

DATA 2 : GEOTECHNICAL SURVEY RESULTS

**THE STUDY ON STORM WATER DRAINAGE PLAN
FOR THE COLOMBO METROPOLITAN REGION
IN
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**

FINAL REPORT

VOLUME V : DATA BOOK

DATA 2 : GEOTECHNICAL SURVEY RESULTS

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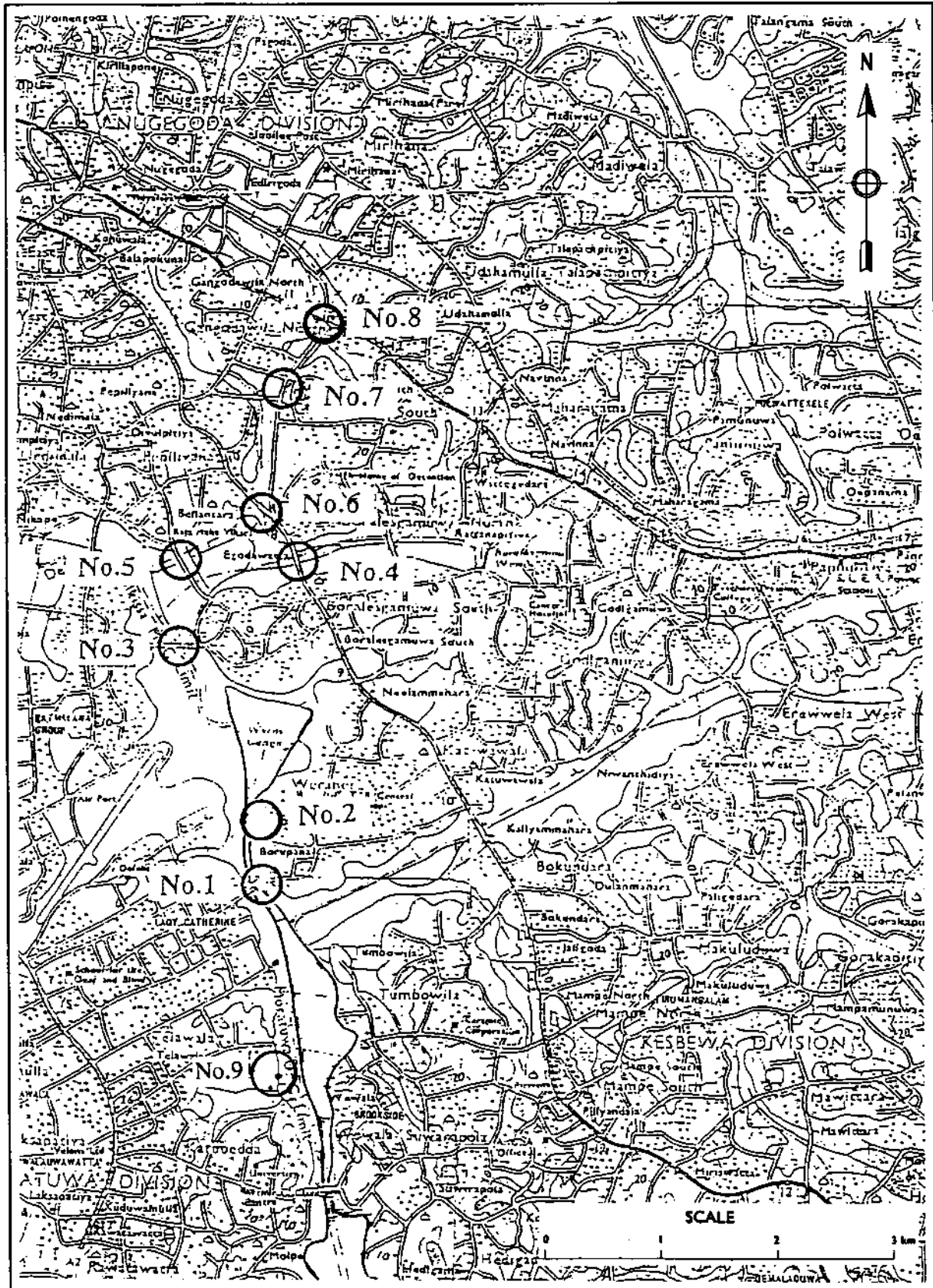
1. Location of Geotechnical Investigation

The locations of geotechnical investigation are tabulated below.

Site of Geotechnical Investigation

Site No.	Location
1	Borupana Bridge
2	Field near Weras Ganga in Borupana
3	Attidiya Irrigation Department Office
4	Horana Road Culvert of Depawa Ela
5	Dehiwala Road Bridge of Rattanapitiya Ela
6	Horana Road Bridge of Rattanapitiya Ela
7	Old Kesbewa Road Culvert of Delkanda Ela
8	High Level Road Bridge of Delkanda Ela
9	Field near Weras Ganga in Telawala

The location map is shown in Figure 1.



*The Study on Storm Water Drainage Plan
for the Colombo Metropolitan Region
in the Democratic Socialist Republic of Sri Lanka*

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure 1
Location of Geotechnical Investigation

2. Work Quantities

Executed work quantities are tabulated below.

Executed Geotechnical Investigation		
Work Item	Unit	Executed Quantities
1. Core Boring	m	76.8
Site No.1	m	6.5
Site No.2	m	9.3
Site No.3	m	9.45
Site No.4	m	4.15
Site No.5	m	10.45
Site No.6	m	7.7
Site no.7	m	8.5
Site No.8	m	8.6
Site No.9	m	12.15
2. Standard Penetration Test	time	77
3. Laboratory Test		
3.1 Moisture Content	samples	9
3.2 LL/ PL/ PI	samples	9
3.3 Specific Gravity	samples	9
3.4 Particle Size Distribution	samples	9
3.5 Unconfined Compression	samples	4
3.6 Consolidation	samples	3

The results of laboratory test are shown in Table 1 and Figure 2.

The final report is kept by SLLRDC.

Table 1 Results of Laboratory Test

BH NO.	Location	Depth (m)	M.C	Specific Gravity	Particle Size Analysis								Atterburg Limits (%)			Unconfined Compression Test			Consolidation					Soil Description	
					Fraction Percentage (Sieve Sizes in mm)								LL	PL	PI	U.C. Strength (KN/m ²)	Failure Strain (%)	D.D. (g/cm ³)	P _c (Kpa)	C _c	C _s	C _c 1+eo	C _s 1+eo		
					>4.75	4.75-2.36	2.36-1.18	1.18-0.600	0.600-0.300	0.300-0.150	0.150-0.075	<0.075													
1.	Borupana Bridge	4.00-4.45	18	2.47	0	0	1.8	6.9	11	13.7	5.1	61.5	52	19	33	-	-	-	-	-	-	-	-	-	Soft sandy clay. Organic odour observed. Colour: Dark grey. Max. particle size: Medium sand.
2.	Kahataga-Hawalta River Bank	3.50-4.00	38	2.60	0.3	1.5	8.5	9.6	4.6	10.5	7.8	57.2	48	30	18	20	08	1.309	-	-	-	-	-	-	Plastic sandy clay. Max. particle size: Coarse sand. Colour: Grey. (Completely weathered rock)
3.	Atidiya Bridge	5.00-5.45	15	2.50	1.4	1.8	2.5	6.0	13.0	22.8	15.8	36.7	38	26	12	-	-	-	-	-	-	-	-	-	Silty clayey sand. Max. particle size: Medium Sand. Colour: Grey.
4.	Depawa Culvert	2.50-3.00	27	2.41	0	0.5	1.5	8.6	14.3	17.2	9.6	48.4	52	22	30	36	09	1.486	21.0	0.211	0.016	0.119	0.0088	(Test curve attached)	Soft plastic clay with sand. Max. particle size: Medium sand. Colour: Greyish brown.
5.	Bellanwila Bridge	3.50-4.00	38	2.54	0	0	2.0	4.4	8.8	15.0	5.2	64.6	53	20	33	35	11	1.475	27	0.104	0.011	0.058	0.0061	(Test curve attached)	Plastic clay. Colour: Grey.
6.	Horana Road Rattana Pilliya Bridge	3.00-3.45	37	2.47	0	1.3	8.4	12.2	9.1	5.6	1.3	62.1	59	21	38	-	-	-	-	-	-	-	-	-	Highly plastic clay with sand. Max. particle size: Medium Sand. Colour: Light Grey.
7.	Old Kesbawa Road Bridge	2.00-2.45	24	2.42	1.6	0	0.6	2.8	3.3	8.2	6.1	77.4	55	18	37	-	-	-	-	-	-	-	-	-	Soft plastic clay with sand. Max. particle size: Coarse sand. Colour: Light Grey.
8.	High Level Road Bridge	2.00-2.95	30	2.43	2.8	2.0	4.3	8.9	15.7	21.2	11.1	34.0	52	20	32	-	-	-	-	-	-	-	-	-	Soft plastic clay with sand. Max. particle: Coarse sand. Colour: Yellowish brown.
9.	Deniyawalla River Bank	4.50-5.00	45	2.40	0	1.8	0.6	3.5	5.4	9.3	3.9	75.5	49	20	29	17	06	1.123	31	0.356	0.018	0.179	0.0088	(Test curve attached)	Sandy plastic clay. Max. Particle size: Medium Sand. Colour: Grey mottled yellowish brown.

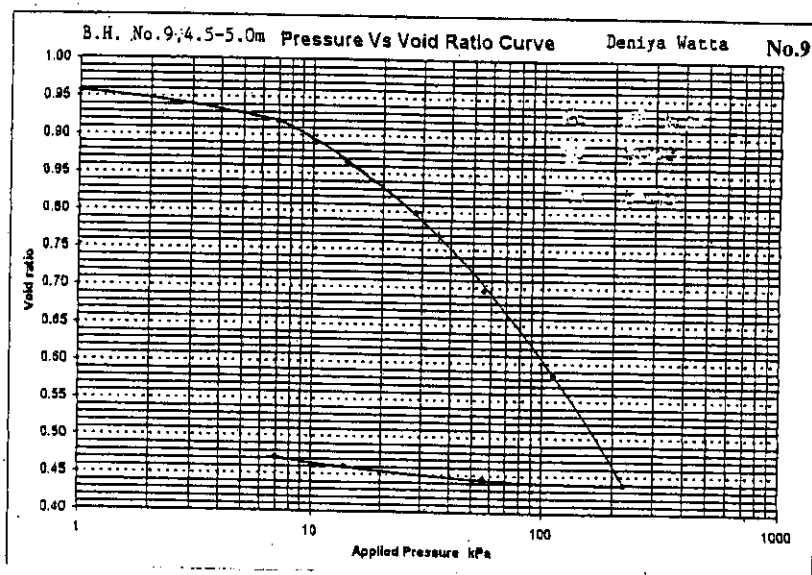
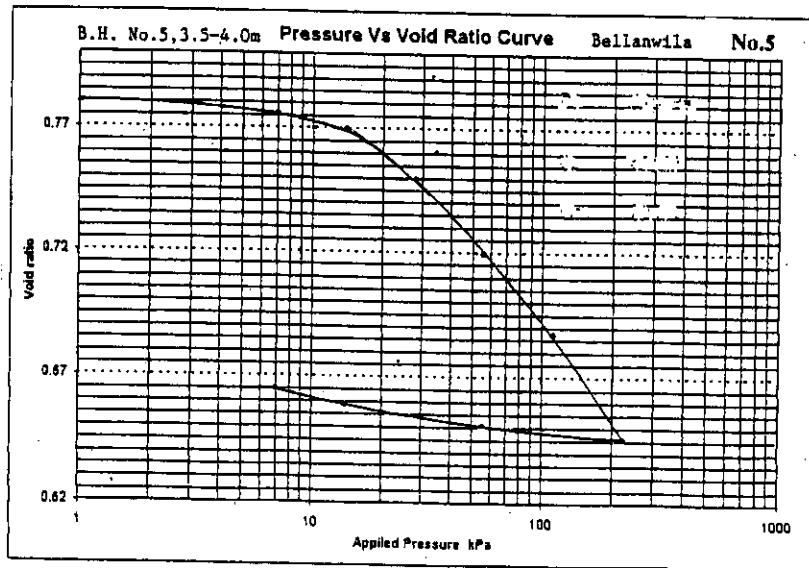
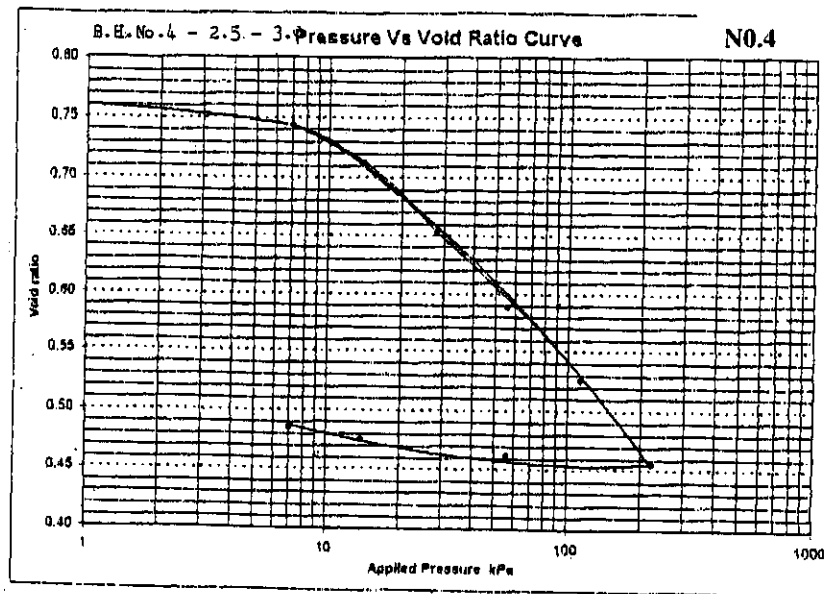


Figure 2 Consolidation Test Curve

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 2								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996 A, MARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region LOCATION : P. Kahatagahawatta, River Bank										
CARRIED OUT FOR M/s. Nippon Koei Co., Ltd.				GROUND LEVEL		DATE : 30.7.02								
COORDINATES														
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS		
					PENETRATION	TYPE	NO	TEST	20	40	60		80	
Same as above	CH				7.00-7.45	D	8	S N=8						3 2 3 3
Silt with a trace of clay Parent rock fabric present. Colour: Blackish (weathered rock)	ML		(1.80)		8.00-8.45	D	9	S N=31						4 9 10 12
Rock					9.30	WS	10	S					N>50	50-No Penetration
Borehole Terminated at 9.30m depth														
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)		SAMPLE/TEST KEY		D DISTURBED SAMPLE B BULK SAMPLE WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE S STANDARD PENETRATION TEST V VANE TEST				W WATER SAMPLE C CORE RECOVERY (%) R ROCK QUALITY DESIGNATION (ROQ %)				LOGGED BY		
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN												SCALE		
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL												ANNEXTURE NO.		

GROUP ENGINEERING LABORATORIES LTD					BORE HOLE NO : 3								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10.					SHEET 1 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing			PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Attidiya Bridge										
CARRIED OUT FOR M/s, Nippon Koei Co., Ltd.			GROUND LEVEL : +0:290 MSL. DATE : 31.7.02 COORDINATES 482,032 N 402,487 E										
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
					PENETRATION	SAMPLE							
						TYPE	NO	TEST	20	40	60	80	
Sandy plastic clay. Colour: Brown	CH		(1.00)	0.00	D	B	1	-					
Lateritic clayey sandy gravel. Colour: Brown (Fill)	GS		(0.50)	1.00-1.45	D	D	2	S N=3					2 1 1 1
Highly organic clay. Colour: Brown	OH		2	2.00-2.45	D	D	3	S N=30	1-30 cm				1 1-30cm
			3	3.00-3.45	D	D	4	S	1-30 cm				1 1-30cm
			4	4.00-4.45	D	D	5	S	1-30 cm				1 1-30cm
Silty clayey sand. Colour: Grey	SC/ SM		5	5.00-5.45	D	D	6	S N=3					1 1 1 1
			6	6.00-6.45	D	D	7	S N=44					7 9 10 25
Silty coarse to fine sand. Colour: Grey	SM		(1.00)										
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)		SAMPLE/TEST KEY		LOGGED BY									
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN		D DISTURBED SAMPLE B BULK SAMPLE WS WASHED SAMPLE PISTON (P) TUBE (UI) OR CORE SAMPLE LENGTH TO SCALE S STANDARD PENETRATION TEST V VANE TEST		W WATER SAMPLE C CORE RECOVERY (%) R ROCK QUALITY DESIGNATION (ROQ II)				SCALE					
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL								ANNEXTURE NO.					

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 3						
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, KARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2						
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region								
CARRIED OUT FOR M/s, Nippon Koei Co,Ltd.				LOCATION : Attidiya Bridge.		GROUND LEVEL DATE : 31.7.02						
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESSES REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
				PENETRATION	SAMPLE TYPE	NO	TEST	20	40	60		80
Silty clayey sand. Colour: Grey.	SC/SM		(1.00)	7.00-7.45	D	8	S N=41					10 9 12 20
Coarse to fine sand with the inclusion of peat. Colour: Dark Grey.	SP		(1.00)	8.00-8.45	D	9	S N=46					9 9 16 21
Coarse to fine sand. Colour: Grey.	SW		9	9.00-9.45	D	10	S N=66					12 20 26 20
Borehole Terminated at 9.45m depth												
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)			SAMPLE/TEST KEY			W WATER SAMPLE			LOGGED BY			
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN			D DISTURBED SAMPLE			C CORE RECOVERY (%)			SCALE			
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL			B BULK SAMPLE			R ROCK QUALITY DESIGNATION (ROD #)			ANNEXTURE NO.			
			WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE									
			S STANDARD PENETRATION TEST									
			V VANE TEST									

GROUP ENGINEERING LABORATORIES LTD					BORE HOLE NO : 4								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10.					SHEET 1 OF 1								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing			PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Depawa Culvert										
CARRIED OUT FOR M/s, Nippon Koei Co,Ltd.			GROUND LEVEL +1.510' MSL COORDINATES 482,715 N 403,445 E		DATE : 01.8.02								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
					PENETRATION	SAMPLE							
						TYPE	NO	TEST	20	40	60	80	
Hard plastic clay with sand. Colour: 'Brown (Fill)'	CH		(1.00)		0.00-0.45	D	1	S N=26	20				10 11 10 5
					1.00-1.45	D	2	S N=4					2 2 1 1
Soft plastic clay with sand. Colour: greyish Brown	GH		(3.00)		2.00-2.45	D	3	S N=11					1 1 5 5
					2.50-3.00	UD	4	-					
					3.00-3.45	D	5	S N=12					1 1 5 6
Coarse to fine sand with a trace of silt. Colour: Grey	SW				4.00	WS	6	S					50-No Penetration
Rock													
Borehole Terminated at 4.15m depth													
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)					SAMPLE/TEST KEY				LOGGED BY				
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN					D DISTURBED SAMPLE				W WATER SAMPLE				SCALE
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL					B BULK SAMPLE				C CORE RECOVERY (%)				ANNEXTURE NO
					WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE				R ROCK QUALITY DESIGNATION (ROD %)				
					S STANDARD PENETRATION TEST								
					Y VANE TEST								

GROUP ENGINEERING LABORATORIES LTD				BORE HOLE NO : 5								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 995A, MARADANA ROAD, COLOMBO 10.				SHEET 1 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Bellanwila Bridge.								
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.				GROUND LEVEL : +0.190 MSL. DATE : 2.8.02 COORDINATES 482,721 N 402,492 E								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
				PENETRATION	SAMPLE							
					TYPE	NO	TEST	20	40	60	80	
Filled with Rubble.			(0.60)									
Soft organic clay. Colour: Black	OH		1.00-1.45	1.00-1.45	D	1	S N=3					1 1 1
			2.00-2.45	2.00-2.45	D	2	S N=5					1 2 2 1
Plastic clay. Colour: Grey	CH		3.00-3.45	3.00-3.45	D	3	S N=3					2 1 1 1
			3.50 - 4.00	3.50 - 4.00	UD	4	-					UD
Sandy clay. Colour: Grey	CL		4.00-4.45	4.00-4.45	D	5	S N=7					5 3 2 2
Organic plastic clay with inclusion of sand. Colour: Black Mottled Grey.	OH		5.00-5.45	5.00-5.45	D	6	S N=24					10 10 8 6
Sandy plastic clay. Colour: Dark Grey.	CH		6.00-6.45	6.00-6.45		7	S N=7					3 2 2 3
			7									

SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)

DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN

WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL

SAMPLE/TEST KEY

D DISTURBED SAMPLE

B BULK SAMPLE

WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE

S STANDARD PENETRATION TEST

V VANE TEST

W WATER SAMPLE

C CORE RECOVERY (%)

R ROCK QUALITY DESIGNATION (ROD %)

LOGGED BY

SCALE

ANNEXTURE NO.

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 5								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing.				PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region										
CARRIED OUT FOR M/s, Niopn Kowi Co,Ltd.				LOCATION : Bellanwila Bridge		DATE : 2.8.02								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS		
					PENETRATION	SAMPLE TYPE	NO	TEST	20	40	60		80	
Plastic clay with sand. Colour: Grey	CH		(1.00)		7.00-7.45	D	8	S N=9						4 3 3 3
Silty fine sand parent rock fabric present. Colour: Blackish grey. (Weathered rock).	SM		8		8.00-8.45	D	9	S N=33						10 12 11 10
Coarse Sand			9		9.00-9.45	D	10	S N=42						10 10 15 17
			10		10.00-10.45	D	11	S N=55						15 17 12 26
Borehole Terminated at 10.45m depth.														
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)				SAMPLE/TEST KEY				LOGGED BY						
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN				D DISTURBED SAMPLE B BULK SAMPLE WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE				W WATER SAMPLE C CORE RECOVERY (1) R ROCK QUALITY DESIGNATION (ROD 2)						
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL				S STANDARD PENETRATION TEST V VANE TEST				SCALE						
												ANNEXTURE NO.		

GROUP ENGINEERING LABORATORIES LTD				BORE HOLE NO : 6										
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10				SHEET 1 OF 2										
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing			PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Hbrana Road, Rattanapitiya Bridge											
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.			GROUND LEVEL +1,594 MSL COORDINATES 483,248 N 403,133 E DATE : 03.8.02											
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS		
					PENETRATION	TYPE	NO	TEST	20	40	60		80	
Lateritic clayey sand with gravel. Colour: Yellowish Brown (Fill)	SC		0.00-1.00	1.00	0.00	B	1	--						
Very soft plastic clay, organic odour observed. Colour: Dark grey.	CH		1.00-2.00	1.00	1.00-1.45	D	2	S	1					1-45cm GWL at 1.0m depth
Silty clayey sand. Colour: Grey.	SC/SM		2.00-3.00	1.00	2.00-2.45	D	3	S N=4	1					2 2 1 1
Highly plastic clay, with sand. Colour: Light grey.	CH		3.00-4.00	1.00	3.00-3.45	D	4	S N=3	1					1 1 1 1
Highly plastic clay, with sand. Colour: Light grey.	CH		4.00-5.00	2.00	4.00-4.45	D	5	S N=3	1					1 1 1 1
Silty clayey sand. Colour: Grey (Completely weathered rock)	SC/SM		5.00-6.00	2.00	5.00-5.45	D	6	S N=10	2					2 4 3 3
Silty clayey sand. Colour: Grey (Completely weathered rock)	SC/SM		6.00-7.00	2.00	6.00-6.45	D	7	S N=11	4					4 3 3 5
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)	SAMPLE/TEST KEY				LOGGED BY									
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN	D DISTURBED SAMPLE B BULK SAMPLE W/S WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE				W WATER SAMPLE C CORE RECOVERY (%) R ROCK QUALITY DESIGNATION (ROD #)				SCALE					
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL	S STANDARD PENETRATION TEST V VANE TEST								ANNEXTURE NO.					

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 6								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Horana Road, Rattana pitiya Bridge										
CARRIED OUT FOR M/s, Nippon Koei Co., Ltd.				GROUND LEVEL		DATE : 03.8.02								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION				SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS			
				GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	PENETRATION	SAMPLE			TEST	20	40
TYPE	NO													
Weathered rock				(0.70)	7.00-7.45	D	8	S	N=16					5 4 4 6
Rock					7.70	WS	9	-						50-No Penetration
Borehole Terminated at 7.70m depth														
<p>SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)</p> <p>DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN</p> <p>WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL</p>				<p>SAMPLE/TEST KEY</p> <p>D DISTURBED SAMPLE</p> <p>B BULK SAMPLE</p> <p>WS WASHED SAMPLE PISTON (PI) TUBE (UI) OR CORE SAMPLE LENGTH TO SCALE</p> <p>S STANDARD PENETRATION TEST</p> <p>V VANE TEST</p>				<p>W WATER SAMPLE</p> <p>C CORE RECOVERY (%)</p> <p>R ROCK QUALITY DESIGNATION (ROD %)</p>				<p>LOGGED BY</p> <p>SCALE</p> <p>ANNEXTURE NO.</p>		

GROUP ENGINEERING LABORATORIES LTD				BORE HOLE NO : 7								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 99/A MARADANA ROAD, COLOMBO 10.				SHEET 1 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Storm Water Drainage Plan for the Colombo LOCATION : Old Kesbewa Road Metropolitan Region Bridge								
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.				GROUND LEVEL +2.328 MSL DATE : 5.8.02 COORDIMATES 483,591 N 403,165 E								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
				PENETRATION	SAMPLE							
					TYPE	NO	TEST	20	40	60	80	
Road Construction.			(0.30)									
Soft plastic clay with sand. Colour: Light Brown	CH		1.00-1.45	D	1	1	S N=5					2 1 2 2
			2.00-2.45	D	2	2	S N=3					1 1 1
Colour: Light Grey			3.00-3.45	D	3	3	S N=5					1 1 2 2
			4.00-4.45	D	4	4	S N=10					2 3 3 4
Silty clayey sand. Colour: grey.	SC/ SM		5.00-5.45	D	5	5	S N=30					8 8 10 12
Silty sand. Colour: Grey	SM		6.00-6.45	D	6	6	S N=8					10 2 2
Medium to fine sand. Colour: Grey.	SP											
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVE, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE) DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL				SAMPLE/TEST KEY D DISTURBED SAMPLE B BULK SAMPLE WS WASHED SAMPLE PISTON (PI TUBE (U) OR CORE SAMPLE LENGTH TO SCALE S STANDARD PENETRATION TEST V VANE TEST				W WATER SAMPLE C CORE RECOVERY (%) R ROCK QUALITY DESIGNATION (ROD II)				LOGGED BY SCALE ANNEXTURE NO.

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 7						
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, KARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2						
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Old Kesbewa Road Bridge								
CARRIED OUT FOR M/s, Nippon Koel Co.,Ltd.				GROUND LEVEL		DATE : 5.8.02						
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION				SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
				PENETRATION	SAMPLE		TEST	20	40	60		80
TYPE	NO											
Same as above				7.00-7.45	WS	7	-					SPT not done due to boiling of sand.
Silty clayey sand Colour: Grey. (Completely weathered rock)				8.00-8.45	D	8	S				>50	16 22 50-No Penetration
Rock Borehole Terminated at 8.50m depth				8.50	WS	9	S				>50	50-No Penetration
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)				SAMPLE/TEST KEY				LOGGED BY				
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN				D DISTURBED SAMPLE				W WATER SAMPLE				
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL				B BULK SAMPLE				C CORE RECOVERY (%)				
				WS WASHED SAMPLE PISTON (PI) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE				R ROCK QUALITY DESIGNATION (ROD II)				
				S STANDARD PENETRATION TEST				SCALE				
				V VANE TEST				ANNEXTURE NO.				

GROUP ENGINEERING LABORATORIES LTD				BORE HOLE NO : 8									
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARACANA ROAD, COLOMBO 10.				SHEET 1 OF 2									
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing			PROJECT : Strom Water Drainage Plan for the Colombo LOCATION : High Level Road Metropolitan Region Bridge.										
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.			GROUND LEVEL : +4.150 MSL COORDINATES 485,813 N 423,622 E DATE : 4.8.02										
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS		
				PENETRATION	TYPE	SAMPLE NO	TEST	20	40	60		80	
Lateritic clayey sand with gravel. Colour: Reddish Brown (Fill)	SC		(1.50)	1.00	BS	1	-						
Soft plastic clay with sand. Colour: Yellowish Brown	CH		(1.50)	2.00-2.45	D	2	S N=5	○					2 2 2 1
Medium to fine sand with a trace of silt. Colour: Light Brown	SP		(0.50)	3.00-3.45	D	3	S N=13	○					9 5 3 5
Silty sand. Colour: Grey	SM		(1.50)	4.00-4.45	D	4	S N=9	○					4 4 3 2
Sandy silty clay. Colour: Greenish Grey. Parent rock fabric present. (Completely weathered rock)	CL/ ML		(1.00)	5.00-5.45	D	5	S N=6	○					4 2 2 2
Silty clayey sand with gravel. Colour: Greenish grey Mottled White	SC/ SM		(2.00)	6.00-6.45	D	6	S N=18	○					3 4 7 7
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF GLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)	SAMPLE/TEST KEY		LOGGED BY										
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN	D DISTURBED SAMPLE B BULK SAMPLE WS WASHED SAMPLE PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE S STANDARD PENETRATION TEST V VANE TEST		W WATER SAMPLE C CORE RECOVERY (I) R ROCK QUALITY DESIGNATION (ROD II)				SCALE						
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL							ANNEXTURE NO.						

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 8		
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A, MARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2		
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region LOCATION : High Level Road Bridge				
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.				GROUND LEVEL		DATE : 4.8.02		
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION				SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES	
				PENETRATION			20 40 60 80	
				TYPE NO TEST				
Same as above				7.00-7.45 D 7 S N=22			7 5 7 10	
Weathered rock				8.00-8.45 D 8 S N=88			7 17 21 50	
Rock				8.60 WS 9 S			50-No Penetration	
Borehole Terminated at 8.60m depth							N 7.50	
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)		SAMPLE/TEST KEY		W WATER SAMPLE		LOGGED BY		
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN		D DISTURBED SAMPLE		O CORE RECOVERY (%)		SCALE		
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL		B BULK SAMPLE		R ROCK QUALITY DESIGNATION (ROD II)		ANNEXTURE NO.		
		WS WASHED SAMPLE						
		PISTON (PI) TUBE (UI) OR CORE SAMPLE LENGTH TO SCALE						
		S STANDARD PENETRATION TEST						
		V VANE TEST						

GROUP ENGINEERING LABORATORIES LTD				BORE HOLE NO : 9									
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A MARADANA ROAD, COLOMBO 10.				SHEET 1 OF 2									
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing			PROJECT : Storm Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Deniyawatta River Bank										
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.			GROUND LEVEL : +0.467 MSL.		DATE : 6.8.02								
			COORDINATES 478,284 N		403,597 E								
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS	
					PENETRATION	SAMPLE		20	40	60	80		
						TYPE	NO	TEST					
Lateritic Fill			(1.00)										GWL. at 0.30m depth.
Soft organic clay Colour: Black.	OH		1.00-1.45		D	1	S						SPT tube dropped freely
			2.00-2.45		D	2	S						do
			3.00-3.45		D	3	S						1-45cm
Sandy plastic clay. Colour: Grey Mottled Yellowish Brown.	CH		4.00-4.45		D	4	S	N=3					1
			4.50-5.00		UD	5	-						UD.
Silty sand with a trace of clay. Colour: Grey Parent rock fabric present. (Completely weathered rock)	SM		5.00-5.45		D	6	S	N=4					2 2 1 1
			6.00-6.45		D	7	S	N=14.					6 5 4 5
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)		SAMPLE/TEST KEY		LOGGED BY									
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS IN DEPTH COLUMN		D DISTURBED SAMPLE		SCALE									
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL		B BULK SAMPLE		ANNEXTURE NO.									
		WS WASHED SAMPLE											
		PISTON (P) TUBE (U) OR CORE SAMPLE LENGTH TO SCALE											
		S STANDARD PENETRATION TEST											
		V VANE TEST											
		W WATER SAMPLE											
		C CORE RECOVERY (%)											
		R ROCK QUALITY DESIGNATION (ROD %)											

GROUP ENGINEERING LABORATORIES LTD						BORE HOLE NO : 9								
HEAD OFFICE No 3, ANDERSON ROAD, COLOMBO 5, SRI LANKA LABORATORY 996A MARADANA ROAD, COLOMBO 10.						SHEET 2 OF 2								
EQUIPMENT & METHODS Water Flush Rotary Drill 75mm casing				PROJECT : Strom Water Drainage Plan for the Colombo Metropolitan Region LOCATION : Deniyawatta River Bank										
CARRIED OUT FOR M/s, Nippon Koei Co.,Ltd.				GROUND LEVEL		DATE : 6.8.02								
				COORDINATES										
SOIL CLASSIFICATION / VISUAL DESCRIPTION AND IDENTIFICATION	GROUP SYMBOL	LEGEND	DEPTH & THICKNESS	REDUCED LEVEL	SAMPLE & TESTS			DISTRIBUTION OF 'N' VALUES				FIELD RECORDS		
					PENETRATION	SAMPLE TYPE	NO	TEST	20	40	60		80	
Same as above	SM		(3.00)	-8	7.00-7.45	D	8	S N=9	○					2 3 3 3
					8.00-8.45	D	9	S N=11	○					2 3 4 4
					9.00-9.45	D	10	S N=14	○					5 3 5 6
Silty clay with sand. Colour: Yellowish Brown Mottled Grey Parent rock fabric present. (Completely weathered rock)	ML		(2.00)	-10	10.00-10.45	D	11	S N=19	○					5 5 7 7
					11.00-11.45	D	12	S N=14	○					7 5 4 5
Silty sand with gravel. Parent rock fabric present. Colour: Yellowish Brown Mottled Dark Grey. (Weathered rock)	SM		(1.00)	-11										
Silty fine sand (weathered rock)	SM		(0.15)	-12	12.00	D	13	S	○				N>50	50-No Penetration
Rock														
Borehole Terminated at 12.15m depth														
SPT : WHERE FULL 0.3m PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N-VALUE)		SAMPLE/TEST KEY										LOGGED BY		
DEPTHS : ALL DEPTHS & REDUCED LEVELS IN METRES. THICKNESSES GIVEN IN BRACKETS 'IN' DEPTH COLUMN		D DISTURBED SAMPLE										SCALE		
WATER : WATER LEVEL OBSERVATIONS DURING BORING ARE GIVEN AS WATER LEVEL		B BULK SAMPLE										ANNEXTURE NO.		
		WS WASHED SAMPLE PISTON (PI) TUBE (II) OR CORE SAMPLE LENGTH TO SCALE												
		S STANDARD PENETRATION TEST												
		V VANE TEST												
		W WATER SAMPLE												
		C CORE RECOVERY (I)												
		R ROCK QUALITY DESIGNATION (ROD II)												