.50	Hard to very hard, brown Silty CLAY of low plasticity (CL)		1.50	SPT-3	3.00-3.45	14	29	33	62		
11.301	4.00				SPT-4	4.00-4.45	17	22	38	60		
10.801	4.50				4.50m							
10.301	5.00	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.50	UDS-2	4.50-4.80						
9.801	5.50				SPT-5	5.00-5.45	19	34	40	74		
9.301	6.00				6.00m							
8.801	6.50	Very hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-6	6.00-6.45	20	35	42	77		
8.301	7.00											
7.801	7.50				SPT-7	7.00-7.45	21	37	46	83		
7.301	8.00											
6.801	8.50				SPT-8	8.00-8.45	18	39	48	87		
6.301	9.00	9.00m										
		Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-9	9.00-9.45	23	21	49	70		
		9.45m										

Disturbed Sample High Plastic Clay
 Standard Penetration Test
 Undisturbed Sample
 Medium plastic Clay (Below A Line)
 Medium Plastic Clay
 Sandy Silt
 Low Plastic Clay

LOGGED BY : _____ CHECKED BY : _____ APPROVED BY : _____



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400183.532 E 288118.051 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.506 Chainage (m) : 322810.00 Date Started : 02.04.2017
Ground Elevation (m) : 15.506 Ground Water Table(m) : Not Met With Date Completed : 02.04.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.006	0.50	Black Silty CLAY of medium plasticity (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
14.506	1.00										
14.006	1.50	Very stiff, brown Clayey SILT of medium plasticity, low expansive (MI)		1.00	SPT-1	1.00-1.45	8	12	15	27	
13.506	2.00				UDS-1	1.50-1.80					
13.006	2.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.00	SPT-2	2.00-2.45	13	27	29	56	
12.506	3.00										
12.006	3.50				SPT-3	3.00-3.45	15	29	34	63	
11.506	4.00										
11.006	4.50	Very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		3.00	SPT-4	4.00-4.45	17	32	39	71	
10.506	5.00				UDS-2	4.50-4.80					
10.006	5.50				SPT-5	5.00-5.45	19	37	42	79	
9.506	6.00										
9.006	6.50				SPT-6	6.00-6.45	21	39	43	82	
8.506	7.00										
8.006	7.50	Very hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-7	7.00-7.45	20	41	44	85	
7.506	8.00										
7.006	8.50				SPT-8	8.00-8.45	23	41	49	90	
6.506	9.00										
	9.45	Very hard, brown Silty CLAY of medium plasticity (CI)		0.45	SPT-9	9.00-9.45	26	43	50	93	

Disturbed Sample Medium Plastic Clay Standard Penetration Test Medium plastic Clay (Below A Line) Undisturbed Sample Sandy Silt

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400283.384 E 288112.613 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.870 Chainage (m) : 322910.00 Date Started : 07.02.2017
Ground Elevation (m) : 15.870 Ground Water Table(m) : Not Met With Date Completed : 08.02.2017
Total Depth (m) : 8.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.370	0.50	Soft, brown Silty CLAY of medium plasticity (CI)		1.50	DS-1	0.00-0.50					Borehole terminated at 8.45m depth below EGL.	
14.870	1.00											
14.370	1.50	Stiff to very stiff, brown Silty CLAY of medium plasticity (CI)		2.50	SPT-1	1.00-1.45	1	2	2	4	Ground water table was not encountered upto termination of borehole.	
13.870	2.00				UDS-1	1.50-1.80						
13.370	2.50				SPT-2	2.00-2.45	4	5	7	12		
12.870	3.00				SPT-3	3.00-3.45	7	8	10	18		
11.870	4.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		4.45	SPT-4	4.00-4.45	9	11	23	34		
11.370	4.50				UDS-2	4.50-4.80						
10.870	5.00				SPT-5	5.00-5.45	17	22	25	47		
10.370	5.50											
9.870	6.00				SPT-6	6.00-6.45	19	20	32	52		
9.370	6.50											
8.870	7.00											
8.370	7.50	SPT-7	7.00-7.45	15	25	33	58					
7.870	8.00											
					SPT-8	8.00-8.45	14	21	26	47		

Disturbed Sample Standard Penetration Test Undisturbed Sample
 Medium Plastic Clay

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400383.236 E 288107.175 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.073 Chainage (m) : 323010.00 Date Started : 06.02.2017
Ground Elevation (m) : 16.073 Ground Water Table(m) : Not Met With Date Completed : 06.02.2017
Total Depth (m) : 8.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks	
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE		
15.573	0.50	Black Sandy SILT, non plastic in nature (ML-SM)		1.00	DS-1	0.00-0.50					Borehole terminated at 8.45m depth below EGL.	
15.073	1.00											
14.573	1.50	Stiff to very stiff, brown Silty CLAY of low plasticity (CL)		3.50	SPT-1	1.00-1.45	3	5	9	14	Ground water table was not encountered upto termination of borehole.	
14.073	2.00				UDS-1	1.50-1.80						
13.573	2.50				SPT-2	2.00-2.45	8	9	13	22		
13.073	3.00											
12.573	3.50				SPT-3	3.00-3.45	12	13	15	28		
12.073	4.00											
11.573	4.50				SPT-4	4.00-4.45	10	12	25	37		
11.073	5.00				Brown Sandy SILT, non plastic in nature (ML)		0.50	UDS/DS-2	4.50-4.80			
10.573	5.50	SPT-5	5.00-5.45	12				21	25	46		
10.073	6.00	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		3.45	SPT-6	6.00-6.45	19	22	29	51		
9.573	6.50											
9.073	7.00				SPT-7	7.00-7.45	14	21	33	54		
8.573	7.50											
8.073	8.00				SPT-8	8.00-8.45	20	30	41	71		

Disturbed Sample Sandy Silt
 Standard Penetration Test Low Plastic Clay
 Undisturbed Sample Medium Plastic Clay
 Slipped / Hard to penetrate samples

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400483.088 E 288101.738 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.947 Chainage (m) : 323110.00 Date Started : 04.02.2017
Ground Elevation (m) : 15.947 Ground Water Table(m) : Not Met With Date Completed : 05.02.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.447	0.50	Stiff, brown Silty CLAY of low plasticity (CL)		3.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
14.947	1.00										
14.447	1.50				SPT-1	1.00-1.45	2	5	6	11	
13.947	2.00				UDS-1	1.50-1.80					
13.447	2.50				SPT-2	2.00-2.45	4	6	7	13	
12.947	3.00										
12.447	3.50	Medium dense, brown Sandy SILT, non plastic in nature (ML)		2.00	SPT-3	3.00-3.45	10	11	13	24	
11.947	4.00										
11.447	4.50				SPT-4	4.00-4.45	13	13	17	30	
10.947	5.00				UDS-2	4.50-4.80					
10.447	5.50	Very stiff to very hard, brown Silty CLAY of medium plasticity (CI)		2.00	SPT-5	5.00-5.45	20	32	38	70	
9.947	6.00										
9.447	6.50				SPT-6	6.00-6.45	11	13	19	32	
8.947	7.00										
8.447	7.50	Very hard, brown Silty CLAY of low plasticity (CL)		1.00	SPT-7	7.00-7.45	15	22	35	57	
7.947	8.00										
7.447	8.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.45	SPT-8	8.00-8.45	18	28	79	107	
6.947	9.00							SPT-9	9.00-9.45	28	35

Disturbed Sample
 Standard Penetration Test
 Undisturbed Sample
 Low Plastic Clay
 Sandy Silt
 Medium Plastic Clay

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400582.940 E 288096.300 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.684 Chainage (m) : 323210.00 Date Started : 30.03.2017
Ground Elevation (m) : 15.684 Ground Water Table(m) : Not Met With Date Completed : 30.03.2017
Total Depth (m) : 9.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.184	0.50	Black Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
14.684	1.00	Very stiff, brown Silty CLAY of low plasticity (CL)		0.50	SPT-1	1.00-1.45	6	9	12	21	
14.184	1.50				UDS-1	1.50-1.80					
13.684	2.00	Very stiff, brown Clayey SILT of medium plasticity (MI)		1.50	SPT-2	2.00-2.45	3	11	16	27	
13.184	2.50										
12.684	3.00				SPT-3	3.00-3.45	10	12	15	27	
12.184	3.50	Medium dense, brown Silty SAND (SM-ML)		1.00							
11.684	4.00				SPT-4	4.00-4.45	13	23	28	51	
11.184	4.50	Very hard, brown Clayey SILT of medium plasticity (MI)		0.50	UDS-2	4.50-4.80					
10.684	5.00				SPT-5	5.00-5.45	15	28	32	60	
10.184	5.50	Very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		2.50							
9.684	6.00				SPT-6	6.00-6.45	19	35	43	78	
9.184	6.50										
8.684	7.00				SPT-7	7.00-7.45	21	33	48	81	
8.184	7.50	Very hard, brown Clayey SILT of medium plasticity (MI)		1.00							
7.684	8.00				SPT-8	8.00-8.45	24	38	51	89	
7.184	8.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.45							
6.684	9.00				SPT-9	9.00-9.45	27	42	55	97	

Disturbed Sample High Plastic Clay
 Standard Penetration Test
 Undisturbed Sample Medium plastic Clay (Below A Line)
 USCS Silty Sand
 Medium Plastic Clay
 Sandy Silt

LOGGED BY : CHECKED BY : APPROVED BY :

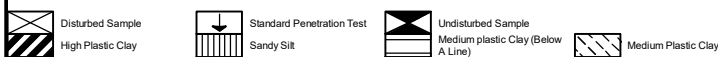


Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400682.792 E 288090.863 Dia. of The Hole : 150mm
Collar Elevation (m) : 15.983 Chainage (m) : 323310.00 Date Started : 31.03.2017
Ground Elevation (m) : 15.983 Ground Water Table(m) : Not Met With Date Completed : 31.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.483	0.50	Brown Silty CLAY of high plasticity, medium expansive (CH)		1.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL. Ground water table was not encountered upto termination of borehole.
14.983	1.00										
14.483	1.50	Medium dense to dense, brown Sandy SILT, non plastic in nature (ML-SM / ML)		2.00	SPT-1	1.00-1.45	6	8	11	19	
13.983	2.00				UDS-1	1.50-1.80					
13.483	2.50				SPT-2	2.00-2.45	9	19	23	42	
12.983	3.00	Hard, brown Clayey SILT of medium plasticity (MI)		1.50	SPT-3	3.00-3.45	10	21	26	47	
12.483	3.50										
11.983	4.00				SPT-4	4.00-4.45	11	18	22	40	
11.483	4.50	Hard to very hard, brown Silty CLAY of medium plasticity (CI)		4.50	UDS-2	4.50-4.80					
10.983	5.00				SPT-5	5.00-5.45	19	17	35	52	
10.483	5.50										
9.983	6.00				SPT-6	6.00-6.45	14	21	28	49	
9.483	6.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.45	SPT-7	7.00-7.45	23	38	43	81	
8.983	7.00										
8.483	7.50				SPT-8	8.00-8.45	24	35	48	83	
7.983	8.00										
7.483	8.50				SPT-9	9.00-9.45	21	41	52	93	
6.983	9.00										
6.483	9.50				SPT-10	10.00-10.45	27	45	50	95	
5.983	10.00										



LOGGED BY :

CHECKED BY :

APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 **Coordinates :** N 2400782.644 E 288085.425 **Dia. of The Hole :** 150mm
Collar Elevation (m) : 16.107 **Chainage (m) :** 323410.00 **Date Started :** 01.04.2017
Ground Elevation (m) : 16.107 **Ground Water Table(m) :** Not Met With **Date Completed :** 01.04.2017
Total Depth (m) : 9.45 **Drilling Method :** Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.607	0.50	Black Silty CLAY of medium plasticity, low expansive (CI)		1.00	DS-1	0.00-0.50					Borehole terminated at 9.45m depth below EGL.
15.107	1.00										
14.607	1.50	Very stiff to very hard, brown Clayey SILT of medium plasticity, low expansive (MI)		3.50	SPT-1	1.00-1.45	5	11	14	25	Ground water table was not encountered upto termination of borehole.
14.107	2.00				UDS-1	1.50-1.80					
13.607	2.50				SPT-2	2.00-2.45	13	23	22	45	
13.107	3.00				SPT-3	3.00-3.45	14	24	34	58	
12.607	3.50				SPT-4	4.00-4.45	11	20	26	46	
11.607	4.50	Hard to very hard, brown Silty CLAY of medium plasticity, low expansive (CI)		3.50	UDS-2	4.50-4.80					
11.107	5.00				SPT-5	5.00-5.45	13	25	30	55	
10.607	5.50				SPT-6	6.00-6.45	15	28	37	65	
10.107	6.00				SPT-7	7.00-7.45	17	30	42	72	
9.607	6.50				SPT-8	8.00-8.45	21	34	47	81	
9.107	7.00	Very dense, brown Sandy SILT, non plastic in nature (ML-SM)		1.45	SPT-9	9.00-9.45	24	40	55	95	
8.607	7.50										
8.107	8.00										

Disturbed Sample
 Standard Penetration Test
 Medium Plastic Clay
 Medium plastic Clay (Below A Line)
 Undisturbed Sample
 Sandy Silt

LOGGED BY : CHECKED BY : APPROVED BY :



Project: Geotechnical Investigation for Mumbai-Ahmedabad High Speed Rail Corridor (Package-I)

Name of the client : RITES Limited

Structure : Bharuch Station at km 323/110 Coordinates : N 2400882.496 E 288079.987 Dia. of The Hole : 150mm
Collar Elevation (m) : 16.048 Chainage (m) : 323510.00 Date Started : 31.03.2017
Ground Elevation (m) : 16.048 Ground Water Table(m) : Not Met With Date Completed : 31.03.2017
Total Depth (m) : 10.45 Drilling Method : Hydraulic Rotary Drilling

Elevation (m)	Depth (m)	Description	Legend	Strata Thickness (m)	Sample Details		Standard Penetration Test Record				Remarks
					Sample Type Number	Test Depth (m)	15cm	15cm	15cm	N VALUE	
15.548	0.50	Very stiff, brown Silty CLAY of high plasticity, medium expansive (CH)		2.00	DS-1	0.00-0.50					Borehole terminated at 10.45m depth below EGL.
15.048	1.00				SPT-1	1.00-1.45	8	12	15	27	
14.548	1.50				UDS-1	1.50-1.80					
14.048	2.00										
13.548	2.50	Dense to very dense, brown Sandy SILT, non plastic in nature (ML)		4.00	SPT-2	2.00-2.45	11	17	22	39	Ground water table was not encountered upto termination of borehole.
13.048	3.00				SPT-3	3.00-3.45	16	22	26	48	
12.548	3.50				SPT-4	4.00-4.45	18	29	39	68	
12.048	4.00				UDS-2	4.50-4.80					
11.548	4.50				SPT-5	5.00-5.45	15	37	42	79	
11.048	5.00										
10.548	5.50	Very hard, brown Clayey SILT of medium plasticity (MI)		3.00	SPT-6	6.00-6.45	18	40	48	88	
10.048	6.00				SPT-7	7.00-7.45	21	42	47	89	
9.548	6.50				SPT-8	8.00-8.45	23	45	50	95	
9.048	7.00										
8.548	7.50	Very dense, brown Sandy SILT, non plastic in nature (ML)		1.45	SPT-9	9.00-9.45	25	48	51	99	
8.048	8.00				SPT-10	10.00-10.45	22	47	52	99	
7.548	8.50										
7.048	9.00										



LOGGED BY :

CHECKED BY :

APPROVED BY :