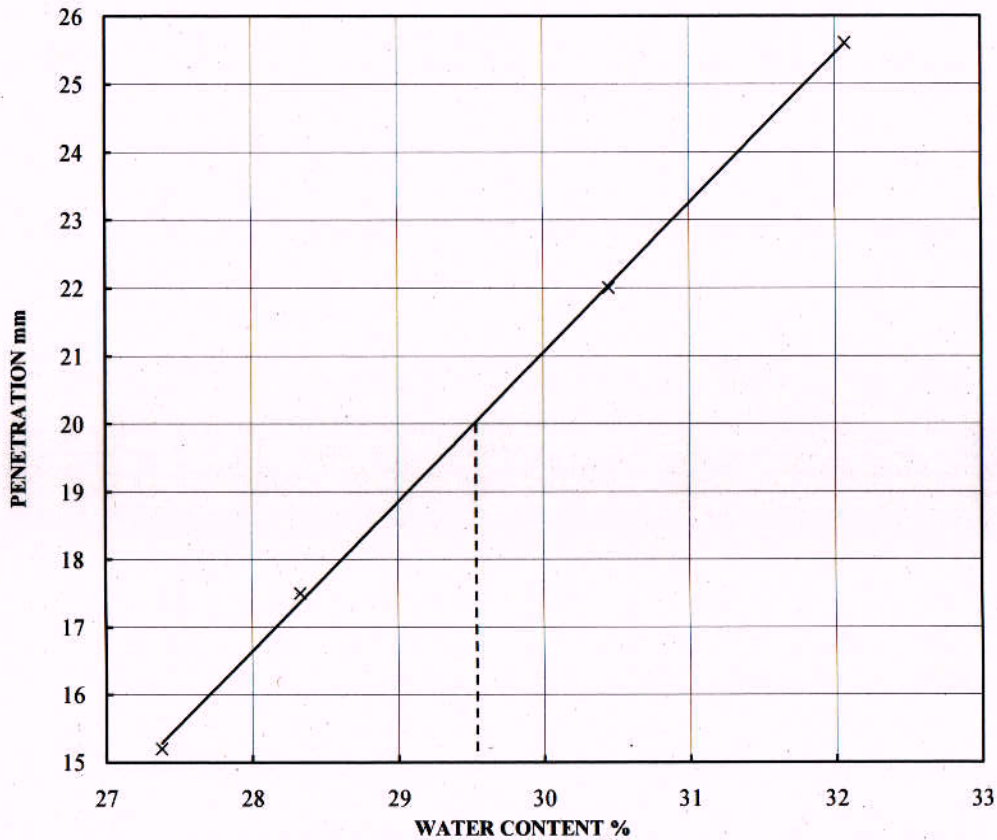


**I.S. : 2720 : PART 5**



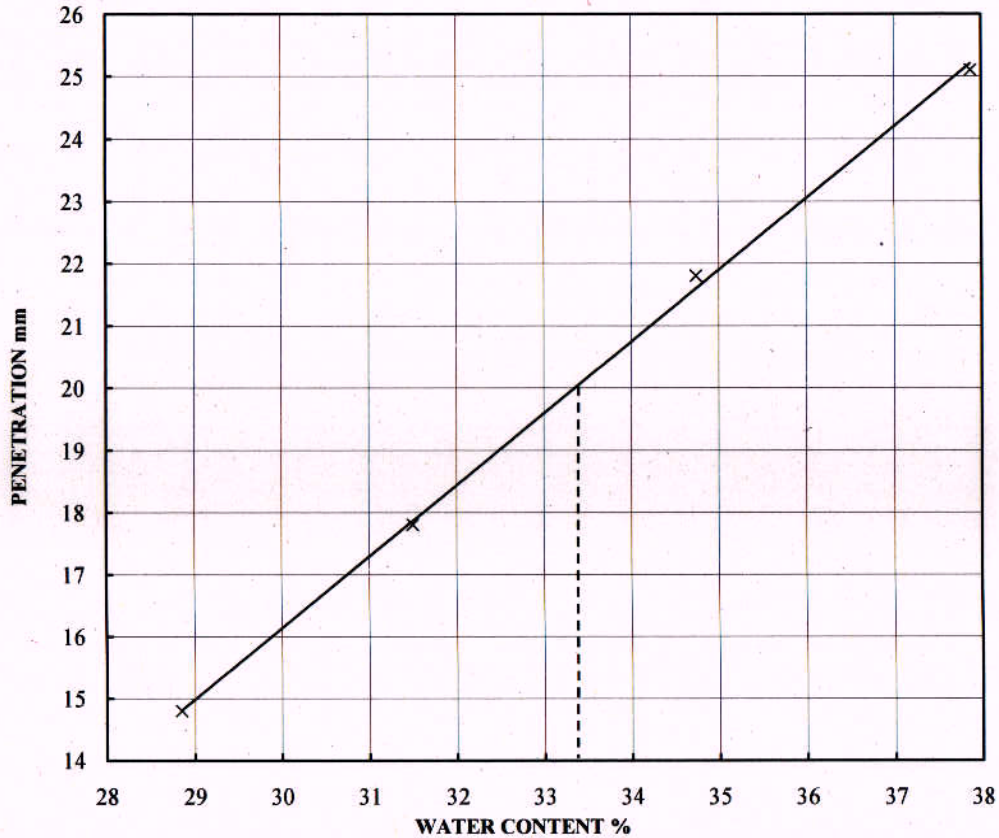
**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.35	26.59	26.69	26.69	
Dry Weight + Tare (g)	23.55	22.91	22.43	22.54	NP
Tare Weight (g)	9.67	9.92	8.44	9.60	
Water Content (%)	27.38	28.33	30.45	32.07	
Penetration (mm)	15.20	17.50	22.00	25.60	
LIQUID LIMIT (%)	30				
PLASTIC LIMIT (%)	NP				
PLASTICITY INDEX (%)	NP				

Sample Type : UDS	
Borehole No. 1/43+900	Sample No: UDS-2
Depth (m): 5.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bilal Khan</i>	Checked : <i>RE</i>
Authorised Signatory <i>[Signature]</i>	
Date : 28/2/16	Date: 14/3/16
Date: 14/3/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

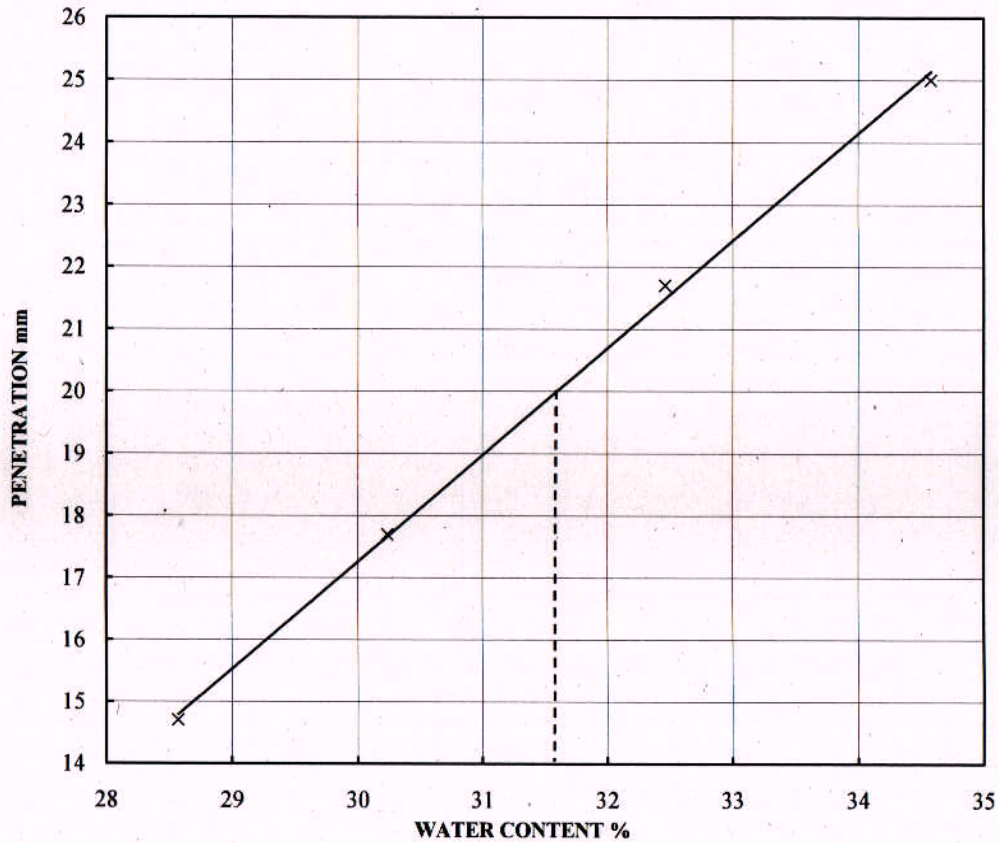
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	28.88	25.88	29.21	28.66	17.79	20.22
Wet Weight + Tare (g)	28.88	25.88	29.21	28.66	17.79	20.22
Dry Weight + Tare (g)	24.33	21.73	24.29	23.09	16.22	18.52
Tare Weight (g)	8.56	8.55	10.13	8.37	8.44	9.92
Water Content (%)	28.85	31.50	34.75	37.88	20.18	19.77
Penetration (mm)	14.80	17.80	21.80	25.10		

LIQUID LIMIT (%) 33  
 PLASTIC LIMIT (%) 20  
 PLASTICITY INDEX (%) 13

Sample Type : UDS		Borehole No. 1/43+900		Sample No: UDS-3	Depth (m): 8.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bikim</i>		Checked : <i>RE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 28/2/016		Date: 17/3/16		Date: 14/3/18	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 83%

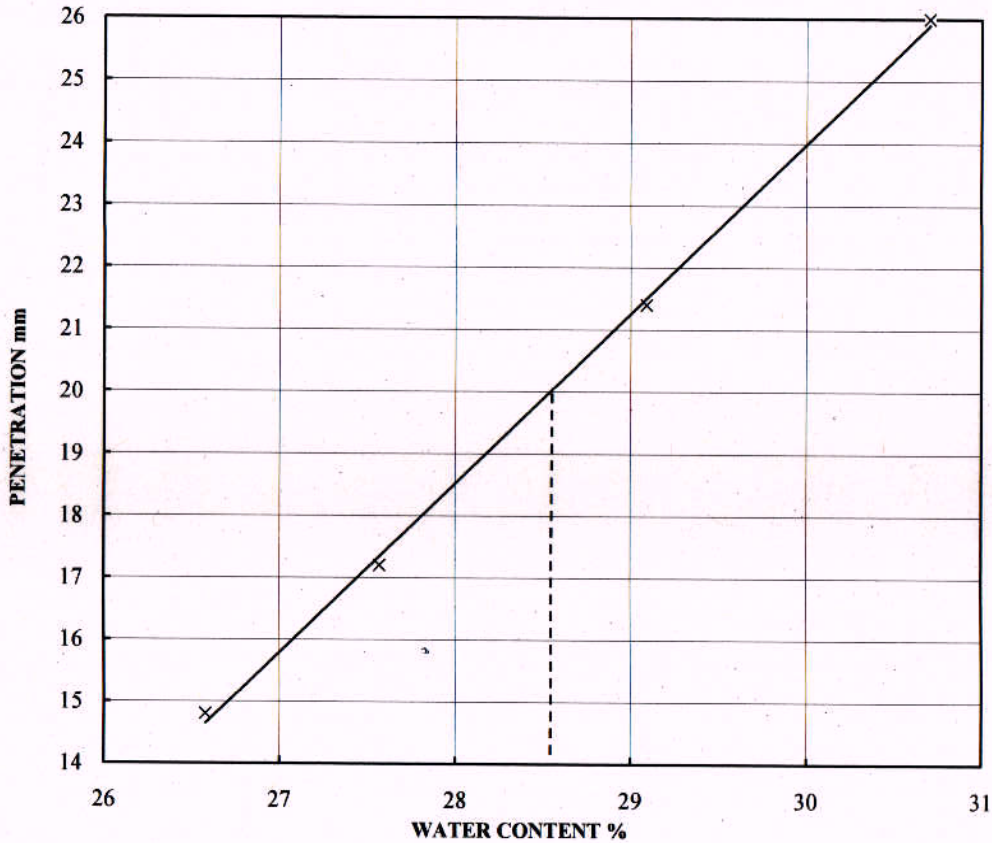
	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	29.86	24.00	25.16	28.19	19.24	20.86
Dry Weight + Tare (g)	25.40	20.45	21.44	23.65	17.56	19.05
Tare Weight (g)	9.79	8.71	9.98	10.52	9.80	10.54
Water Content (%)	28.57	30.24	32.46	34.58	21.65	21.27
Penetration (mm)	14.70	17.70	21.70	25.00		

LIQUID LIMIT (%) 32  
 PLASTIC LIMIT (%) 21  
 PLASTICITY INDEX (%) 11

Sample Type : UDS	
Borehole No. 1/43+900	Sample No: UDS-4
Depth (m): 11.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bal Kim</i>	Checked : <i>RE</i>
Authorised Signatory <i>[Signature]</i>	
Date : 28/2/06	Date: 14/3/06
Date: 14/07/08	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	24.97	26.25	26.69	29.11	
Dry Weight + Tare (g)	21.59	22.44	22.69	24.25	NP
Tare Weight (g)	8.86	8.62	8.94	8.42	
Water Content (%)	26.58	27.57	29.09	30.70	
Penetration (mm)	14.80	17.20	21.40	26.00	

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS

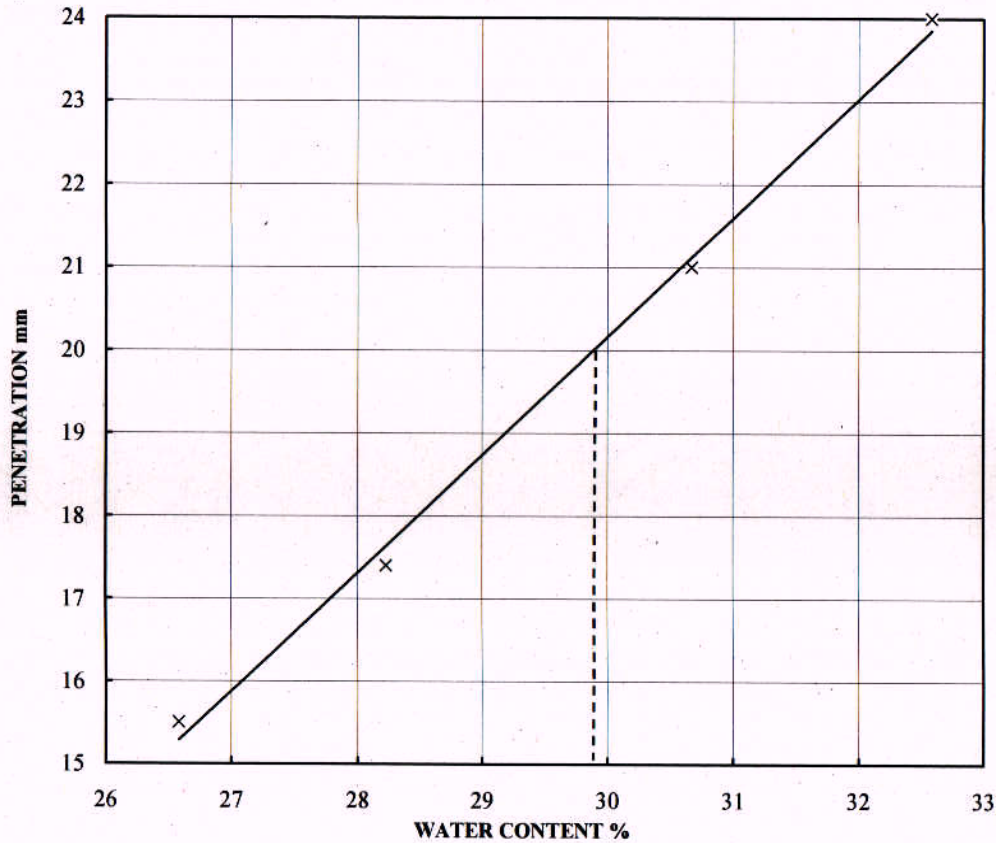
Borehole No. 1/46+362      Sample No: UDS-1      Depth (m): 2.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator : *Bl Kim*      Checked : *RE*      Authorised Signatory *[Signature]*  
 Date : 28/2/16      Date: 14/3/16      Date: 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

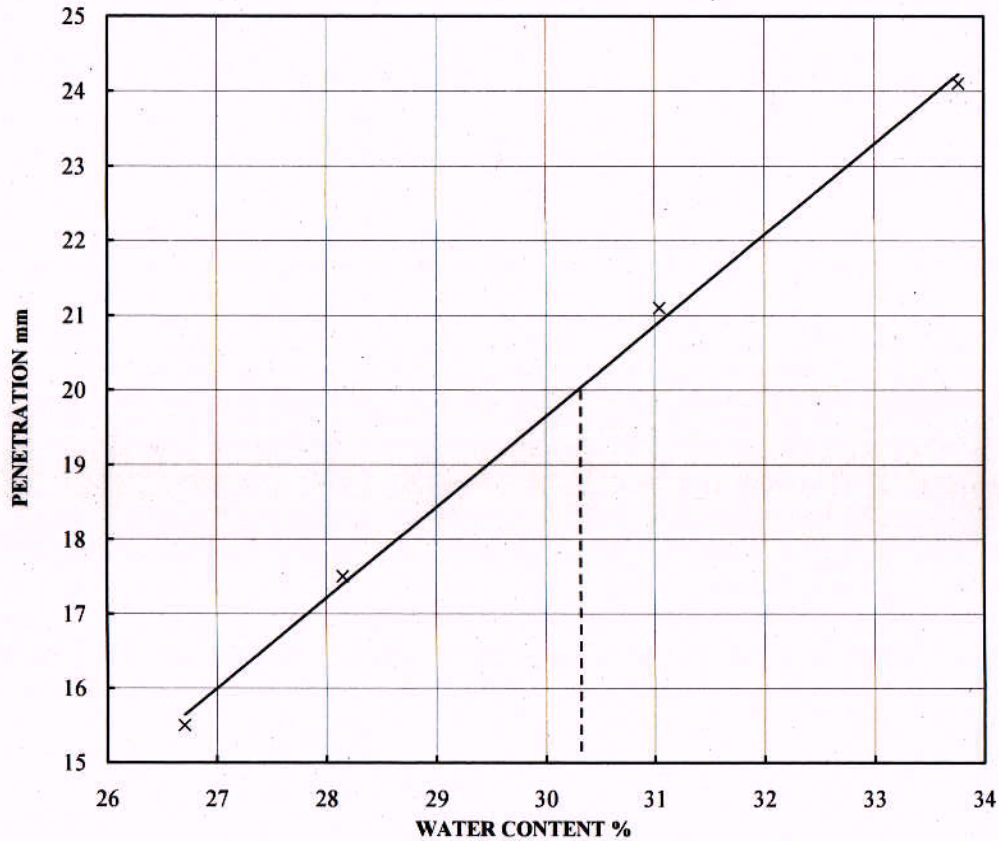
Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %	
	29.52	32.63	29.71	30.26	22.38	22.25
Wet Weight + Tare (g)	29.52	32.63	29.71	30.26	22.38	22.25
Dry Weight + Tare (g)	25.49	27.80	24.75	24.90	20.48	20.46
Tare Weight (g)	10.33	10.69	8.57	8.45	10.00	10.40
Water Content (%)	26.58	28.23	30.67	32.58	18.13	17.79
Penetration (mm)	15.50	17.40	21.00	24.00		

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) 18  
 PLASTICITY INDEX (%) 12

Sample Type : UDS	
Borehole No. 1/46+362	Sample No: UDS-2
Depth (m): 5.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bikram</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 28/2/16	Date: 14/3/16
Date: 14/7/15	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

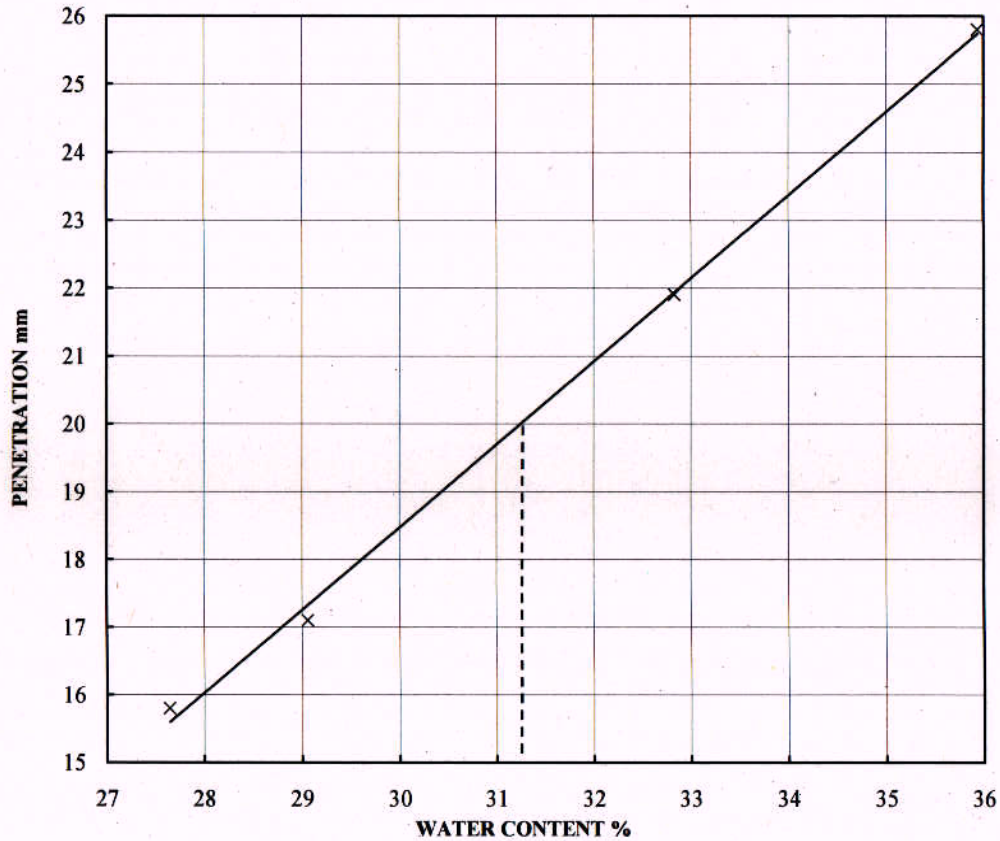
Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %	
	23.15	28.63	28.41	28.48	20.24	18.52
Wet Weight + Tare (g)	23.15	28.63	28.41	28.48	20.24	18.52
Dry Weight + Tare (g)	20.06	24.30	23.98	23.86	18.21	16.86
Tare Weight (g)	8.49	8.92	9.71	10.17	8.39	8.71
Water Content (%)	26.71	28.15	31.04	33.77	20.67	20.37
Penetration (mm)	15.50	17.50	21.10	24.10		

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) 21  
 PLASTICITY INDEX (%) 9

Sample Type : UDS		Borehole No. 1/46+362		Sample No: UDS-3		Depth (m): 8.00	
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342		Test Report No: XPL/2015-16/02	
Operator : <i>Bikram</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>			
Date : 28/2/16		Date: 14/3/16		Date: 14/3/16			

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

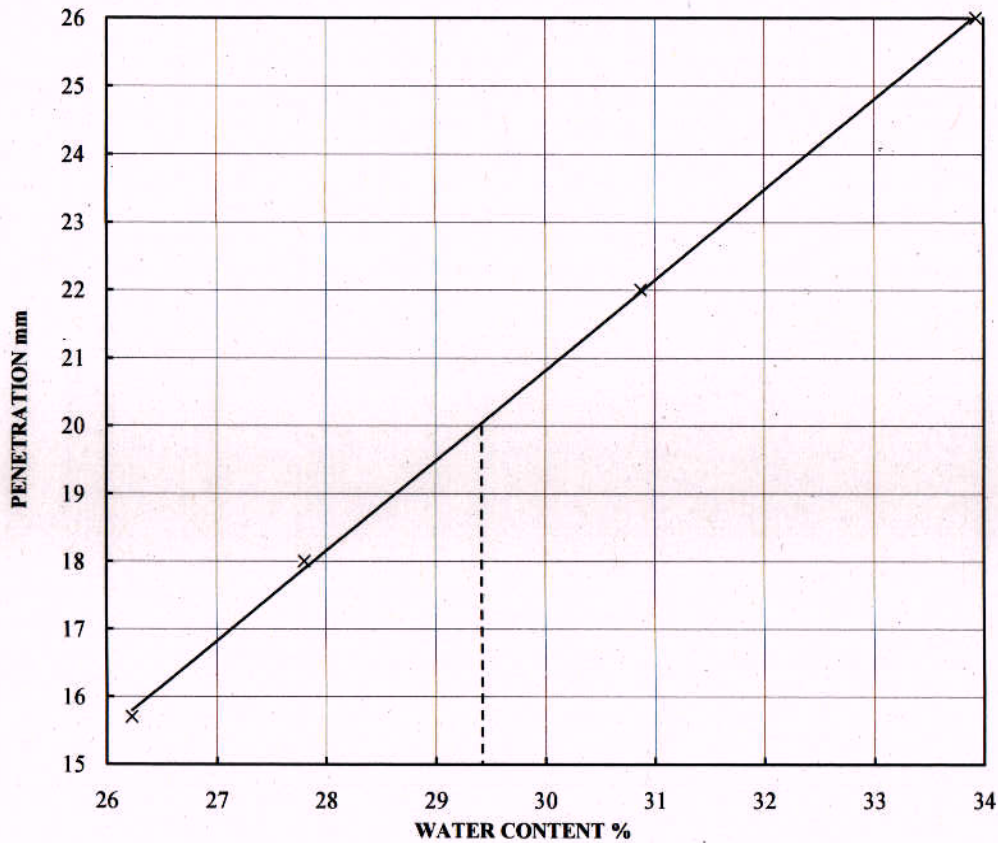
	LIQUID LIMIT %				PLASTIC LIMIT %	
	27.10	24.51	28.23	28.50	20.29	21.53
Wet Weight + Tare (g)	27.10	24.51	28.23	28.50	20.29	21.53
Dry Weight + Tare (g)	23.13	21.29	23.27	23.45	18.26	19.51
Tare Weight (g)	8.77	10.21	8.16	9.39	8.81	10.05
Water Content (%)	27.65	29.06	32.83	35.94	21.48	21.35
Penetration (mm)	15.80	17.10	21.90	25.80		

LIQUID LIMIT (%) 31  
 PLASTIC LIMIT (%) 21  
 PLASTICITY INDEX (%) 10

Sample Type : UDS		Borehole No. 1/46+362		Sample No: UDS-4		Depth (m): 11.00	
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342		Test Report No: XPL/2015-16/02	
Operator : <i>Bikim</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>			
Date : 29/2/16		Date: 14/3/16		Date: 14/3/16			



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

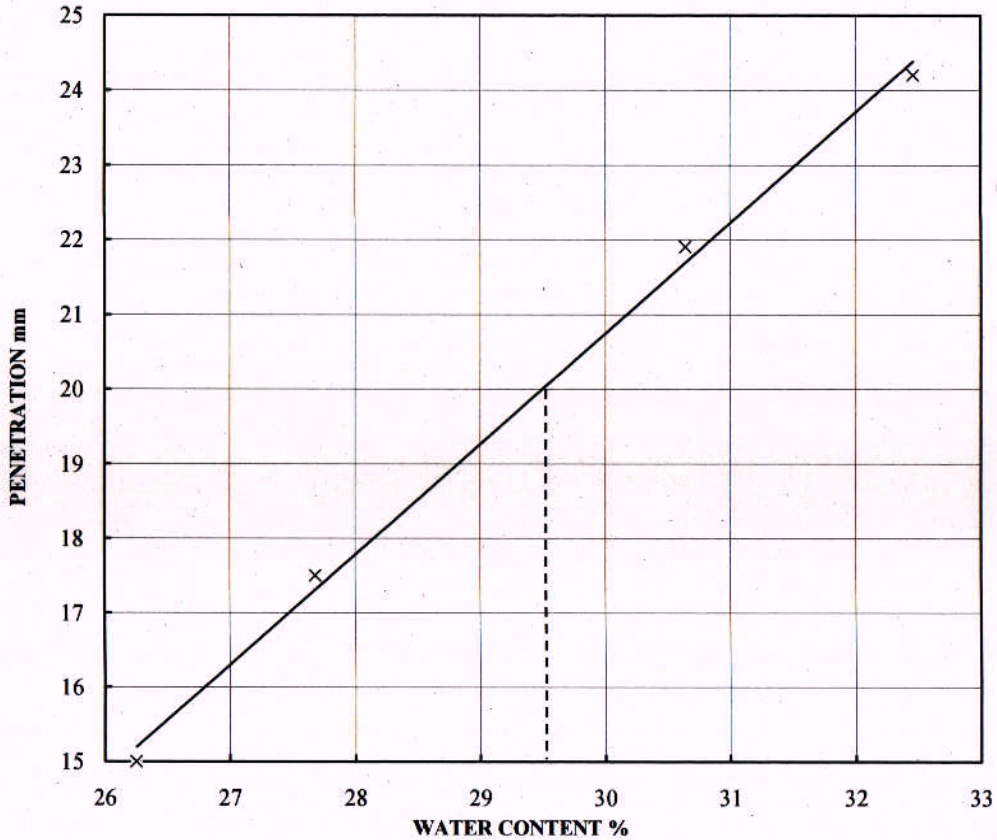
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	27.14	27.74	29.27	25.57	22.38	22.25
Dry Weight + Tare (g)	23.66	23.65	24.34	21.37	20.47	20.46
Tare Weight (g)	10.37	8.94	8.37	9.00	10.00	10.40
Water Content (%)	26.23	27.80	30.87	33.93	18.24	17.79
Penetration (mm)	15.70	18.00	22.00	26.00		

LIQUID LIMIT (%)	29
PLASTIC LIMIT (%)	18
PLASTICITY INDEX (%)	11

Sample Type : UDS	
Borehole No. 1/46+362	Sample No: UDS-5
Depth (m): 14.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No: 1342	
Test Report No: XPL/2015-16/02	
Operator: <i>Bekim</i>	Checked: <i>PT</i>
Authorised Signatory: <i>[Signature]</i>	
Date: 29/2/16	Date: 17/3/16
Date: 14/01/18	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %	
	29.59	27.50	29.52	30.21	20.24	18.38
Wet Weight + Tare (g)	29.59	27.50	29.52	30.21	20.24	18.38
Dry Weight + Tare (g)	25.60	23.68	24.93	25.14	18.27	16.95
Tare Weight (g)	10.40	9.88	9.95	9.52	8.63	9.80
Water Content (%)	26.25	27.68	30.64	32.46	20.44	20.00
Penetration (mm)	15.00	17.50	21.90	24.20		

LIQUID LIMIT (%)	30
PLASTIC LIMIT (%)	20
PLASTICITY INDEX (%)	10

Sample Type : UDS

Borehole No. 1/46+362

Sample No: UDS-6

Depth (m): 17.00

**XPLORER**

Site Ref: Hapur - Meerut Section

Job No : 1342

Test Report No: XPL/2015-16/02

Operator :

*Bikim*

Checked :

*RE*

Authorised Signatory

*[Signature]*

Date :

29/12/16

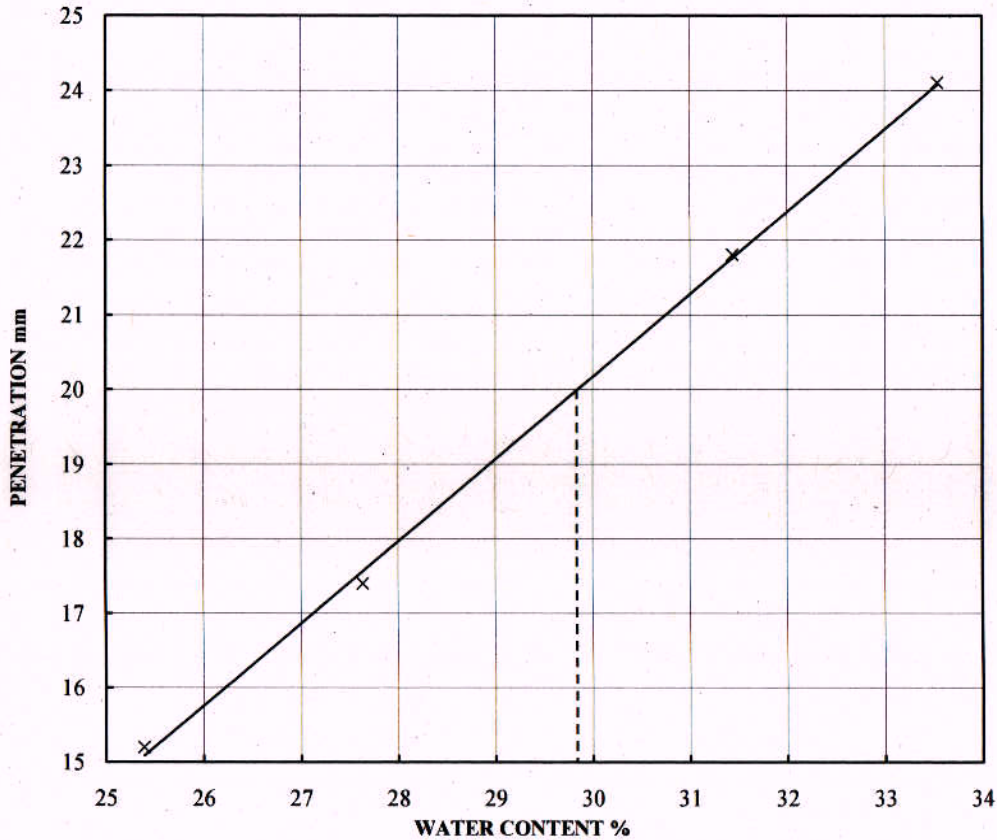
Date:

17/3/16

Date:

24/12/18

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 83%

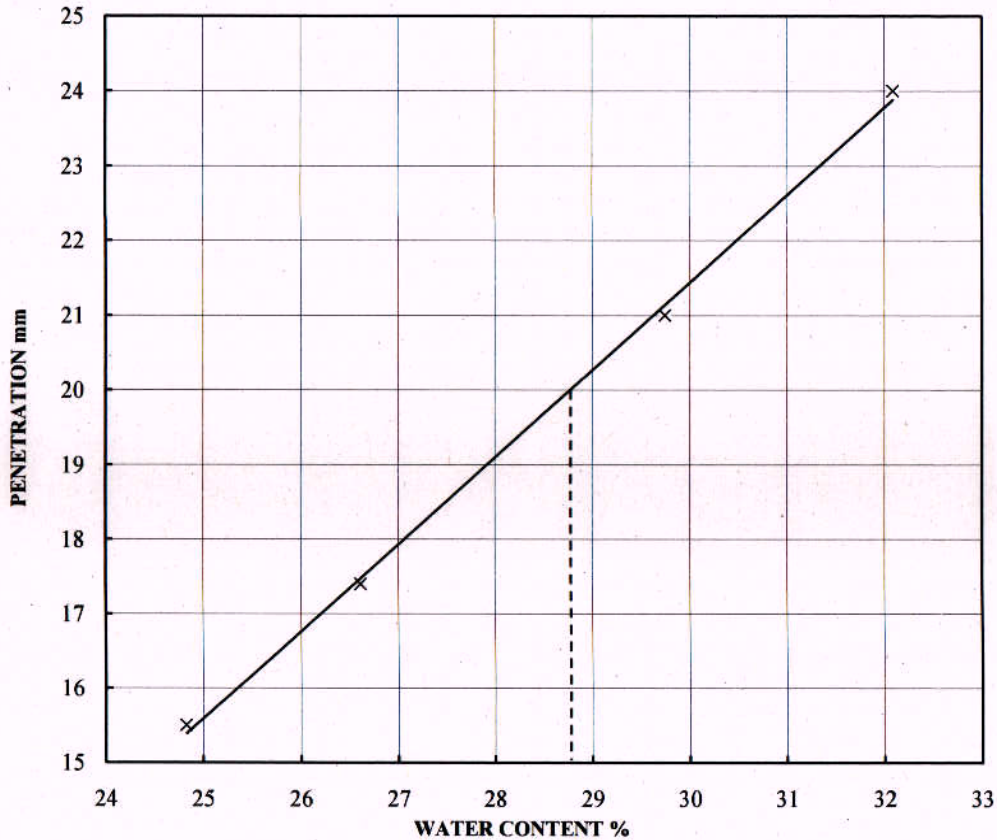
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.86	29.04	27.06	28.54	
Dry Weight + Tare (g)	23.33	24.90	22.64	23.87	NP
Tare Weight (g)	9.44	9.92	8.59	9.94	
Water Content (%)	25.39	27.64	31.44	33.54	
Penetration (mm)	15.20	17.40	21.80	24.10	

LIQUID LIMIT (%)	30
PLASTIC LIMIT (%)	19
PLASTICITY INDEX (%)	11

Sample Type : UDS	
Borehole No. 1/46+362	Sample No: UDS-7 Depth (m): 20.00
XPLORER	Site Ref: Hapur - Meerut Section Job No : 1342 Test Report No: XPL/2015-16/02
Operator : <i>Bikim</i>	Checked : <i>ACE</i> Authorised Signatory <i>[Signature]</i>
Date : 29/2/16	Date: 11/3/16 Date: 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

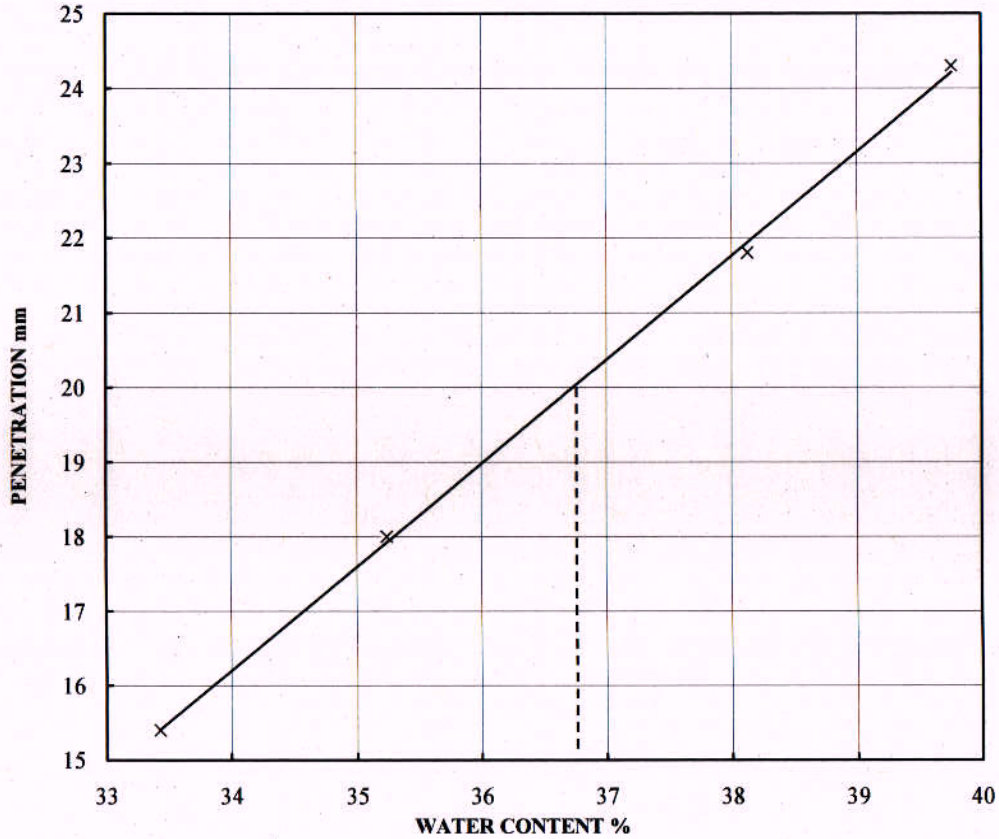
Percentage of passing 0.425mm B.S.Sieve = 89%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	24.78	27.22	28.15	28.15	20.09	20.62
Wet Weight + Tare (g)	24.78	27.22	28.15	28.15	20.09	20.62
Dry Weight + Tare (g)	21.55	23.30	23.70	23.60	18.15	18.60
Tare Weight (g)	8.54	8.57	8.74	9.42	8.66	8.61
Water Content (%)	24.83	26.61	29.75	32.09	20.44	20.22
Penetration (mm)	15.50	17.40	21.00	24.00		

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) 20  
 PLASTICITY INDEX (%) 9

Sample Type : UDS		Borehole No. 1/46+362		Sample No: UDS-8	Depth (m): 23.00
XPLORER		Site Ref: Hapur - Meerut Section		Job No: 1342	Test Report No: XPL/2015-16/02
Operator : <i>B. K. M.</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date : 29/2/16		Date: 14/3/16		Date: 14/3/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

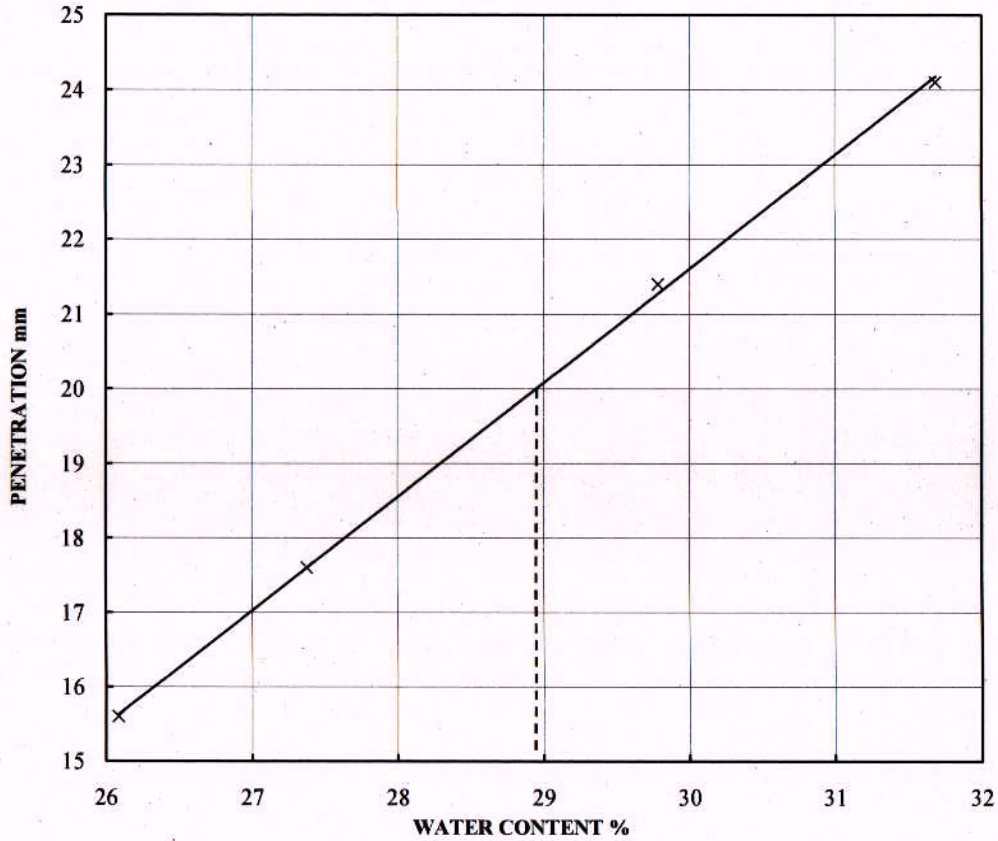
Percentage of passing 0.425mm B.S.Sieve = 93%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	28.89	27.27	30.57	26.33	19.22	20.78
Wet Weight + Tare (g)	28.89	27.27	30.57	26.33	19.22	20.78
Dry Weight + Tare (g)	24.15	22.40	24.87	21.59	17.54	18.90
Tare Weight (g)	9.97	8.58	9.92	9.67	9.49	10.00
Water Content (%)	33.43	35.24	38.13	39.77	20.87	21.12
Penetration (mm)	15.40	18.00	21.80	24.30		

LIQUID LIMIT (%) 37  
 PLASTIC LIMIT (%) 21  
 PLASTICITY INDEX (%) 16

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-1      Depth (m): 2.00
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section      Job No : 1342
	Test Report No: XPL/2015-16/02
Operator : <i>Bikim</i>	Checked : <i>[Signature]</i>
Date : 29/2/16	Date: 14/3/16
	Authorised Signatory <i>[Signature]</i>
	Date: 14/3/16

## I.S. : 2720 : PART 5



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 90%

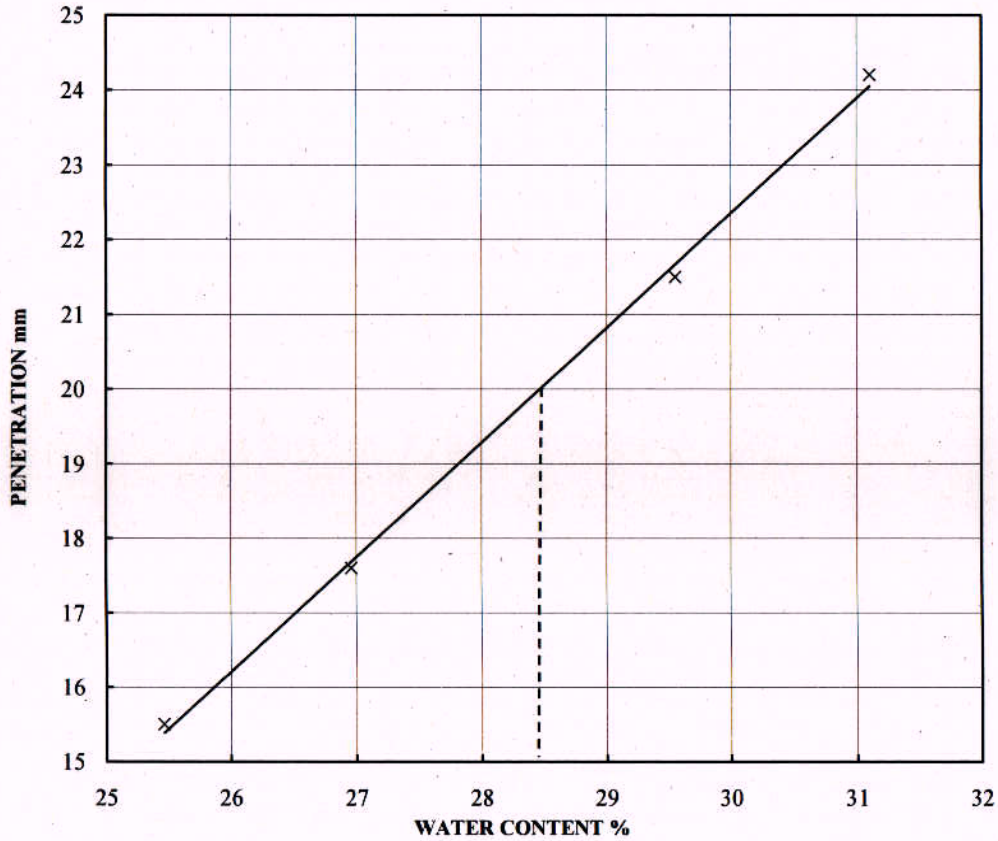
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.33	29.41	31.16	28.90	
Dry Weight + Tare (g)	21.85	25.35	26.35	24.48	NP
Tare Weight (g)	8.51	10.52	10.20	10.53	
Water Content (%)	26.09	27.38	29.78	31.68	
Penetration (mm)	15.60	17.60	21.40	24.10	

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-4      Depth (m): 11.00
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section      Job No : 1342
	Test Report No: XPL/2015-16/02
Operator : <i>Bipin</i>	Checked : <i>RE</i>
Date : 29/2/16	Date: 19/3/16
	Authorized Signatory: <i>[Signature]</i>
	Date: 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

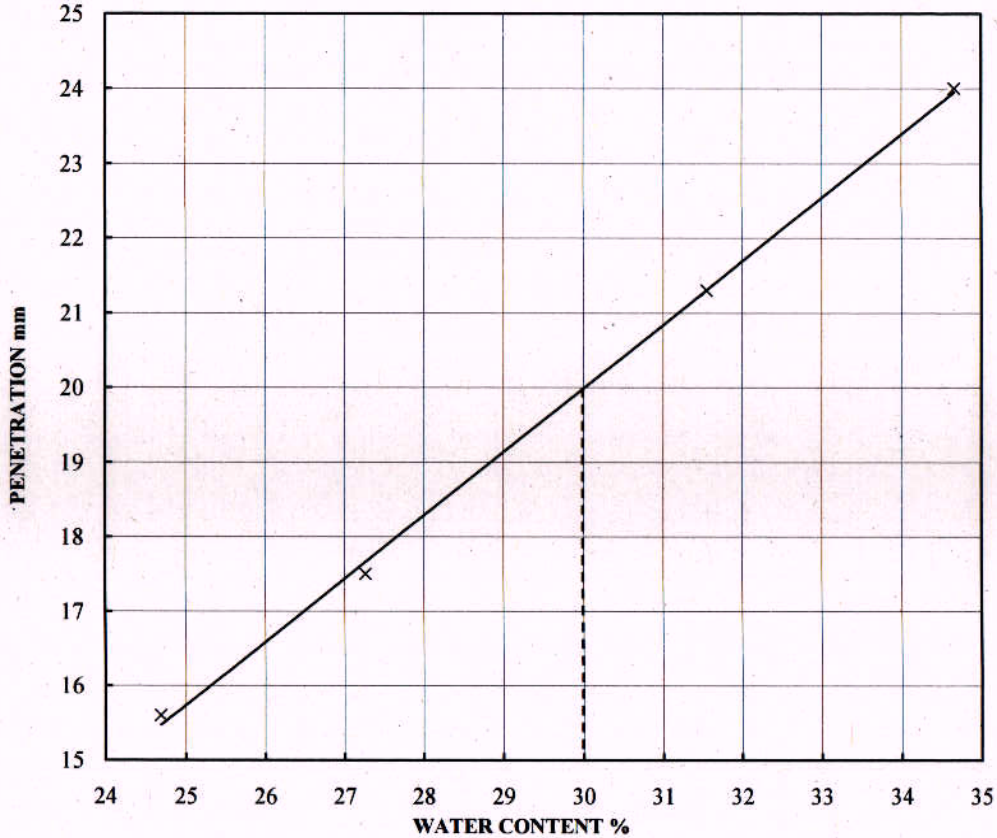
Percentage of passing 0.425mm B.S.Sieve = 90%

	LIQUID LIMIT %				PLASTIC LIMIT %
	28.38	32.68	27.46	29.40	
Wet Weight + Tare (g)	28.38	32.68	27.46	29.40	NP
Dry Weight + Tare (g)	24.65	27.94	23.16	24.79	
Tare Weight (g)	10.00	10.36	8.61	9.97	
Water Content (%)	25.46	26.96	29.55	31.11	
Penetration (mm)	15.50	17.60	21.50	24.20	

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-5      Depth (m): 14.00
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section      Job No : 1342
	Test Report No: XPL/2015-16/02
Operator : <i>Bi Rim</i>	Checked : <i>[Signature]</i>
Date : 29/12/16	Date: 14/3/16      Date: 14/3/18

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

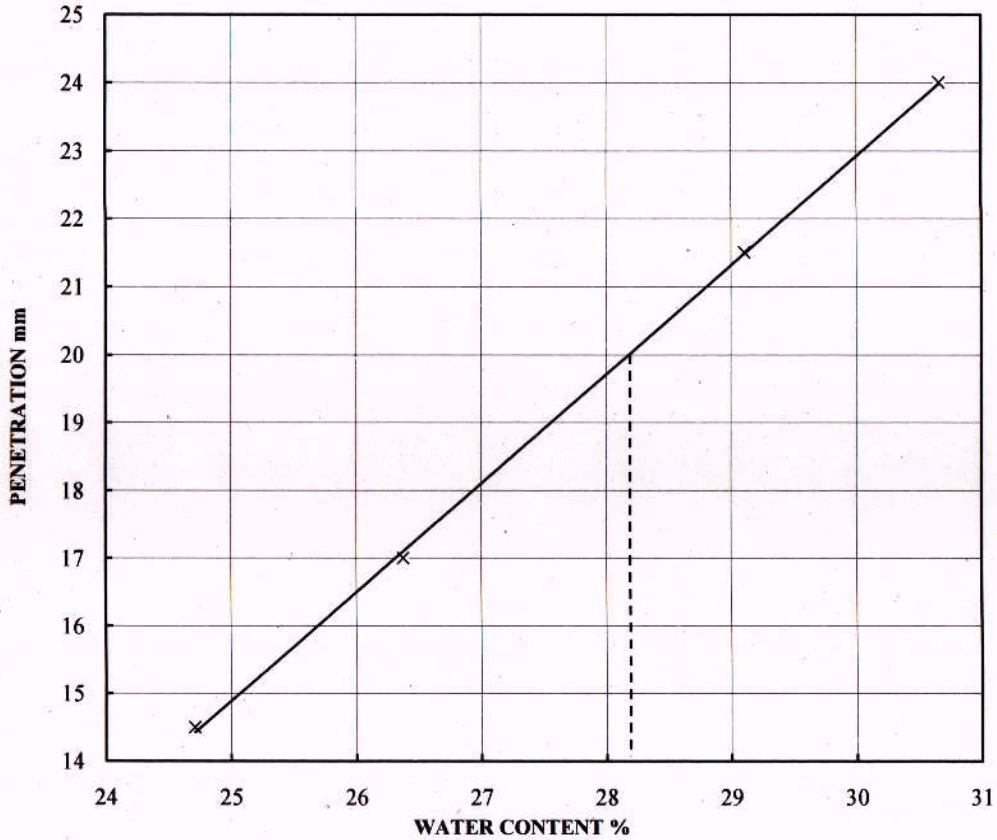
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	27.37	31.45	30.60	29.84	21.05	19.50
Wet Weight + Tare (g)	27.37	31.45	30.60	29.84	21.05	19.50
Dry Weight + Tare (g)	23.59	26.49	25.73	24.85	19.27	17.68
Tare Weight (g)	8.29	8.30	10.30	10.47	10.58	8.65
Water Content (%)	24.69	27.27	31.55	34.66	20.48	20.16
Penetration (mm)	15.60	17.50	21.30	24.00		

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) 20  
 PLASTICITY INDEX (%) 10

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-6
Depth (m): 17.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Behera</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 13/01/16	Date: 14/3/16
Date: 14/3/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 91%

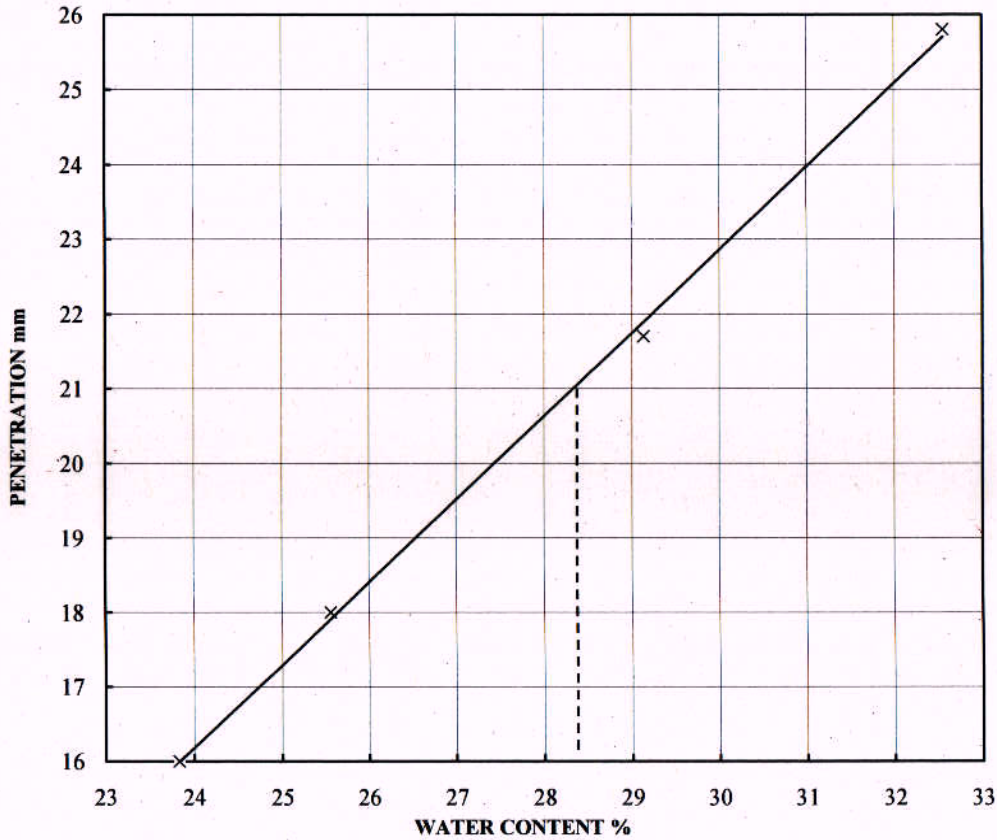
	LIQUID LIMIT %				PLASTIC LIMIT %	
	26.76	29.20	43.76	36.52	22.38	22.25
Wet Weight + Tare (g)	26.76	29.20	43.76	36.52	22.38	22.25
Dry Weight + Tare (g)	23.36	25.13	39.33	31.61	20.48	20.46
Tare Weight (g)	9.60	9.70	24.11	15.60	10.00	10.40
Water Content (%)	24.71	26.38	29.11	30.66	18.13	17.79
Penetration (mm)	14.50	17.00	21.50	24.00		

LIQUID LIMIT (%)	28
PLASTIC LIMIT (%)	18
PLASTICITY INDEX (%)	10

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-7
Depth (m): 20.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bikram</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 1/3/16	Date: 14/3/16
Date: 14/3/16	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

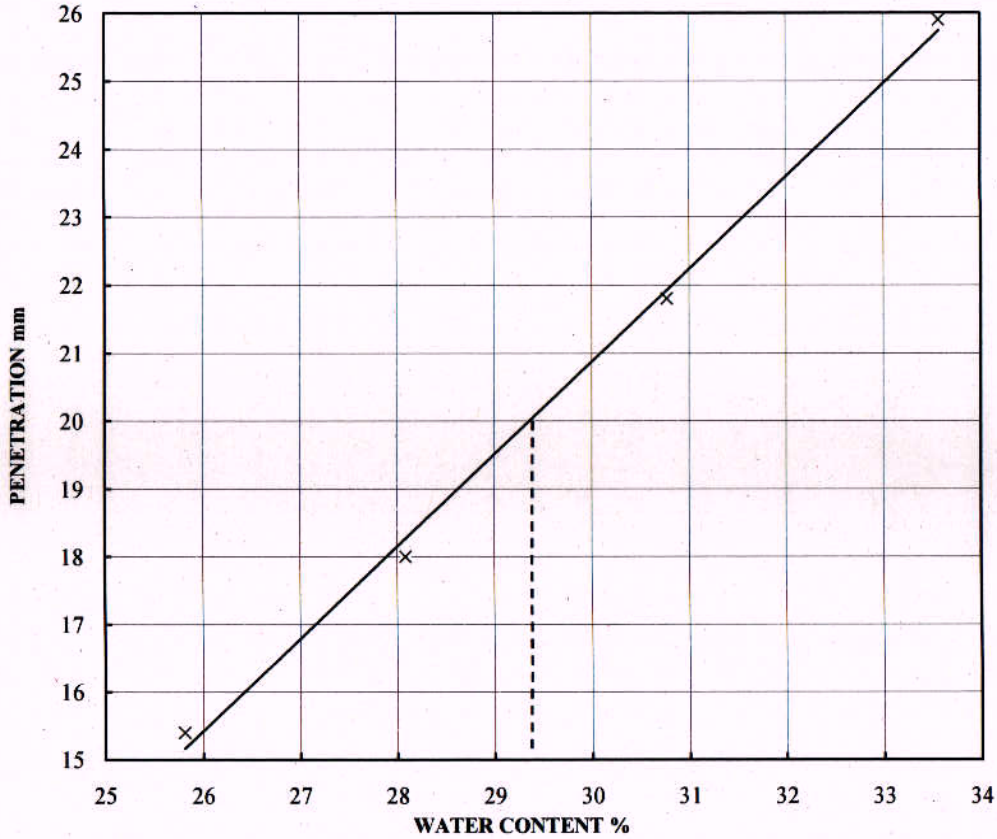
Percentage of passing 0.425mm B.S.Sieve = 88%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	31.26	28.29	30.61	25.73	21.16	21.79
Wet Weight + Tare (g)	31.26	28.29	30.61	25.73	21.16	21.79
Dry Weight + Tare (g)	27.19	24.28	25.94	21.41	19.21	19.84
Tare Weight (g)	10.13	8.59	9.91	8.13	9.88	10.40
Water Content (%)	23.83	25.56	29.13	32.56	20.90	20.66
Penetration (mm)	16.00	18.00	21.70	25.80		

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) 21  
 PLASTICITY INDEX (%) 7

Sample Type : UDS	
Borehole No. 1/48+122	Sample No: UDS-8
Depth (m): 23.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Ba'kim</i>	Checked : <i>[Signature]</i>
Date : 11/3/16	Date: 14/3/16
Authorised Signatory <i>[Signature]</i>	
Date: 14/3/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

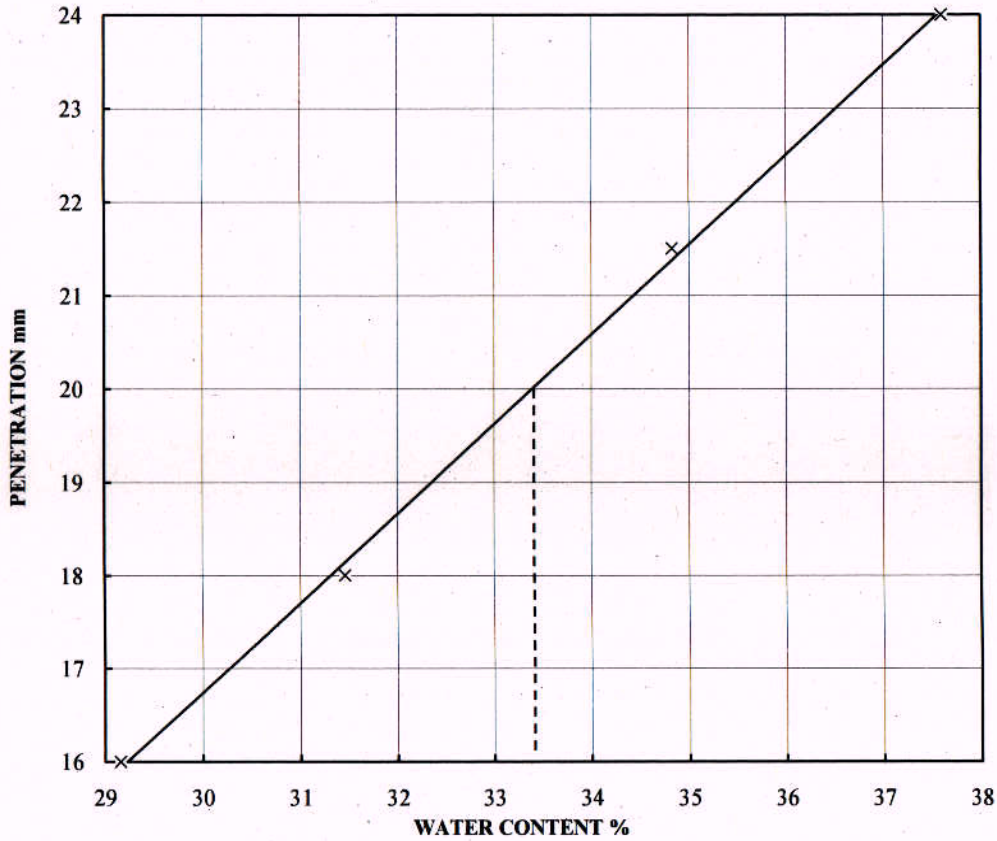
Percentage of passing 0.425mm B.S.Sieve = 89%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.85	27.85	28.67	31.10	
Dry Weight + Tare (g)	24.16	23.69	23.98	25.92	NP
Tare Weight (g)	9.88	8.88	8.74	10.47	
Water Content (%)	25.81	28.09	30.77	33.57	
Penetration (mm)	15.40	18.00	21.80	25.90	

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS		Borehole No. 1/48+510		Sample No: UDS-3	Depth (m): 8.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>[Signature]</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date : 25/11/16		Date: 14/3/16		Date: 14/3/18	

**I.S. : 2720 : PART 5**



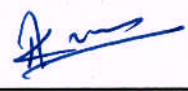


**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 80%

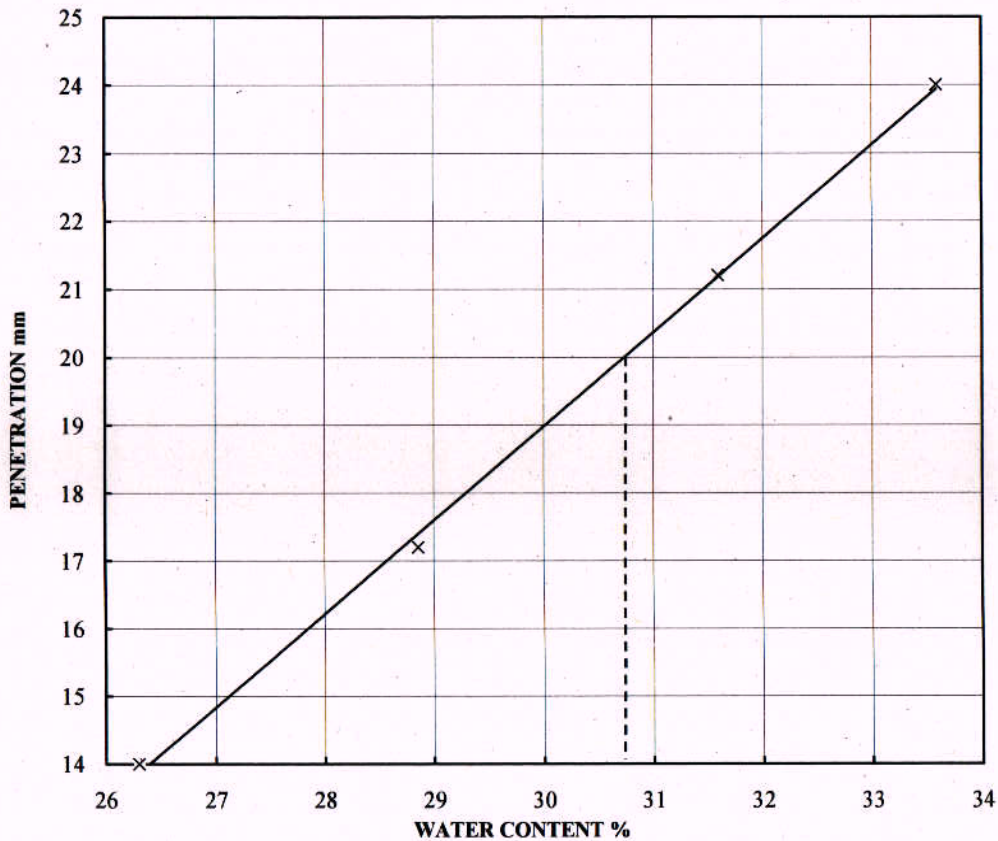
	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	28.22	30.39	29.84	28.16	21.91	21.48
Dry Weight + Tare (g)	24.12	25.63	24.40	23.19	19.77	19.31
Tare Weight (g)	10.07	10.50	8.78	9.97	9.82	9.14
Water Content (%)	29.16	31.46	34.83	37.60	21.51	21.34
Penetration (mm)	16.00	18.00	21.50	24.00		

LIQUID LIMIT (%) 33  
PLASTIC LIMIT (%) 21  
PLASTICITY INDEX (%) 12

Sample Type : UDS	
Borehole No. 1/48+510	Sample No: UDS-4
Depth (m): 11.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator: 	Checked: 
Authorised Signatory 	
Date: 20/12/16	Date: 14/12/16
Date: 14/12/16	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 94%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.98	28.08	29.24	29.59	
Dry Weight + Tare (g)	23.15	23.74	24.70	24.66	NP
Tare Weight (g)	8.57	8.70	10.33	9.99	
Water Content (%)	26.30	28.86	31.59	33.59	
Penetration (mm)	14.00	17.20	21.20	24.00	

LIQUID LIMIT (%) 31  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

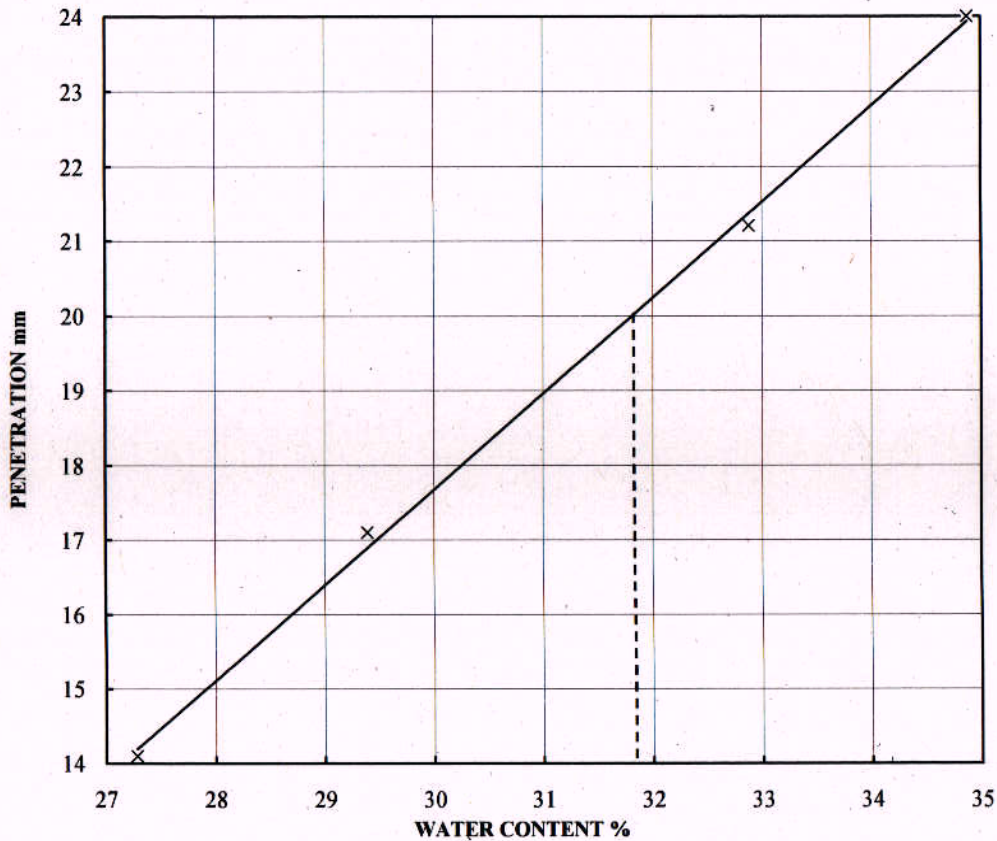
Sample Type : UDS

Borehole No. 1/48+510      Sample No: UDS-5      Depth (m): 14.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator :	Checked :	Authorised Signatory
Date: 28/2/16	Date: 14/3/16	Date: 14/3/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

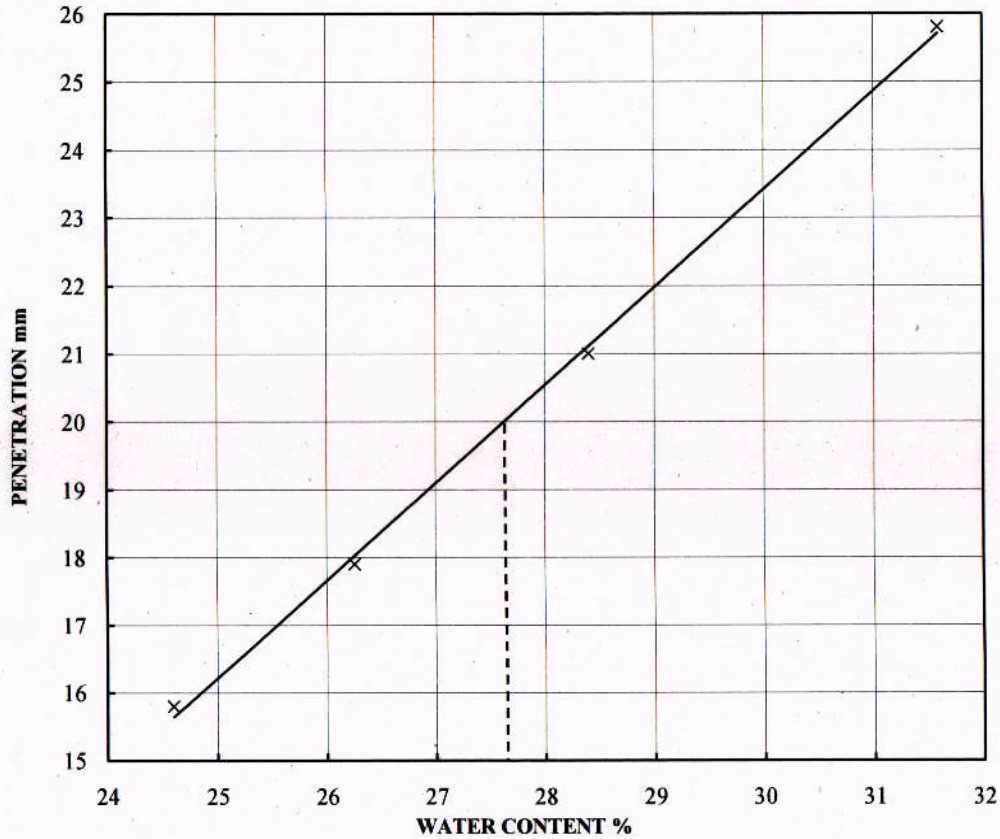
Percentage of passing 0.425mm B.S.Sieve = 95%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	32.70	27.25	28.22	29.48	
Dry Weight + Tare (g)	27.95	23.00	23.36	24.03	NP
Tare Weight (g)	10.54	8.54	8.57	8.39	
Water Content (%)	27.28	29.39	32.88	34.88	
Penetration (mm)	14.10	17.10	21.20	24.00	

LIQUID LIMIT (%) 32  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS		Borehole No. 1/48+510		Sample No: UDS-6	Depth (m): 17.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>			
Date : 28/12/16	Date: 14/1/16	Date: 14/1/16			

**I.S. : 2720 : PART 5**






**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 92%

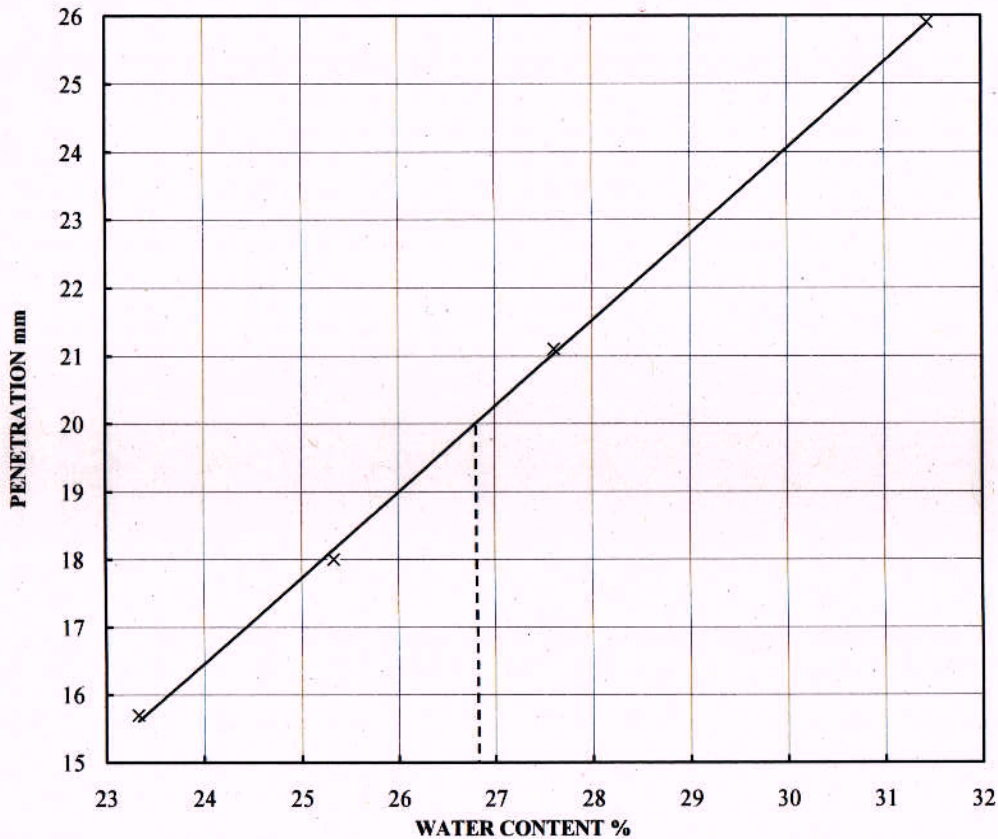
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.12	27.70	29.01	28.06	
Dry Weight + Tare (g)	21.85	23.68	24.50	23.48	NP
Tare Weight (g)	8.55	8.37	8.62	9.00	
Water Content (%)	24.60	26.26	28.40	31.59	
Penetration (mm)	15.80	17.90	21.00	25.80	

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS	
Borehole No. 1/48+510	Sample No: UDS-7
Depth (m): 20.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : 	Checked : 
Authorised Signatory 	
Date : 25/11/16	Date: 14/12/16
Date: 14/12/16	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 96%




	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.44	30.76	30.54	30.16	
Dry Weight + Tare (g)	26.31	26.45	26.05	25.46	NP
Tare Weight (g)	8.61	9.44	9.79	10.51	
Water Content (%)	23.33	25.34	27.61	31.45	
Penetration (mm)	15.70	18.00	21.10	25.90	

LIQUID LIMIT (%) 27  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

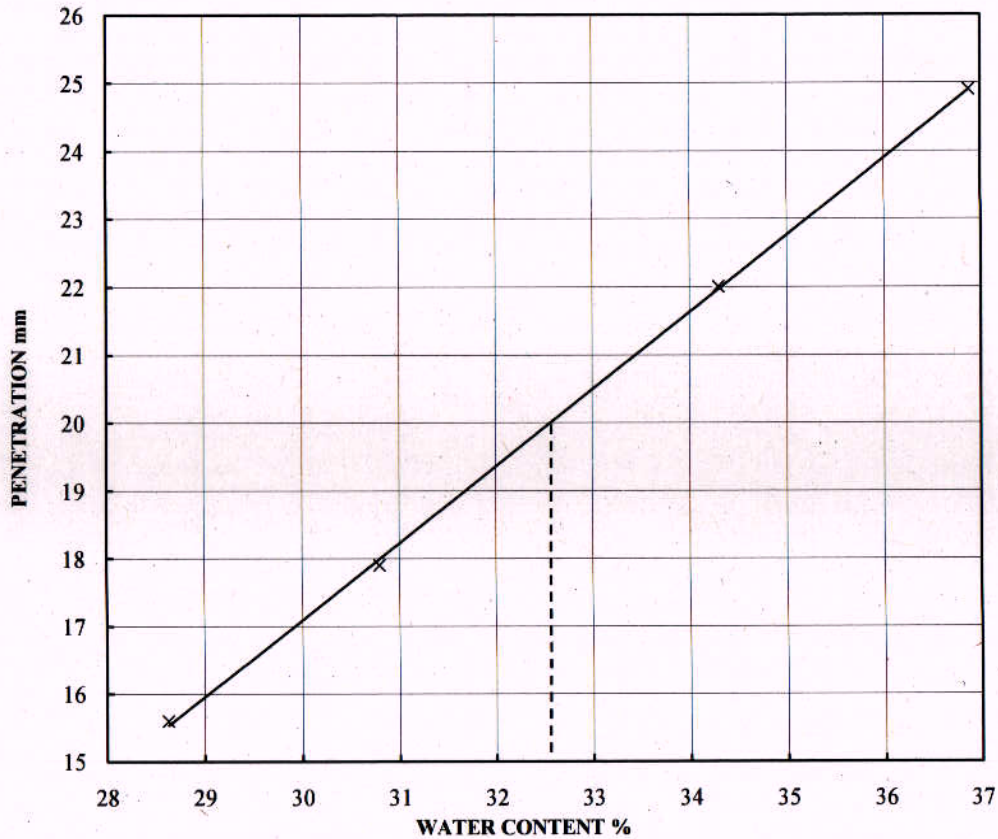
Sample Type : UDS

Borehole No. 1/48+510 Sample No: UDS-8 Depth (m): 23.00

**XPLORER** Site Ref: Hapur - Meerut Section Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator: 	Checked: 	Authorised Signatory: 
Date: 25/2/16	Date: 17/3/16	Date: 14/3/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

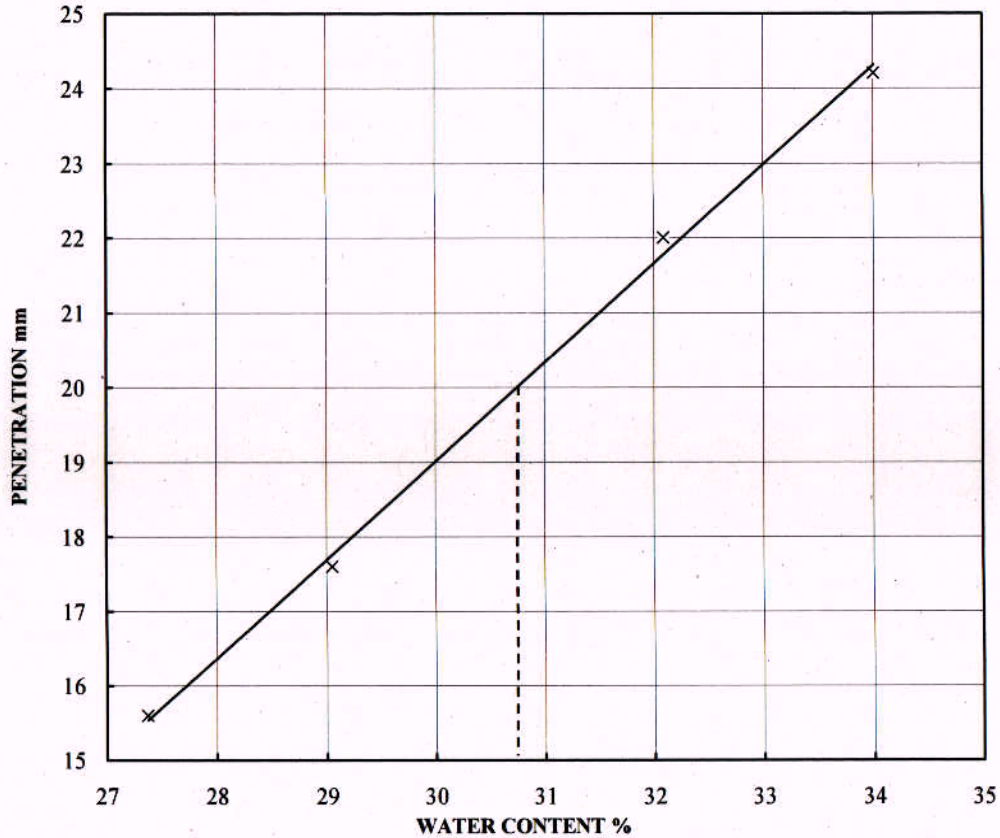
Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	28.10	29.70	27.35	27.70	
Dry Weight + Tare (g)	23.94	24.72	22.50	22.88	NP
Tare Weight (g)	9.42	8.55	8.36	9.80	
Water Content (%)	28.63	30.80	34.30	36.88	
Penetration (mm)	15.60	17.90	22.00	24.90	

LIQUID LIMIT (%) 33  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS		Borehole No. 1/54+825		Sample No: UDS-1	Depth (m): 2.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator: <i>[Signature]</i>		Checked: <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date: 28/2/16		Date: 14/2/16		Date: 14/2/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 95%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.74	32.15	30.50	29.23	
Dry Weight + Tare (g)	26.15	27.15	25.50	24.01	NP
Tare Weight (g)	9.38	9.94	9.92	8.66	
Water Content (%)	27.37	29.05	32.09	34.01	
Penetration (mm)	15.60	17.60	22.00	24.20	

LIQUID LIMIT (%) 31  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS

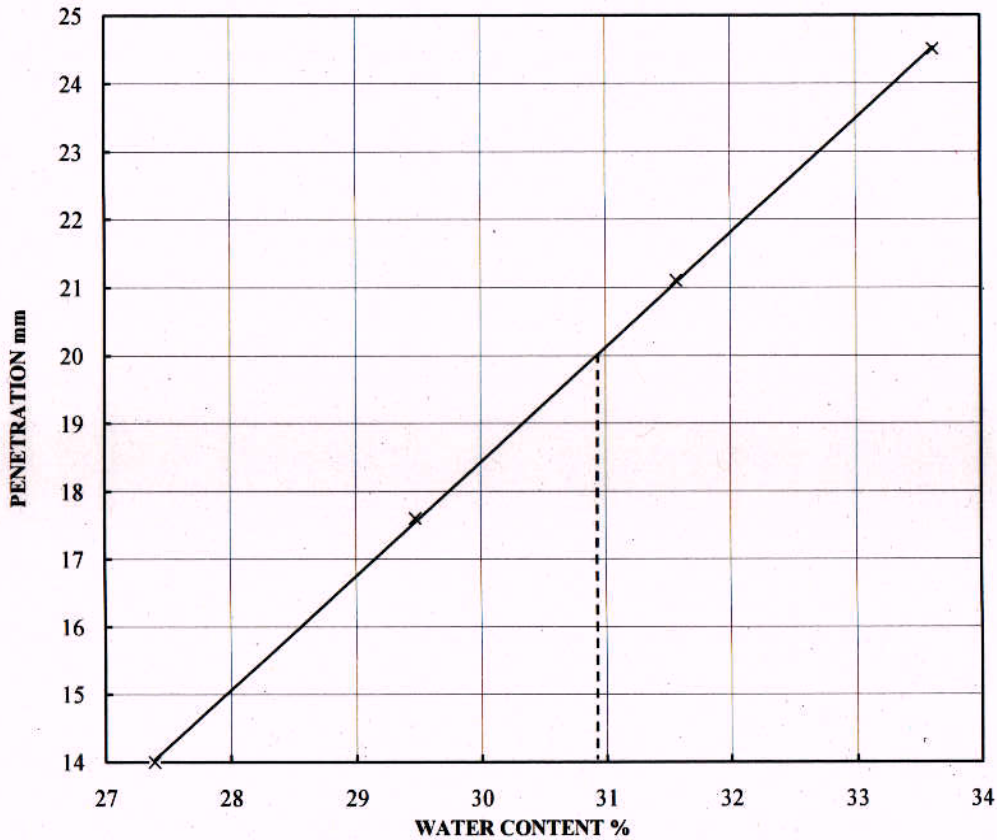
Borehole No. 1/54+825 Sample No: UDS-9 Depth (m): 26.00

XPLORER Site Ref: Hapur - Meerut Section Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator : <i>AB</i>	Checked : <i>RT</i>	Authorised Signatory : <i>[Signature]</i>
Date : 28/2/16	Date : 14/3/16	Date : 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.99	31.22	28.80	27.14	
Dry Weight + Tare (g)	22.16	26.51	24.27	22.43	NP
Tare Weight (g)	8.17	10.53	9.92	8.42	
Water Content (%)	27.39	29.47	31.57	33.62	
Penetration (mm)	14.00	17.60	21.10	24.50	

LIQUID LIMIT (%)	31
PLASTIC LIMIT (%)	NP
PLASTICITY INDEX (%)	NP

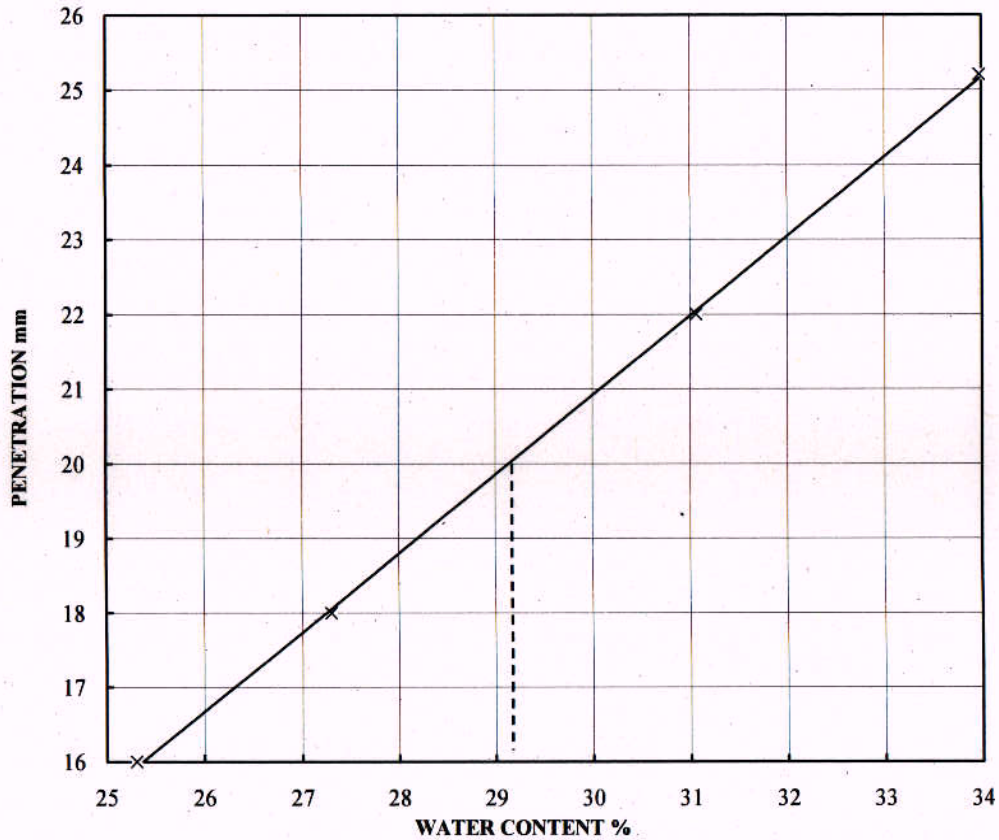
Sample Type : UDS

Borehole No. 1/55+850      Sample No: UDS-1      Depth (m): 2.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No: 1342  
Test Report No: XPL/2015-16/02

Operator:	Checked:	Authorised Signatory:
Date: 25/2/16	Date: 17/2/16	Date: 17/2/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 79%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.08	28.49	28.60	28.60	
Dry Weight + Tare (g)	22.97	24.25	23.90	23.88	NP
Tare Weight (g)	10.68	8.72	8.77	9.99	
Water Content (%)	25.31	27.30	31.06	33.98	
Penetration (mm)	16.00	18.00	22.00	25.20	

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

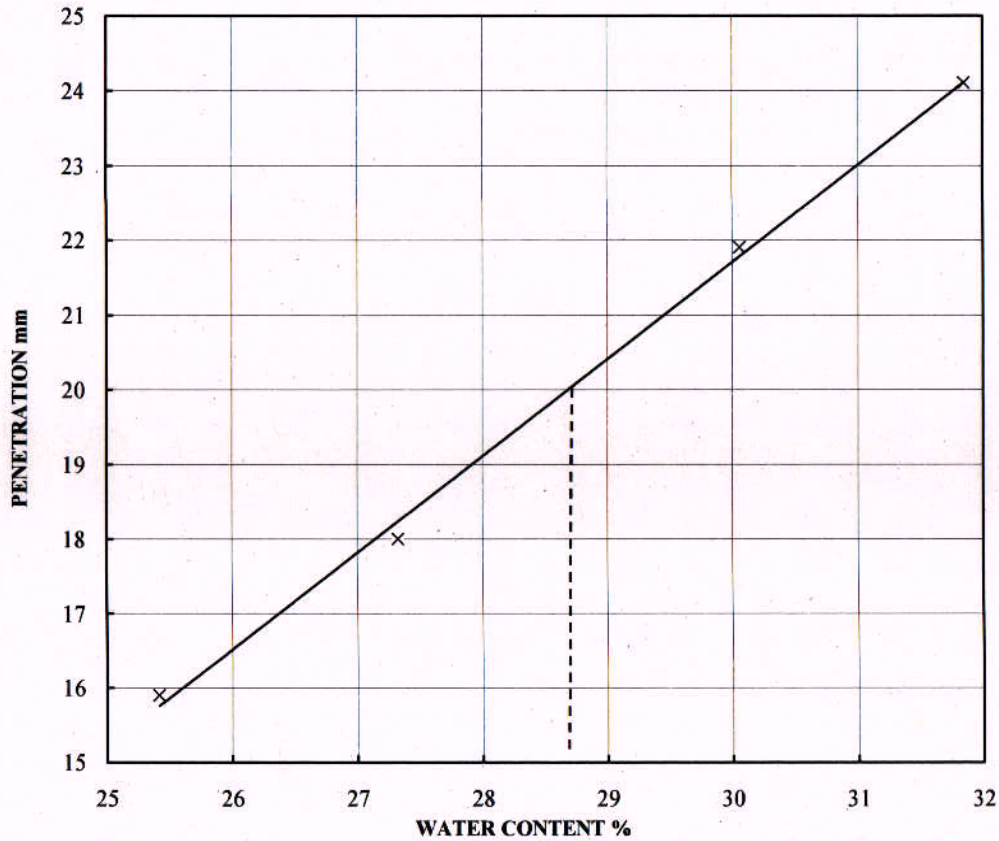
Sample Type : UDS

Borehole No. 1/56+780      Sample No: UDS-5      Depth (m): 14.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>
Date : 25/11/15	Date: 17/3/16	Date: 14/2/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 91%

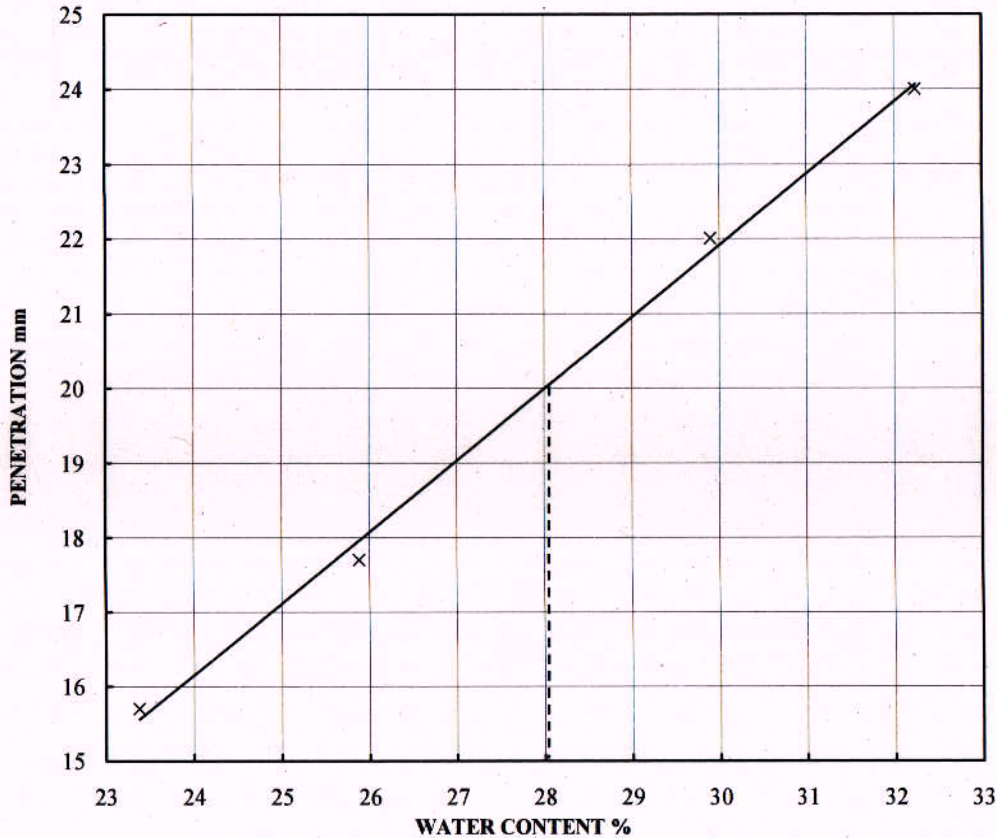
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	24.89	26.90	32.25	31.99	
Dry Weight + Tare (g)	21.50	23.02	27.20	26.69	NP
Tare Weight (g)	8.16	8.82	10.40	10.05	
Water Content (%)	25.41	27.32	30.06	31.85	
Penetration (mm)	15.90	18.00	21.90	24.10	

LIQUID LIMIT (%) 29  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS			
Borehole No. 1/57+555	Sample No: UDS-1	Depth (m): 2.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section	Job No: 1342	Test Report No: XPL/2015-16/02
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>	
Date : 26/2/16	Date: 14/3/16	Date: 14/3/16	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 94%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.54	31.22	28.94	29.34	
Dry Weight + Tare (g)	23.12	26.90	24.61	24.31	NP
Tare Weight (g)	8.48	10.21	10.13	8.69	
Water Content (%)	23.38	25.88	29.90	32.24	
Penetration (mm)	15.70	17.70	22.00	24.00	

LIQUID LIMIT (%)	28
PLASTIC LIMIT (%)	NP
PLASTICITY INDEX (%)	NP

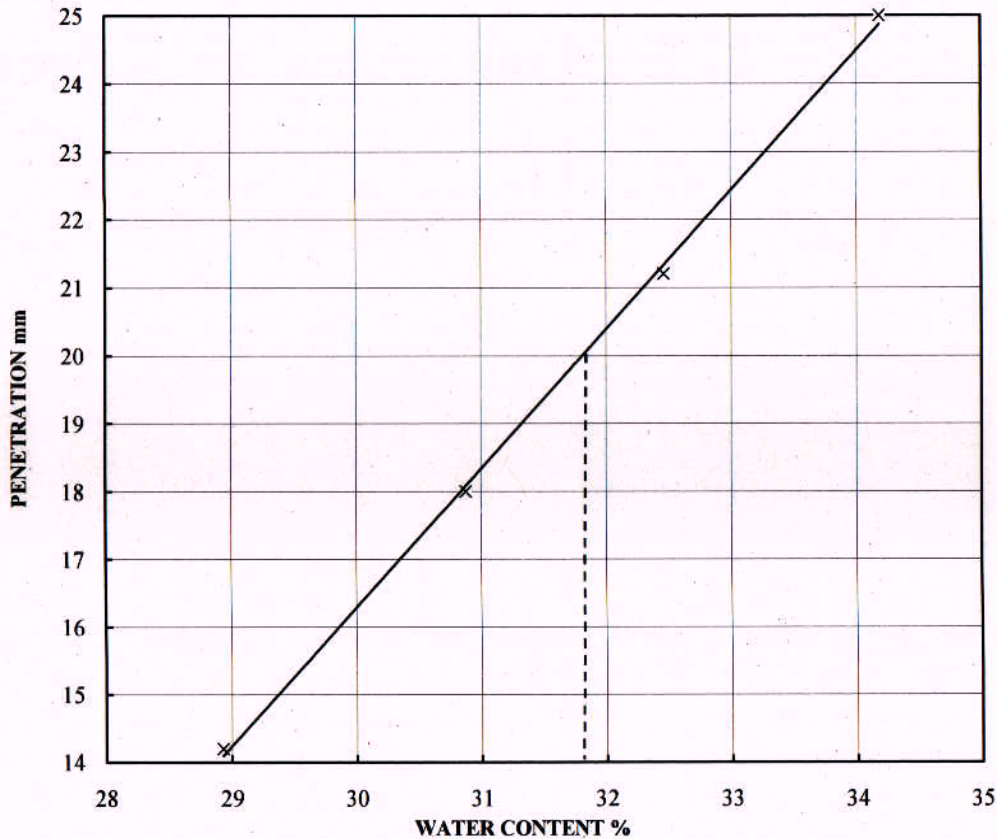
Sample Type : UDS

Borehole No. 1/57+555      Sample No: UDS-2      Depth (m): 5.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
Test Report No: XPL/2015-16/02

Operator :	Checked :	Authorised Signatory
Date : 26/12/16	Date: 14/3/16	Date: 14/3/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

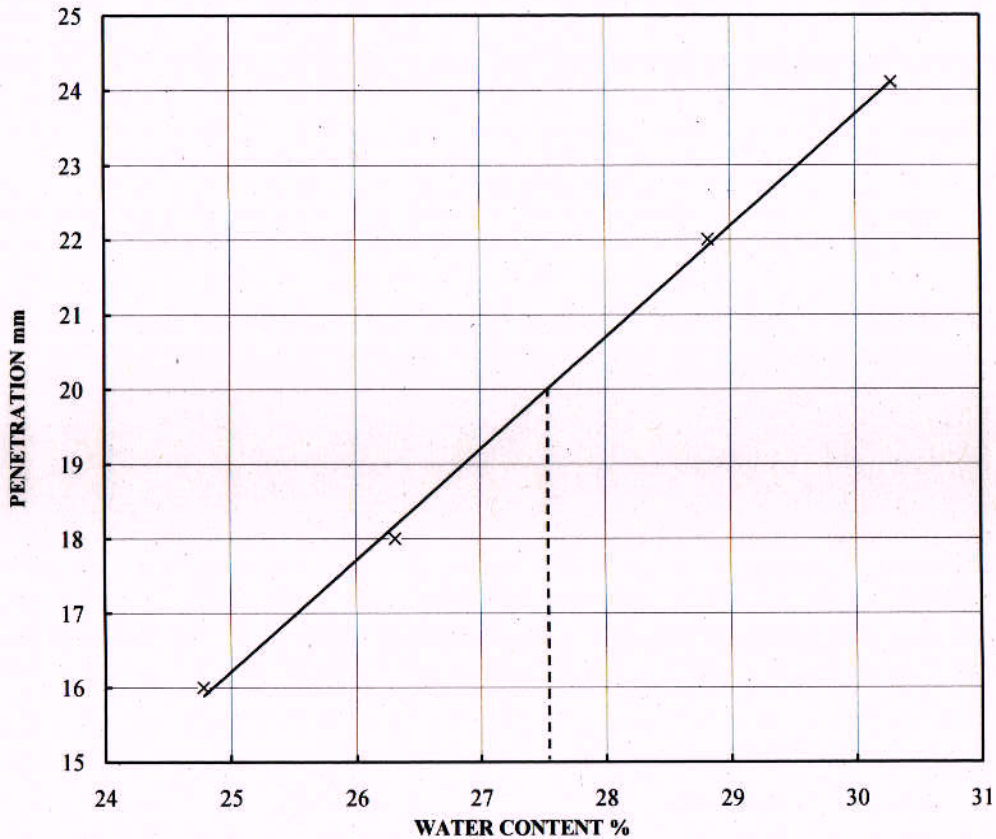
Percentage of passing 0.425mm B.S.Sieve = 90%

	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	30.76	42.90	28.02	38.18	22.67	20.99
Dry Weight + Tare (g)	26.14	35.15	23.30	30.61	20.57	19.16
Tare Weight (g)	10.17	10.05	8.76	8.45	10.04	9.79
Water Content (%)	28.93	30.88	32.46	34.19	19.94	19.55
Penetration (mm)	14.20	18.00	21.20	25.00		

LIQUID LIMIT (%) 32  
 PLASTIC LIMIT (%) 20  
 PLASTICITY INDEX (%) 12

Sample Type : UDS		Borehole No. 1/58+400		Sample No: UDS-1	Depth (m): 2.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator: <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>			
Date: 26/2/16	Date: 14/3/16	Date: 14/3/16			

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 79%

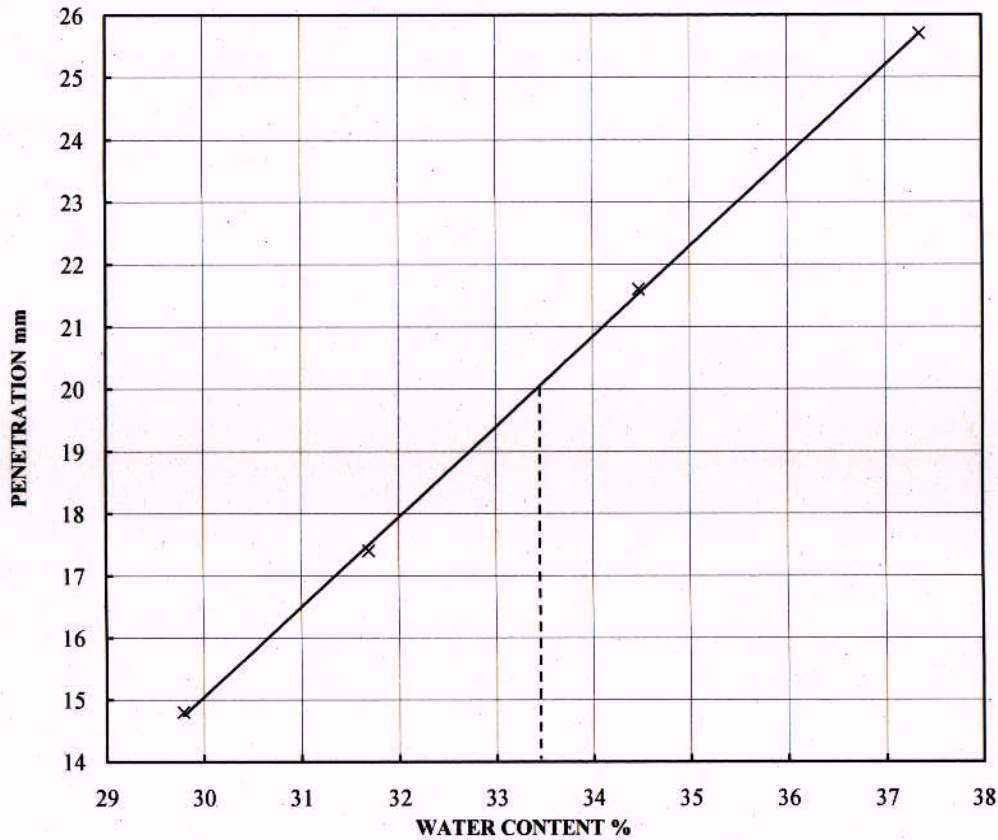
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.38	27.31	29.50	29.70	
Dry Weight + Tare (g)	22.85	23.41	24.90	25.04	NP
Tare Weight (g)	8.62	8.59	8.94	9.66	
Water Content (%)	24.78	26.32	28.82	30.29	
Penetration (mm)	16.00	18.00	22.00	24.10	

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS		Depth (m): 11.00	
Borehole No. 1/58+400	Sample No: UDS-4	Job No : 1342	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section	Test Report No: XPL/2015-16/02	
Operator: <i>[Signature]</i>	Checked: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>	
Date: 26/12/16	Date: 14/3/16	Date: 14/3/16	



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	29.23	29.23	26.03	28.42	
Dry Weight + Tare (g)	24.74	24.53	21.92	23.06	NP
Tare Weight (g)	9.67	9.70	10.00	8.70	
Water Content (%)	29.79	31.69	34.48	37.36	
Penetration (mm)	14.80	17.40	21.60	25.70	

LIQUID LIMIT (%)	33
PLASTIC LIMIT (%)	NP
PLASTICITY INDEX (%)	NP

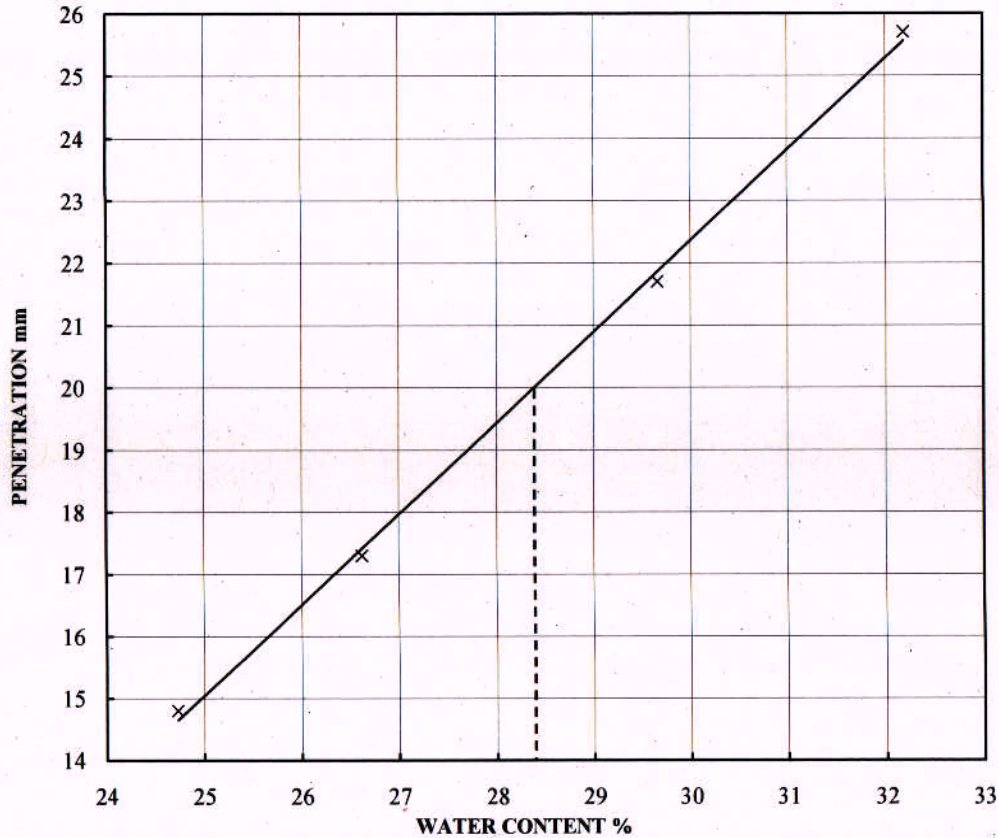
Sample Type : UDS

Borehole No. 1/58+400      Sample No: UDS-5      Depth (m): 14.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
Test Report No: XPL/2015-16/02

Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory : <i>[Signature]</i>
Date : 26/2/16	Date: 14/3/16	Date: 14/3/16

## I.S. : 2720 : PART 5






**HISTORY OF SAMPLE :**

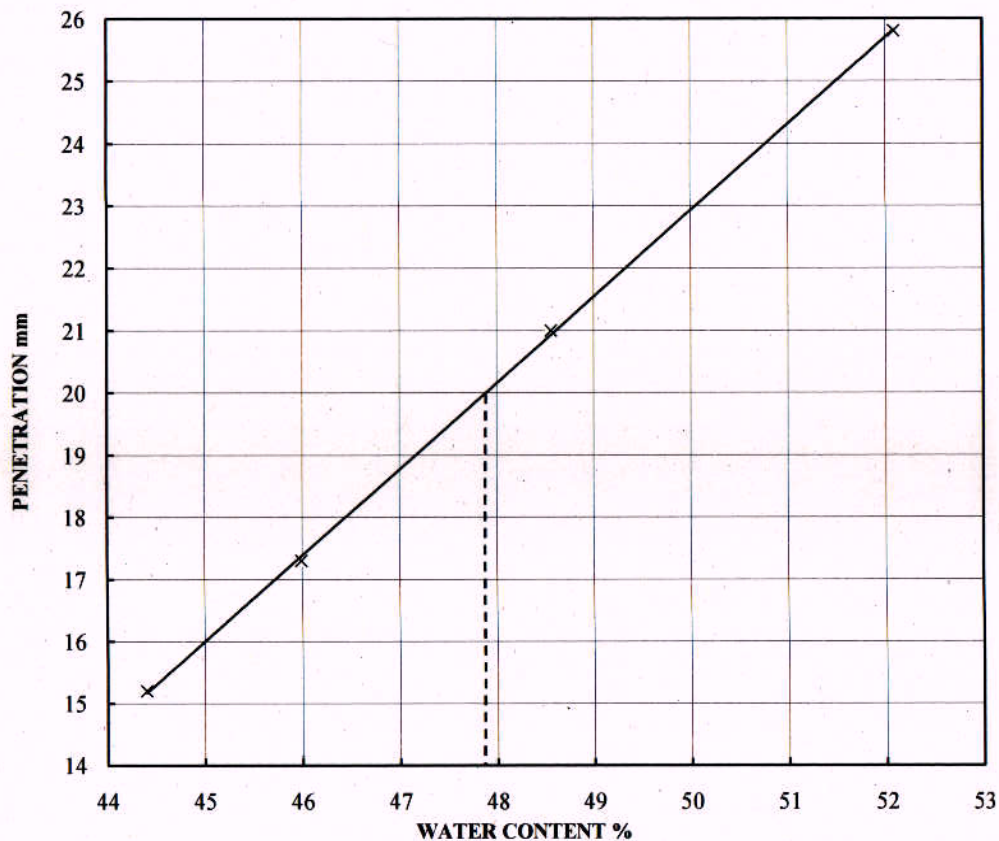
Percentage of passing 0.425mm B.S.Sieve = 97%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	24.07	26.46	25.97	25.09	22.38	22.25
Wet Weight + Tare (g)	24.07	26.46	25.97	25.09	22.38	22.25
Dry Weight + Tare (g)	20.97	23.10	22.20	21.14	20.38	20.35
Tare Weight (g)	8.41	10.48	9.49	8.86	10.00	10.40
Water Content (%)	24.73	26.62	29.66	32.19	19.27	19.10
Penetration (mm)	14.80	17.30	21.70	25.70		

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) 19  
 PLASTICITY INDEX (%) 9

Sample Type : UDS		Borehole No. 1/59+305		Sample No: UDS-1		Depth (m): 2.00	
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No: 1342		Test Report No: XPL/2015-16/02	
Operator: 		Checked: 		Authorised Signatory: 			
Date: 20/2/16		Date: 14/2/16		Date: 14/2/16			

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 87%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	23.03	23.37	22.60	24.97	17.54	18.07
Wet Weight + Tare (g)	23.03	23.37	22.60	24.97	17.54	18.07
Dry Weight + Tare (g)	18.47	18.95	17.88	19.86	15.44	16.29
Tare Weight (g)	8.20	9.34	8.16	10.05	7.98	9.99
Water Content (%)	44.40	45.99	48.56	52.09	28.15	28.25
Penetration (mm)	15.20	17.30	21.00	25.80		

LIQUID LIMIT (%) 48  
 PLASTIC LIMIT (%) 28  
 PLASTICITY INDEX (%) 20

Sample Type : UDS

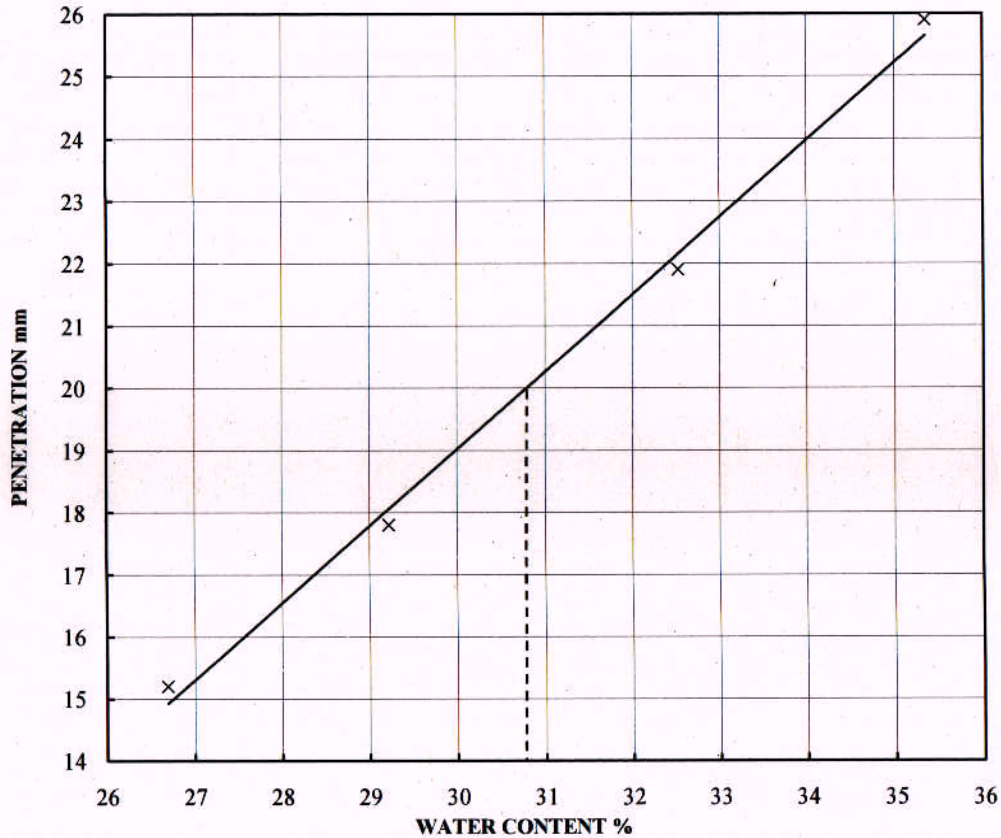
Borehole No. 1/59+305 Sample No: UDS-3 Depth (m): 8.00

XPLORER Site Ref: Hapur - Meerut Section Job No: 1342  
 Test Report No: XPL/2015-16/02

Operator:	Checked:	Authorised Signatory:
Date: 26/2/16	Date: 14/3/16	Date: 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural




	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	25.07	27.46	26.97	26.09	22.38	22.25
Dry Weight + Tare (g)	21.56	23.62	22.68	21.59	20.30	20.25
Tare Weight (g)	8.41	10.48	9.49	8.86	10.00	10.40
Water Content (%)	26.69	29.22	32.52	35.35	20.19	20.30
Penetration (mm)	15.20	17.80	21.90	25.90		

LIQUID LIMIT (%) 31  
 PLASTIC LIMIT (%) 20  
 PLASTICITY INDEX (%) 11

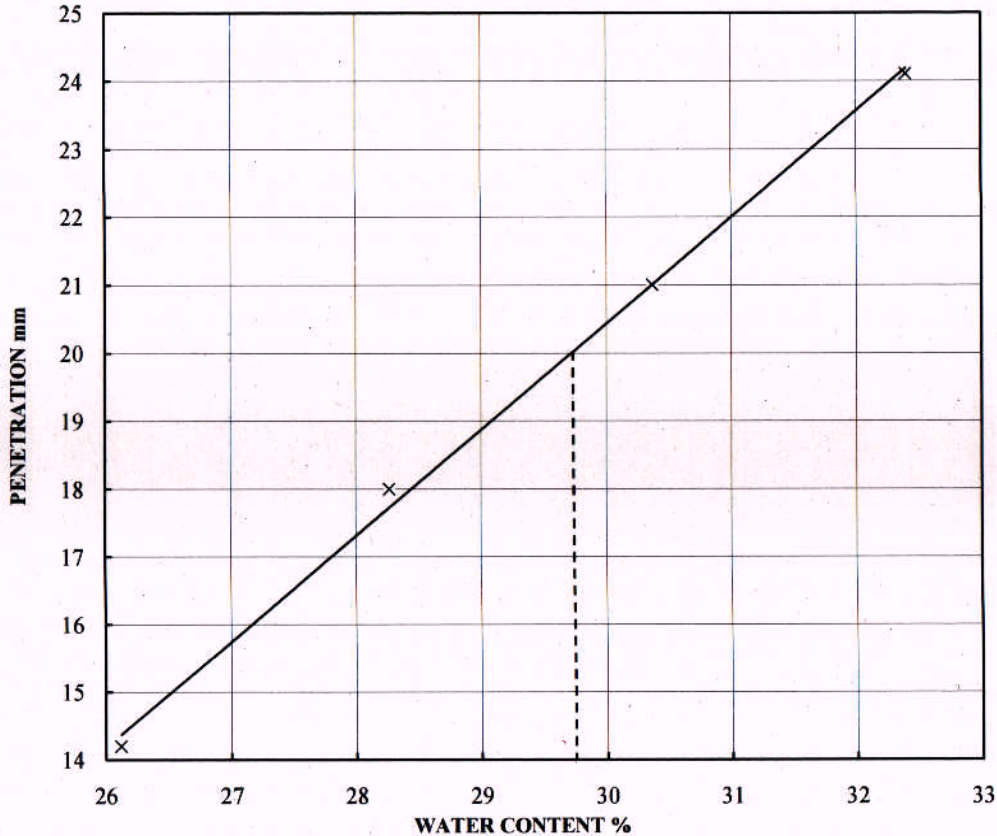
Sample Type : UDS

Borehole No. 1/59+305      Sample No: UDS-4      Depth (m): 11.00

**XPLOER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
 Test Report No: XPL/2015-16/02

Operator : 	Checked : 	Authorised Signatory 
Date : 26/7/16	Date: 14/3/16	Date: 14/3/16

**I.S. : 2720 : PART 5**


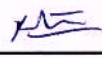



**HISTORY OF SAMPLE :**

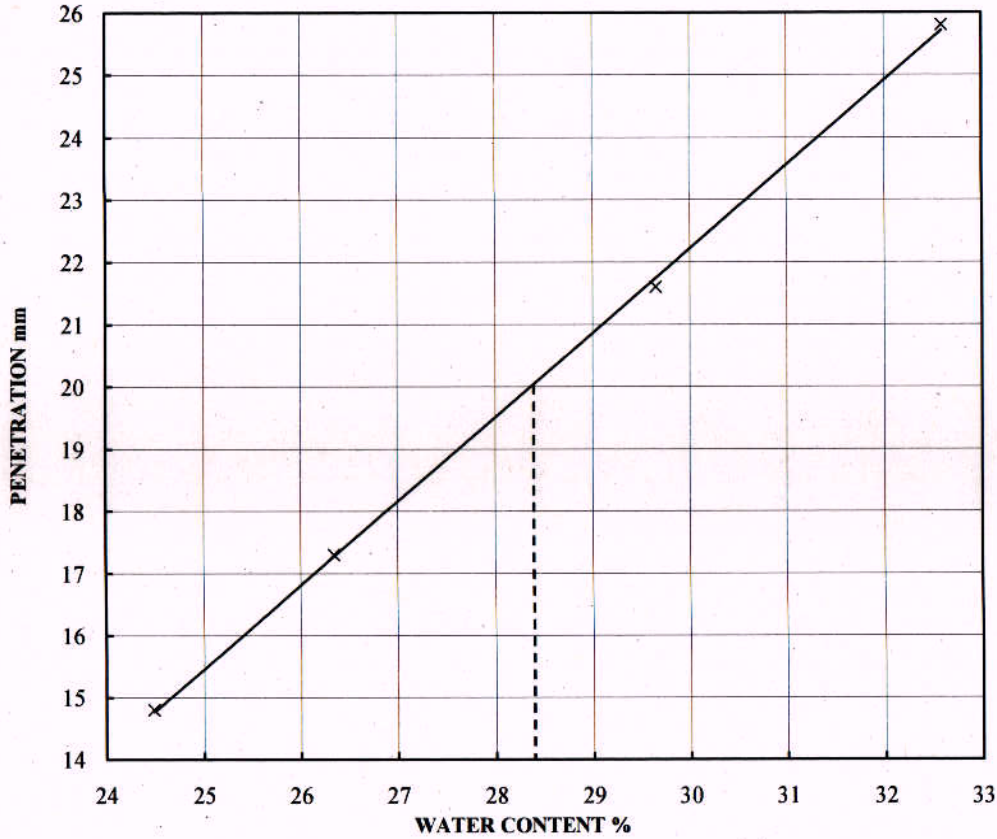
Percentage of passing 0.425mm B.S.Sieve = 93%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.32	30.01	32.00	29.31	
Dry Weight + Tare (g)	23.65	25.60	27.01	24.67	NP
Tare Weight (g)	9.60	10.00	10.59	10.35	
Water Content (%)	26.12	28.27	30.37	32.40	
Penetration (mm)	14.20	18.00	21.00	24.10	

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS	
Borehole No. 1/62+160	Sample No: UDS-3      Depth (m): 8.00
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section      Job No : 1342
	Test Report No: XPL/2015-16/02
Operator: 	Checked: 
Date: 27/11/16	Authorised Signatory:  Date: 14/12/16

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	28.61	27.47	29.55	28.36	
Dry Weight + Tare (g)	25.01	23.90	24.69	23.82	NP
Tare Weight (g)	10.31	10.35	8.30	9.89	
Water Content (%)	24.49	26.35	29.65	32.59	
Penetration (mm)	14.80	17.30	21.60	25.80	

LIQUID LIMIT (%)	28
PLASTIC LIMIT (%)	NP
PLASTICITY INDEX (%)	NP

Sample Type : UDS

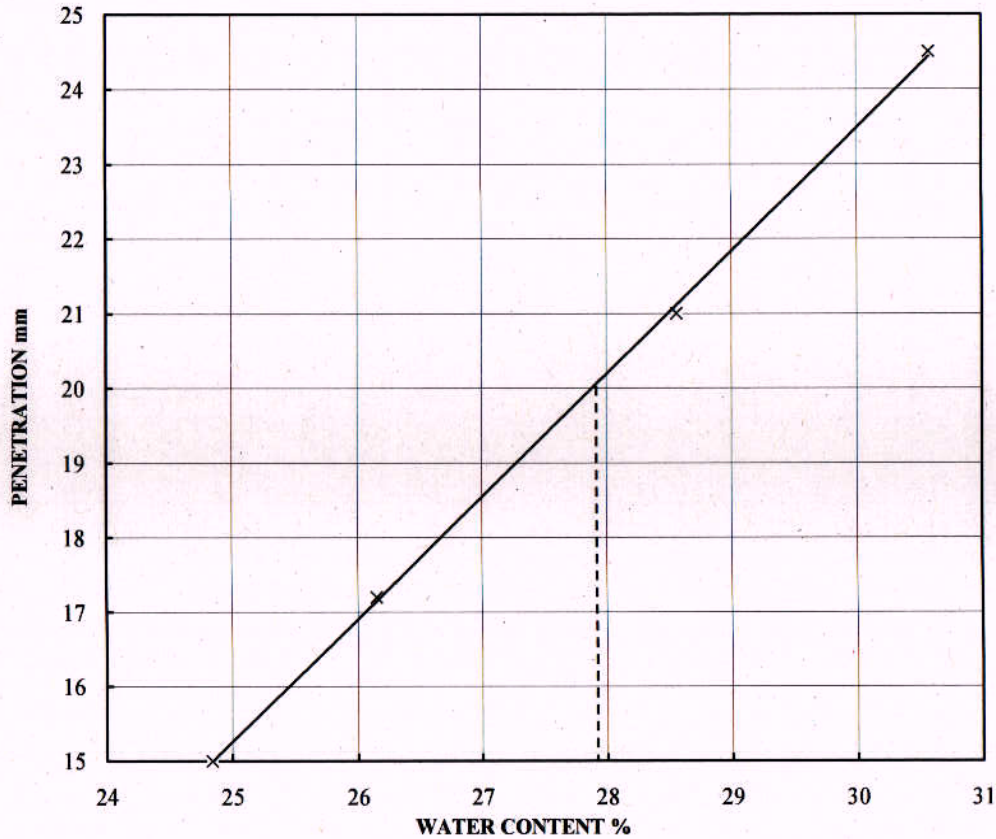
Borehole No. 1/62+160      Sample No: UDS-4      Depth (m): 11.00

**XPLORER**      Site Ref: Hapur - Meerut Section      Job No : 1342  
Test Report No: XPL/2015-16/02

Operator:	Checked:	Authorised Signatory:
Date: 27/2/16	Date: 14/3/16	Date: 14/3/16



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

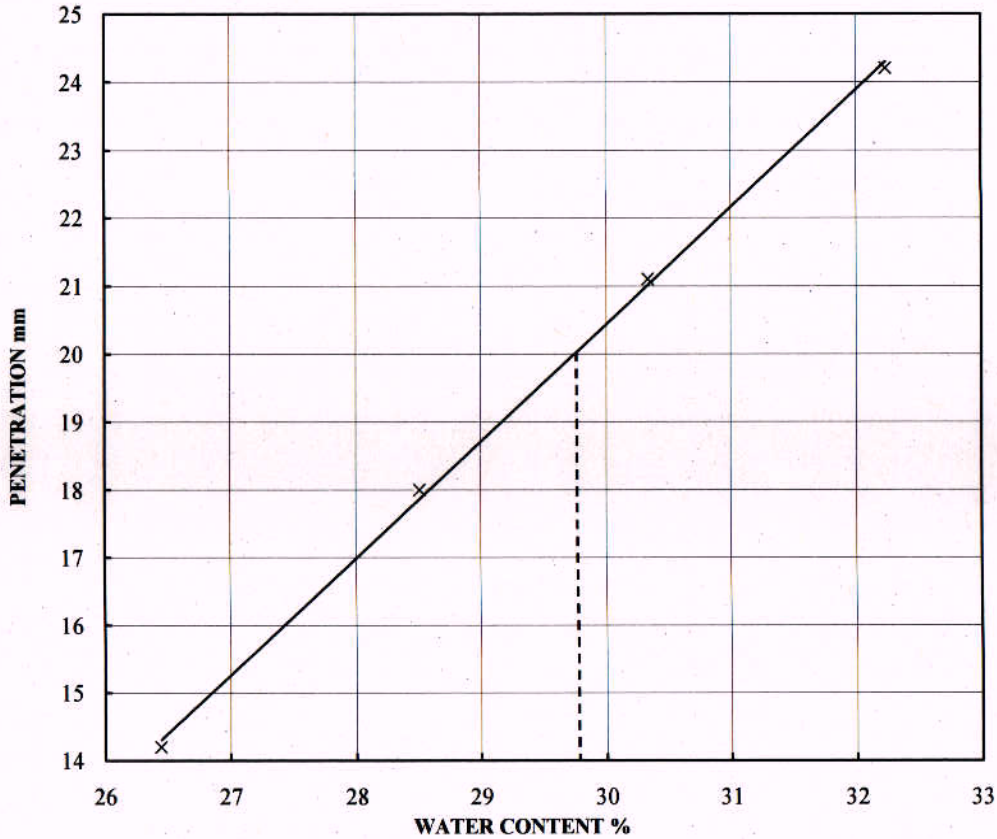
Percentage of passing 0.425mm B.S.Sieve = Natural

	LIQUID LIMIT %				PLASTIC LIMIT %	
	30.12	28.61	30.63	34.21	20.22	22.17
Wet Weight + Tare (g)	30.12	28.61	30.63	34.21	20.22	22.17
Dry Weight + Tare (g)	26.10	24.46	25.80	28.65	18.52	20.36
Tare Weight (g)	9.91	8.59	8.89	10.47	8.94	10.13
Water Content (%)	24.84	26.15	28.56	30.58	17.75	17.69
Penetration (mm)	15.00	17.20	21.00	24.50		

LIQUID LIMIT (%) 28  
 PLASTIC LIMIT (%) 18  
 PLASTICITY INDEX (%) 10

Sample Type : UDS		Borehole No. 1/63+570		Sample No: UDS-1		Depth (m): 2.00	
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342		Test Report No: XPL/2015-16/02	
Operator : <i>AS</i>		Checked : <i>AS</i>		Authorised Signatory <i>[Signature]</i>			
Date : 27/2/16		Date: 14/3/16		Date: 14/3/16			

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

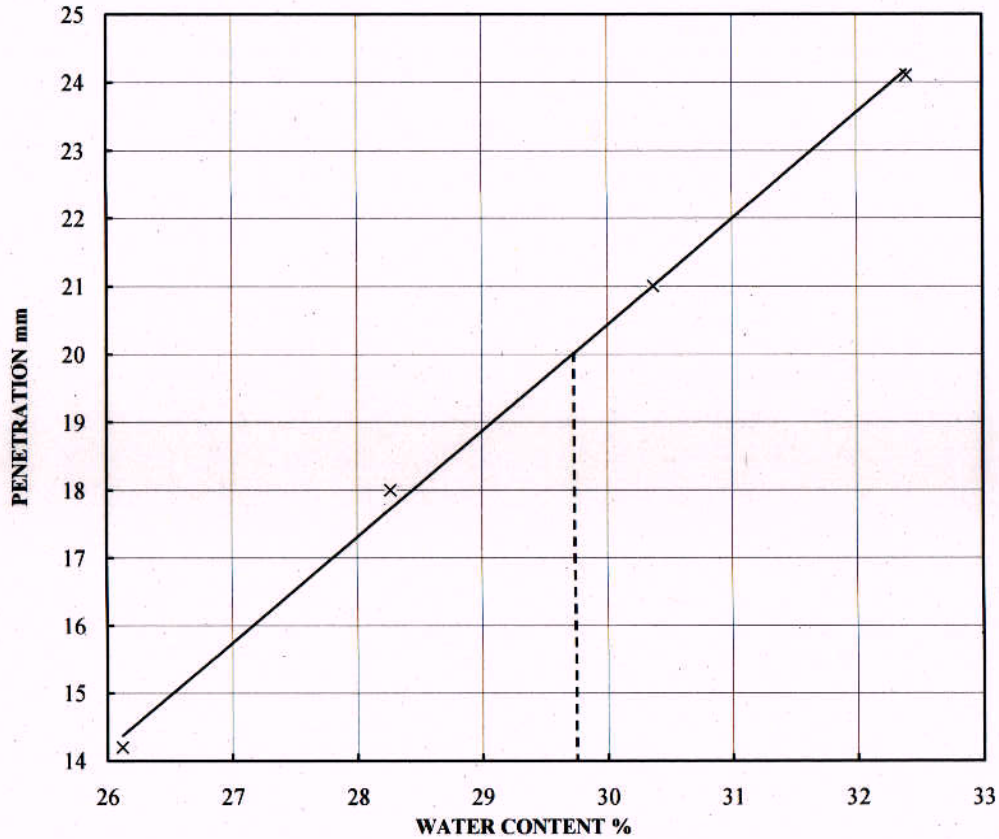
Percentage of passing 0.425mm B.S.Sieve = 94%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	29.18	30.17	30.22	28.29	
Dry Weight + Tare (g)	24.88	25.38	25.56	23.96	NP
Tare Weight (g)	8.62	8.58	10.20	10.53	
Water Content (%)	26.45	28.51	30.34	32.24	
Penetration (mm)	14.20	18.00	21.10	24.20	

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS			
Borehole No. 1/64+270	Sample No: UDS-4	Depth (m): 11.00	
<b>XPLORER</b>	Site Ref: Hapur - Meerut Section	Job No : 1342	Test Report No: XPL/2015-16/02
Operator :	Checked :	Authorised Signatory	
Date : 27/2/16	Date: 17/3/16	Date: 14/3/16	

**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 93%

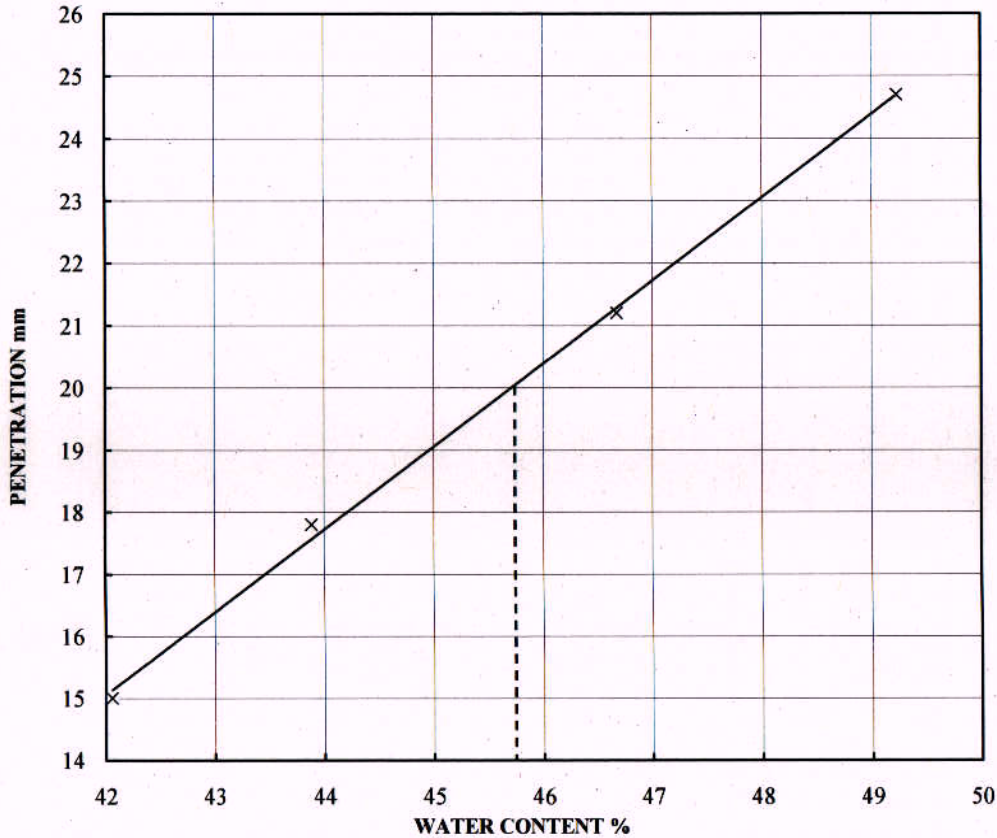
	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.32	30.01	32.00	29.31	
Dry Weight + Tare (g)	23.65	25.60	27.01	24.67	NP
Tare Weight (g)	9.60	10.00	10.59	10.35	
Water Content (%)	26.12	28.27	30.37	32.40	
Penetration (mm)	14.20	18.00	21.00	24.10	

LIQUID LIMIT (%) 30  
 PLASTIC LIMIT (%) NP  
 PLASTICITY INDEX (%) NP

Sample Type : UDS		Borehole No. 1/65+740		Sample No: UDS-1	Depth (m): 2.00
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No : 1342	Test Report No: XPL/2015-16/02
Operator:	Checked:	Authorised Signatory:			
Date: 27/4/16	Date: 14/3/16	Date: 14/3/16			



**I.S. : 2720 : PART 5**



**HISTORY OF SAMPLE :**

Percentage of passing 0.425mm B.S.Sieve = 94%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	24.95	25.47	24.74	23.70	18.13	17.24
Wet Weight + Tare (g)	24.95	25.47	24.74	23.70	18.13	17.24
Dry Weight + Tare (g)	20.37	20.59	19.83	18.57	16.28	15.33
Tare Weight (g)	9.48	9.47	9.31	8.15	9.34	8.24
Water Content (%)	42.06	43.88	46.67	49.23	26.66	26.94
Penetration (mm)	15.00	17.80	21.20	24.70		

LIQUID LIMIT (%) 46  
 PLASTIC LIMIT (%) 27  
 PLASTICITY INDEX (%) 19

Sample Type : UDS		Borehole No. 1/65+740		Sample No: UDS-4		Depth (m): 11.00	
<b>XPLORER</b>		Site Ref: Hapur - Meerut Section		Job No: 1342		Test Report No: XPL/2015-16/02	
Operator :		Checked :		Authorised Signatory			
Date : 27/2/16		Date: 14/3/16		Date: 14/3/16			

**SPECIFIC GRAVITY**  
( IS 2720 : PART 3/ SEC 1 : 1980 )

**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-UDS-1 Depth(m) 2.00**

**Chainage 41+916**

Test No :	1	2
$\rho_s$ Bottle No :	SG-10	SG-11
Mass of $\rho_s$ bottle with stopper, M1	26.18	32.74
Mass of $\rho_s$ bottle with Stopper & Soil, M2	36.18	42.74
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	77.02	86.78
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	70.87	80.60
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.60	2.62

**Average Specific Gravity : 2.61**

**BH No :- 1 Sample No :-UDS-7 Depth(m) 20.00**

**Chainage 41+916**

Test No :	1	2
$\rho_s$ Bottle No :	SG-12	SG-15
Mass of $\rho_s$ bottle with stopper, M1	39.05	34.94
Mass of $\rho_s$ bottle with Stopper & Soil, M2	49.05	44.94
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	85.98	91.71
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	79.76	85.52
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.65	2.62

**Average Specific Gravity : 2.64**

Operator :

*Bebim*

Checked :

*Saha*

Authorised signatory

*[Signature]*

Date : 18/2/16

Date : 14/3/16

Date : 14/3/16









**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-SPT-4 Depth(m) 6.00**

**Chainage 48+122**

Test No :	1	2
$\rho_s$ Bottle No :	SG-18	SG-21
Mass of $\rho_s$ bottle with stopper, M1	38.30	36.13
Mass of $\rho_s$ bottle with Stopper & Soil, M2	48.30	46.13
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	91.60	89.15
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	85.43	83.02
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.61	2.58

Average Specific Gravity : 2.60

**BH No :- 1 Sample No:-UDS-6 Depth(m) 17.00**

**Chainage 48+122**

Test No :	1	2
$\rho_s$ Bottle No :	SG-23	SG-25
Mass of $\rho_s$ bottle with stopper, M1	33.43	23.02
Mass of $\rho_s$ bottle with Stopper & Soil, M2	43.43	33.02
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	87.59	72.49
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	81.33	66.28
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.67	2.64

Average Specific Gravity : 2.66

Operator :

*Be Kim*

Date : 18/2/16

Checked :

*Saha*

Date : 14/3/16

Authorised signatory

*A...*

Date : 14/3/16



**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

SITE REF: Hapur - Meerut Section

Job No. 1342

Test Report No: XPL/2015-16/02

BH No :- 1                                      Sample No :-UDS-3                                      Depth(m)                                      8.00

Chainage                                      48+510

Test No :	1	2
$\rho_s$ Bottle No :	SG-16	SG-17
Mass of $\rho_s$ bottle with stopper, M1	31.63	32.01
Mass of $\rho_s$ bottle with Stopper & Soil, M2	41.63	42.01
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	88.45	88.55
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	82.20	82.31
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.67	2.66

Average Specific Gravity :                                      2.66

BH No :- 1                                      Sample No:-UDS-7                                      Depth(m)                                      20.00

Chainage                                      48+510

Test No :	1	2
$\rho_s$ Bottle No :	SG-18	SG-21
Mass of $\rho_s$ bottle with stopper, M1	38.30	36.13
Mass of $\rho_s$ bottle with Stopper & Soil, M2	48.30	46.13
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	91.63	89.26
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	85.43	83.02
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.63	2.66

Average Specific Gravity :                                      2.65

Operator :

*Bikim*

Date : 18/2/16

Checked :

*Sahu*

Date :

14/3/16

Authorised signatory

*[Signature]*

Date :

14/3/16



**SPECIFIC GRAVITY**  
( IS 2720 : PART 3/ SEC 1 : 1980 )

**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section**

**Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1**                      Sample No :-SPT-4                      Depth(m)                      6.00

**Chainage**                      51+000

Test No :	1	2
$\rho_s$ Bottle No :	SG-10	SG-25
Mass of $\rho_s$ bottle with stopper, M1	26.20	23.04
Mass of $\rho_s$ bottle with Stopper & Soil, M2	36.20	33.04
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	77.07	72.50
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	70.87	66.28
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.63	2.65

Average Specific Gravity :                      2.64

**BH No :- 1**                      Sample No:-SPT-4                      Depth(m)                      6.00

**Chainage**                      52+640

Test No :	1	2
$\rho_s$ Bottle No :	SG-11	SG-12
Mass of $\rho_s$ bottle with stopper, M1	32.76	39.06
Mass of $\rho_s$ bottle with Stopper & Soil, M2	42.77	49.07
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	86.82	85.98
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	80.60	79.76
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.64	2.64

Average Specific Gravity :                      2.64

Operator :

*Bikim*

Date : 18/12/16

Checked :

*Saha*

Date :

14/3/16

Authorised signatory

*[Signature]*

Date :

14/3/16





**SPECIFIC GRAVITY**  
( IS 2720 : PART 3/ SEC 1 : 1980 )

**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-SPT-5 Depth(m) 7.50**

**Chainage 55+850**

Test No :	1	2
$\rho_s$ Bottle No :	SG-21	SG-23
Mass of $\rho_s$ bottle with stopper, M1	36.15	33.43
Mass of $\rho_s$ bottle with Stopper & Soil, M2	46.15	43.42
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	89.20	87.54
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	83.02	81.33
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.62	2.64

Average Specific Gravity : 2.63

**BH No :- 1 Sample No:-SPT-13 Depth(m) 19.50**

**Chainage 55+850**

Test No :	1	2
$\rho_s$ Bottle No :	SG-10	SG-11
Mass of $\rho_s$ bottle with stopper, M1	26.18	32.74
Mass of $\rho_s$ bottle with Stopper & Soil, M2	36.18	42.74
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	76.99	86.76
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	70.87	80.60
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.58	2.60

Average Specific Gravity : 2.59

Operator :

*Bikim*

Date : *19/2/16*

Checked :

*Saha*

Date : *14/3/16*

Authorised signatory

*[Signature]*

Date : *14/3/16*





**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-SPT-6 Depth(m) 9.00**

**Chainage 57+555**

Test No :	1	2
$\rho_s$ Bottle No :	SG-16	SG-17
Mass of $\rho_s$ bottle with stopper, M1	31.63	32.01
Mass of $\rho_s$ bottle with Stopper & Soil, M2	41.63	42.01
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	88.43	88.50
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	82.20	82.31
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.65	2.62

Average Specific Gravity : 2.64

**BH No :- 1 Sample No:-SPT-14 Depth(m) 21.00**

**Chainage 57+555**

Test No :	1	2
$\rho_s$ Bottle No :	SG-12	SG-15
Mass of $\rho_s$ bottle with stopper, M1	39.05	34.94
Mass of $\rho_s$ bottle with Stopper & Soil, M2	49.05	44.94
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	86.00	91.75
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	79.76	85.52
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.66	2.65

Average Specific Gravity : 2.66

Operator :

*Bikram*

Date : 19/11/16

Checked :

*Sahu*

Date : 14/3/16

Authorised signatory

*[Signature]*

Date : 14/3/15



**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**  
Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-SPT-5 Depth(m) 7.50**  
**Chainage 58+400**

Test No :	1	2
$\rho_s$ Bottle No :	SG-10	SG-11
Mass of $\rho_s$ bottle with stopper, M1	26.16	32.69
Mass of $\rho_s$ bottle with Stopper & Soil, M2	36.16	42.69
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	76.87	86.52
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	70.67	80.36
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.63	2.60

Average Specific Gravity : 2.62

**BH No :- 1 Sample No:-SPT-14 Depth(m) 21.00**  
**Chainage 58+400**

Test No :	1	2
$\rho_s$ Bottle No :	SG-12	SG-25
Mass of $\rho_s$ bottle with stopper, M1	39.00	34.90
Mass of $\rho_s$ bottle with Stopper & Soil, M2	49.00	44.90
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	85.77	91.45
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	79.53	85.23
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.66	2.65

Average Specific Gravity : 2.65

Operator : <i>Be Kim</i>	Checked : <i>Sahu</i>	Authorised signatory <i>[Signature]</i>
Date : 19/2/16	Date : 14/3/16	Date : 14/3/16



**SPECIFIC GRAVITY**  
( IS 2720 : PART 3/ SEC 1 : 1980 )

**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

**SITE REF: Hapur - Meerut Section Job No. 1342**

Test Report No: XPL/2015-16/02

**BH No :- 1 Sample No :-UDS-3 Depth(m) 8.00**

**Chainage 59+305**

Test No :	1	2
$\rho_s$ Bottle No :	SG-16	SG-17
Mass of $\rho_s$ bottle with stopper, M1	31.58	31.97
Mass of $\rho_s$ bottle with Stopper & Soil, M2	41.58	41.97
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	88.10	88.26
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	81.91	82.05
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.62	2.64

Average Specific Gravity : 2.63

**BH No :- 1 Sample No:-UDS-3 Depth(m) 8.00**

**Chainage 62+160**

Test No :	1	2
$\rho_s$ Bottle No :	SG-18	SG-21
Mass of $\rho_s$ bottle with stopper, M1	38.25	36.08
Mass of $\rho_s$ bottle with Stopper & Soil, M2	48.25	46.08
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	91.33	88.95
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	85.17	82.76
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.60	2.62

Average Specific Gravity : 2.61

Operator :

*Bikim*

Date : 20/2/16

Checked :

*Saha*

Date :

14/3/16

Authorised signatory

*[Signature]*

Date :

14/3/16

**SPECIFIC GRAVITY**  
( IS 2720 : PART 3/ SEC 1 : 1980 )

**PROJECT : Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut**

SITE REF: **Hapur - Meerut Section** Job No. **1342**

Test Report No: XPL/2015-16/02

BH No :- 1 Sample No :-SPT-5 Depth(m) 7.50

Chainage 63+570

Test No :	1	2
$\rho_s$ Bottle No :	SG-23	SG-25
Mass of $\rho_s$ bottle with stopper, M1	33.38	22.99
Mass of $\rho_s$ bottle with Stopper & Soil, M2	43.38	32.99
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	87.31	72.25
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	81.07	66.05
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.66	2.63

Average Specific Gravity : 2.65

BH No :- 1 Sample No:-SPT-13 Depth(m) 19.50

Chainage 63+570

Test No :	1	2
$\rho_s$ Bottle No :	SG-10	SG-11
Mass of $\rho_s$ bottle with stopper, M1	26.16	32.69
Mass of $\rho_s$ bottle with Stopper & Soil, M2	36.16	42.69
Mass of $\rho_s$ bottle with Stopper, Soil & Distilled Water, M3	76.82	86.55
Mass of $\rho_s$ bottle with Stopper & Distilled Water, M4	70.67	80.36
$\rho_s = \frac{(M2 - M1)}{(M4 - M1) - (M3 - M2)}$	2.60	2.62

Average Specific Gravity : 2.61

Operator :

*Bikim*

Date : 20/11/16

Checked :

*Sala*

Date : 14/3/16

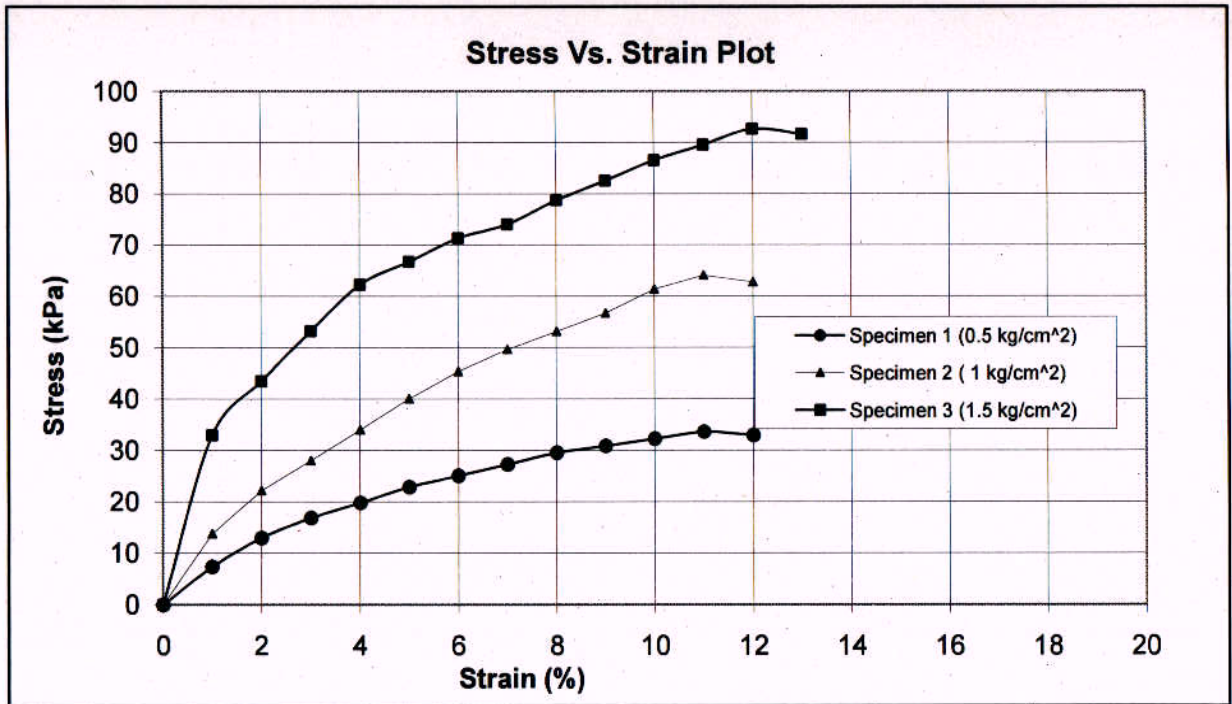
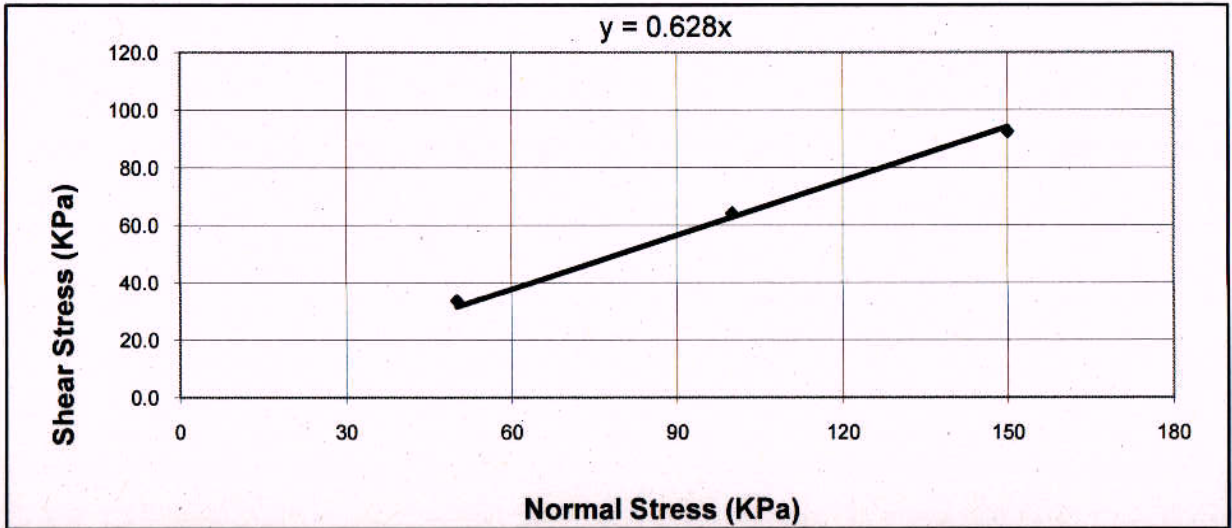
Authorised signatory

*[Signature]*

Date : 14/3/16







Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.67  
Brownish Sandy SILT (ML)

Test Result

$c = 0.0$  kPa  
 $\phi = 32.1^\circ$

BH No: 1	Chainage 41+916	Sample No.: UDS-8	Depth (m): 23.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by:

Date: 11/3/16

Checked by:

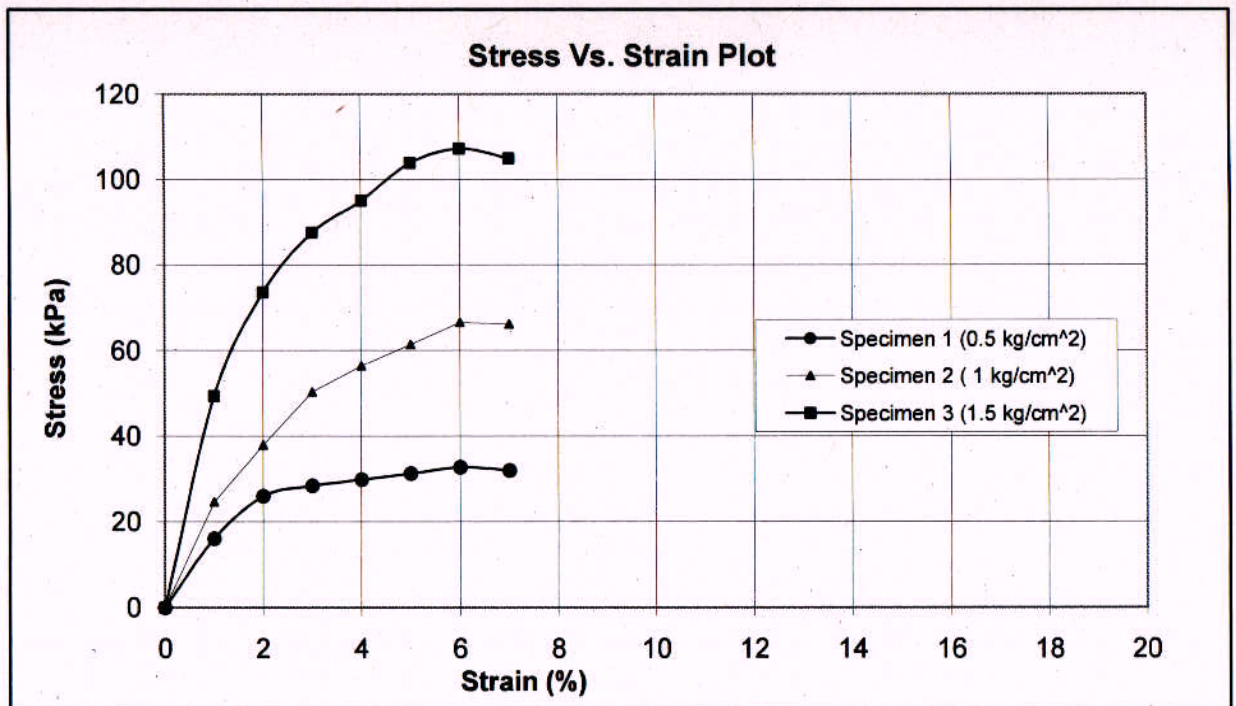
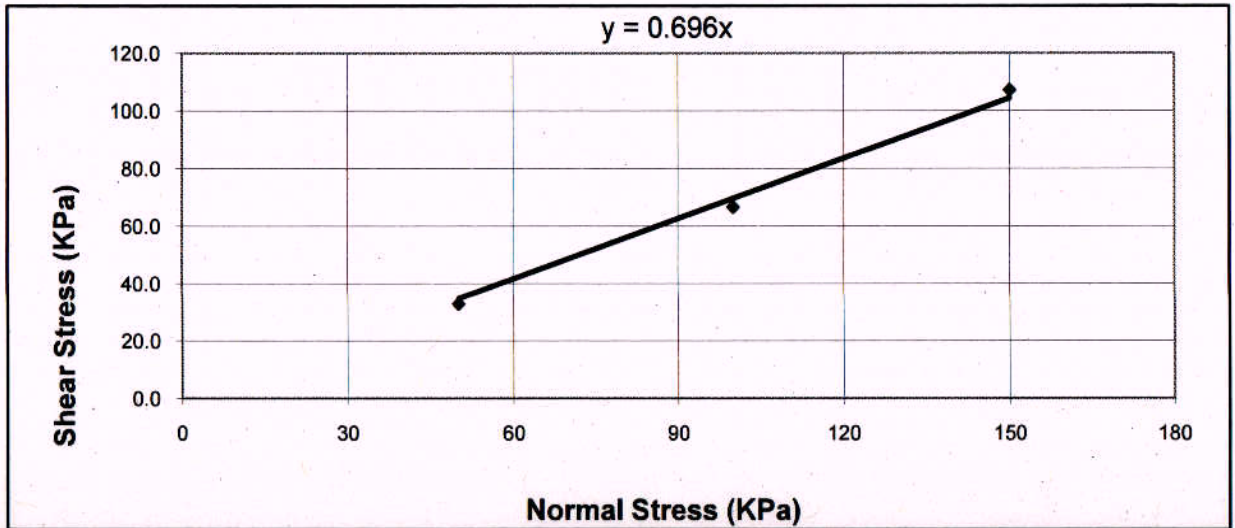
Date: 14/3/16

Authorised Signatory:

Date: 14/3/16



**DIRECT SHEAR TEST RESULT**  
**I.S.: 2720 : PART XIII**



Sample Details

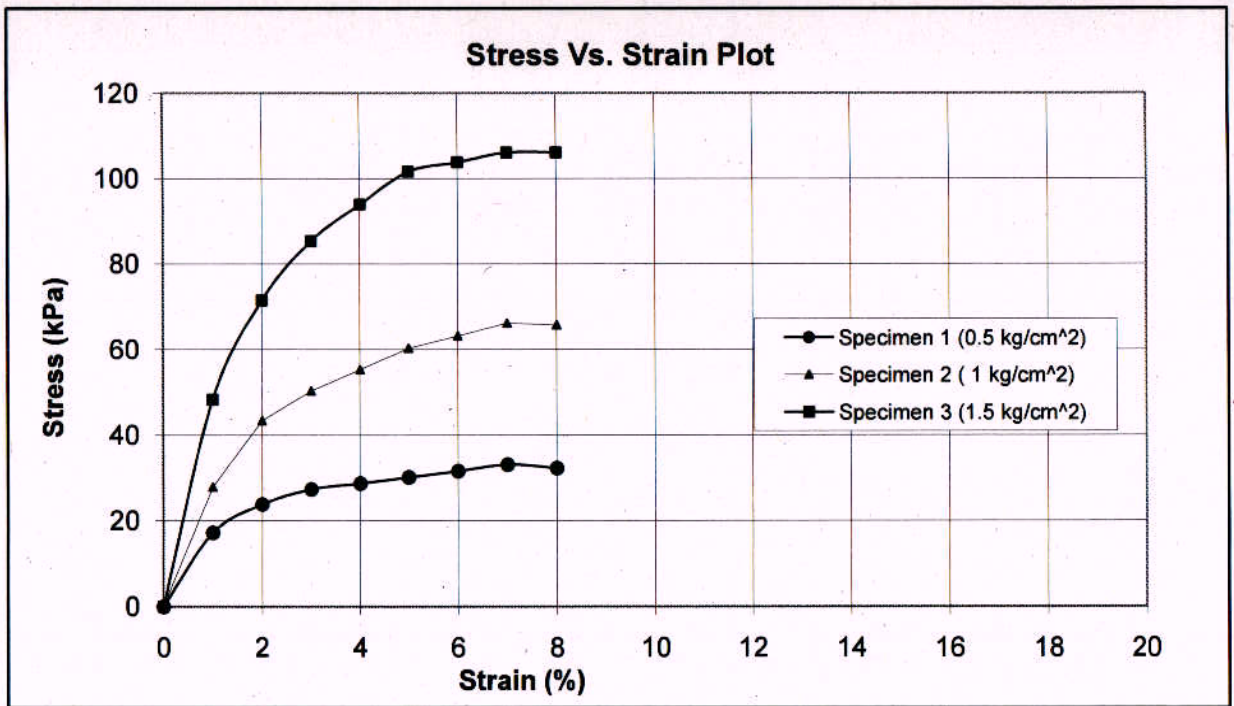
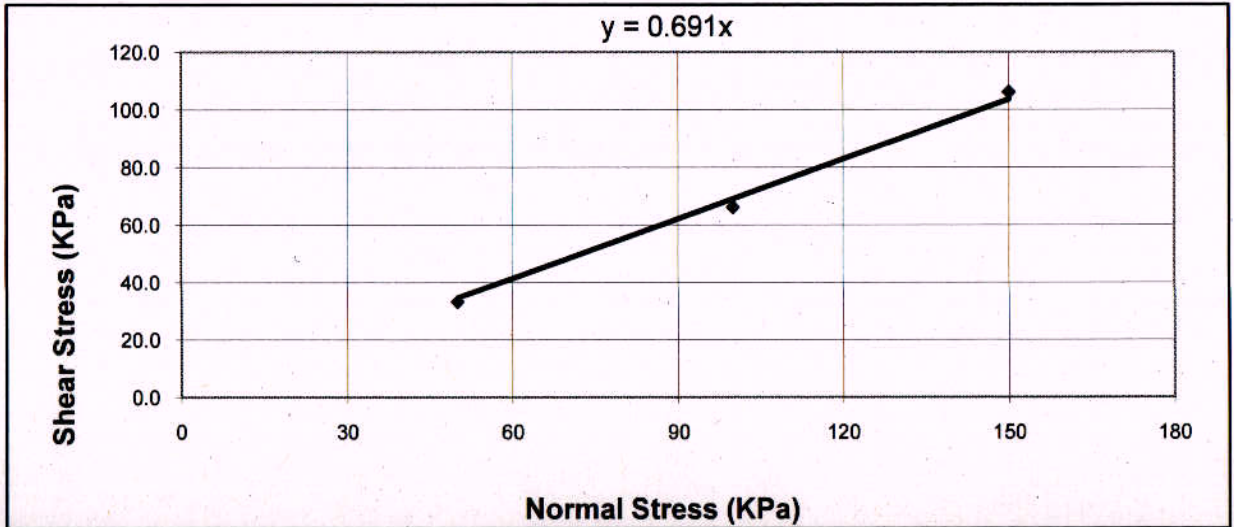
Dry-density, (mg/m<sup>3</sup>) = 1.80  
Poorly Graded SAND(SP)

Test Result

c = 0.0 kPa  
φ = 34.8°

BH No: 1	Chainage 43+900	Sample No.: SPT-12	Depth (m): 18.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by:	Checked by:	Authorised Signatory:
Date: 11/31/16	Date: 14/3/16	Date: 14/3/16





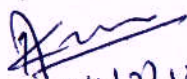
Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.82  
Poorly Graded SAND(SP)

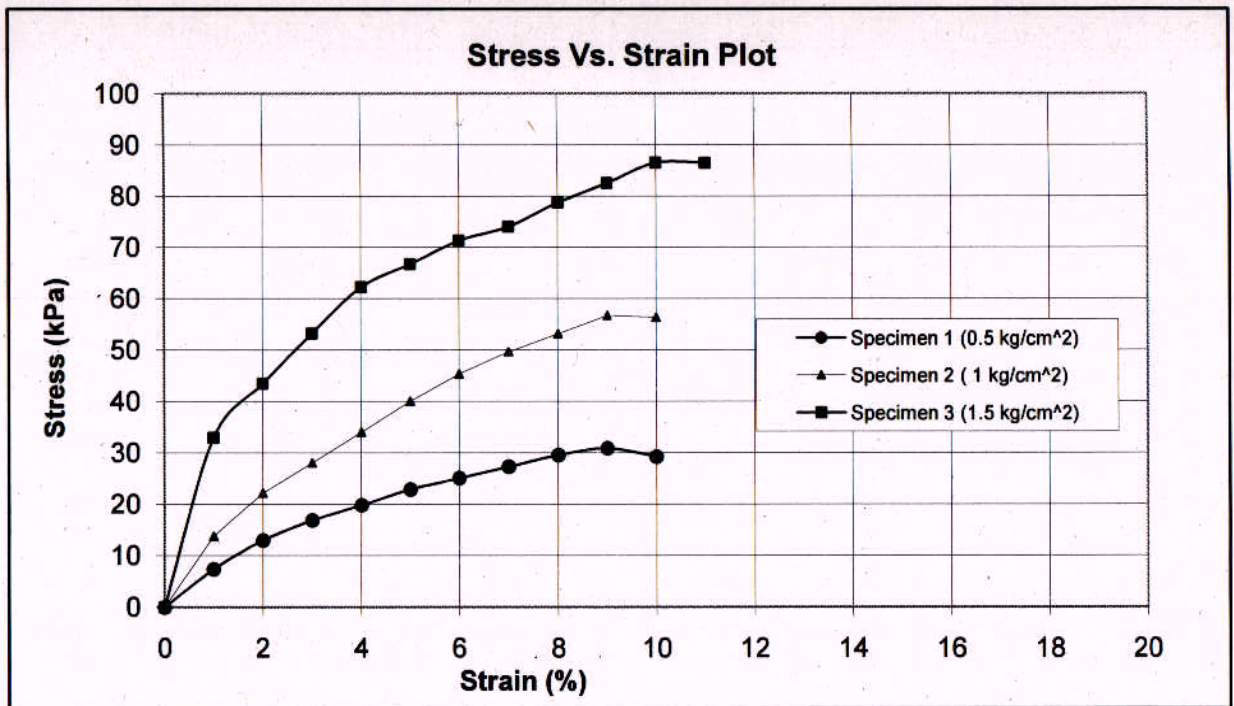
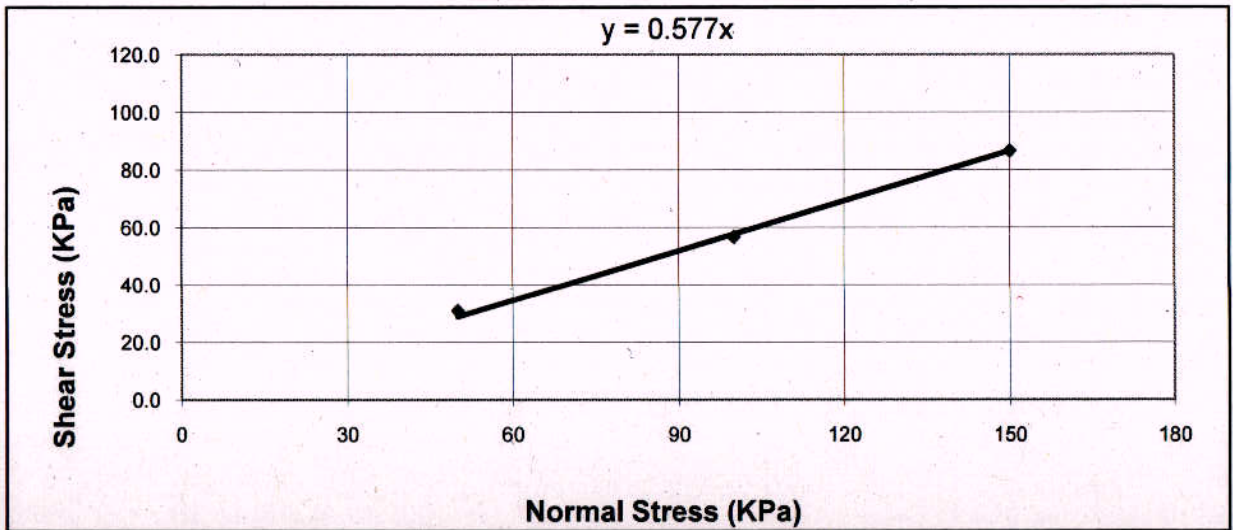
Test Result

c = 0.0 kPa  
φ = 34.6 °

BH No: 1	Chainage 43+900	Sample No.: SPT-17	Depth (m): 25.50
Site Ref: Hapur - Meerut Section	Job No: 1342		Test Report No: XPL/2015-16/02

Tested by: 	Checked by: 	Authorised Signatory: 
Date: 11/3/16	Date: 14/3/16	Date: 14/3/16





Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.84  
Brownish Sandy SILT (ML)

Test Result

c = 0.0 kPa  
φ = 30.0°

BH No: 1	Chainage 46+362	Sample No.: UDS-1	Depth (m): 2.00
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Site Ref: Hapur - Meerut Section	Job No: 1342
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Test Report No: XPL/2015-16/02

Tested by:

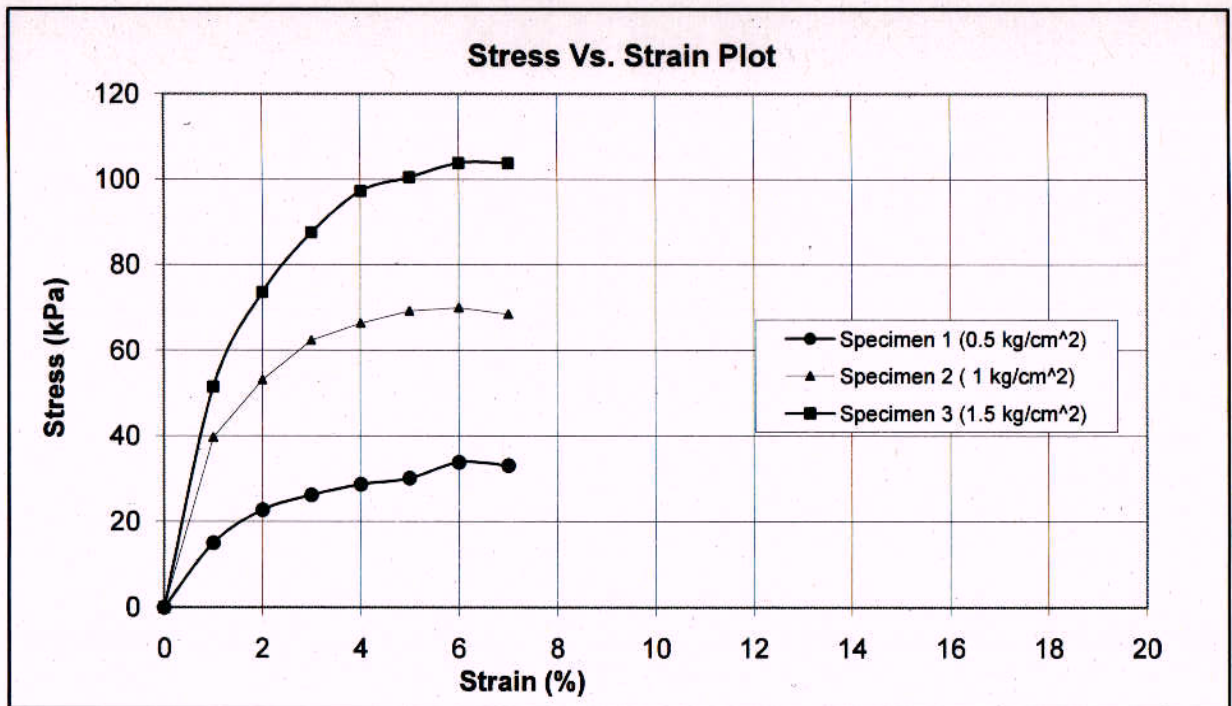
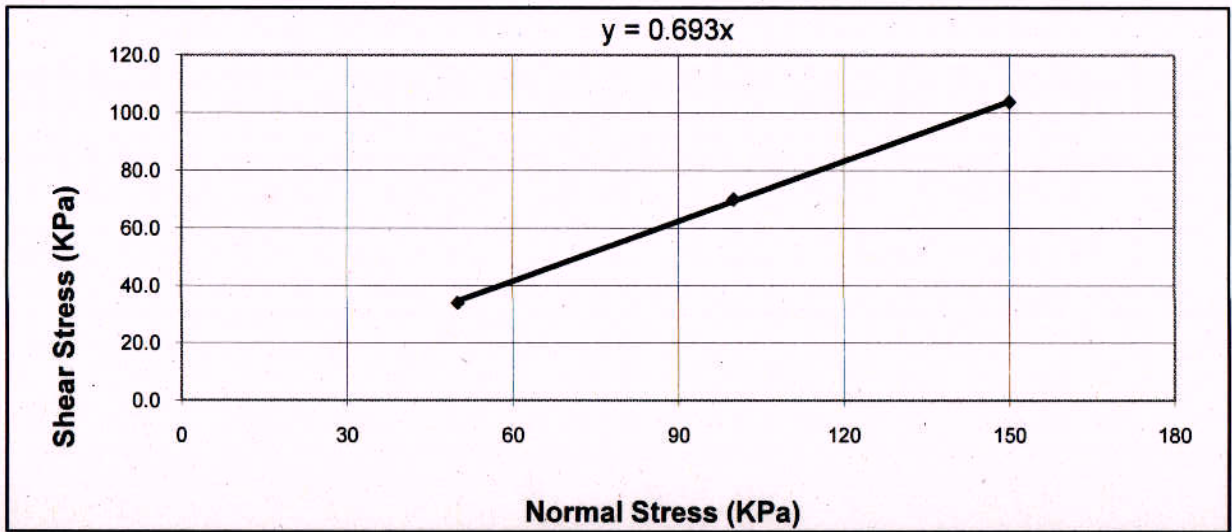
Date: 11/3/16

Checked by:

Date: 14/3/16

Authorised Signatory:

Date: 14/3/16



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.87  
Poorly Graded SAND(SP)

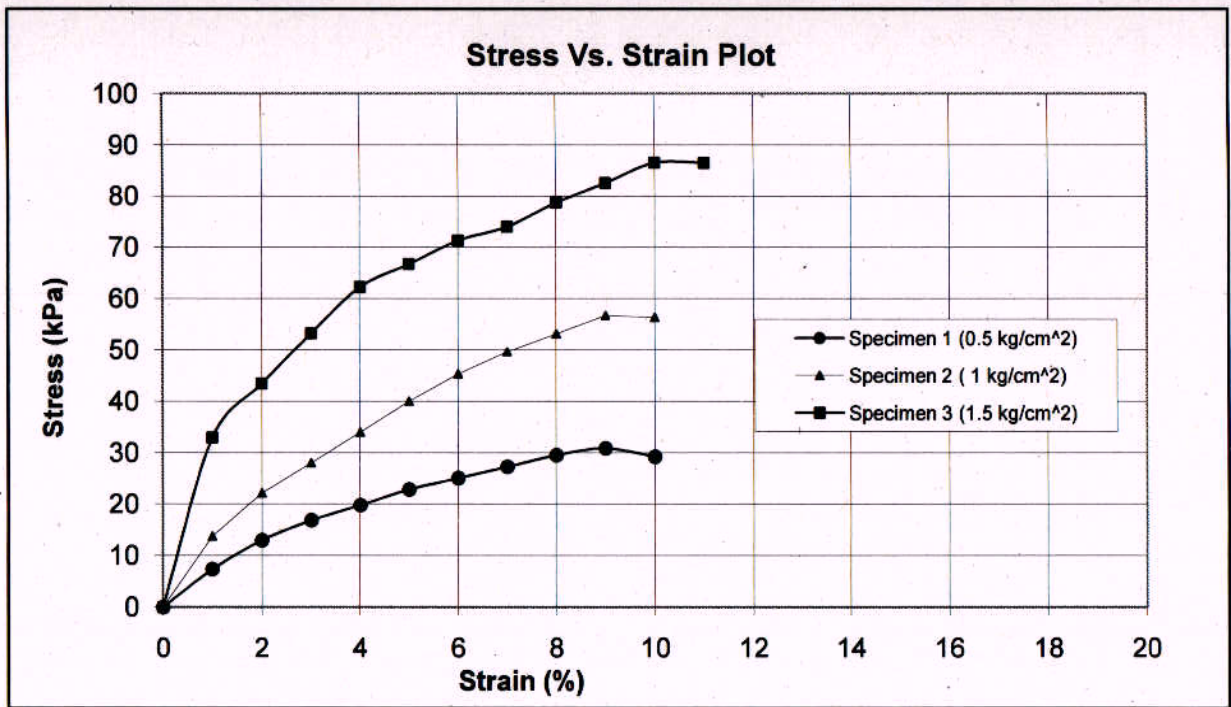
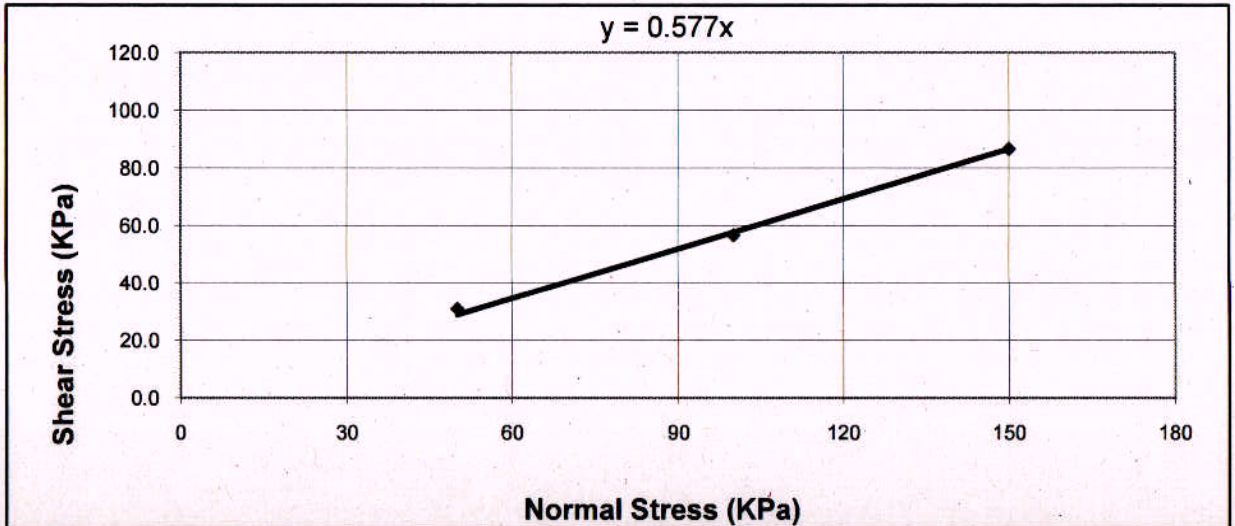
Test Result

$c = 0.0$  kPa  
 $\phi = 34.7^\circ$

BH No: 1	Chainage 46+362	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: 	Checked by: 	Authorised Signatory: 
Date: 17/3/16	Date: 14/3/16	Date: 14/3/16





Sample Details

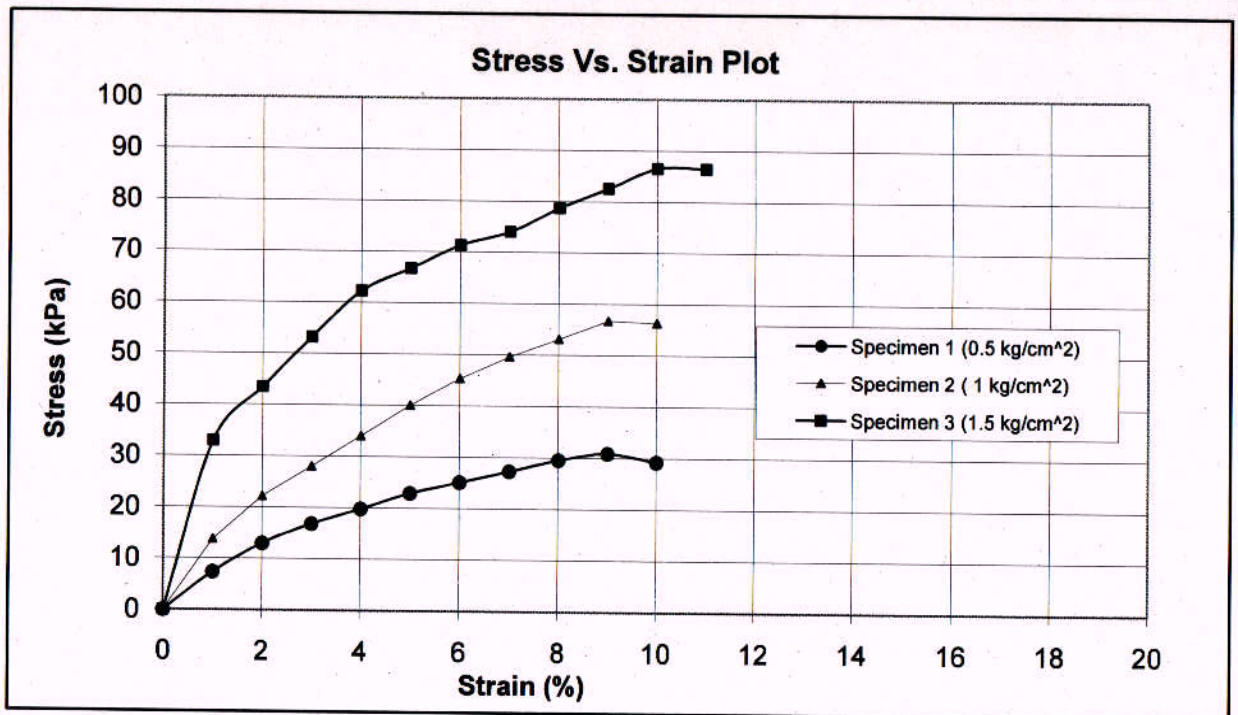
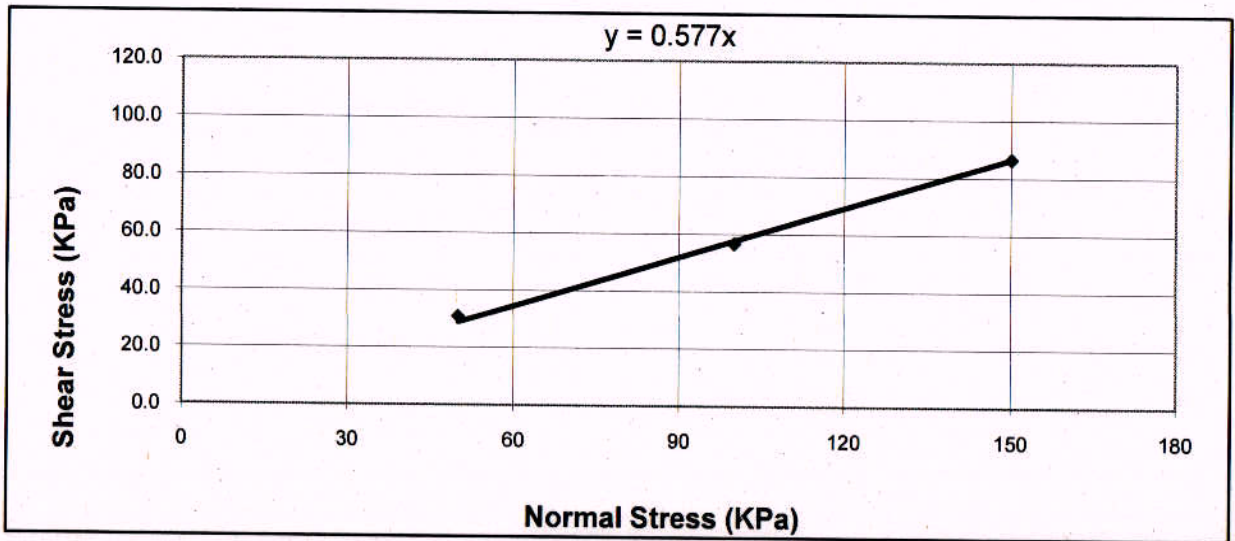
Dry-density, (mg/m³) = 1.63  
Brownish Sandy SILT (ML)

Test Result

$c = 0.0$  kPa  
 $\phi = 30.0^\circ$

BH No: 1	Chainage 48+122	Sample No.: UDS-4	Depth (m): 11.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

<b>Tested by:</b> 	<b>Checked by:</b> 	<b>Authorised Signatory:</b> 
<b>Date:</b> 11/3/16	<b>Date:</b> 14/3/16	<b>Date:</b> 14/3/16





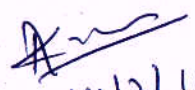
**Sample Details**

Dry-density, (mg/m<sup>3</sup>) = 1.72  
Brownish Silty SAND (SM)

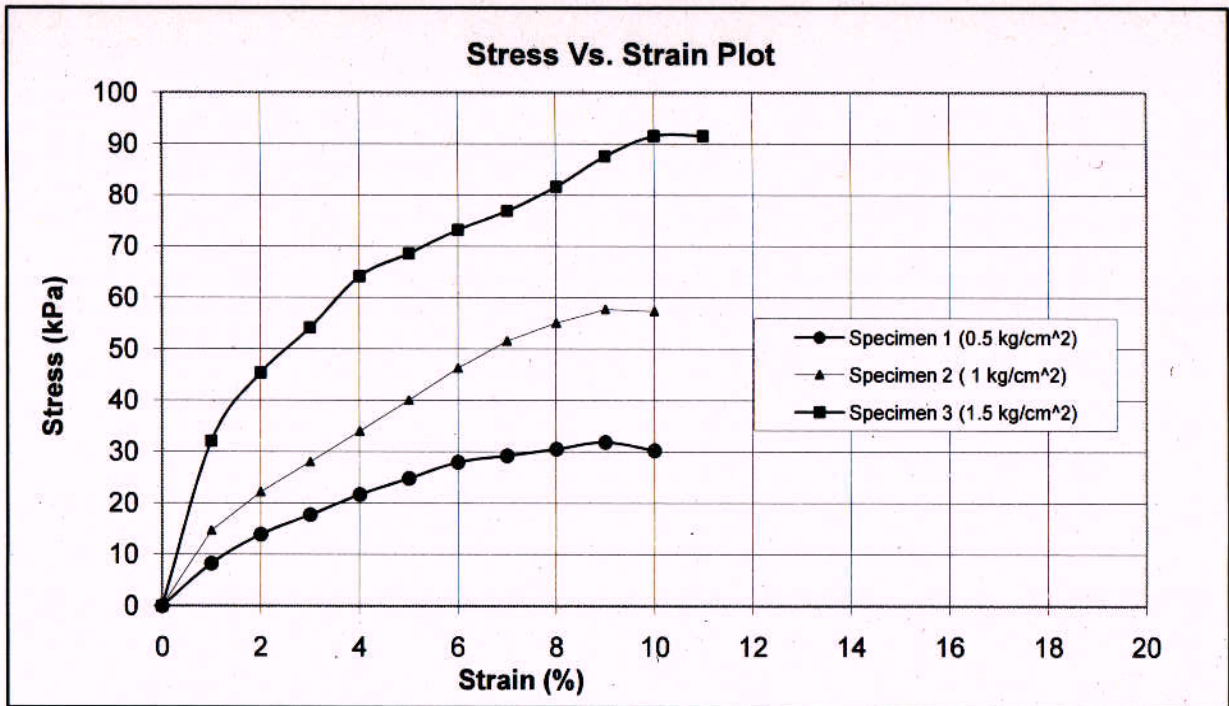
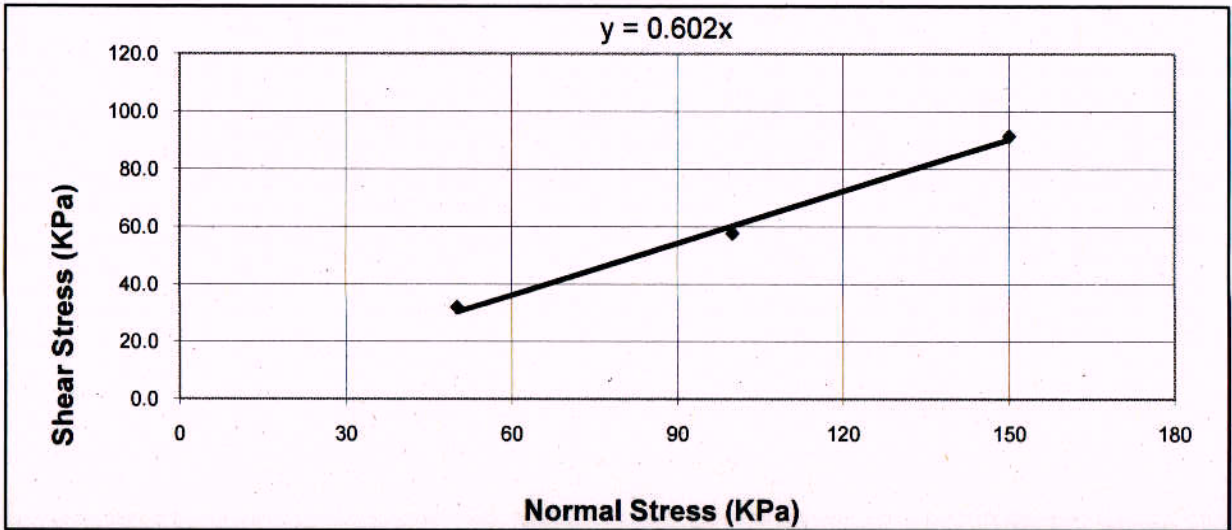
**Test Result**

$c = 0.0$  kPa  
 $\phi = 30.0^\circ$

BH No: 1	Chainage 48+510	Sample No.: UDS-1	Depth (m): 2.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: 	Checked by: 	Authorised Signatory: 
Date: 11/3/16	Date: 14/3/16	Date: 14/3/16





Sample Details

Dry-density, (mg/m³) = 1.71  
Brownish Sandy SILT (ML)

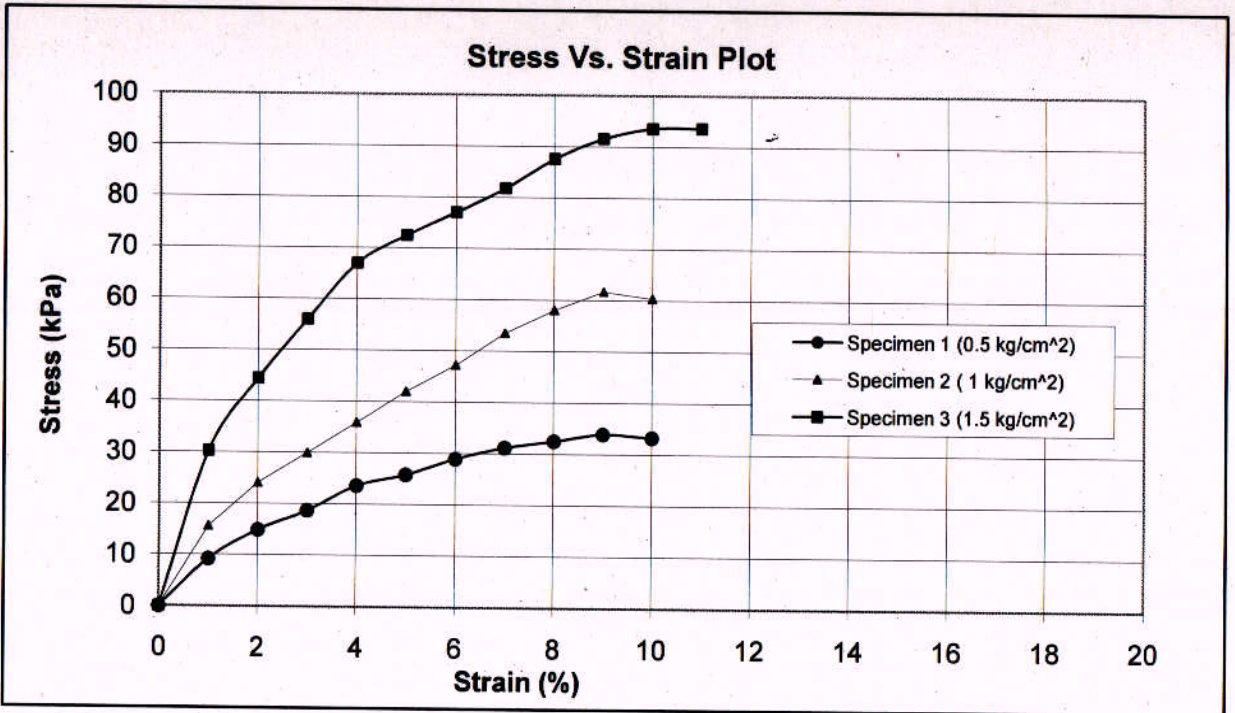
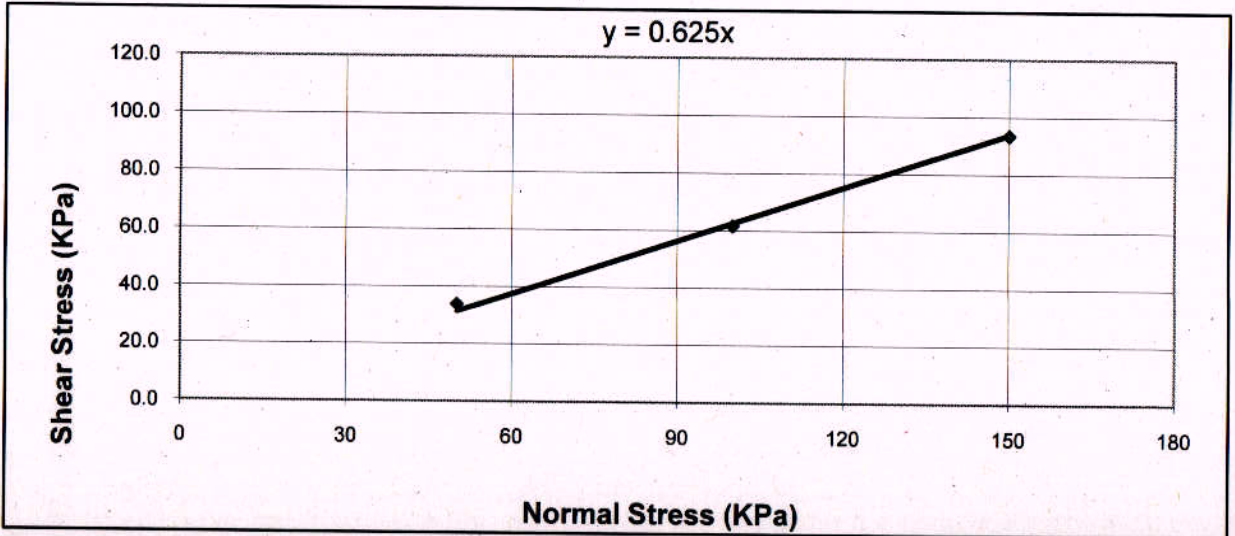
Test Result

$c = 0.0$  kPa  
 $\phi = 31.0^\circ$

BH No: 1	Chainage 48+510	Sample No.: UDS-6	Depth (m): 17.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: 	Checked by: 	Authorised Signatory: 
Date: 21/3/16	Date: 14/3/16	Date: 14/3/16

**DIRECT SHEAR TEST RESULT**  
**I.S.: 2720 : PART XIII**



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.64  
Brownish Sandy SILT (ML)

Test Result

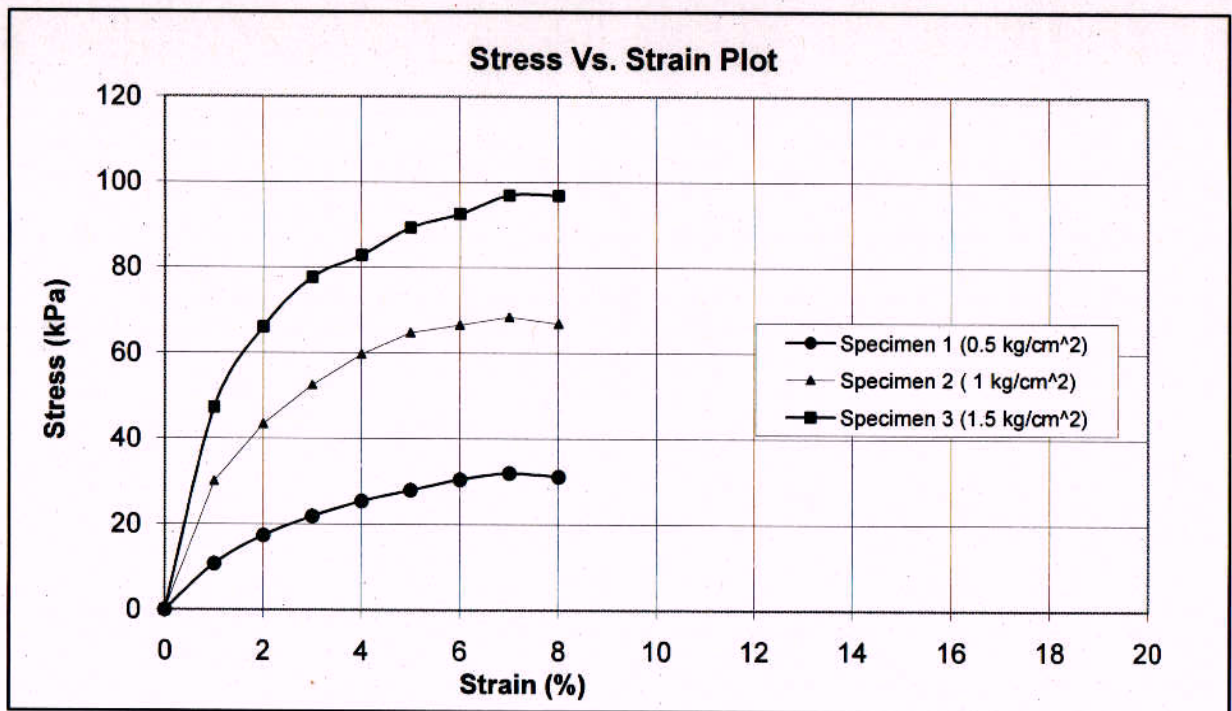
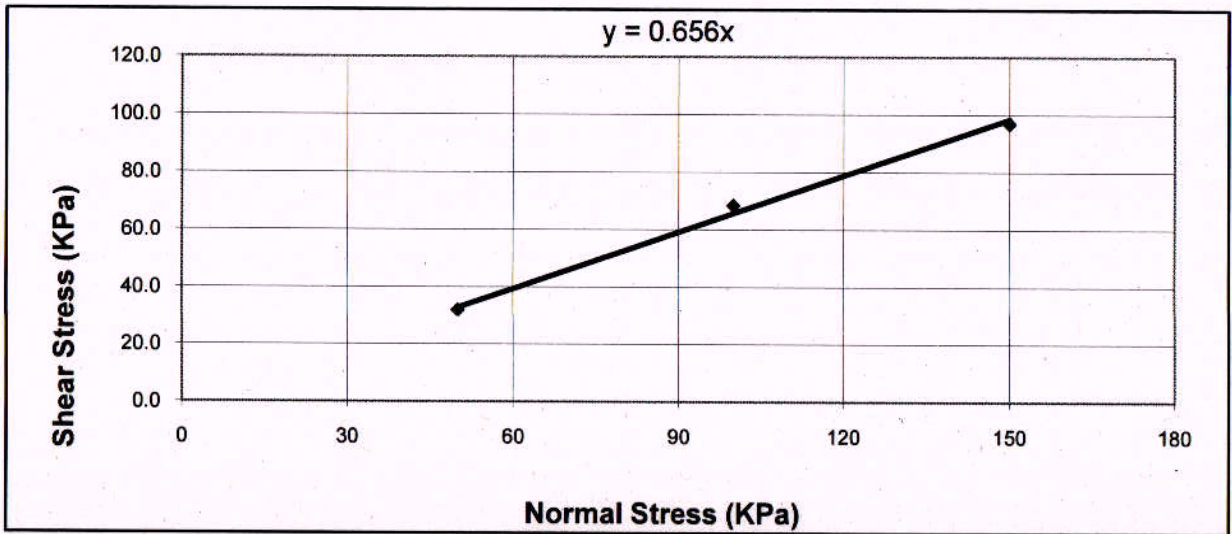
$c = 0.0$  kPa  
 $\phi = 32.0^\circ$

BH No: 1	Chainage 48+510	Sample No.: UDS-7	Depth (m): 20.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by:	Checked by:	Authorised Signatory:
Date: 2/3/16	Date: 14/3/16	Date: 14/2/16



**DIRECT SHEAR TEST RESULT**  
**I.S.: 2720 : PART XIII**



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.84  
Poorly Graded SAND(SP)

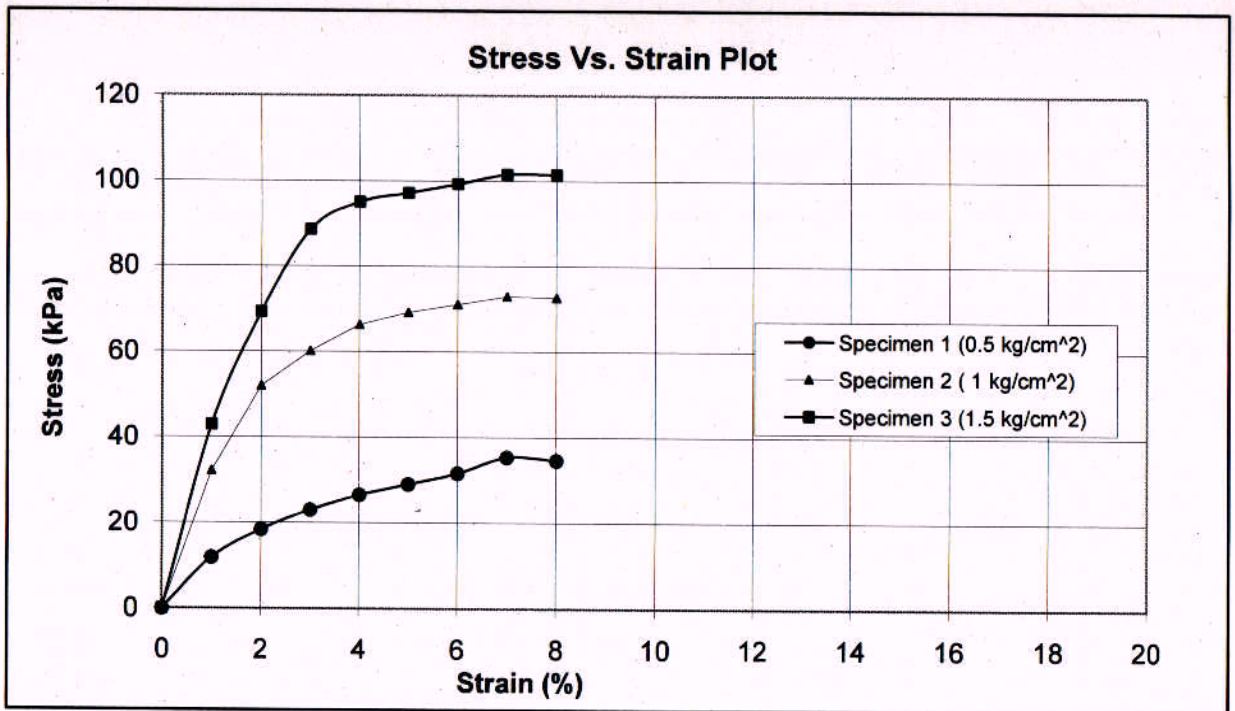
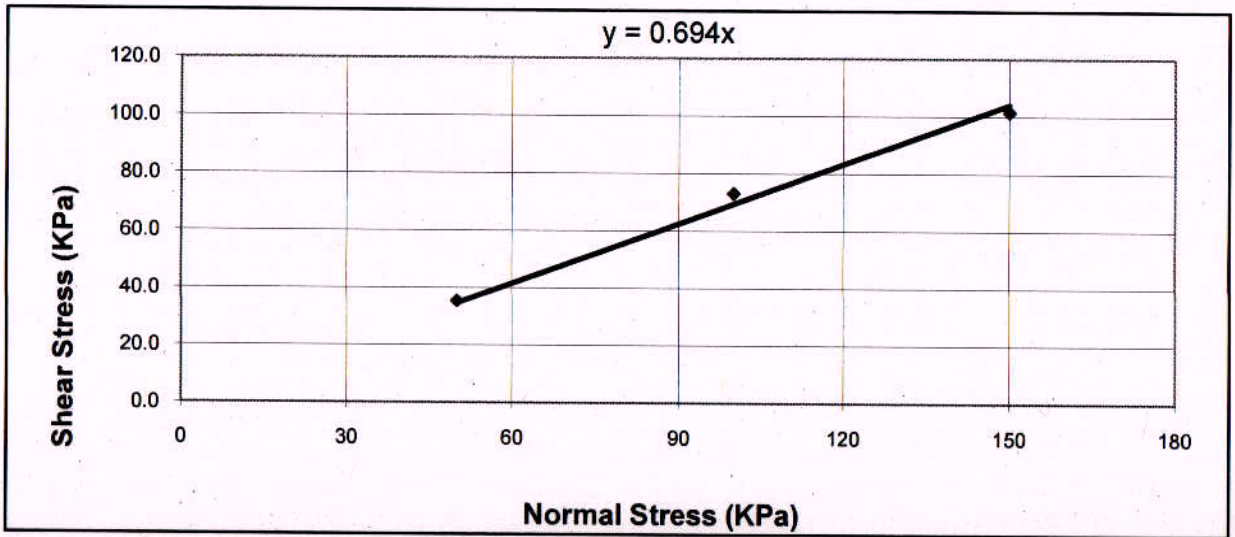
Test Result

c = 0.0 kPa  
φ = 33.3 °

BH No: 1	Chainage 48+510	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section	Job No : 1342		Test Report No: XPL/2015-16/02

Tested by: <i>[Signature]</i>	Checked by: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>
Date: 28/2/16	Date: 19/3/16	Date: 14/3/16

**DIRECT SHEAR TEST RESULT**  
**I.S.: 2720 : PART XIII**



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.70  
Brownish Silty SAND(SM)

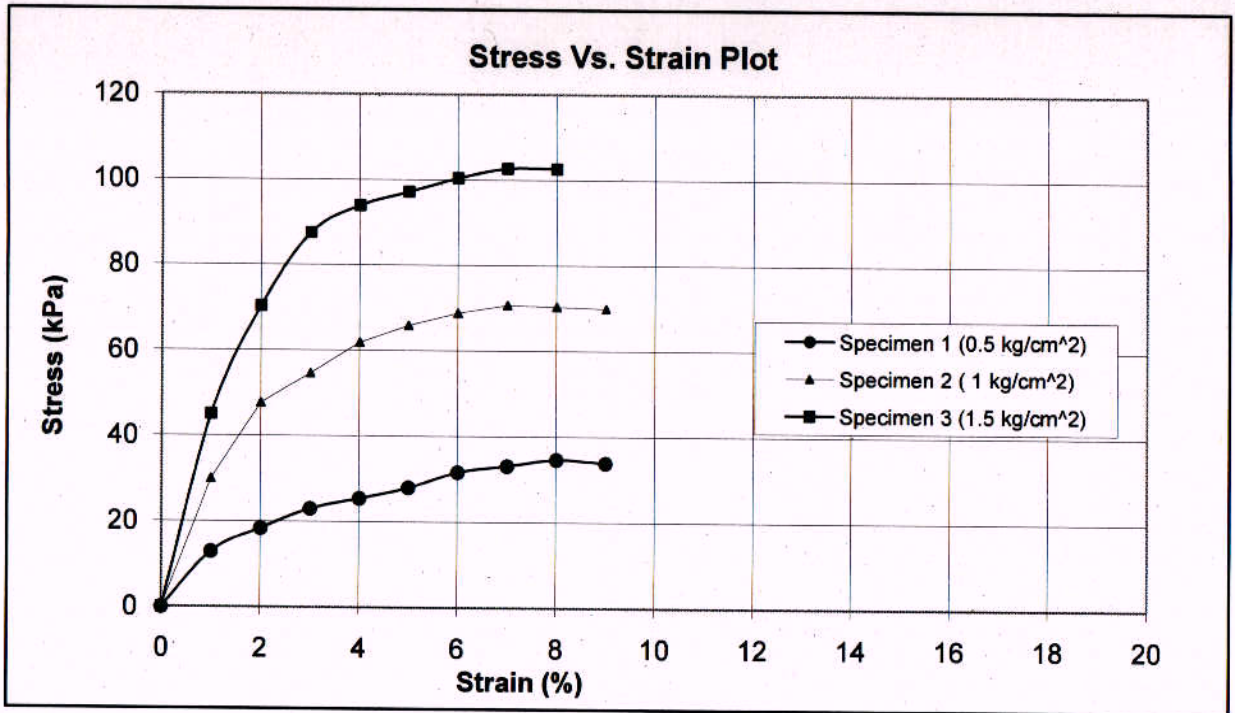
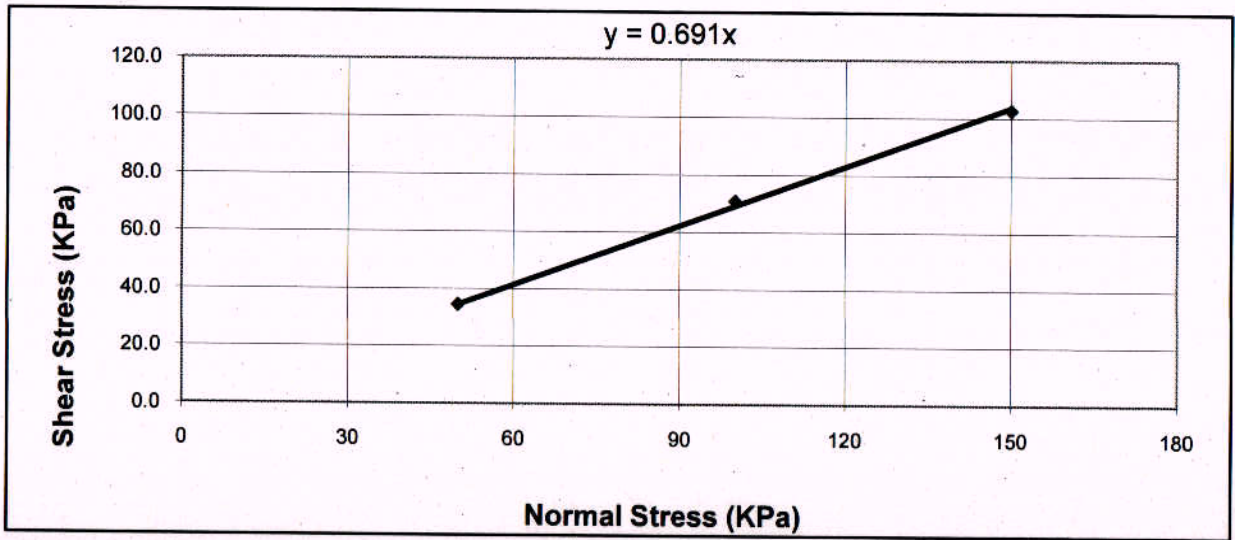
Test Result

$c = 0.0$  kPa  
 $\phi = 34.7^\circ$

BH No: 1	Chainage 51+000	Sample No.: SPT-1	Depth (m): 1.50
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: <i>[Signature]</i>	Checked by: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>
Date: 29/12/16	Date: 14/3/16	Date: 14/3/16





Sample Details

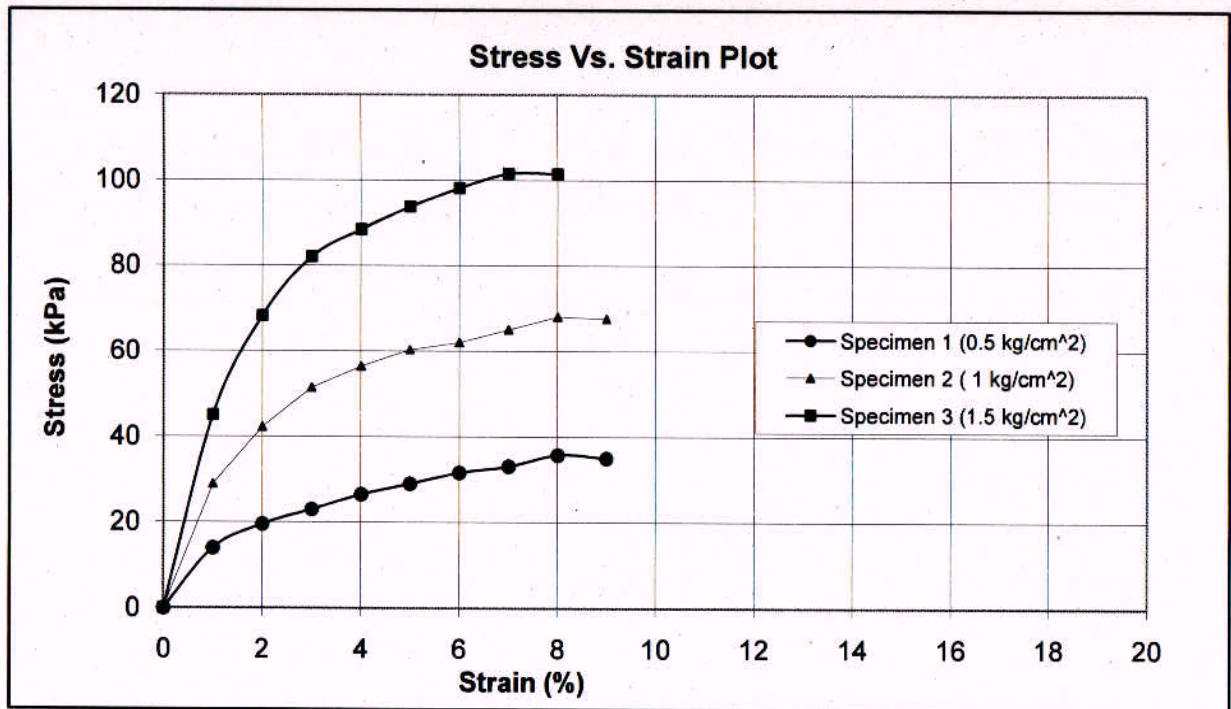
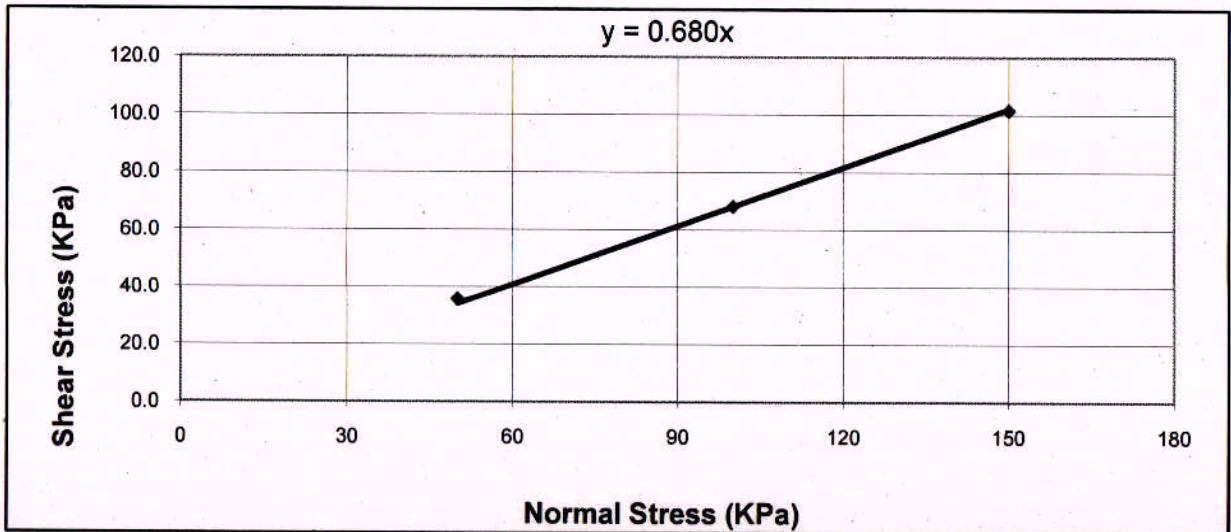
Dry-density, (mg/m<sup>3</sup>) = 1.75  
Brownish Silty SAND (SW-SM)

Test Result

c = 0.0 kPa  
 $\phi = 34.6^\circ$

BH No: 1	Chainage 51+000	Sample No.: SPT-4	Depth (m): 6.00
Site Ref: Hapur - Meerut Section	Job No: 1342		Test Report No: XPL/2015-16/02

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 28/12/16      Date: 14/3/16      Date: 14/3/16



Sample Details

Dry-density, (mg/m³) = 1.75  
Brownish Silty SAND (SW-SM)

Test Result

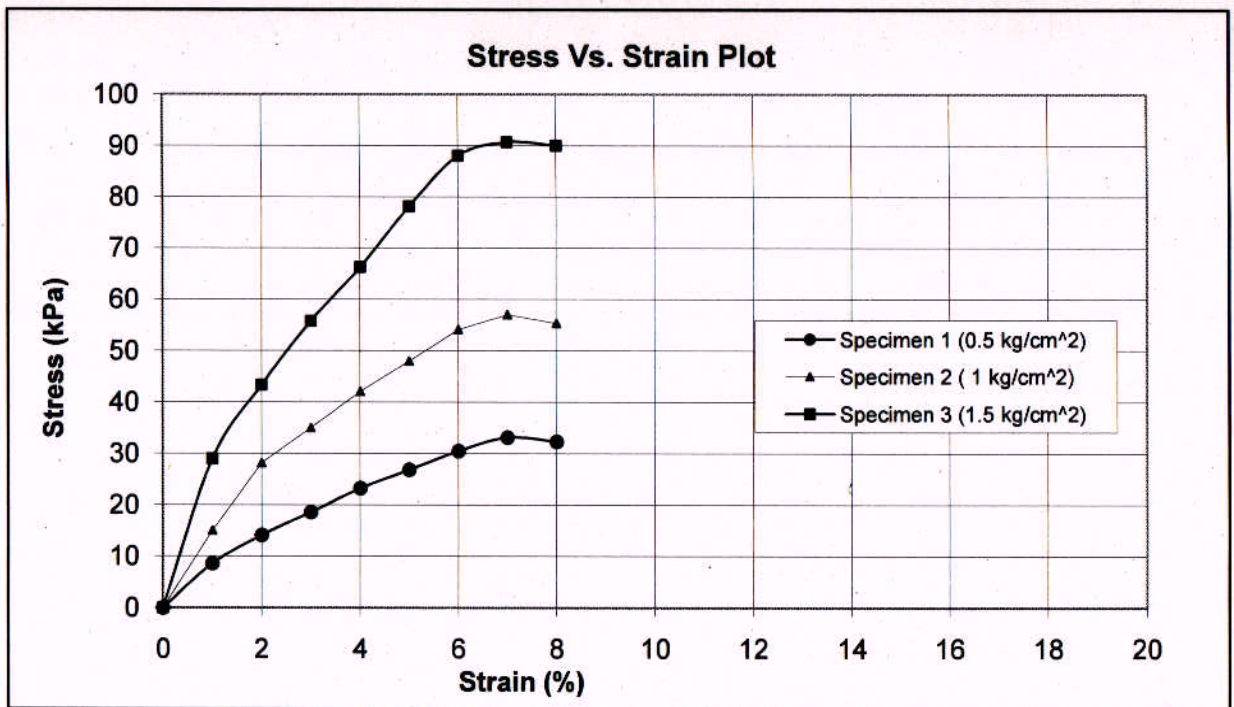
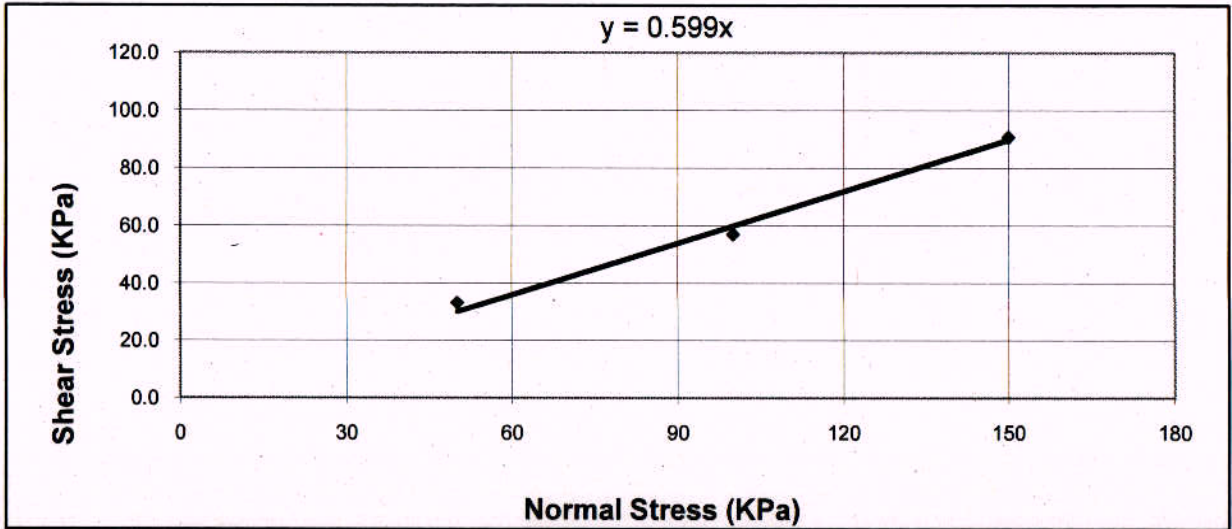
$c = 0.0$  kPa  
 $\phi = 34.2^\circ$

BH No: 1	Chainage 51+000	Sample No.: SPT-7	Depth (m): 10.50
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 28/1/16      Date: 14/3/16      Date: 14/3/16










Sample Details

Dry-density, (mg/m³) = 1.80  
Brownish Sandy SILT (ML)

Test Result

$c = 0.0$  kPa  
 $\phi = 30.9^\circ$

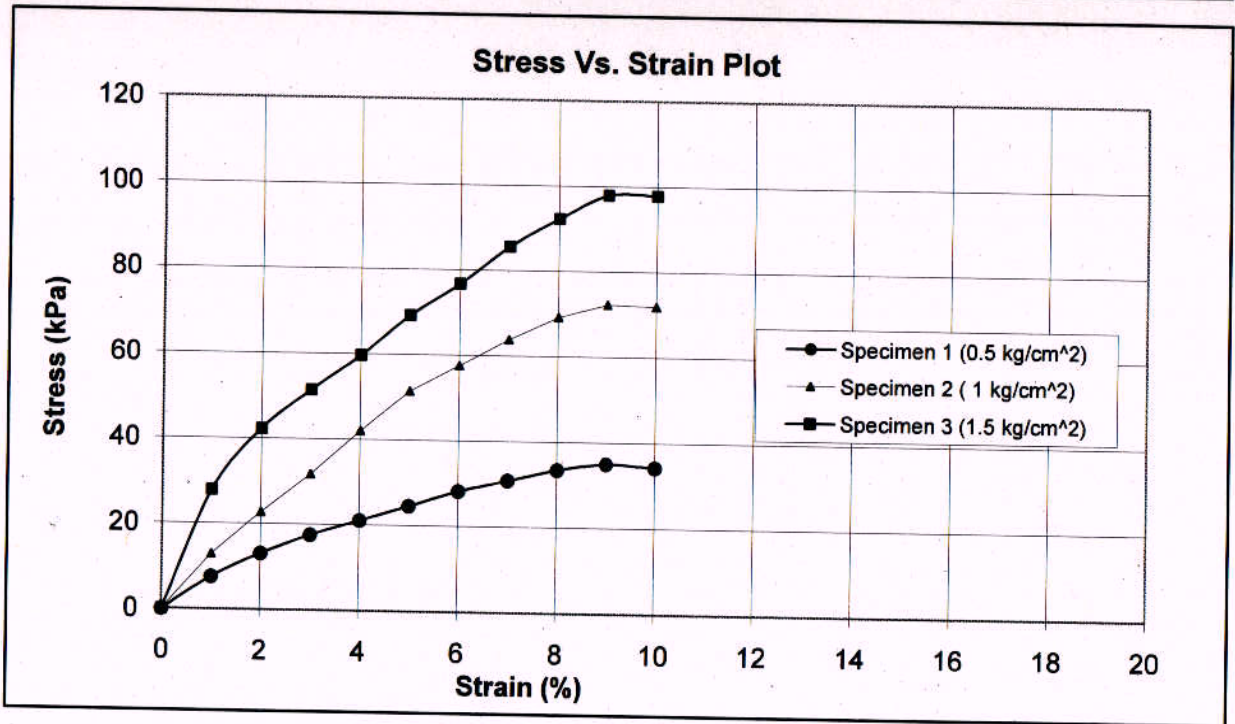
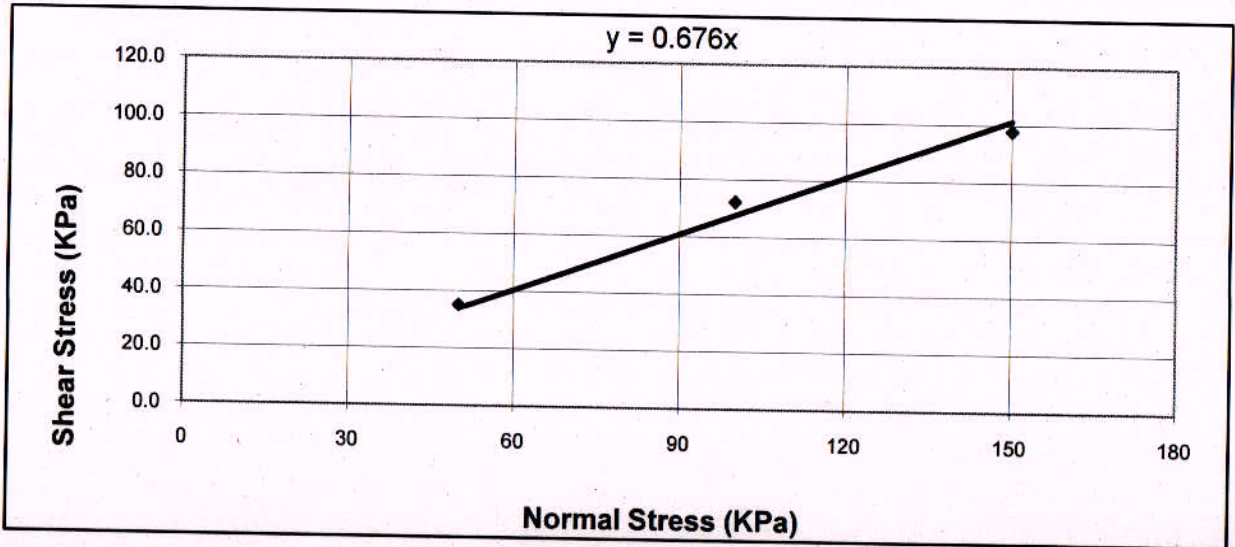
BH No: 1	Chainage 52+640	Sample No.: SPT-4	Depth (m): 6.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by:       Checked by:       Authorised Signatory: 

Date: 28/2/16      Date: 14/3/16      Date: 14/3/16



**DIRECT SHEAR TEST RESULT**  
**I.S.: 2720 : PART XIII**



Sample Details

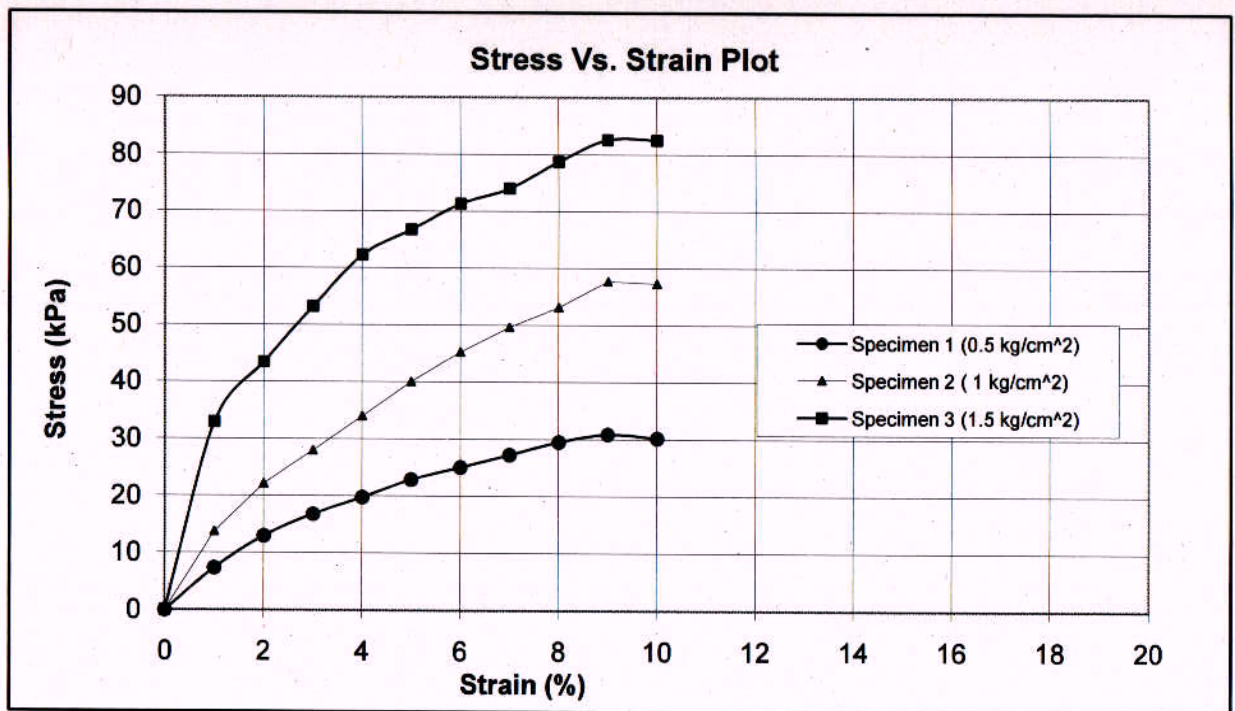
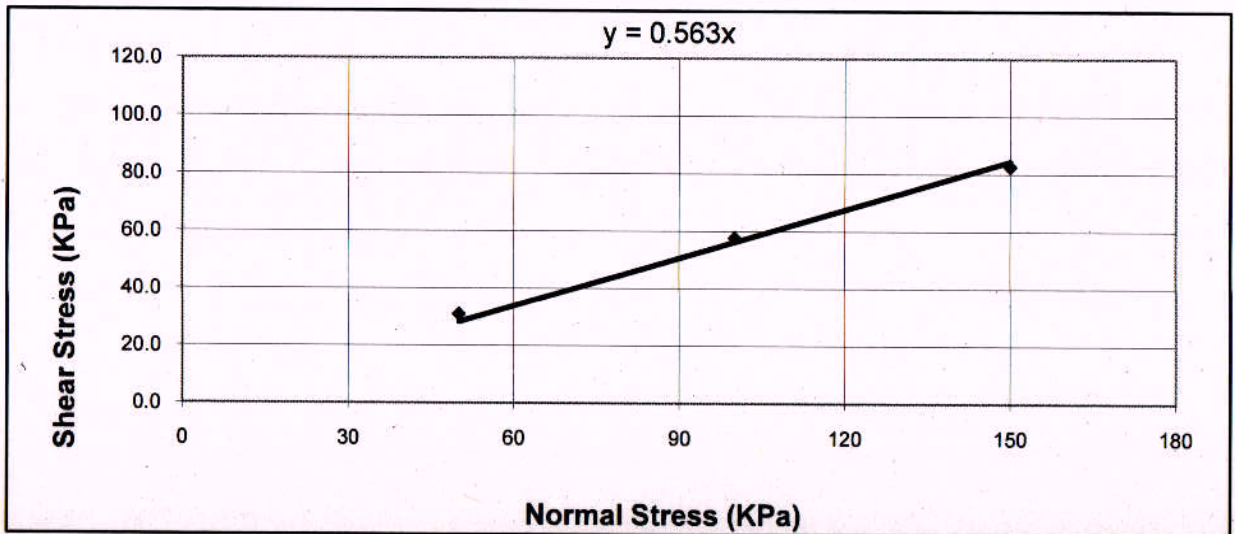
Dry-density, (mg/m<sup>3</sup>) = 1.84  
Brownish Silty SAND (SW-SM)

Test Result

c = 0.0 kPa  
φ = 34.0 °

BH No: 1	Chainage 52+640	Sample No.: SPT-7	Depth (m): 10.50
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: <i>[Signature]</i>	Checked by: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>
Date: 28/2/16	Date: 14/3/16	Date: 14/3/15



Sample Details

Dry-density, (mg/m³) = 1.73  
Brownish Sandy SILT (ML)

Test Result

c = 0.0 kPa  
φ = 29.4 °

BH No: 1	Chainage 54+825	Sample No.: UDS-1	Depth (m): 2.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*

Checked by:

*[Signature]*

Authorised Signatory:

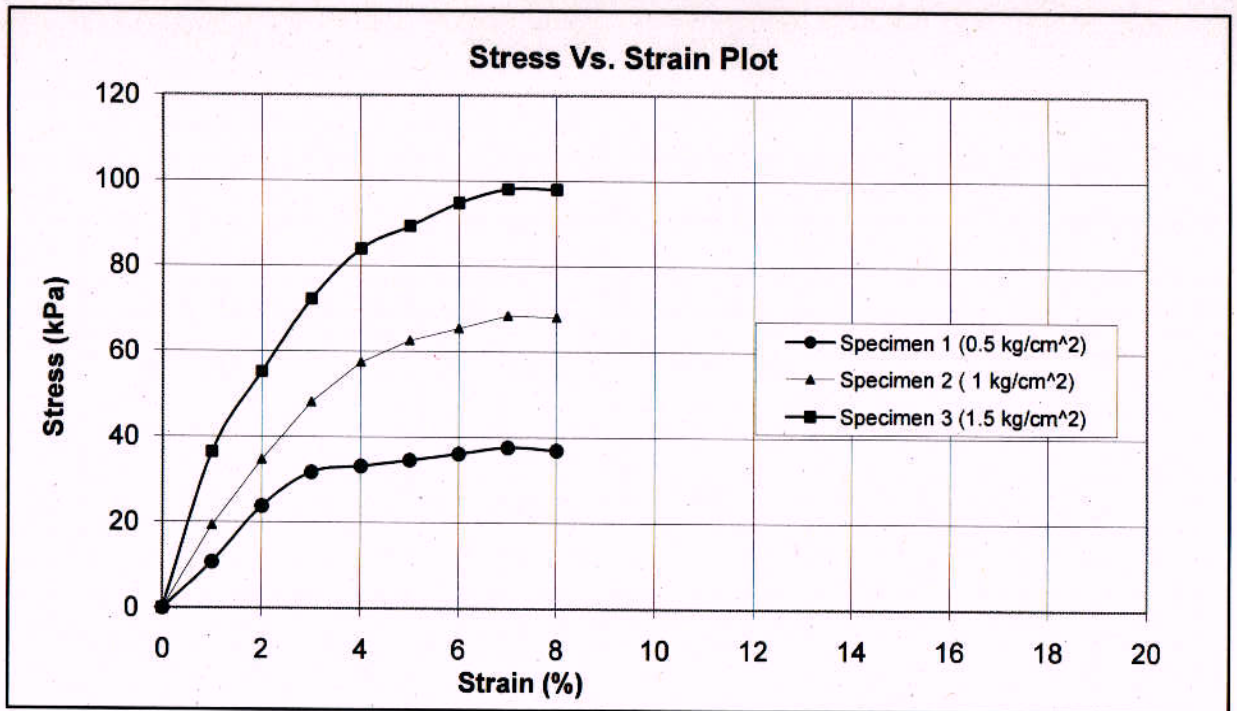
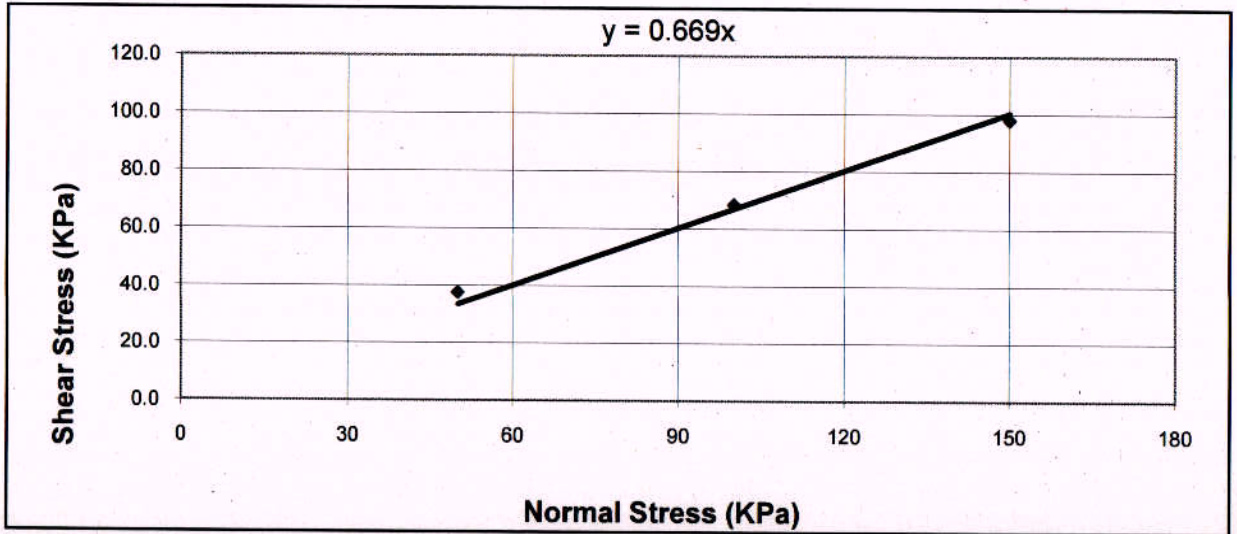
*[Signature]*

Date: 28/2/16

Date: 14/3/16

Date: 14/3/16





Sample Details

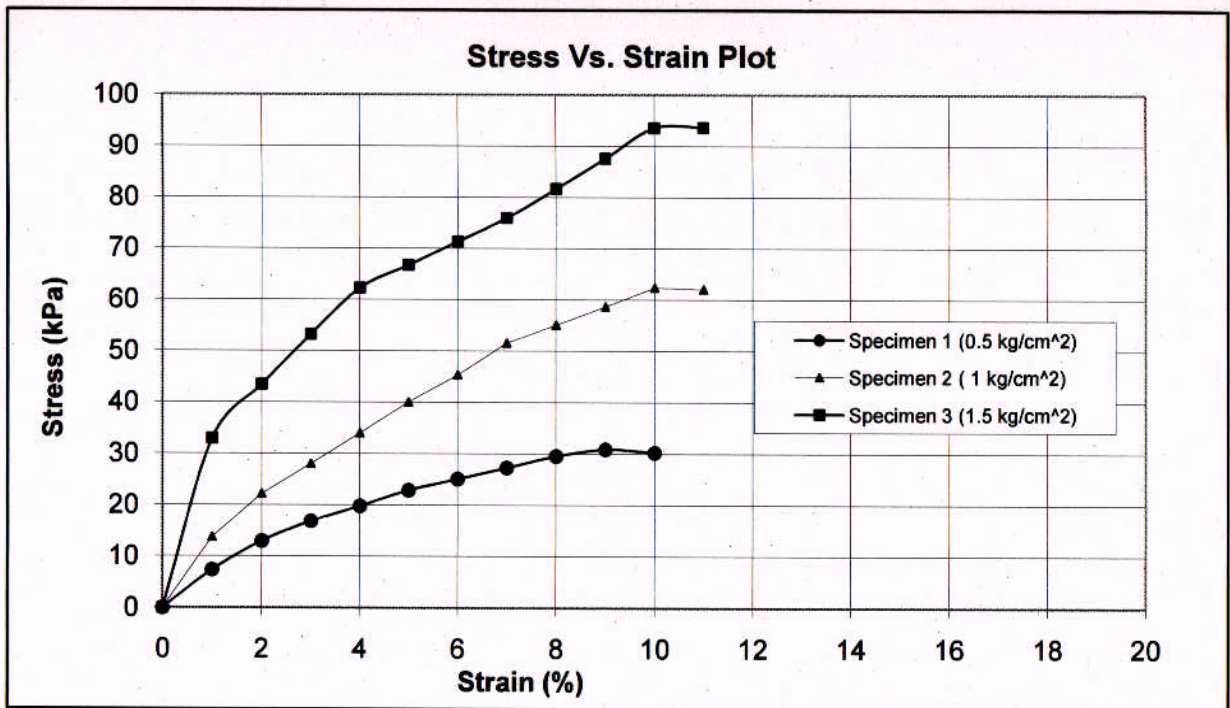
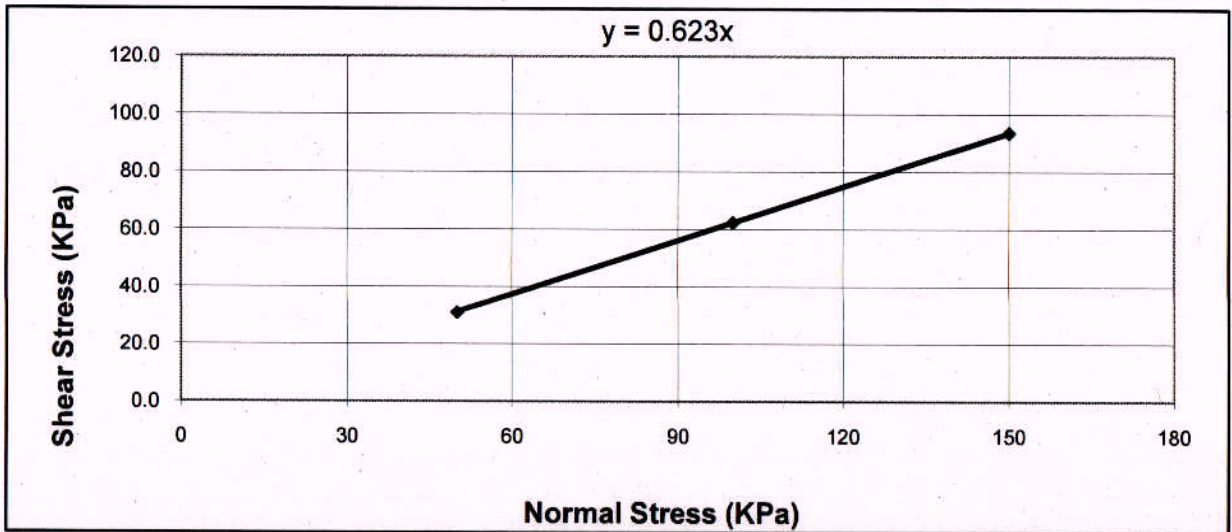
Dry-density, (mg/m³) = 1.66  
Poorly Graded SAND (SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 33.8^\circ$

BH No: 1	Chainage 54+825	Sample No.: SPT-8	Depth (m): 12.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 22/12/16      Date: 14/3/16      Date: 14/3/16




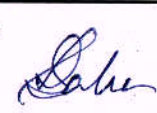
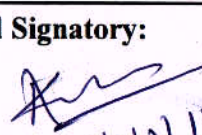
Sample Details

Dry-density, (mg/m³) = 1.65  
Brownish Sandy SILT (ML)

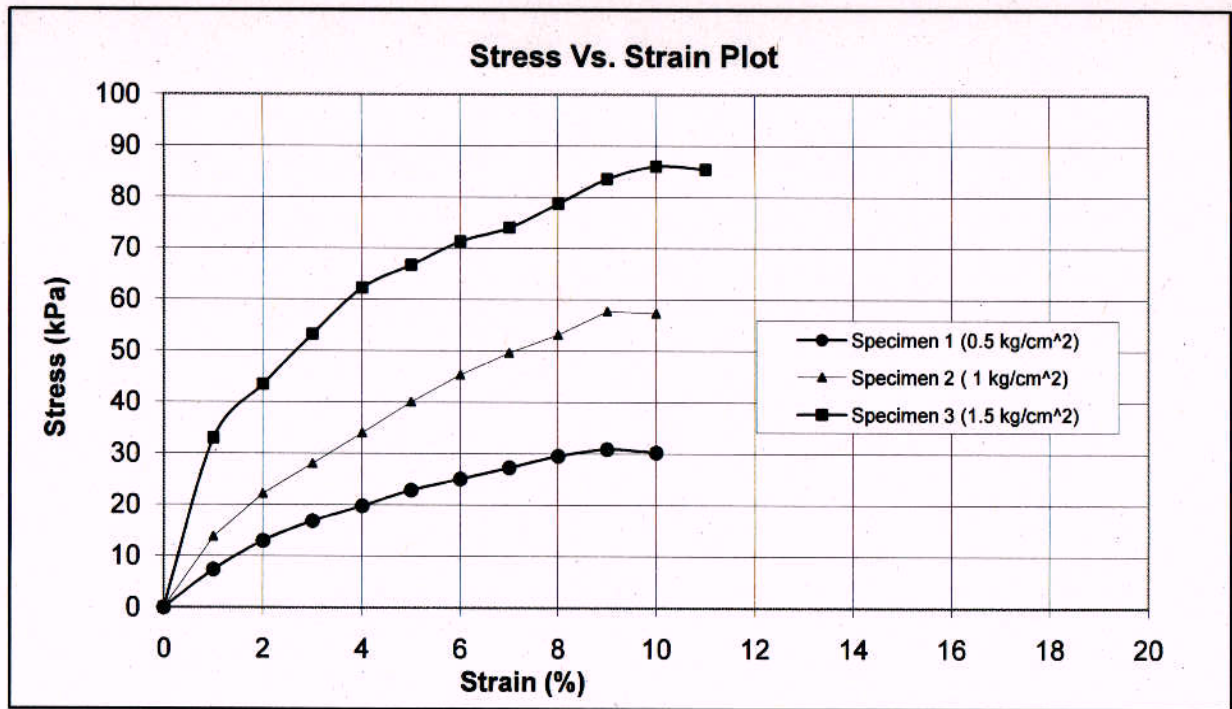
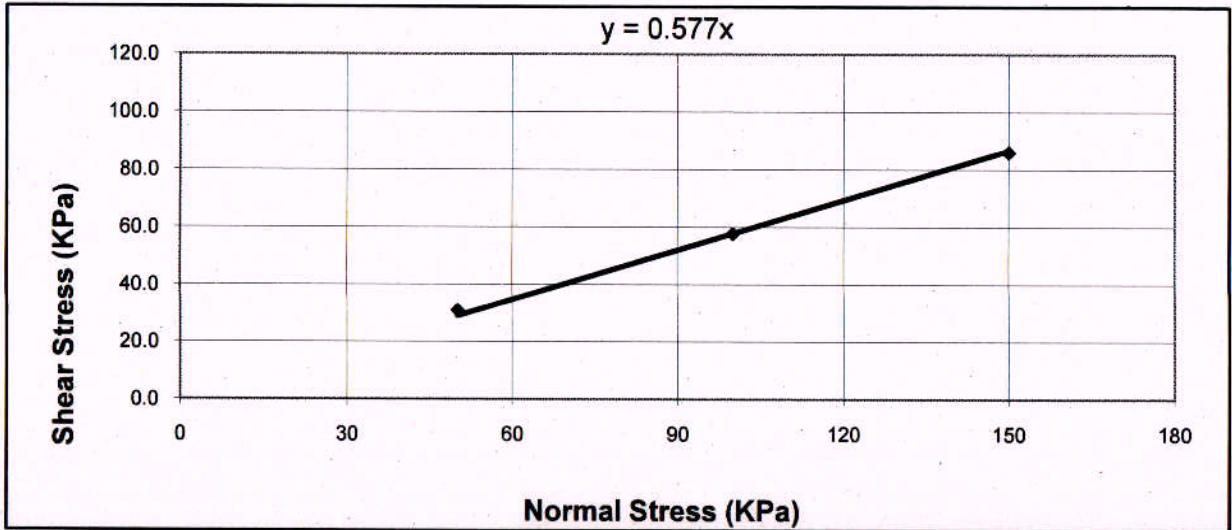
Test Result

c = 0.0 kPa  
 $\phi = 31.9^\circ$

BH No: 1	Chainage 54+825	Sample No.: UDS-9	Depth (m): 26.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by:  Checked by:  Authorised Signatory:   
Date: 29/12/16 Date: 14/3/16 Date: 14/3/16





Sample Details

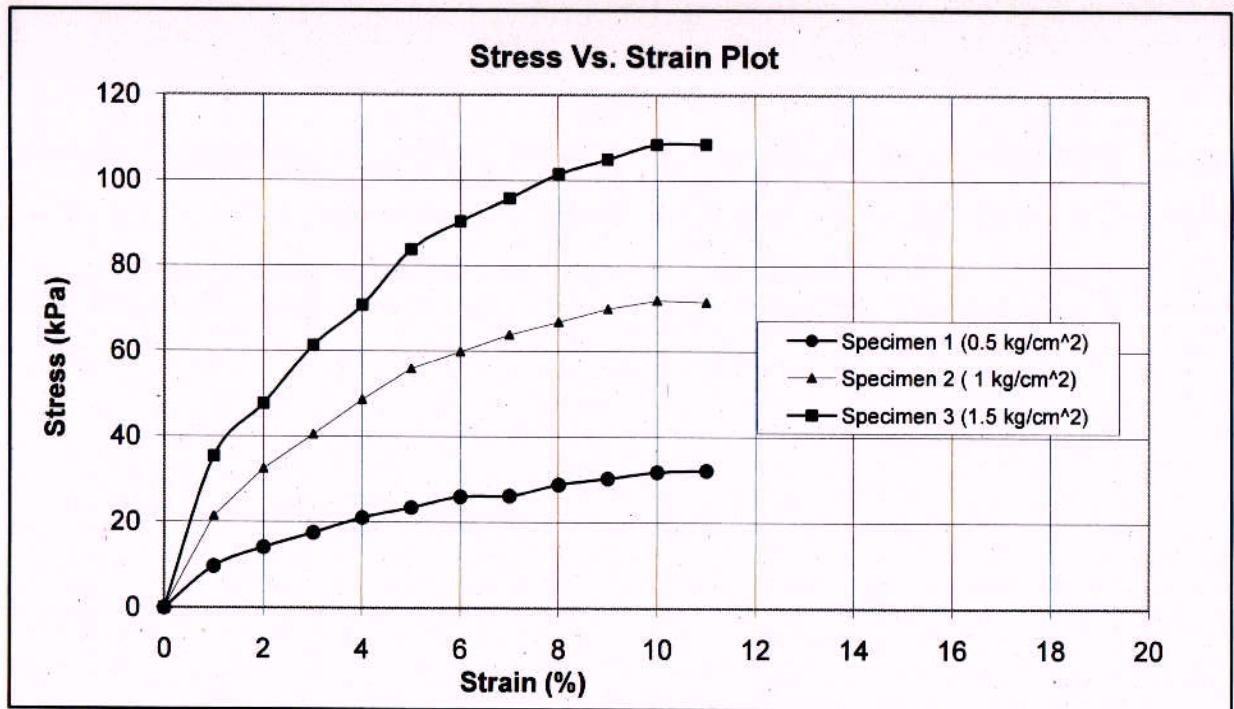
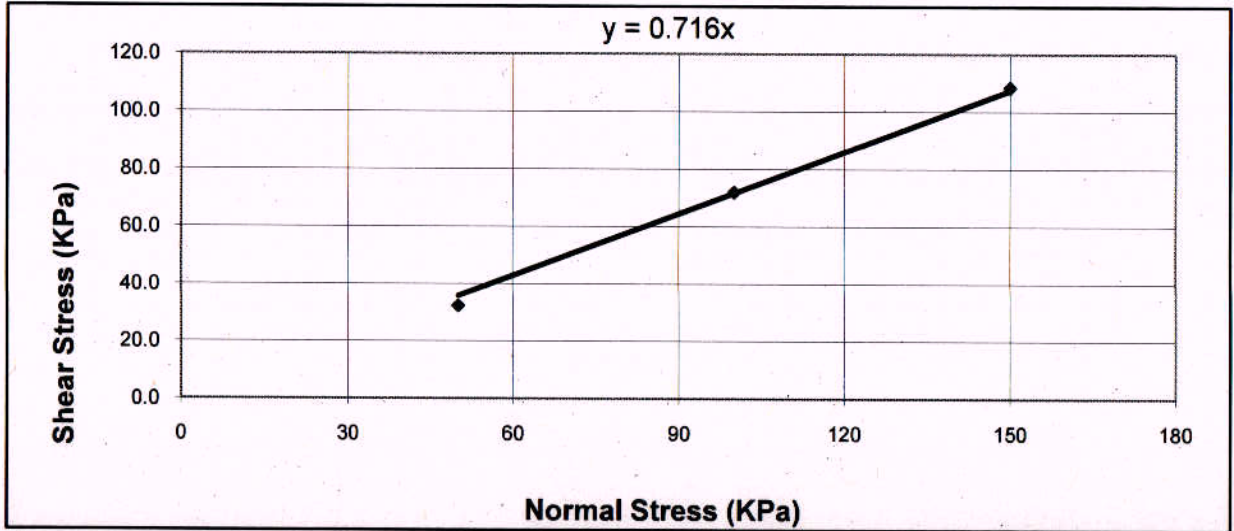
Dry-density, (mg/m<sup>3</sup>) = 1.65  
Brownish Sandy SILT (ML)

Test Result

c = 0.0 kPa  
φ = 30.0 °

BH No: 1	Chainage 55+850	Sample No.: UDS-1	Depth (m): 2.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 29/12/16      Date: 14/3/18      Date: 14/3/18



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.86  
Poorly Graded SAND(SP)

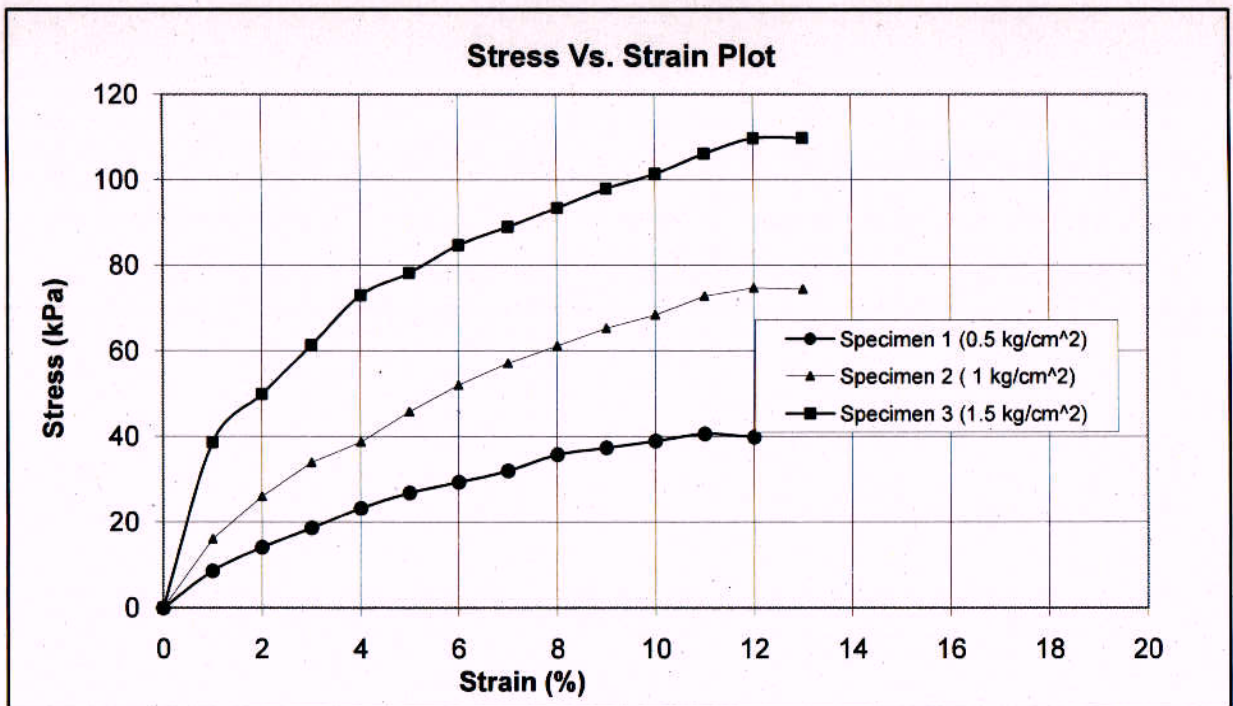
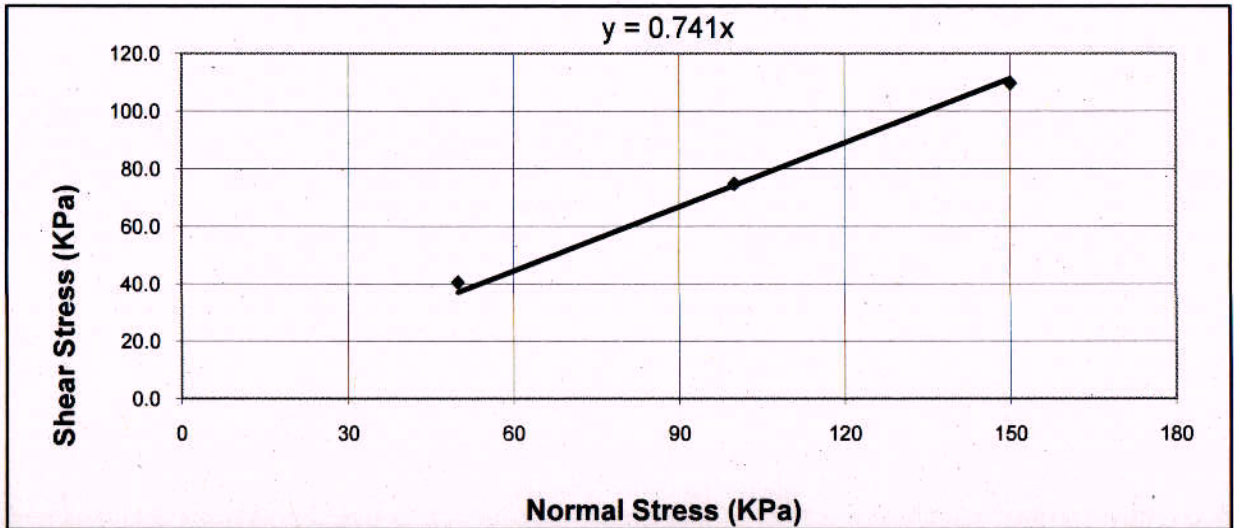
Test Result

c = 0.0 kPa  
 $\phi = 35.6^\circ$

BH No: 1	Chainage 55+850	Sample No.: SPT-9	Depth (m): 13.50
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 29/12/16      Date: 14/3/16      Date: 24/3/16








Sample Details

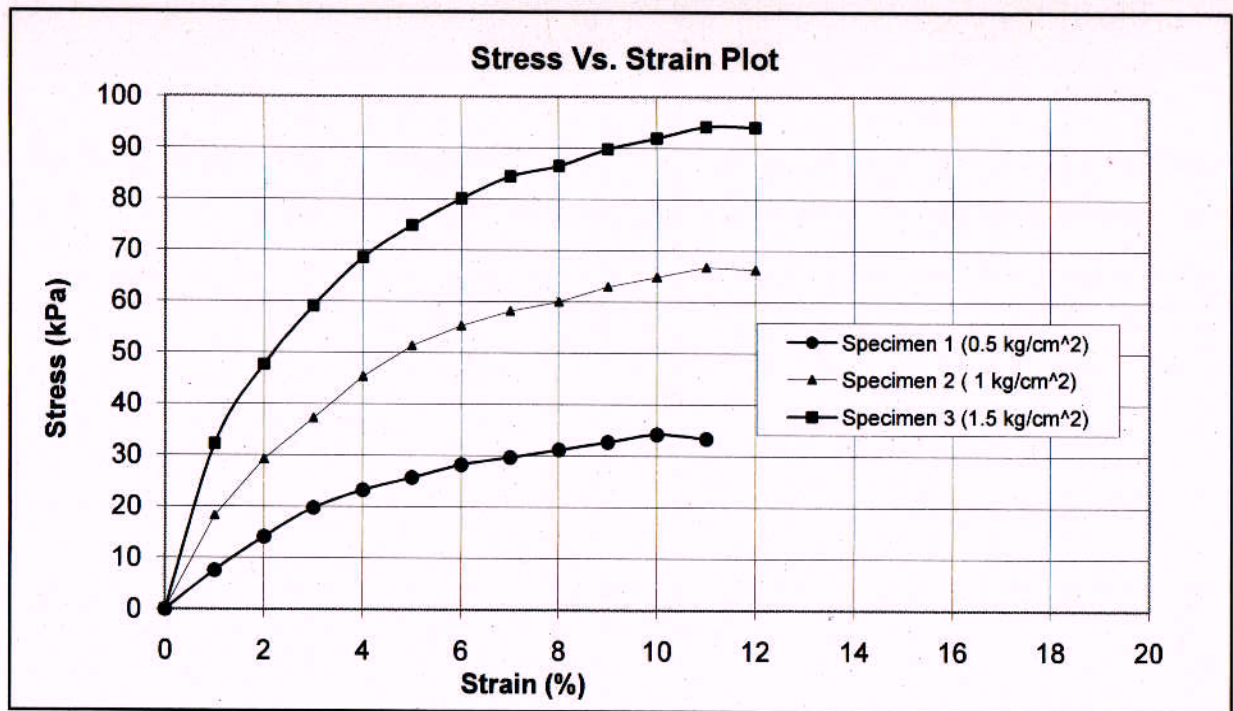
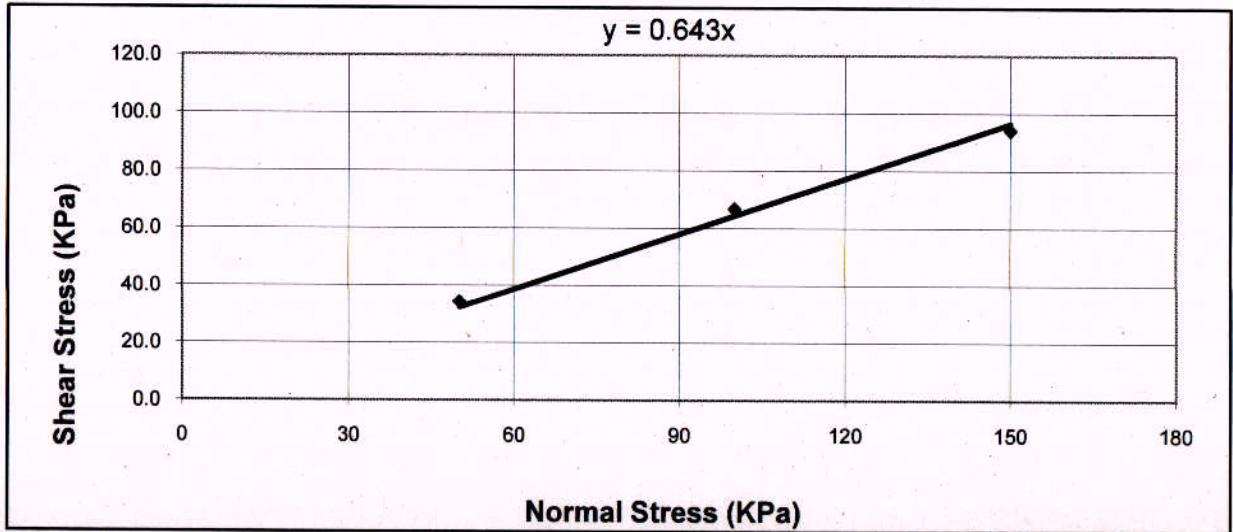
Dry-density, (mg/m<sup>3</sup>) = 1.89  
Poorly Graded SAND(SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 36.5^\circ$

BH No: 1	Chainage 55+850	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by:  Checked by:  Authorised Signatory:   
Date: 29/11/16 Date: 14/3/16 Date: 14/3/16



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.63  
Poorly Graded SAND(SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 32.7^\circ$

BH No: 1	Chainage 56+780	Sample No.: SPT-5	Depth (m): 7.50
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*

Checked by:

Authorised Signatory:

Date: 29/1/16

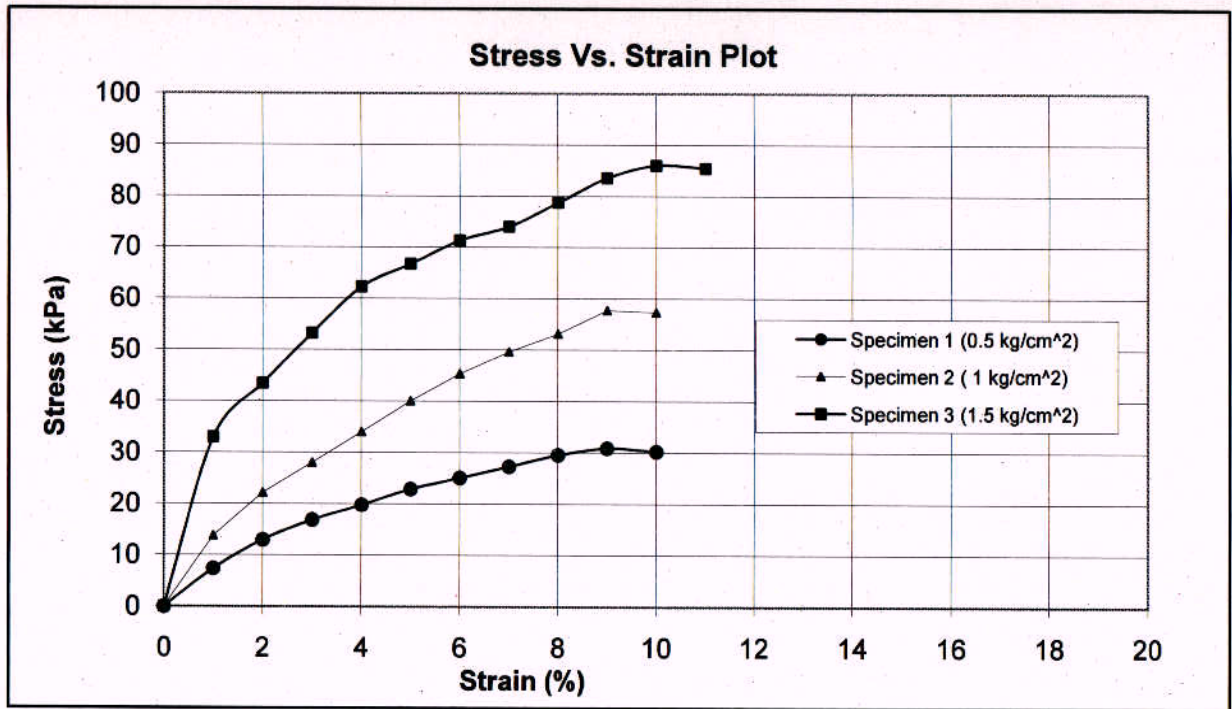
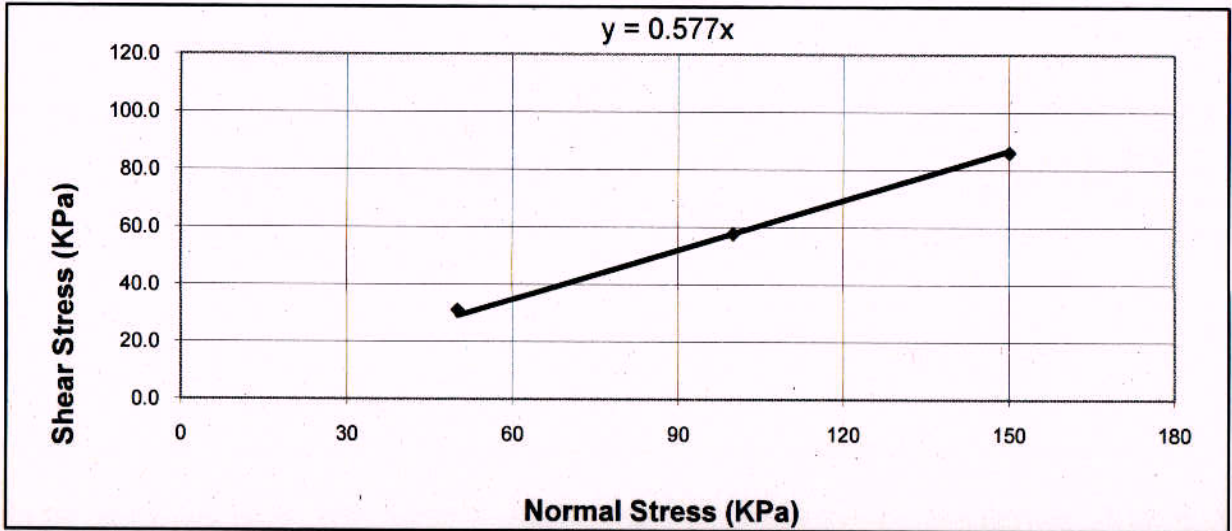
Date:

*[Signature]*  
14/3/16

Date:

*[Signature]*  
14/3/16






Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.76  
Brownish Sandy SILT (ML)


Test Result

$c = 0.0$  kPa  
 $\phi = 30.0^\circ$


BH No: 1	Chainage 56+780	Sample No.: UDS-5	Depth (m): 14.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: 

Checked by:

  
Date: 14/3/16

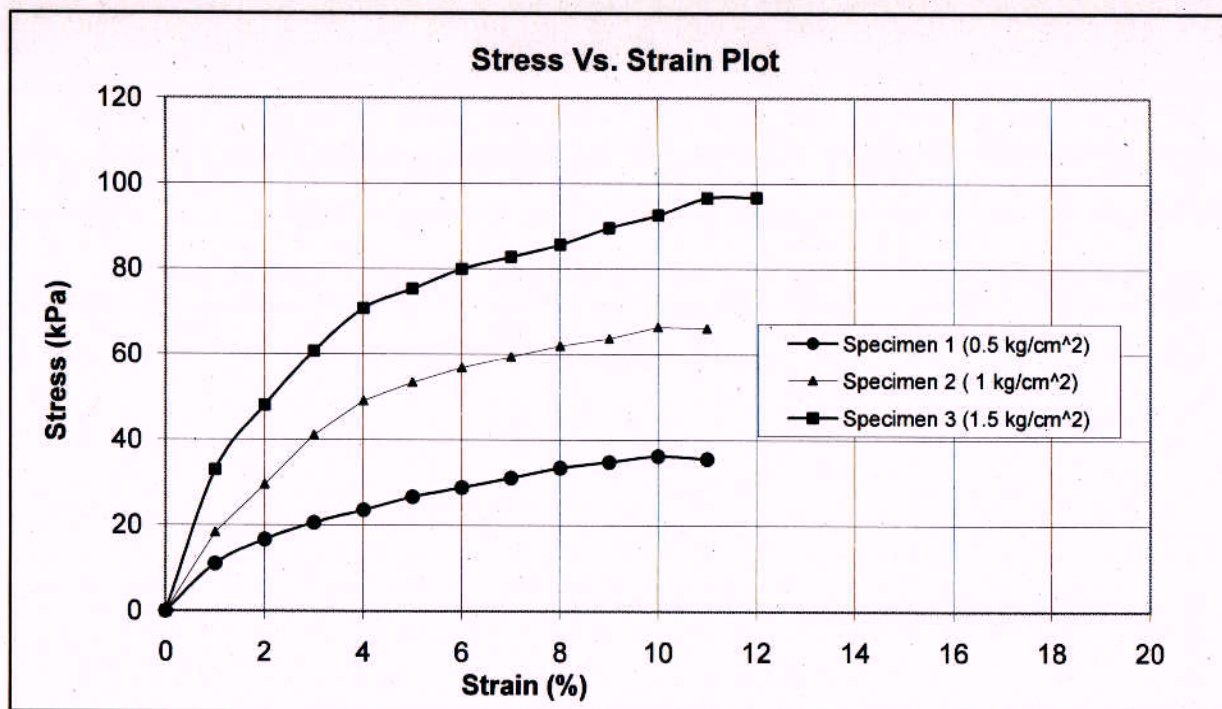
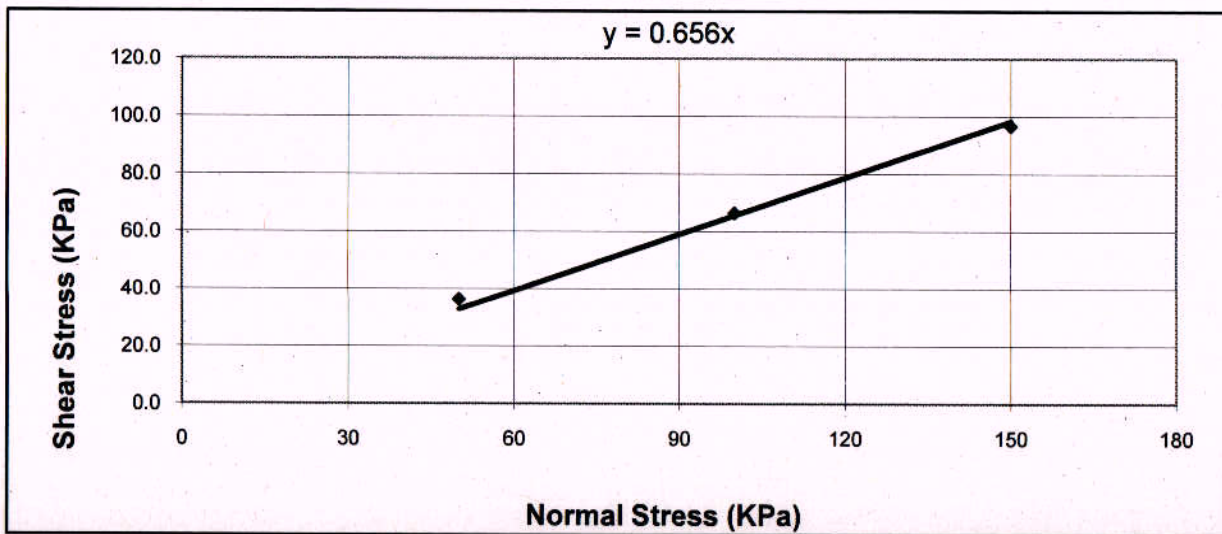
Authorised Signatory:

  
Date: 14/3/16

Date: 29/2/16

Date:

Date:



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.88  
Poorly Graded SAND(SP)

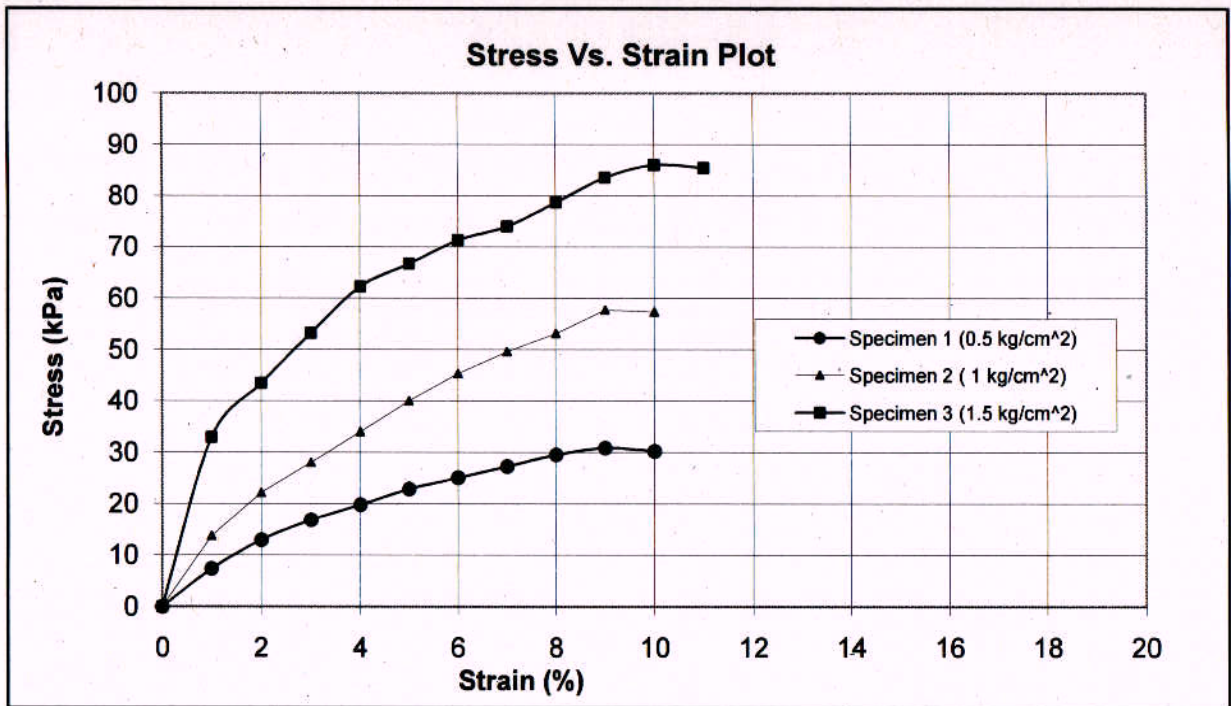
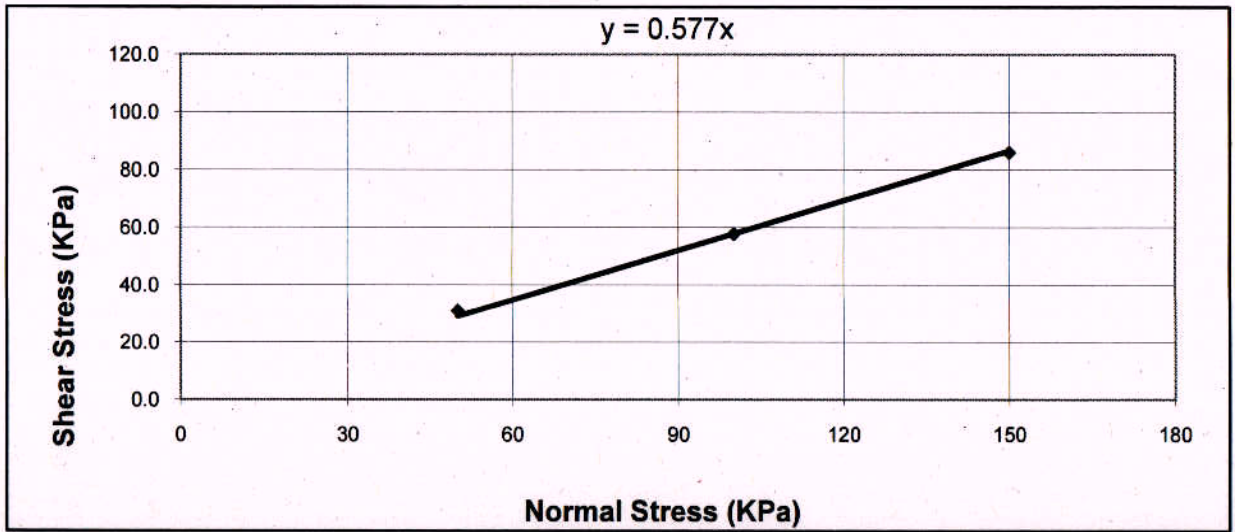
Test Result

c = 0.0 kPa  
φ = 33.3 °

BH No: 1	Chainage 56+780	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]* Checked by: *[Signature]* Authorised Signatory: *[Signature]*  
Date: 11/3/16 Date: 14/3/16 Date: 14/3/18





Sample Details

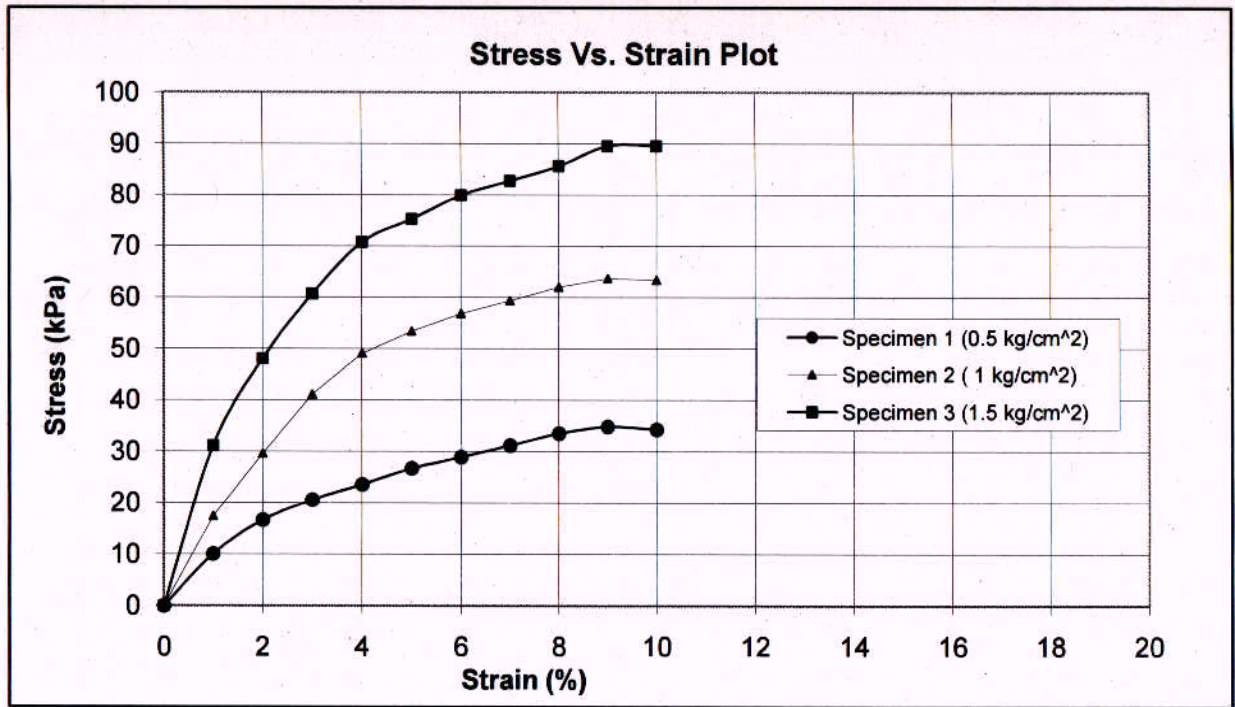
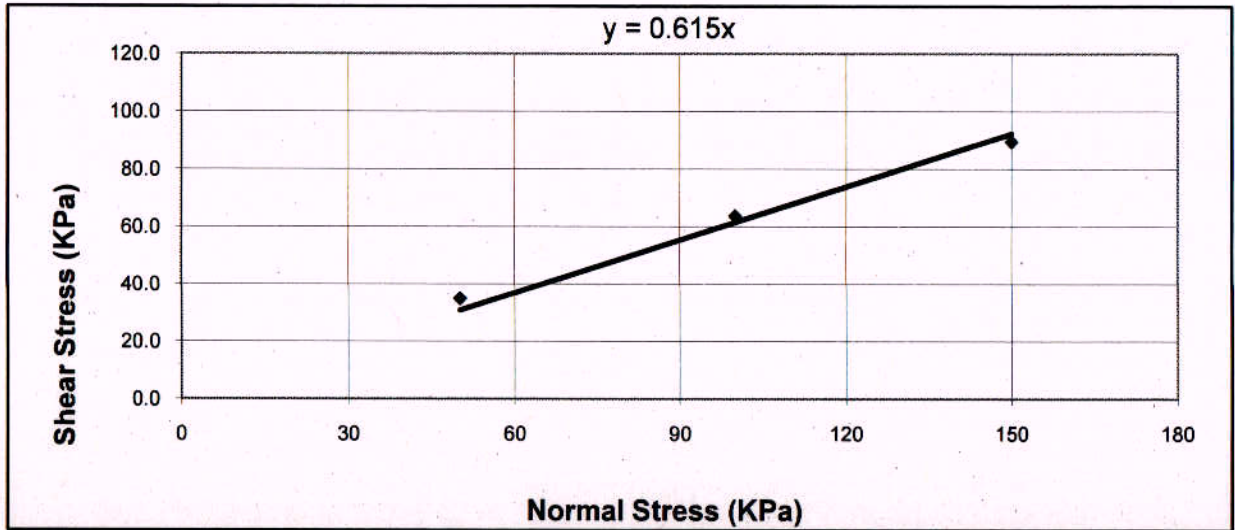
Dry-density, (mg/m<sup>3</sup>) = 1.51  
Brownish Sandy SILT (ML)

Test Result

c = 0.0 kPa  
φ = 30.0°

BH No: 1	Chainage 57+555	Sample No.: UDS-2	Depth (m): 5.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 9/3/16      Date: 14/3/16      Date: 14/3/16



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.70  
Brownish Silty SAND (SW-SM)

Test Result

$c = 0.0$  kPa  
 $\phi = 31.6^\circ$

BH No: 1	Chainage 57+555	Sample No.: SPT-10	Depth (m): 15.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*

Checked by:

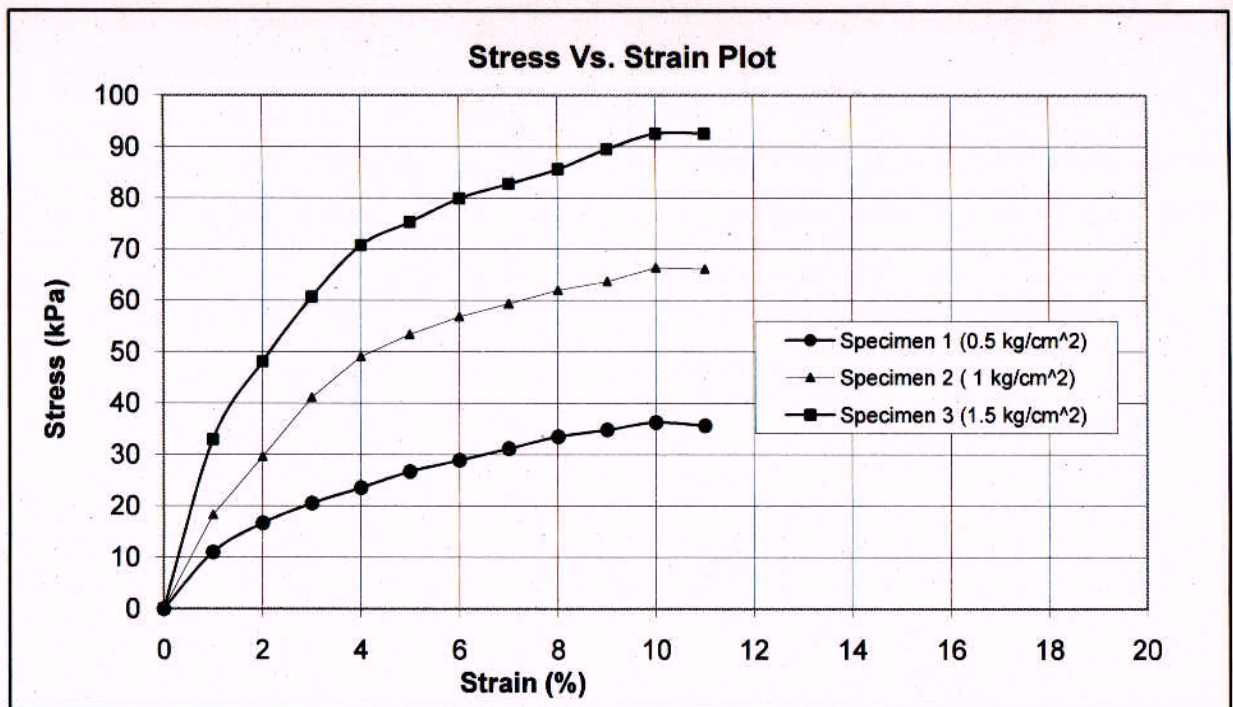
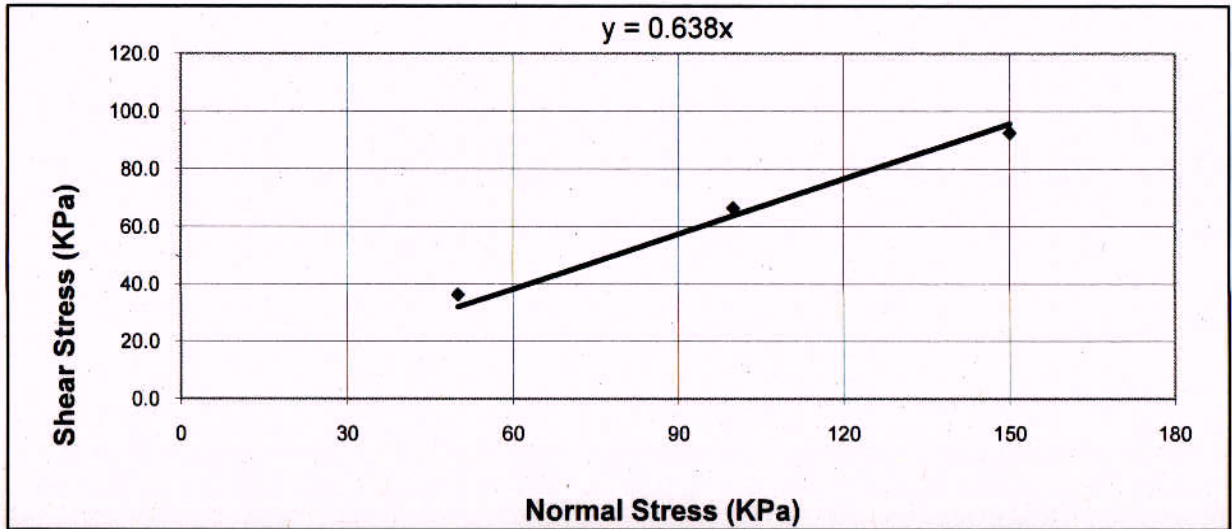
Authorised Signatory:

Date: 11/3/16

Date: 14/3/16

Date: 14/3/16






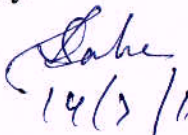
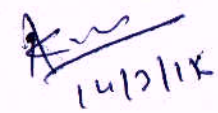
Sample Details

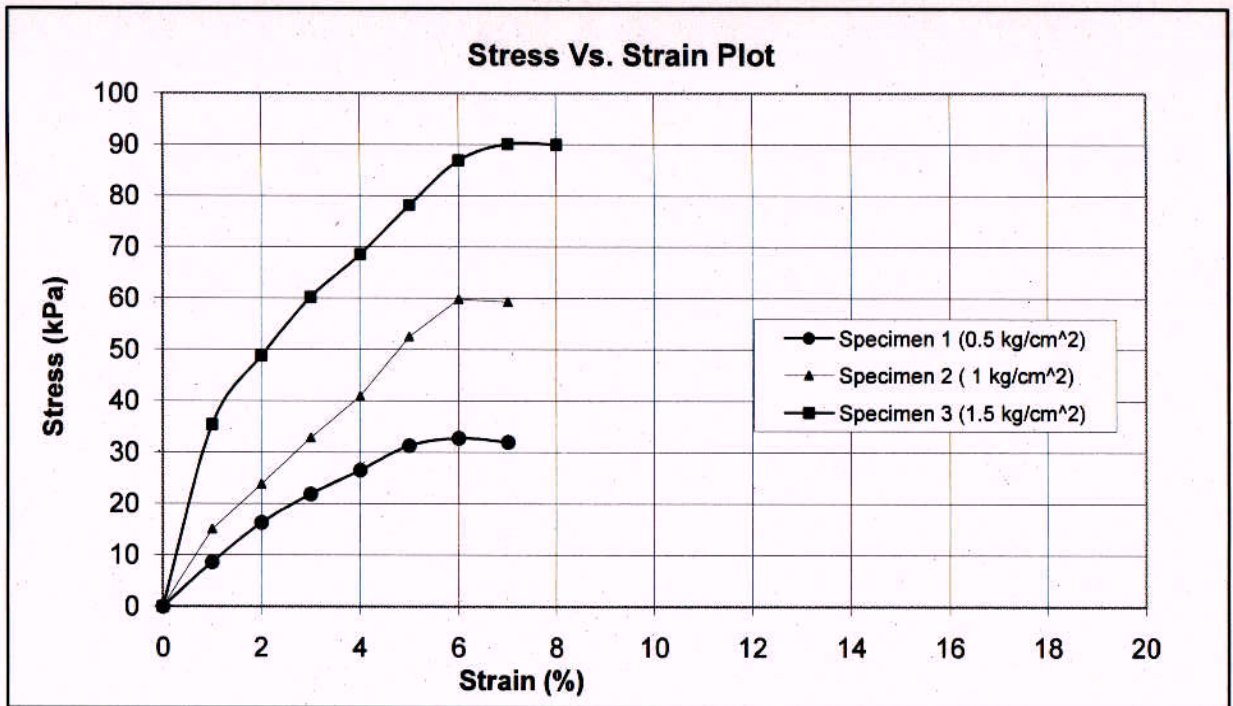
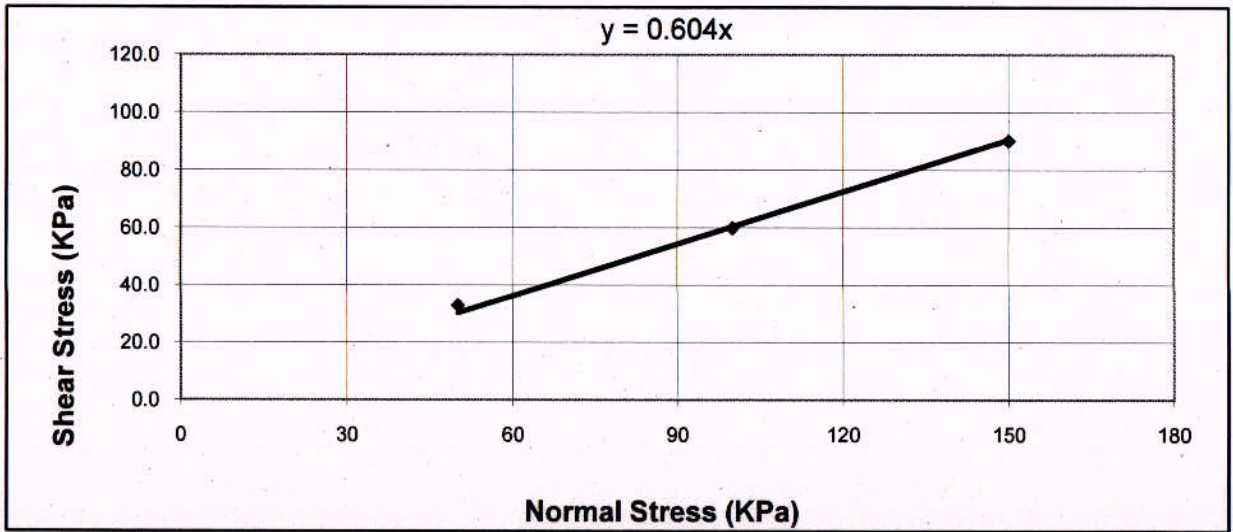
Dry-density, (mg/m<sup>3</sup>) = 1.88  
Brownish Silty SAND (SW-SM)

Test Result

$c = 0.0$  kPa  
 $\phi = 32.5^\circ$

BH No: 1	Chainage 57+555	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by:  Checked by:  Authorised Signatory:   
Date: 11/3/16 Date: 14/3/16 Date: 14/3/16



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.75  
Brownish Sandy SILT (ML)

Test Result

$c = 0.0$  kPa  
 $\phi = 31.1^\circ$

BH No: 1	Chainage 58+400	Sample No.: UDS-4	Depth (m): 11.00
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: *[Signature]*

Checked by:

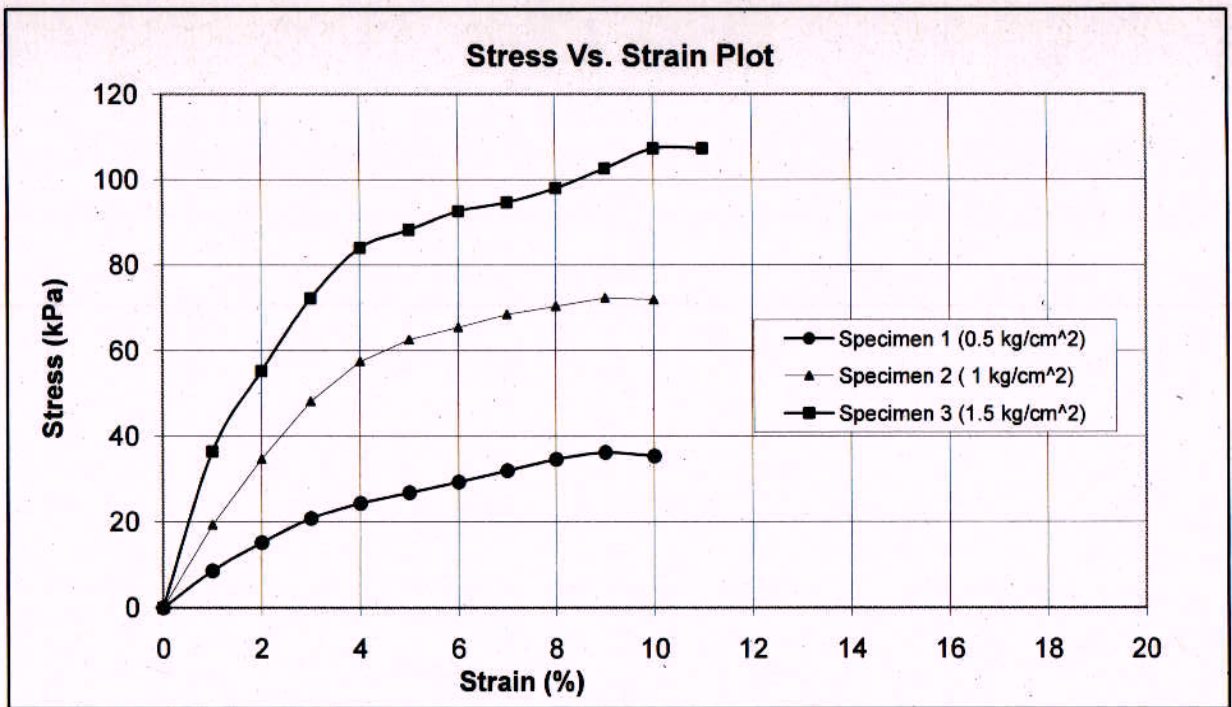
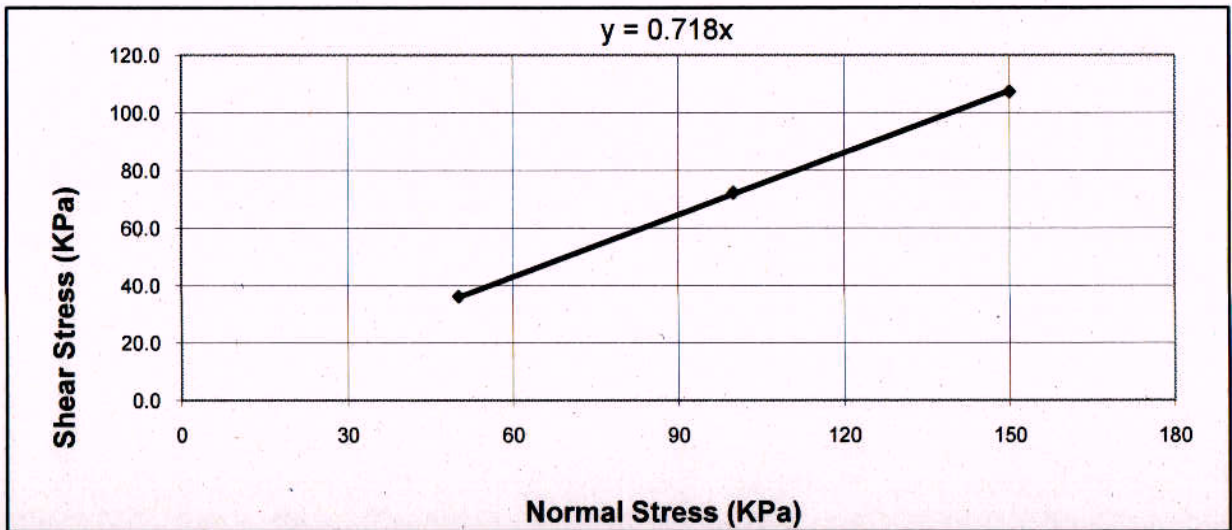
Authorised Signatory:

Date: 14/3/16

Date:

Date:





Sample Details

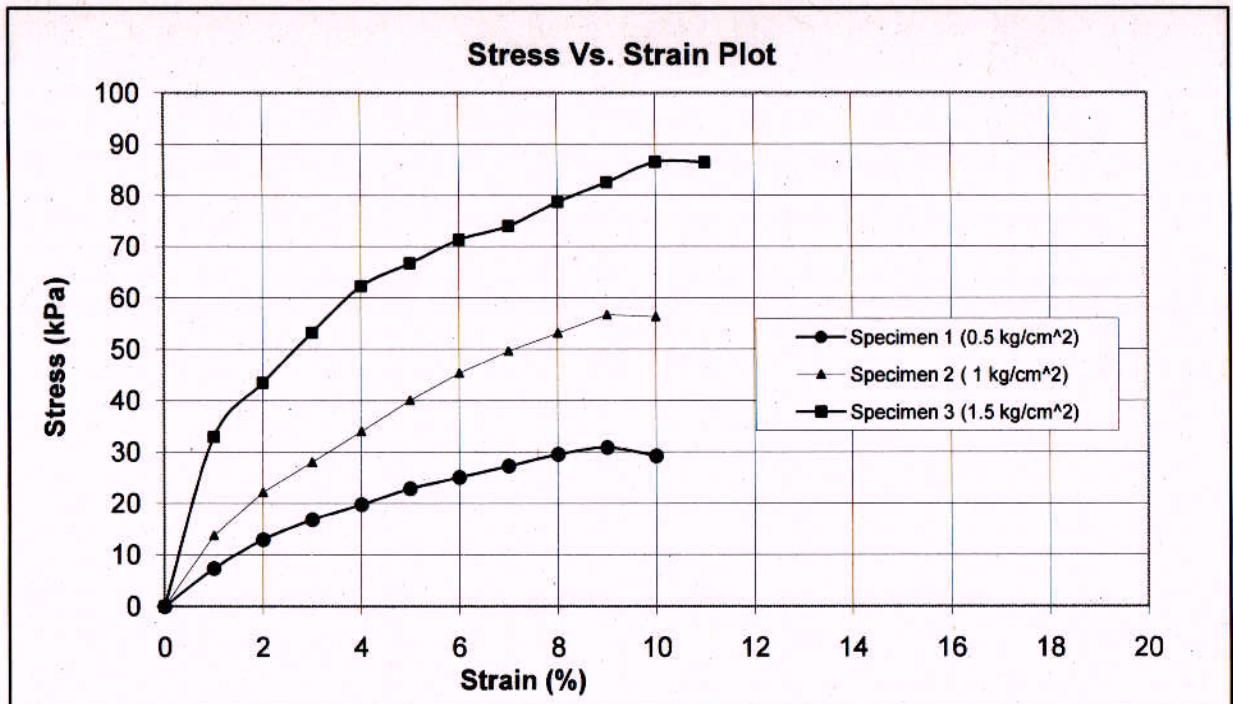
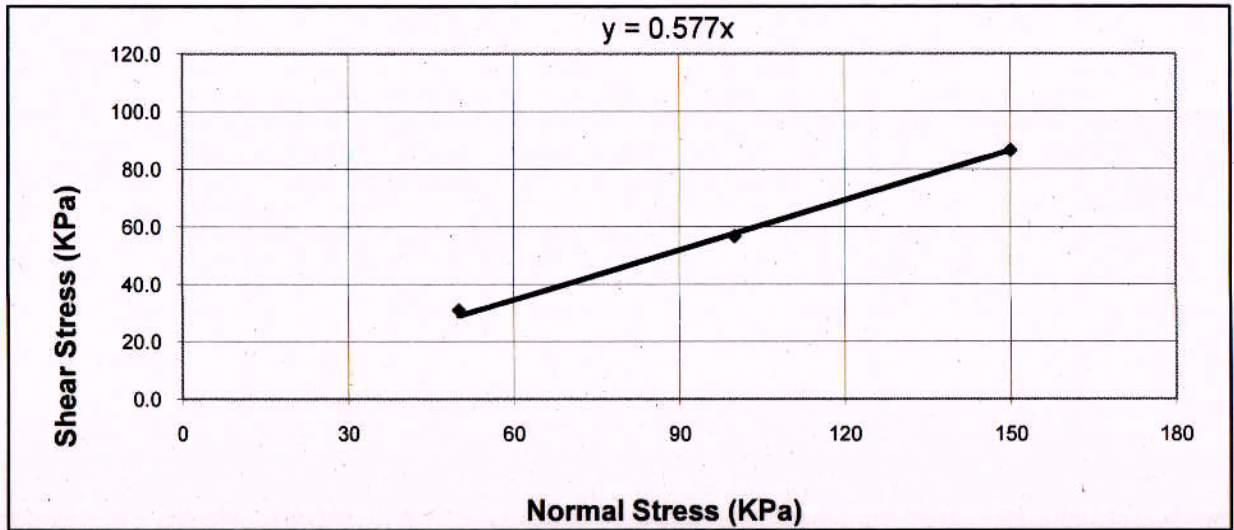
Dry-density, (mg/m<sup>3</sup>) = 1.96  
Poorly Graded SAND(SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 35.7^\circ$

BH No: 1	Chainage 58+400	Sample No.: SPT-18	Depth (m): 27.00
Site Ref: Hapur - Meerut Section	Job No: 1342		Test Report No: XPL/2015-16/02

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 11/3/16      Date: 14/3/16      Date: 14/3/16



Sample Details

Dry-density, (mg/m³) = 1.70  
Brownish Sandy SILT (ML)

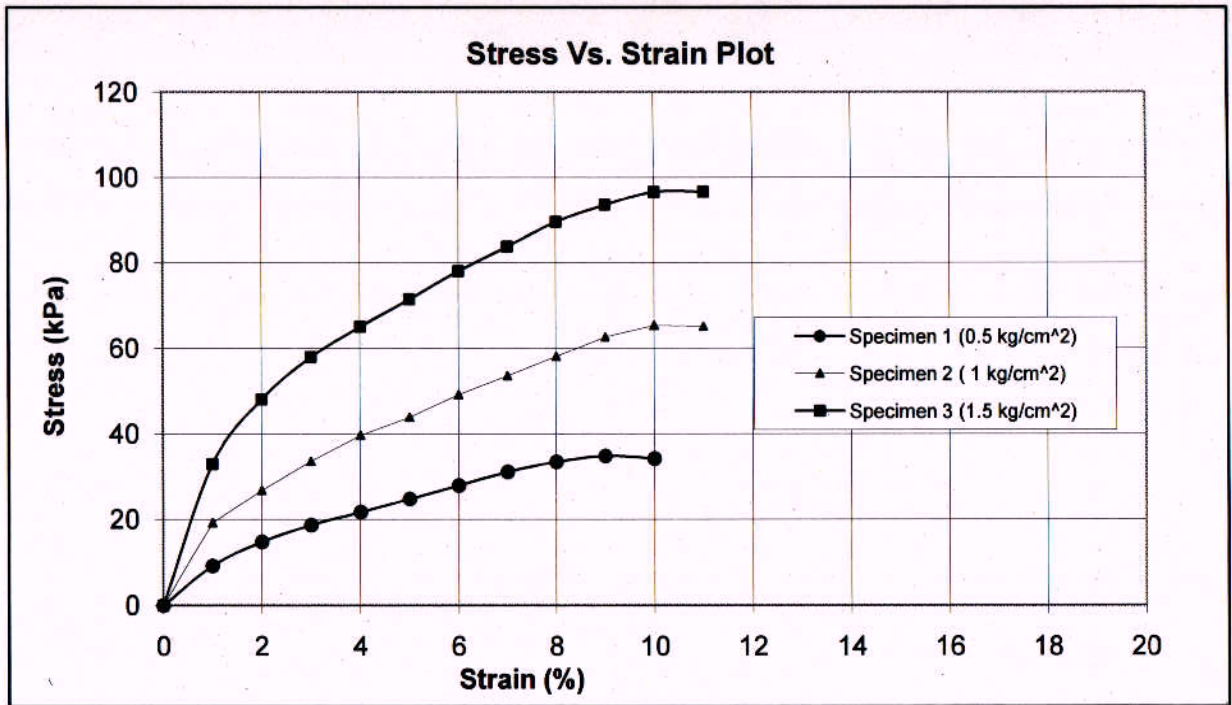
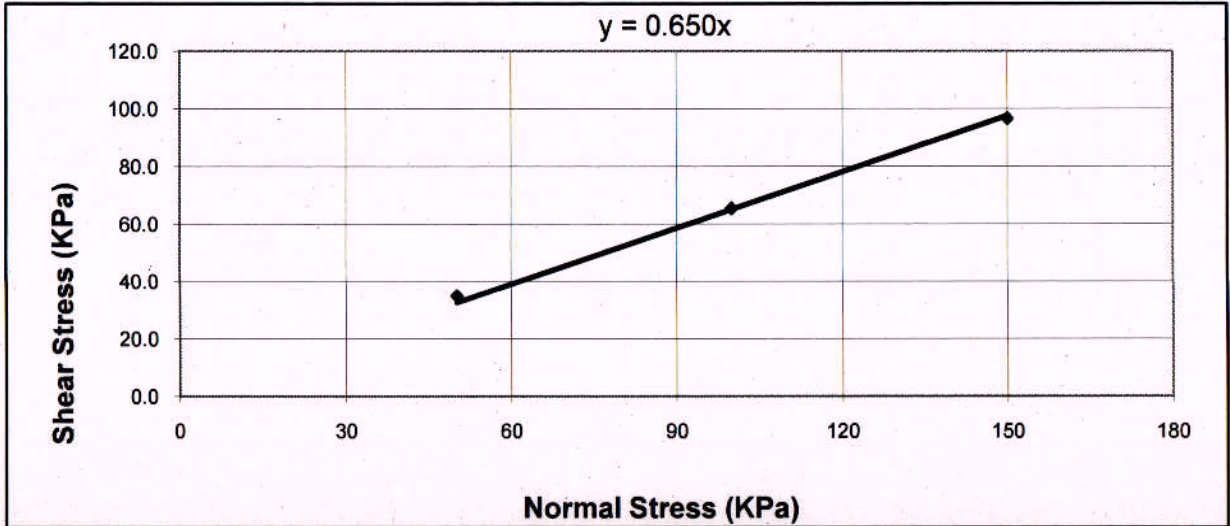
Test Result

c = 0.0 kPa  
φ = 30.0°

BH No: 1	Chainage 62+160	Sample No.: SPT-1	Depth (m): 1.50
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by: <i>[Signature]</i>	Checked by: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>
Date: 11/3/16	Date: 14/3/16	Date: 14/3/16





Sample Details

Dry-density, (mg/m³) = 1.67  
Brownish Silty SAND(SW-SM)

Test Result

$c = 0.0$  kPa  
 $\phi = 33.0^\circ$

BH No: 1	Chainage 62+160	Sample No.: SPT-3	Depth (m): 4.50
Site Ref: Hapur - Meerut Section		Job No : 1342	
Test Report No: XPL/2015-16/02			

Tested by: 

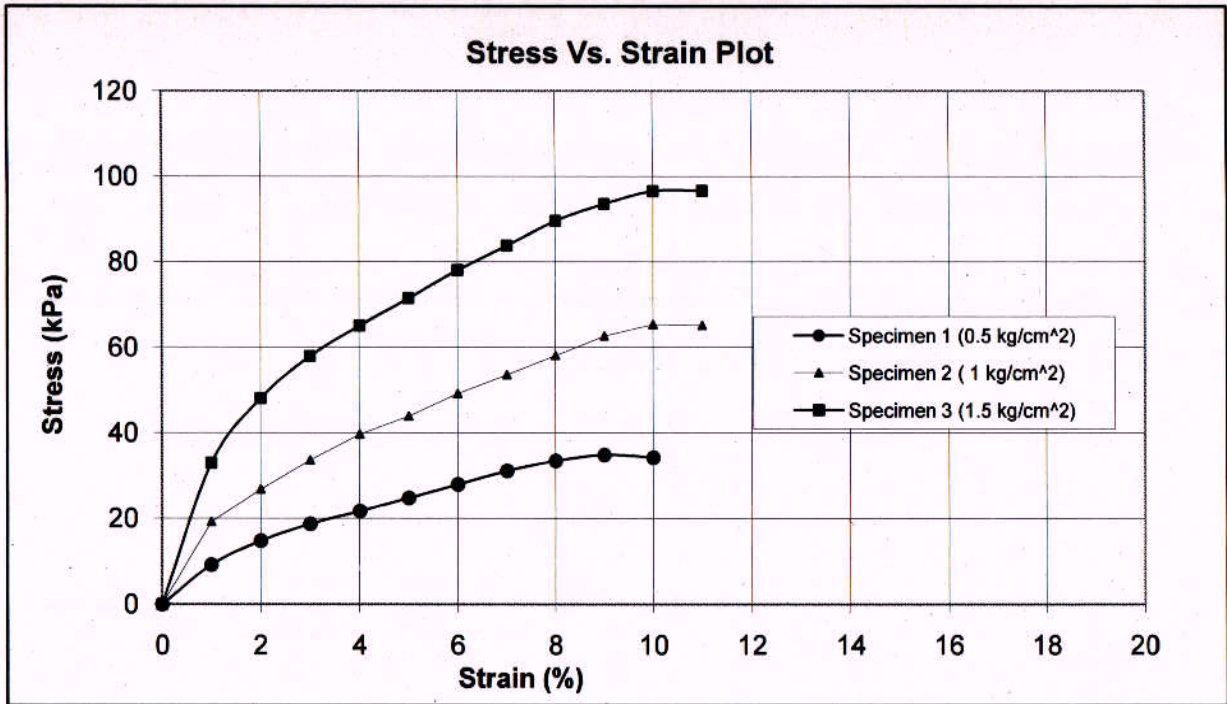
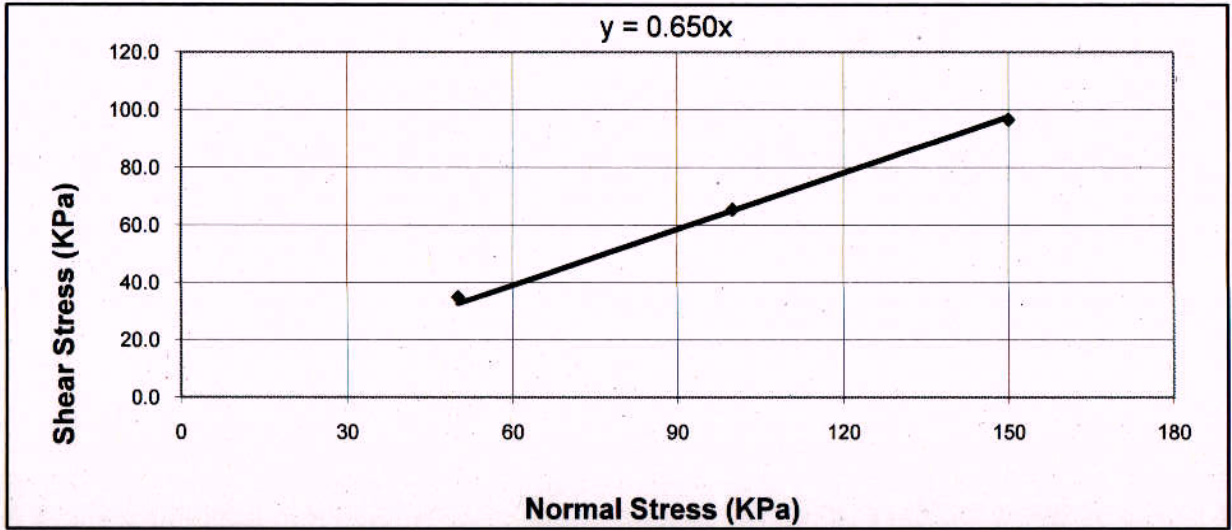
Checked by:

Authorised Signatory:

Date: 4/3/16

Date:   
14/3/16

Date:   
14/3/16



Sample Details

Dry-density, (mg/m<sup>3</sup>) = 1.77  
Brownish Sandy SILT (ML)

Test Result

c = 0.0 kPa  
φ = 33.0 °

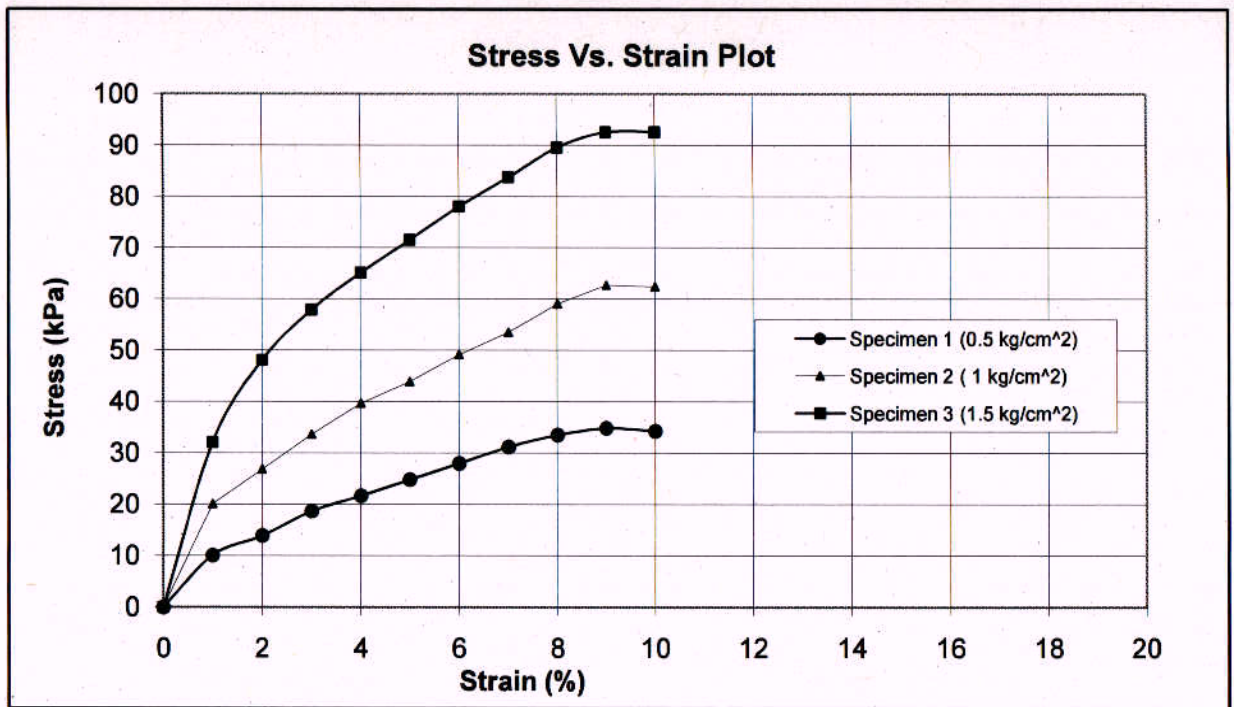
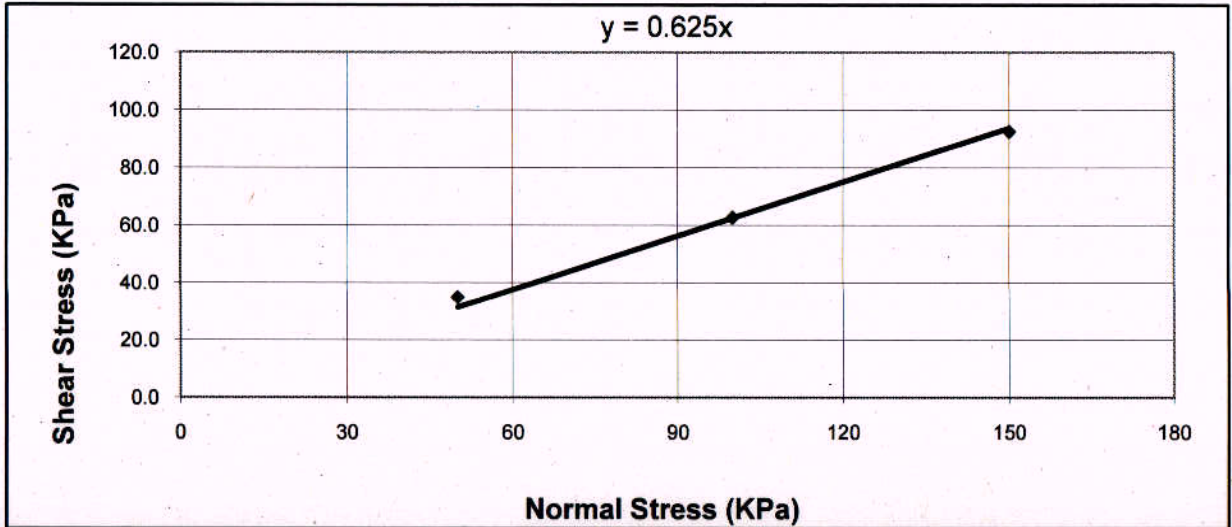
BH No: 1	Chainage 62+160	Sample No.: UDS-4	Depth (m): 11.00
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Site Ref: Hapur - Meerut Section	Job No : 1342
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Test Report No: XPL/2015-16/02

Tested by: <i>[Signature]</i>	Checked by: <i>[Signature]</i>	Authorised Signatory: <i>[Signature]</i>
Date: 2/3/16	Date: 14/3/16	Date: 14/3/16





Sample Details

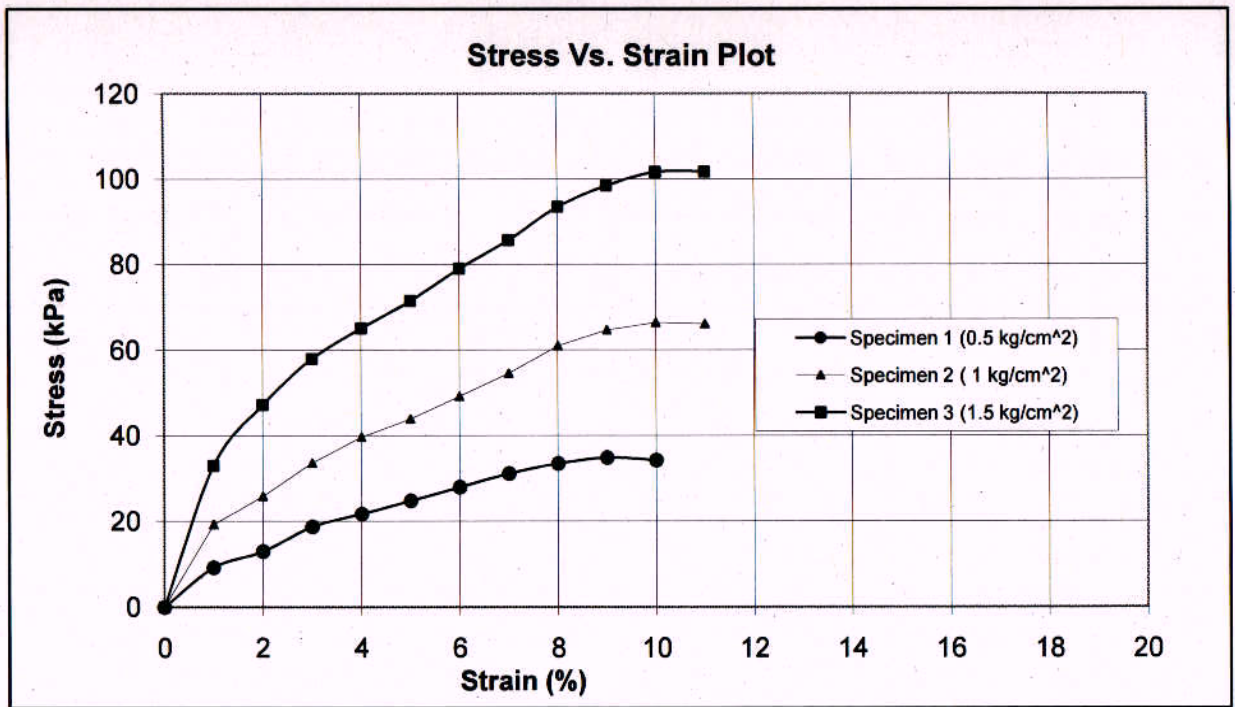
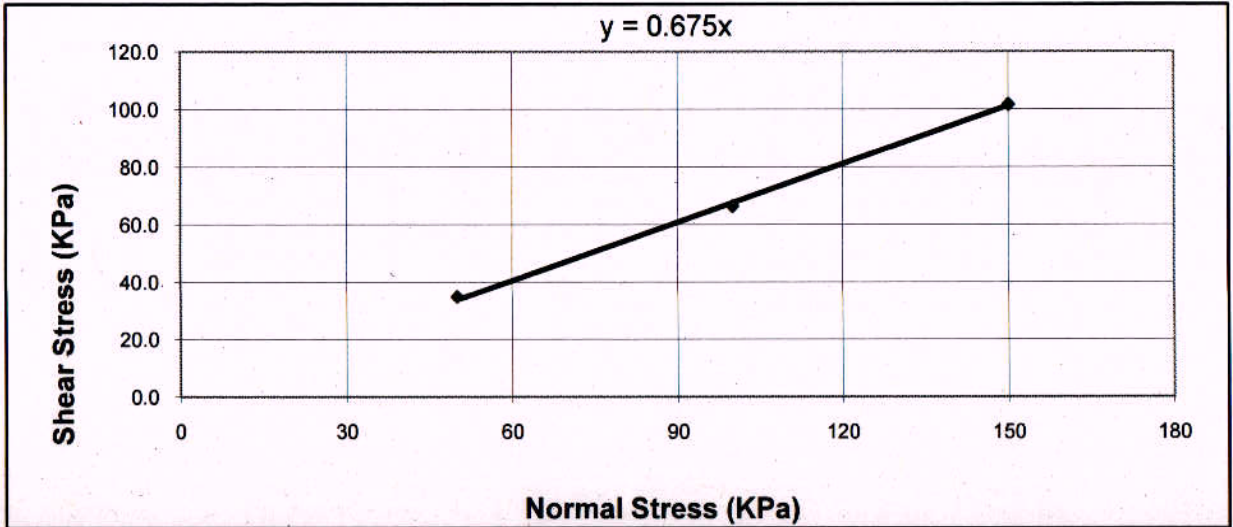
Dry-density, (mg/m<sup>3</sup>) = 1.66  
Poorly Graded SAND(SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 32.0^\circ$

BH No: 1	Chainage 63+570	Sample No.: SPT-5	Depth (m): 7.50
Site Ref: Hapur - Meerut Section	Job No: 1342		Test Report No: XPL/2015-16/02

Tested by: *[Signature]*      Checked by: *[Signature]*      Authorised Signatory: *[Signature]*  
Date: 2/3/16      Date: 14/9/16      Date: 14/9/16





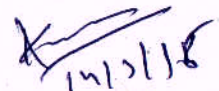
Sample Details

Dry-density, (mg/m³) = 1.75  
 Poorly Graded SAND(SP)

Test Result

$c = 0.0$  kPa  
 $\phi = 34.0^\circ$

BH No: 1	Chainage 63+570	Sample No.: SPT-13	Depth (m): 19.50
Site Ref: Hapur - Meerut Section		Job No: 1342	
Test Report No: XPL/2015-16/02			

Tested by:  Checked by:  Authorised Signatory:   
 Date: 2/3/16 Date: 14/3/16 Date: 14/3/16