

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-29**

Boring No. **TS-3**
Depth (ft) **60-70**
Sample No. **S-7**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	705	Tare No.	898
Wgt. Tare + Wet Specimen (gm)	1420.10	Wgt. Tare + Wet Specimen (gm)	440.01
Wgt. Tare + Dry Specimen (gm)	1346.40	Wgt. Tare + Dry Specimen (gm)	432.66
Weight of Tare (gm)	101.30	Weight of Tare (gm)	110.00
Weight of Water (gm)	73.70	Weight of Water (gm)	7.35
Weight of Dry Soil (gm)	1245.10	Weight of Dry Soil (gm)	322.66
Moisture Content (%)	5.9	Moisture Content (%)	2.3

Wet Weight - 3/4" Sample (gm)	19959	Weight of the Dry Specimen (gm)	1245.10
Dry Weight - 3/4" Sample (gm)	18843.6	Weight of minus #200 material (gm)	159.37
Wet Weight + 3/4" Sample (gm)	25301.00	Weight of plus #200 material (gm)	1085.73
Dry Weight + 3/4" Sample (gm)	24737.49		
Total Dry Weight Sample (gm)	43581.1	J - Factor (Percent Finer than 3/4")	0.4324

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	5871.00	13.17	13.17	86.83	86.83
2"	50	6609.00	14.83	28.00	72.00	72.00
1 1/2"	37.5	3379.00	7.58	35.58	64.42	64.42
1"	25	6596.00	14.80	50.38	49.62	49.62
3/4"	19	2846.00	6.38	56.76	43.24	43.24
1/2"	12.5	247.73	19.90	19.90	80.10	34.64
3/8"	9.5	134.58	10.81	30.71	69.29	29.96
#4	4.75	213.52	17.15	47.85	52.15	22.55
#10	2	206.62	16.59	64.45	35.55	15.37
#20	0.85	131.31	10.55	74.99	25.01	10.81
#40	0.425	67.27	5.40	80.40	19.60	8.48
#60	0.25	32.74	2.63	83.03	16.97	7.34
#140	0.106	39.17	3.15	86.17	13.83	5.98
#200	0.075	12.79	1.03	87.20	12.80	5.53
Pan	-	159.37	12.80	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC** Date **2/23/06** Checked By **KJB** Date **3-8-06**

ATTERBERG LIMIT
ASTM D 4318-00 (SOP - S4)

Client
Client Reference
Project No.
Lab ID

PAUL C. RIZZO
TAUM SAUK 06-3551
2006-060-01
2006-060-01-29

Boring No.
Depth (ft)
Sample No.
Visual Description

TS-3
60-70
S-7
REDDISH BROWN SILT
(Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

Tested By BS Date 3/1/06 Checked By KB Date 3-7-06
page 1 of 1 DCN: CT-S4C DATE: 7-11-97 REVISION : 2 C:\MSOFFICE\Excel\PrintQ\U433.xls]Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-30**

Boring No. **TS-3**
Depth (ft) **70-80**
Sample No. **S-8**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2471	Tare No.	913
Wgt. Tare + Wet Specimen (gm)	1267.80	Wgt. Tare + Wet Specimen (gm)	551.71
Wgt. Tare + Dry Specimen (gm)	1192.40	Wgt. Tare + Dry Specimen (gm)	546.61
Weight of Tare (gm)	100.33	Weight of Tare (gm)	110.77
Weight of Water (gm)	75.40	Weight of Water (gm)	5.10
Weight of Dry Soil (gm)	1092.07	Weight of Dry Soil (gm)	435.84
Moisture Content (%)	6.9	Moisture Content (%)	1.2

Wet Weight - 3/4" Sample (gm)	3360	Weight of the Dry Specimen (gm)	1092.07
Dry Weight - 3/4" Sample (gm)	3143.0	Weight of minus #200 material (gm)	260.17
Wet Weight + 3/4" Sample (gm)	31781.00	Weight of plus #200 material (gm)	831.90
Dry Weight + 3/4" Sample (gm)	31413.41		
Total Dry Weight Sample (gm)	34556.4	J - Factor (Percent Finer than 3/4")	0.0910

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	24758.00	70.82	70.82	29.18	29.18
2"	50	2908.00 (*)	8.32	79.13	20.87	20.87
1 1/2"	37.5	1696.00	4.85	83.99	16.01	16.01
1"	25	1833.00	5.24	89.23	10.77	10.77
3/4"	19	586.00	1.68	90.90	9.10	9.10
1/2"	12.5	101.71	9.31	9.31	90.69	8.25
3/8"	9.5	58.99	5.40	14.72	85.28	7.76
#4	4.75	143.89	13.18	27.89	72.11	6.56
#10	2	179.73	16.46	44.35	55.65	5.06
#20	0.85	144.15 (**)	13.20	57.55	42.45	3.86
#40	0.425	85.43	7.82	65.37	34.63	3.15
#60	0.25	43.60	3.99	69.36	30.64	2.79
#140	0.106	54.52	4.99	74.36	25.64	2.33
#200	0.075	19.88	1.82	76.18	23.82	2.17
Pan	-	260.17	23.82	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC** Date **2/23/06** Checked By **YKB** Date **2-28-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-3
Client Reference	TAUM SAUK 06-3551	Depth (ft)	70-80
Project No.	2006-060-01	Sample No.	S-8
Lab ID	2006-060-01-30	Soil Description	BROWN SILTY CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

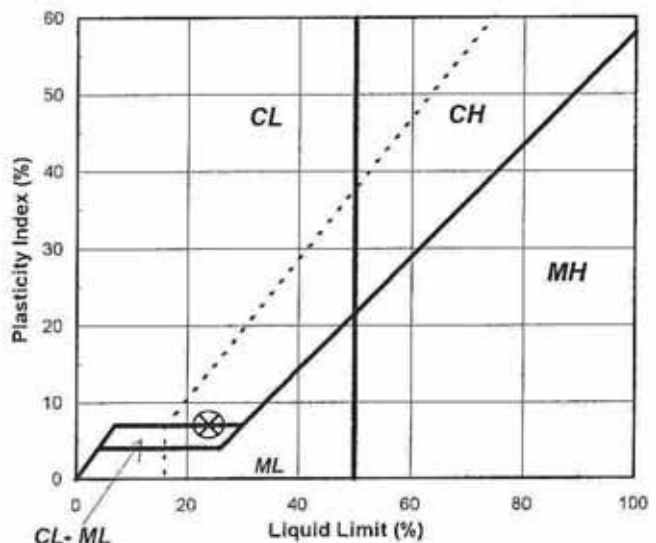
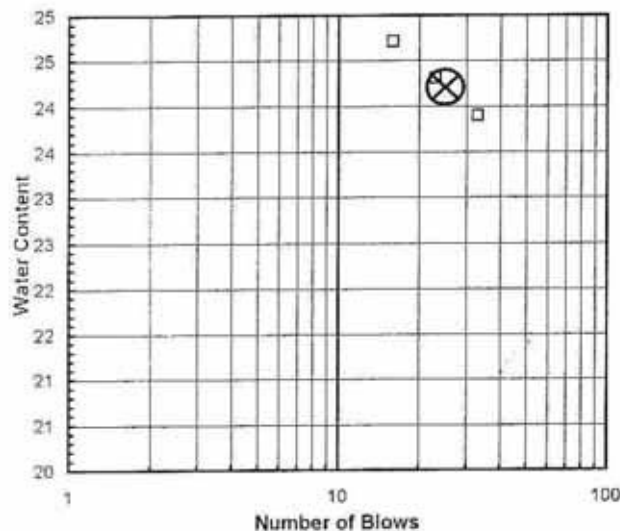
Liquid Limit Test	1	2	3	
Tare Number	O	40A	142	MULTIPOINT
Wt. of Tare & WS (gm)	42.80	45.04	48.47	
Wt. of Tare & DS (gm)	38.43	39.64	42.94	
Wt. of Tare (gm)	20.14	17.42	20.56	
Wt. of Water (gm)	4.4	5.4	5.5	
Wt. of DS (gm)	18.3	22.2	22.4	
Moisture Content (%)	23.9	24.3	24.7	
Number of Blows	33	23	16	

Plastic Limit Test	1	2	Range	Test Results	
Tare Number	209	213		Liquid Limit (%)	24
Wt. of Tare & WS (gm)	23.71	24.93		Plastic Limit (%)	17
Wt. of Tare & DS (gm)	22.79	24.05		Plasticity Index (%)	7
Wt. of Tare (gm)	17.42	18.88		USCS Symbol	CL-ML
Wt. of Water (gm)	0.9	0.9			
Wt. of DS (gm)	5.4	5.2			
Moisture Content (%)	17.1	17.0	0.1		

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



Tested By	BS	Date	2/24/06	Checked By	YHB	Date	2-27-06
page 1 of 1	DCN:	CT-S4B	DATE:	10/8/01	REVISION:	2	

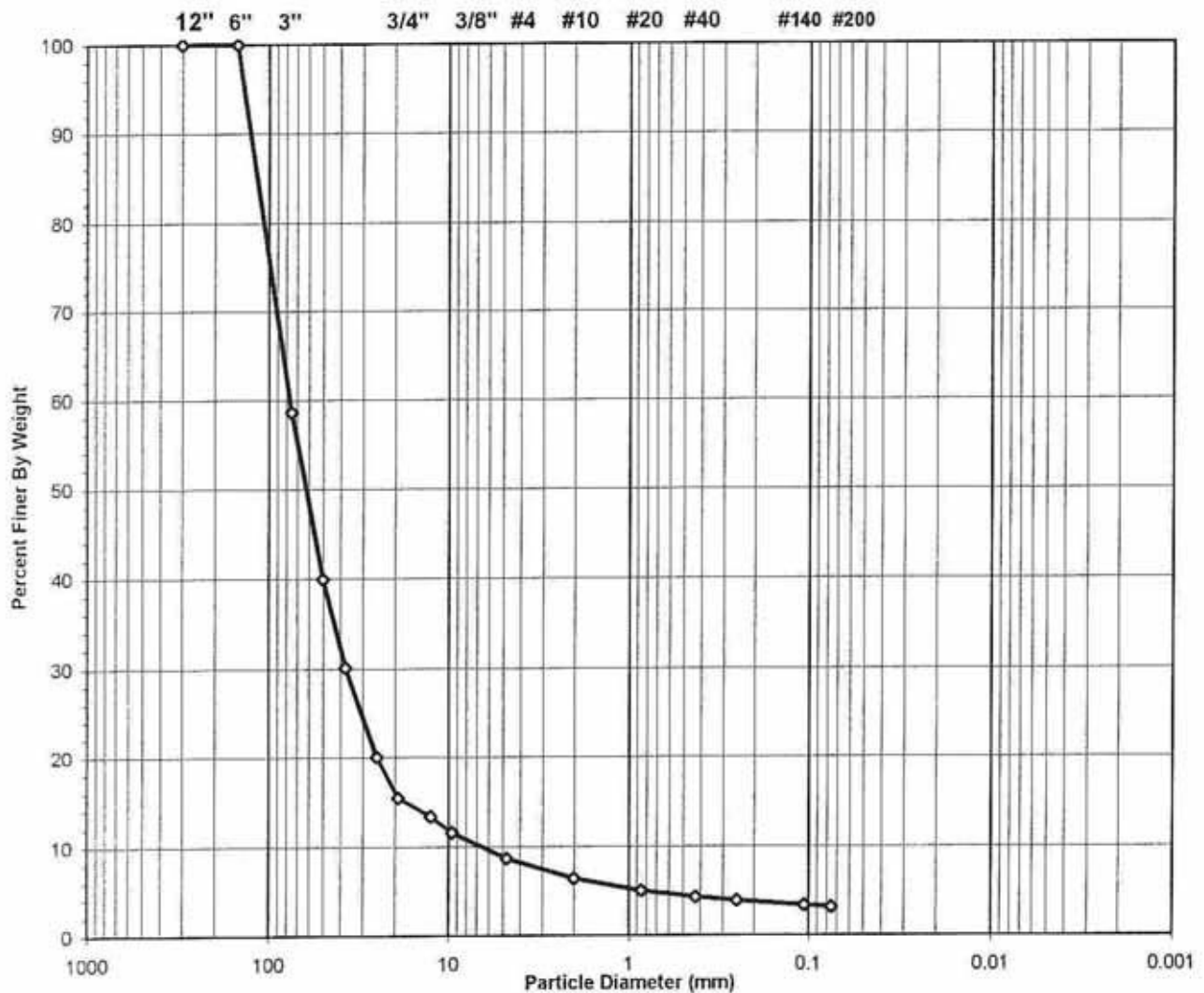
C:\MSOFFICE\Excel\PrintQ\U332...xls\Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-31**

Boring No. **TS-3**
Depth (ft) **80-90**
Sample No. **S-9**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By **PC** Date **2/23/06** Checked By **KVB** Date **2-24-06**
page 1 of 2 DCN: CT-S3A DATE 6-26-99 REVISION 2 C:\MSOFFICE\Excel\PrintQ\U285.xls\Sheet1

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
 Client Reference **TAUM SAUK 06-3551**
 Project No. **2006-060-01**
 Lab ID **2006-060-01-31**

Boring No. **TS-3**
 Depth (ft) **80-90**
 Sample No. **S-9**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	635	Tare No.	888
Wgt. Tare + Wet Specimen (gm)	1300.70	Wgt. Tare + Wet Specimen (gm)	538.89
Wgt. Tare + Dry Specimen (gm)	1196.70	Wgt. Tare + Dry Specimen (gm)	521.60
Weight of Tare (gm)	100.06	Weight of Tare (gm)	110.50
Weight of Water (gm)	104.00	Weight of Water (gm)	17.29
Weight of Dry Soil (gm)	1096.64	Weight of Dry Soil (gm)	411.10
Moisture Content (%)	9.5	Moisture Content (%)	4.2

Wet Weight - 3/4" Sample (gm)	3647	Weight of the Dry Specimen (gm)	1096.64
Dry Weight - 3/4" Sample (gm)	3331.1	Weight of minus #200 material (gm)	220.08
Wet Weight + 3/4" Sample (gm)	19023.00	Weight of plus #200 material (gm)	876.56
Dry Weight + 3/4" Sample (gm)	18255.22		
Total Dry Weight Sample (gm)	21586.3	J - Factor (Percent Finer than 3/4")	0.1543

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	9316.00	41.42	41.42	58.58	58.58
2"	50	4196.00	18.65	60.07	39.93	39.93
1 1/2"	37.5	2200.00	9.78	69.85	30.15	30.15
1"	25	2282.00	10.14	79.99	20.01	20.01
3/4"	19	1029.00	4.57	84.57	15.43	15.43
1/2"	12.5	144.02	13.13	13.13	86.87	13.40
3/8"	9.5	130.48	11.90	25.03	74.97	11.57
#4	4.75	205.87	18.77	43.80	56.20	8.67
#10	2	163.33	14.89	58.70	41.30	6.37
#20	0.85	100.28	9.14	67.84	32.16	4.96
#40	0.425	51.36	4.68	72.53	27.47	4.24
#60	0.25	26.55	2.42	74.95	25.05	3.87
#140	0.106	38.27	3.49	78.44	21.56	3.33
#200	0.075	16.40	1.50	79.93	20.07	3.10
Pan	-	220.08	20.07	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC**

Date

2/23/06

Checked By

YLP

Date

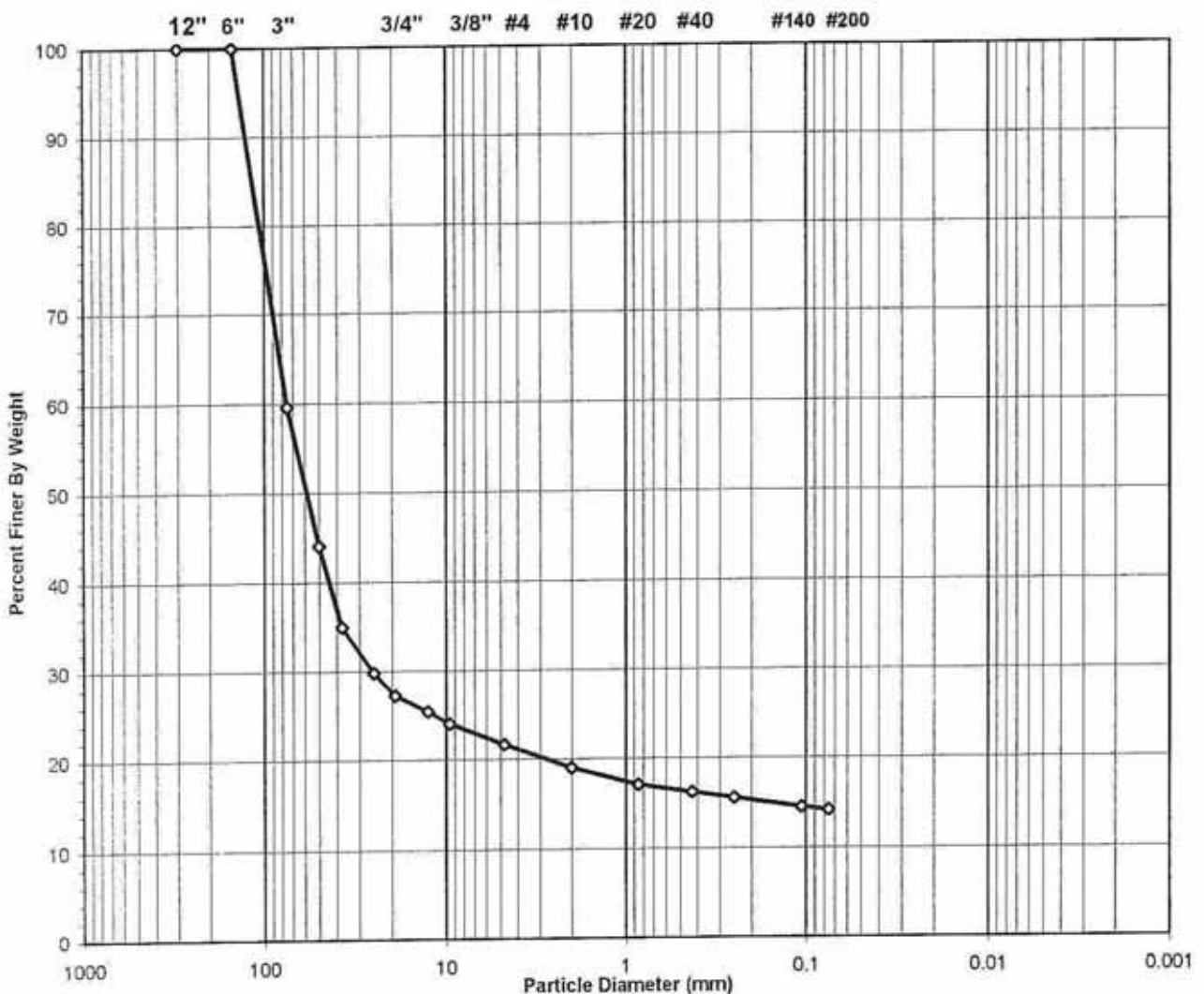
2-24-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-32

Boring No. TS-3
Depth (ft) 90-95.7
Sample No. S-10
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GC, TESTED**

USCS Classification **CLAYEY GRAVEL**

Tested By PC Date 2/23/06 Checked By *KRB* Date *2-28-06*
page 1 of 2 DCN: CT-S3A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ\U285.xls\Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-32**

Boring No. **TS-3**
Depth (ft) **90-95.7**
Sample No. **S-10**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1913	Tare No.	882
Wgt. Tare + Wet Specimen (gm)	1169.40	Wgt. Tare + Wet Specimen (gm)	1038.30
Wgt. Tare + Dry Specimen (gm)	1020.90	Wgt. Tare + Dry Specimen (gm)	1015.20
Weight of Tare (gm)	101.80	Weight of Tare (gm)	110.42
Weight of Water (gm)	148.50	Weight of Water (gm)	23.10
Weight of Dry Soil (gm)	919.10	Weight of Dry Soil (gm)	904.78
Moisture Content (%)	16.2	Moisture Content (%)	2.6

Wet Weight - 3/4" Sample (gm)	9783	Weight of the Dry Specimen (gm)	919.10
Dry Weight - 3/4" Sample (gm)	8422.2	Weight of minus #200 material (gm)	476.71
Wet Weight + 3/4" Sample (gm)	23029.00	Weight of plus #200 material (gm)	442.39
Dry Weight + 3/4" Sample (gm)	22455.68		
Total Dry Weight Sample (gm)	30877.9	J - Factor (Percent Finer than 3/4")	0.2728

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	12787.00	40.38	40.38	59.62	59.62
2"	50	4926.00	15.56	55.94	44.06	44.06
1 1/2"	37.5	2892.00	9.13	65.07	34.93	34.93
1"	25	1621.00	5.12	70.19	29.81	29.81
3/4"	19	803.00	2.54	72.72	27.28	27.28
1/2"	12.5	60.60	6.59	6.59	93.41	25.48
3/8"	9.5	46.17	5.02	11.62	88.38	24.11
#4	4.75	80.87	8.80	20.42	79.58	21.71
#10	2	89.52	9.74	30.16	69.84	19.05
#20	0.85	65.11	7.08	37.24	62.76	17.12
#40	0.425	30.46	3.31	40.55	59.45	16.21
#60	0.25	21.74	2.37	42.92	57.08	15.57
#140	0.106	35.00	3.81	46.73	53.27	14.53
#200	0.075	12.92	1.41	48.13	51.87	14.15
Pan	-	476.71	51.87	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC** Date **2/23/06** Checked By **KRB** Date **2-28-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-3
Client Reference	TAUM SAUK 06-3551	Depth (ft)	90-95.7
Project No.	2006-060-01	Sample No.	S-10
Lab ID	2006-060-01-32	Soil Description	REDDISH BROWN LEAN CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

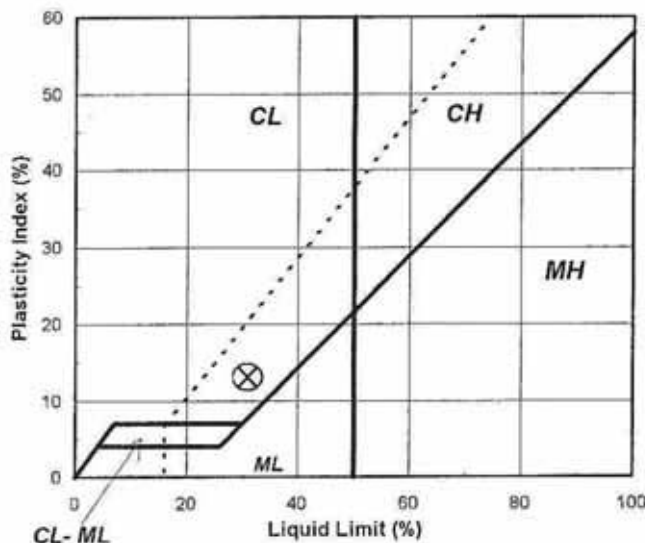
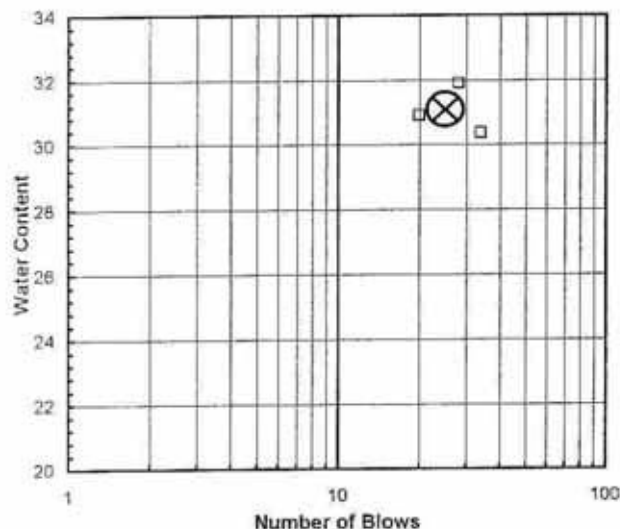
Liquid Limit Test	1	2	3	
Tare Number	44	12	37	MULTIPOINT
Wt. of Tare & WS (gm)	39.99	41.33	35.99	
Wt. of Tare & DS (gm)	34.41	35.07	30.99	
Wt. of Tare (gm)	16.02	15.44	14.81	
Wt. of Water (gm)	5.6	6.3	5.0	
Wt. of DS (gm)	18.4	19.6	16.2	
Moisture Content (%)	30.3	31.9	30.9	
Number of Blows	34	28	20	

Plastic Limit Test	1	2	Range	Test Results	
Tare Number	2298	2305		Liquid Limit (%)	31
Wt. of Tare & WS (gm)	24.12	26.79		Plastic Limit (%)	18
Wt. of Tare & DS (gm)	23.18	25.91		Plasticity Index (%)	13
Wt. of Tare (gm)	17.92	20.94		USCS Symbol	CL
Wt. of Water (gm)	0.9	0.9			
Wt. of DS (gm)	5.3	5.0			
Moisture Content (%)	17.9	17.7	0.2		

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



Tested By JP Date 2/24/06 Checked By KVB Date 2-27-06

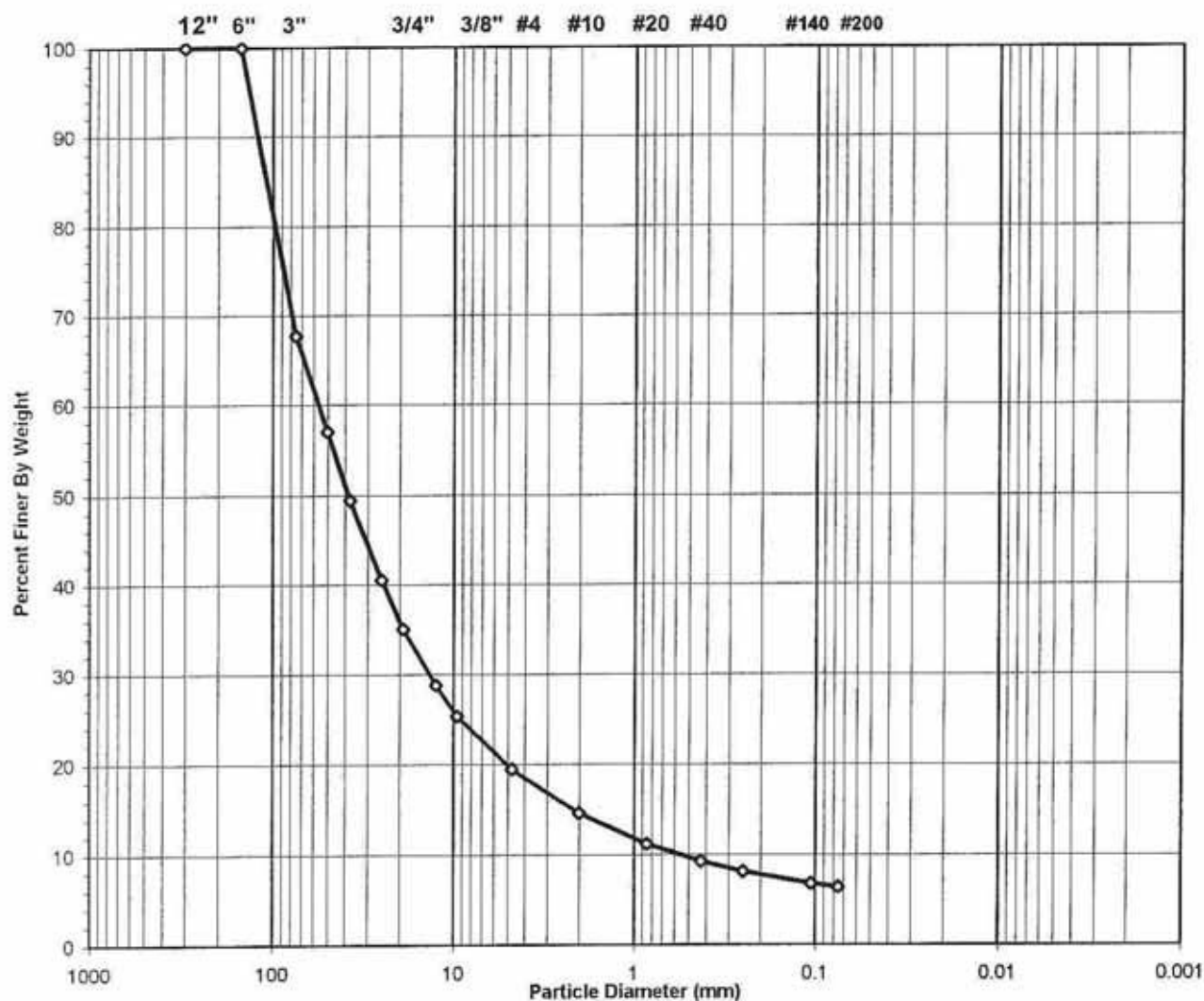
BORING TS-4

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-33

Boring No. TS-4
Depth (ft) NA
Sample No. S-1
Soil Color REDDISH GRAY

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = 55.9 CC = 5.8

USCS Classification **POORLY GRADED GRAVEL WITH SILT**

D30 = 13.5 CU = 99.4

D10 = 0.6

Tested By JP

Date 2/20/06

Checked By *KVB*

Date *2-20-06*

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

 Client **PAUL C. RIZZO**
 Client Reference **TAUM SAUK 06-3551**
 Project No. **2006-060-01**
 Lab ID **2006-060-01-33**

 Boring No. **TS-4**
 Depth (ft) **NA**
 Sample No. **S-1**
 Soil Color **REDDISH GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	934	Tare No.	973
Wgt. Tare + Wet Specimen (gm)	1078.50	Wgt. Tare + Wet Specimen (gm)	1043.20
Wgt. Tare + Dry Specimen (gm)	1013.90	Wgt. Tare + Dry Specimen (gm)	1024.20
Weight of Tare (gm)	189.56	Weight of Tare (gm)	102.34
Weight of Water (gm)	64.60	Weight of Water (gm)	19.00
Weight of Dry Soil (gm)	824.34	Weight of Dry Soil (gm)	921.86
Moisture Content (%)	7.8	Moisture Content (%)	2.1

Wet Weight - 3/4" Sample (gm)	18552	Weight of the Dry Specimen (gm)	824.34
Dry Weight - 3/4" Sample (gm)	17203.8	Weight of minus #200 material (gm)	150.90
Wet Weight + 3/4" Sample (gm)	32506.00	Weight of plus #200 material (gm)	673.44
Dry Weight + 3/4" Sample (gm)	31849.56		
Total Dry Weight Sample (gm)	49053.4	J - Factor (Percent Finer than 3/4")	0.3507

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	16145.00	32.25	32.25	67.75	67.75
2"	50	5368.00 (*)	10.72	42.97	57.03	57.03
1 1/2"	37.5	3803.00	7.60	50.57	49.43	49.43
1"	25	4450.00	8.89	59.46	40.54	40.54
3/4"	19	2740.00	5.47	64.93	35.07	35.07
1/2"	12.5	147.52	17.90	17.90	82.10	28.80
3/8"	9.5	80.88	9.81	27.71	72.29	25.35
#4	4.75	137.63	16.70	44.40	55.60	19.50
#10	2	114.15	13.85	58.25	41.75	14.64
#20	0.85	82.17 (**)	9.97	68.22	31.78	11.15
#40	0.425	45.25	5.49	73.71	26.29	9.22
#60	0.25	26.33	3.19	76.90	23.10	8.10
#140	0.106	30.73	3.73	80.63	19.37	6.79
#200	0.075	8.78	1.07	81.69	18.31	6.42
Pan	-	150.90	18.31	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

 Tested By **JP**

 Date **2/20/06**

 Checked By **AB**

 Date **2-20-06**

RIGID WALL CONSTANT HEAD PERMEABILITY

ASTM D 2434-68 (SOP-S35) Modified

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 03-3551**
Project No. **2006-060-02**
Lab ID **2006-060-02-02**

Boring No. **TS-4**
Depth(ft.) **0-20**
Sample No. **S1+S2A,B,C**
Visual Description **BROWN CLAYEY SAND AND ROCK FRAGMENTS**

Unit Weight

Wt. of Wet Material (gm) **15558**
Average Length (in) **11.6**
Permeameter Diameter (in) **7.5**
Sample Volume (cc) **8426.9**
Unit Dry Weight (gm/cc) **1.75**
Unit Dry Weight (pcf) **109.1**

Water Content

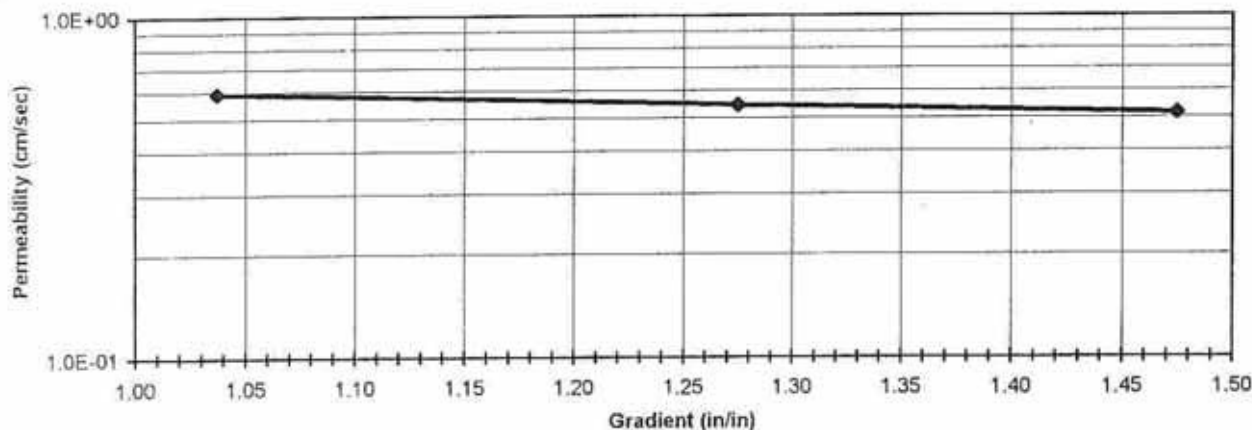
Tare Number **915**
Wt. of Tare & Wet Mat.(gm) **674.20**
Wt. of Tare & Dry Mat.(gm) **644.20**
Wt. of Tare (gm) **110.17**
Wt. Water (gm) **30.00**
Wt. of Dry Material (gm) **534.03**

	Test 1	Test 2	Test 3
Piezometer Spacing (in)	8	8	8
Temperature (° C)	20.3	20.5	20.5
Temp. Correction Factor	0.9926	0.9879	0.9879

Water Content (%) **5.6**
(Measured)

Load (psf) **NA**

Test No.	Replicate No.	Head (in)	Gradient (in/in)	Elapsed Time (sec)	Collection Tube (divisions)	Collected Volume (cc)	Permeability 20° C (cm/s)	Average Permeability (cm/s)
1	1	8.30	1.04	40.9	5	7220.5	5.9E-01	5.9E-01
1	2	8.30	1.04	40.8	5	7220.5	5.9E-01	
1	3	8.30	1.04	41.1	5	7220.5	5.9E-01	
2	1	10.20	1.28	36.1	5	7220.5	5.4E-01	5.4E-01
2	2	10.20	1.28	36.2	5	7220.5	5.4E-01	
2	3	10.20	1.28	36.1	5	7220.5	5.4E-01	
3	1	11.80	1.48	32.8	5	7220.5	5.2E-01	5.1E-01
3	2	11.80	1.48	33.0	5	7220.5	5.1E-01	
3	3	11.80	1.48	33.1	5	7220.5	5.1E-01	



Tested By **DDA**

Date

2/24/06

Checked By

KJB

Date

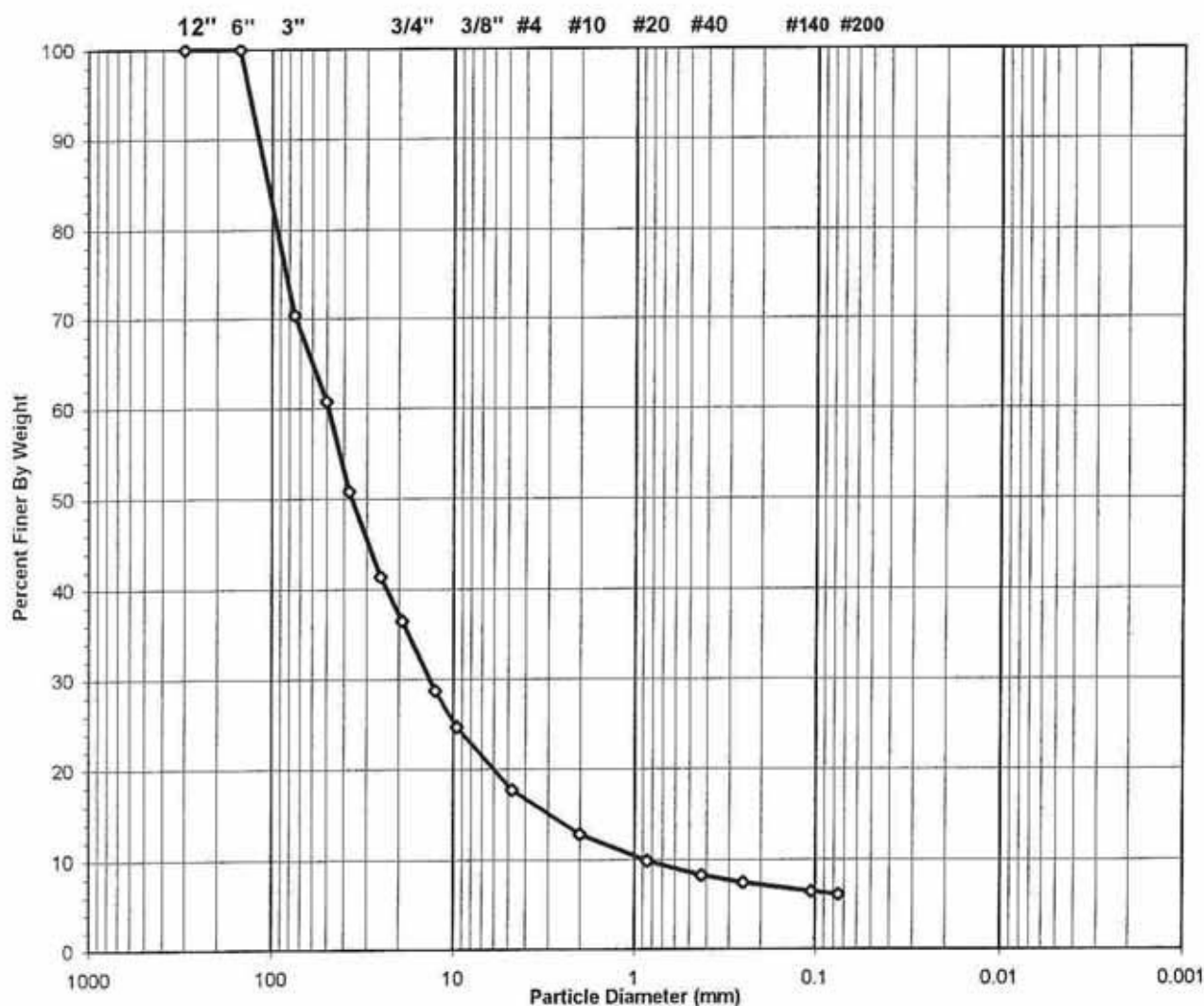
3-2-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-34

Boring No. TS-4
Depth (ft) 10-13
Sample No. S-2
Soil Color REDDISH GRAY

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = 48.8 CC = 4.1

USCS Classification **POORLY GRADED GRAVEL WITH SILT**

D30 = 13.4 CU = 55.1

D10 = 0.9

Tested By JP

Date 2/20/06

Checked By

KPS

Date

2-20-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-34**

Boring No. **TS-4**
Depth (ft) **10-13**
Sample No. **S-2**
Soil Color **REDDISH GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	697	Tare No.	915
Wgt. Tare + Wet Specimen (gm)	1284.10	Wgt. Tare + Wet Specimen (gm)	716.20
Wgt. Tare + Dry Specimen (gm)	1205.00	Wgt. Tare + Dry Specimen (gm)	703.70
Weight of Tare (gm)	101.40	Weight of Tare (gm)	110.21
Weight of Water (gm)	79.10	Weight of Water (gm)	12.50
Weight of Dry Soil (gm)	1103.60	Weight of Dry Soil (gm)	593.49
Moisture Content (%)	7.2	Moisture Content (%)	2.1

Wet Weight - 3/4" Sample (gm)	9039	Weight of the Dry Specimen (gm)	1103.60
Dry Weight - 3/4" Sample (gm)	8434.5	Weight of minus #200 material (gm)	184.46
Wet Weight + 3/4" Sample (gm)	15012.00	Weight of plus #200 material (gm)	919.14
Dry Weight + 3/4" Sample (gm)	14702.34		
Total Dry Weight Sample (gm)	23136.8	J - Factor (Percent Finer than 3/4")	0.3645

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	6997.00	29.62	29.62	70.38	70.38
2"	50	2254.00	9.54	39.16	60.84	60.84
1 1/2"	37.5	2382.00	10.08	49.24	50.76	50.76
1"	25	2215.00	9.38	58.62	41.38	41.38
3/4"	19	1164.00	4.93	63.55	36.45	36.45
1/2"	12.5	234.27	21.23	21.23	78.77	28.72
3/8"	9.5	119.39	10.82	32.05	67.95	24.77
#4	4.75	214.13	19.40	51.45	48.55	17.70
#10	2	149.40	13.54	64.99	35.01	12.76
#20	0.85	88.03	7.98	72.96	27.04	9.86
#40	0.425	48.84	4.43	77.39	22.61	8.24
#60	0.25	24.77	2.24	79.63	20.37	7.42
#140	0.106	30.12	2.73	82.36	17.64	6.43
#200	0.075	10.19	0.92	83.29	16.71	6.09
Pan	-	184.46	16.71	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

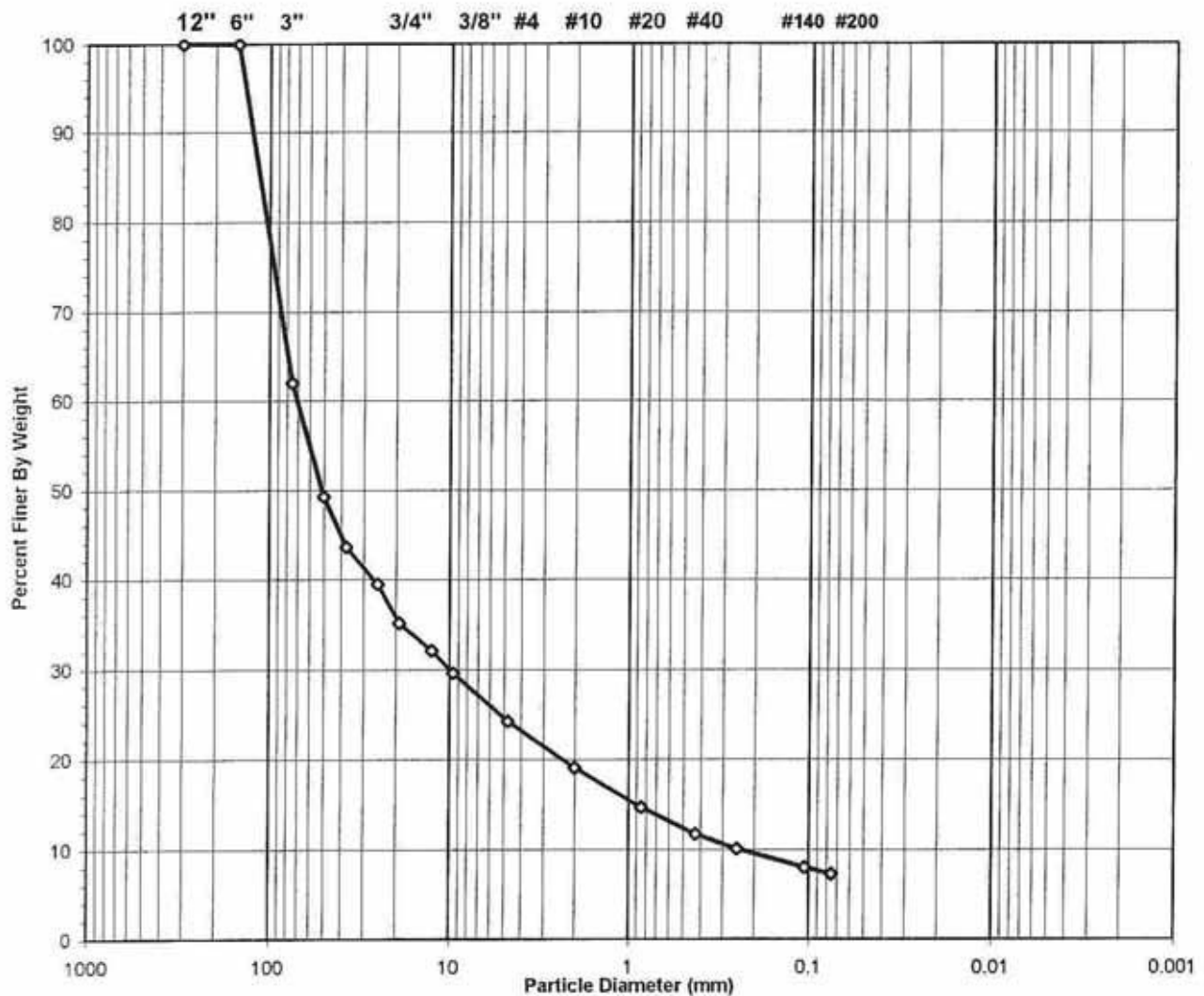
Tested By **JP** Date **2/20/06** Checked By **YKB** Date **2-20-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-34

Boring No. TS-4
Depth (ft) 13-16
Sample No. S-2
Soil Color REDDISH GRAY

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = 70.4 CC = 5.7

USCS Classification **POORLY GRADED GRAVEL WITH SILT AND SAND**

D30 = 9.9 CU = 289.2

D10 = 0.2

Tested By JP

Date 2/20/06

Checked By *KB*

Date 2-20-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-34**

Boring No. **TS-4**
Depth (ft) **13-16**
Sample No. **S-2**
Soil Color **REDDISH GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	631	Tare No.	894
Wgt. Tare + Wet Specimen (gm)	1196.90	Wgt. Tare + Wet Specimen (gm)	701.50
Wgt. Tare + Dry Specimen (gm)	1149.30	Wgt. Tare + Dry Specimen (gm)	696.40
Weight of Tare (gm)	100.57	Weight of Tare (gm)	110.40
Weight of Water (gm)	47.60	Weight of Water (gm)	5.10
Weight of Dry Soil (gm)	1048.73	Weight of Dry Soil (gm)	586.00
Moisture Content (%)	4.5	Moisture Content (%)	0.9

Wet Weight - 3/4" Sample (gm)	6425	Weight of the Dry Specimen (gm)	1048.73
Dry Weight - 3/4" Sample (gm)	6146.0	Weight of minus #200 material (gm)	216.95
Wet Weight + 3/4" Sample (gm)	11410.00	Weight of plus #200 material (gm)	831.78
Dry Weight + 3/4" Sample (gm)	11311.55		
Total Dry Weight Sample (gm)	17457.6	J - Factor (Percent Finer than 3/4")	0.3521

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	6689.00	37.99	37.99	62.01	62.01
2"	50	2254.00	12.80	50.78	49.22	49.22
1 1/2"	37.5	990.00	5.62	56.41	43.59	43.59
1"	25	732.00	4.16	60.56	39.44	39.44
3/4"	19	745.00	4.23	64.79	35.21	35.21
1/2"	12.5	91.08	8.68	8.68	91.32	32.15
3/8"	9.5	75.49	7.20	15.88	84.12	29.61
#4	4.75	161.42	15.39	31.27	68.73	24.20
#10	2	152.78	14.57	45.84	54.16	19.07
#20	0.85	129.64	12.36	58.20	41.80	14.71
#40	0.425	88.99	8.49	66.69	33.31	11.73
#60	0.25	49.47	4.72	71.41	28.59	10.07
#140	0.106	62.18	5.93	77.34	22.66	7.98
#200	0.075	20.73	1.98	79.31	20.69	7.28
Pan	-	216.95	20.69	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/20/06**

Checked By **YHS**

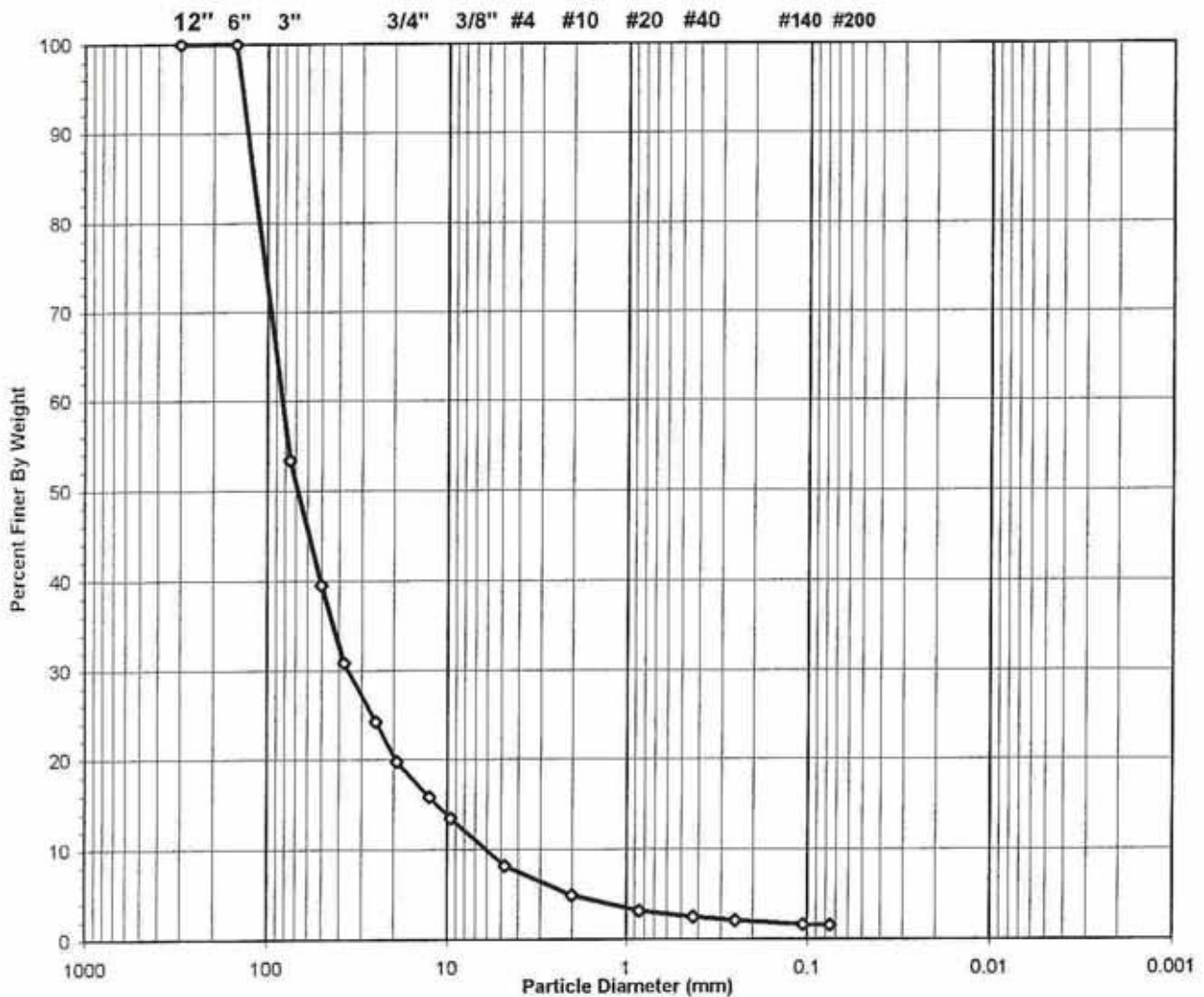
Date **2-20-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-34

Boring No. TS-4
Depth (ft) 16-20
Sample No. S-2
Soil Color REDDISH GRAY

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By JP Date 2/20/06 Checked By *YKB*

Date *2-20-06*

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-34**

Boring No. **TS-4**
Depth (ft) **16-20**
Sample No. **S-2**
Soil Color **REDDISH GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1920	Tare No.	927
Wgt. Tare + Wet Specimen (gm)	1359.30	Wgt. Tare + Wet Specimen (gm)	1327.30
Wgt. Tare + Dry Specimen (gm)	1274.00	Wgt. Tare + Dry Specimen (gm)	1314.90
Weight of Tare (gm)	100.08	Weight of Tare (gm)	102.84
Weight of Water (gm)	85.30	Weight of Water (gm)	12.40
Weight of Dry Soil (gm)	1173.92	Weight of Dry Soil (gm)	1212.06
Moisture Content (%)	7.3	Moisture Content (%)	1.0

Wet Weight - 3/4" Sample (gm)	11273	Weight of the Dry Specimen (gm)	1173.92
Dry Weight - 3/4" Sample (gm)	10509.4	Weight of minus #200 material (gm)	89.46
Wet Weight + 3/4" Sample (gm)	43119.00	Weight of plus #200 material (gm)	1084.46
Dry Weight + 3/4" Sample (gm)	42682.34		
Total Dry Weight Sample (gm)	53191.7	J - Factor (Percent Finer than 3/4")	0.1976

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	25053.00	46.62	46.62	53.38	53.38
2"	50	7441.00	13.85	60.47	39.53	39.53
1 1/2"	37.5	4638.00	8.63	69.10	30.90	30.90
1"	25	3605.00	6.71	75.81	24.19	24.19
3/4"	19	2382.00	4.43	80.24	19.76	19.76
1/2"	12.5	231.96	19.76	19.76	80.24	15.85
3/8"	9.5	141.99	12.10	31.85	68.15	13.46
#4	4.75	318.58	27.14	58.99	41.01	8.10
#10	2	194.61	16.58	75.57	24.43	4.83
#20	0.85	99.82	8.50	84.07	15.93	3.15
#40	0.425	41.52	3.54	87.61	12.39	2.45
#60	0.25	22.29	1.90	89.51	10.49	2.07
#140	0.106	26.32	2.24	91.75	8.25	1.63
#200	0.075	7.37	0.63	92.38	7.62	1.51
Pan	-	89.46	7.62	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

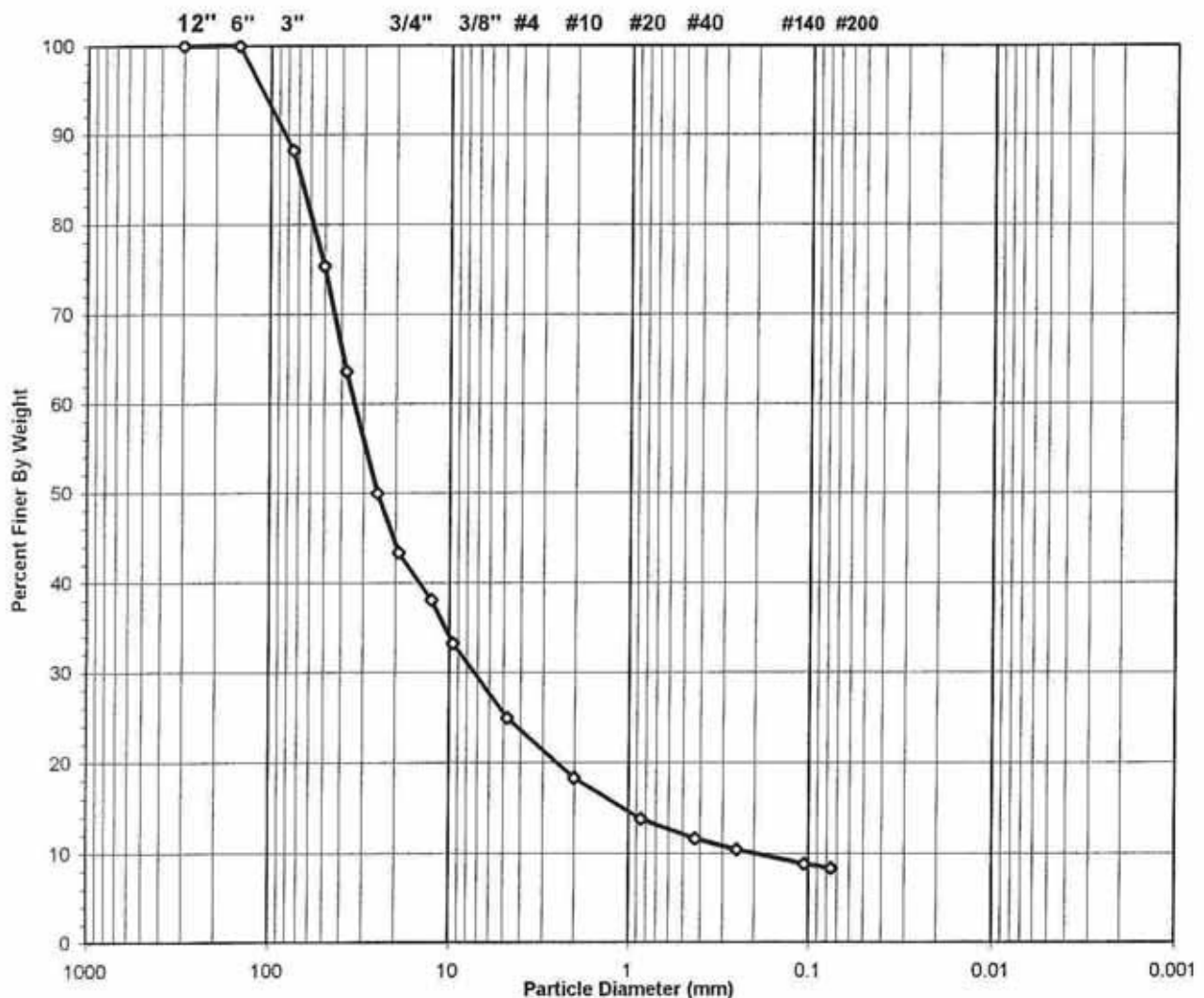
Tested By **JP** Date **2/20/06** Checked By **WLB** Date **2-20-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-35

Boring No. TS-4
Depth (ft) 20-30
Sample No. S-3
Soil Color REDDISH GRAY

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = 33.7 CC = 7.7

USCS Classification **POORLY GRADED GRAVEL WITH SILT AND SAND**

D30 = 7.3 CU = 164.9

D10 = 0.2

Tested By JP

Date 2/20/06

Checked By *KVB*

Date 2-20-06

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

 Client PAUL C. RIZZO
 Client Reference TAUM SAUK 06-3551
 Project No. 2006-060-01
 Lab ID 2006-060-01-35

 Boring No. TS-4
 Depth (ft) 20-30
 Sample No. S-3
 Soil Color REDDISH GRAY

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2334	Tare No.	902
Wgt. Tare + Wet Specimen (gm)	1075.30	Wgt. Tare + Wet Specimen (gm)	1133.40
Wgt. Tare + Dry Specimen (gm)	967.10	Wgt. Tare + Dry Specimen (gm)	1090.90
Weight of Tare (gm)	100.97	Weight of Tare (gm)	110.75
Weight of Water (gm)	108.20	Weight of Water (gm)	42.50
Weight of Dry Soil (gm)	866.13	Weight of Dry Soil (gm)	980.15
Moisture Content (%)	12.5	Moisture Content (%)	4.3

Wet Weight - 3/4" Sample (gm)	19184	Weight of the Dry Specimen (gm)	866.13
Dry Weight - 3/4" Sample (gm)	17053.6	Weight of minus #200 material (gm)	166.00
Wet Weight + 3/4" Sample (gm)	23275.00	Weight of plus #200 material (gm)	700.13
Dry Weight + 3/4" Sample (gm)	22307.72		
Total Dry Weight Sample (gm)	39361.3	J - Factor (Percent Finer than 3/4")	0.4333

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	4834.00	11.77	11.77	88.23	88.23
2"	50	5295.00 (*)	12.89	24.66	75.34	75.34
1 1/2"	37.5	4807.00	11.70	36.37	63.63	63.63
1"	25	5652.00	13.76	50.13	49.87	49.87
3/4"	19	2687.00	6.54	56.67	43.33	43.33
1/2"	12.5	105.35	12.16	12.16	87.84	38.06
3/8"	9.5	97.51	11.26	23.42	76.58	33.18
#4	4.75	164.69	19.01	42.44	57.56	24.94
#10	2	132.45	15.29	57.73	42.27	18.31
#20	0.85	91.40 (**)	10.55	68.28	31.72	13.74
#40	0.425	43.29	5.00	73.28	26.72	11.58
#60	0.25	24.19	2.79	76.07	23.93	10.37
#140	0.106	31.20	3.60	79.67	20.33	8.81
#200	0.075	10.05	1.16	80.83	19.17	8.30
Pan	-	166.00	19.17	100.00	-	-

 Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By JP

Date 2/20/06

Checked By



Date 2-20-06

RIGID WALL CONSTANT HEAD PERMEABILITY

ASTM D 2434-68 (SOP-S35) Modified

Client	Paul C. Rizzo & Associates, Inc.	Boring No.	TS-4
Client Reference	TRUM SAUK 06-3551	Depth(ft.)	20-40
Project No.	2006-060-02	Sample No.	S3+S4A,B
Lab ID	2006-060-02-03	Visual Description	BROWN CLAYEY SAND W/ ROCK

Unit Weight

Wt. of Wet Material (gm)	16448
Average Length (in)	11.7
Permeameter Diameter (in)	7.5
Sample Volume (cc)	8455.8
Unit Dry Weight (gm/cc)	1.76
Unit Dry Weight (pcf)	110.1

Water Content

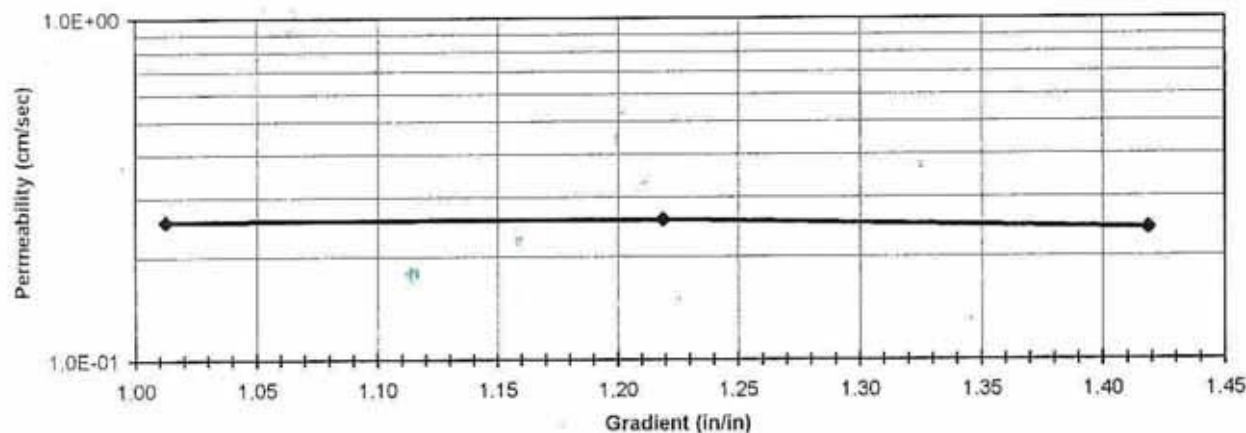
Tare Number	503
Wt. of Tare & Wet Mat.(gm)	1037.00
Wt. of Tare & Dry Mat.(gm)	949.40
Wt. of Tare (gm)	96.15
Wt. Water (gm)	87.60
Wt. of Dry Material (gm)	853.25

	Test 1	Test 2	Test 3
Piezometer Spacing (in)	8	8	8
Temperature (° C)	23.5	23.6	23.7
Temp. Correction Factor	0.9203	0.9182	0.9160

Water Content (%) **10.3**
(Measured)

Load (psf) **NA**

Test No.	Replicate No.	Head (in)	Gradient (in/in)	Elapsed Time (sec)	Collection Tube (divisions)	Collected Volume (cc)	Permeability 20° C (cm/s)	Average Permeability (cm/s)
1	1	8.10	1.01	54.3	3	4332.3	2.5E-01	2.5E-01
1	2	8.10	1.01	54.3	3	4332.3	2.5E-01	
1	3	8.10	1.01	54.5	3	4332.3	2.5E-01	
2	1	9.75	1.22	44.6	3	4332.3	2.6E-01	2.6E-01
2	2	9.75	1.22	44.2	3	4332.3	2.6E-01	
2	3	9.75	1.22	44.5	3	4332.3	2.6E-01	
3	1	11.35	1.42	40.5	3	4332.3	2.4E-01	2.4E-01
3	2	11.35	1.42	40.6	3	4332.3	2.4E-01	
3	3	11.35	1.42	40.4	3	4332.3	2.4E-01	



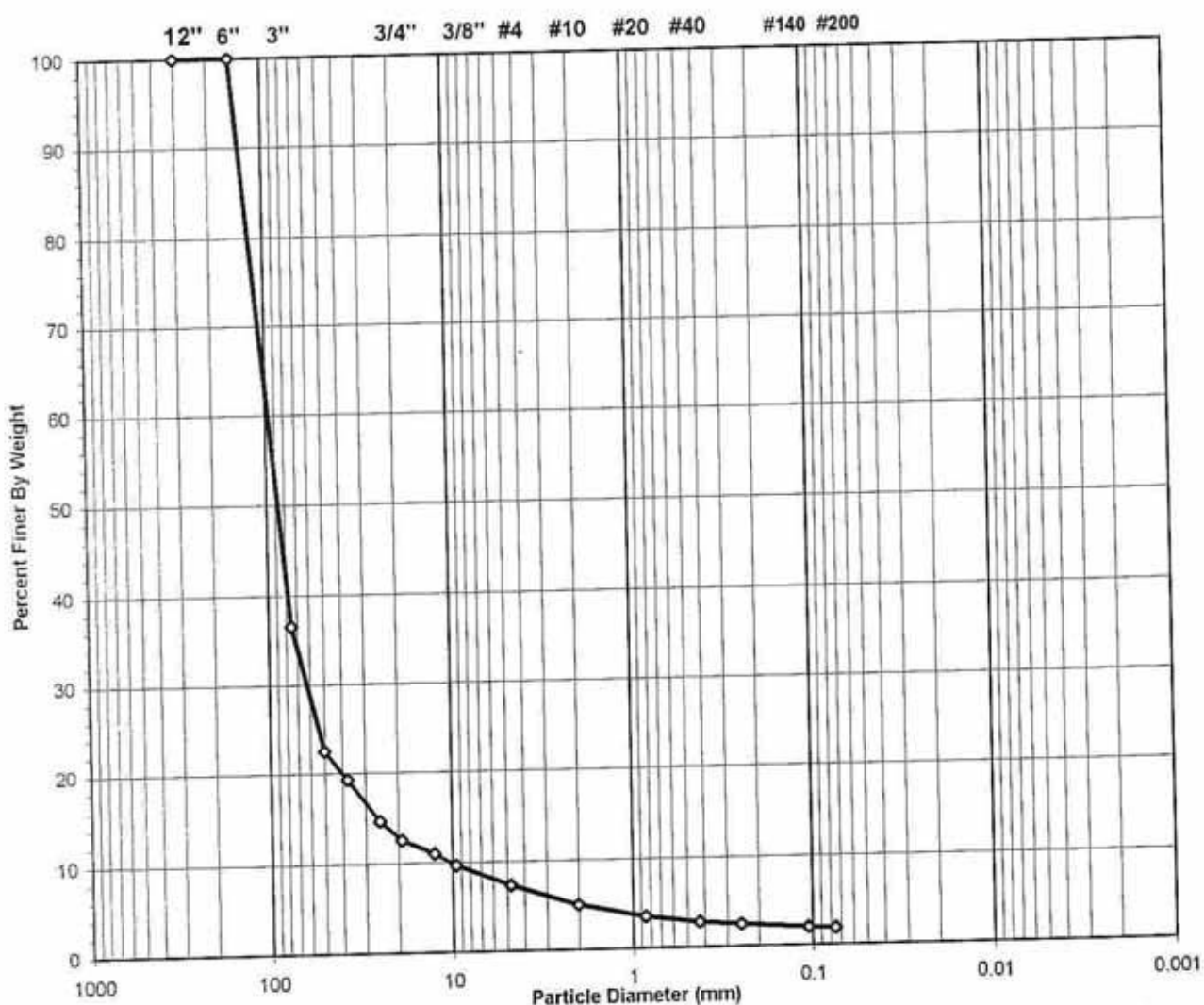
Tested By DDA Date 3/2/06 Checked By *KJB* Date 3-3-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-36

Boring No. TS-4
Depth (ft) 30-36
Sample No. S-4
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By **PC**

Date **2/18/06**

Checked By **YRB**

Date **2-20-06**

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-36**

Boring No. **TS-4**
Depth (ft) **30-36**
Sample No. **S-4**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	701	Tare No.	903
Wgt. Tare + Wet Specimen (gm)	1471.50	Wgt. Tare + Wet Specimen (gm)	705.40
Wgt. Tare + Dry Specimen (gm)	1297.10	Wgt. Tare + Dry Specimen (gm)	687.60
Weight of Tare (gm)	100.33	Weight of Tare (gm)	109.67
Weight of Water (gm)	174.40	Weight of Water (gm)	17.80
Weight of Dry Soil (gm)	1196.77	Weight of Dry Soil (gm)	577.93
Moisture Content (%)	14.6	Moisture Content (%)	3.1

Wet Weight - 3/4" Sample (gm)	4066	Weight of the Dry Specimen (gm)	1196.77
Dry Weight - 3/4" Sample (gm)	3548.8	Weight of minus #200 material (gm)	179.33
Wet Weight + 3/4" Sample (gm)	25535.00	Weight of plus #200 material (gm)	1017.44
Dry Weight + 3/4" Sample (gm)	24772.03		
Total Dry Weight Sample (gm)	28320.9	J - Factor (Percent Finer than 3/4")	0.1253

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	18529.00	63.47	63.47	36.53	36.53
2"	50	4087.00 (*)	14.00	77.47	22.53	22.53
1 1/2"	37.5	936.00	3.21	80.68	19.32	19.32
1"	25	1359.00	4.66	85.33	14.67	14.67
3/4"	19	624.00	2.14	87.47	12.53	12.53
1/2"	12.5	146.63	12.25	12.25	87.75	11.00
3/8"	9.5	126.45	10.57	22.82	77.18	9.67
#4	4.75	225.80	18.87	41.69	58.31	7.31
#10	2	220.46	18.42	60.11	39.89	5.00
#20	0.85	140.30 (**)	11.72	71.83	28.17	3.53
#40	0.425	69.59	5.81	77.64	22.36	2.80
#60	0.25	33.66	2.81	80.46	19.54	2.45
#140	0.106	40.54	3.39	83.84	16.16	2.02
#200	0.075	14.01	1.17	85.02	14.98	1.88
Pan	-	179.33	14.98	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

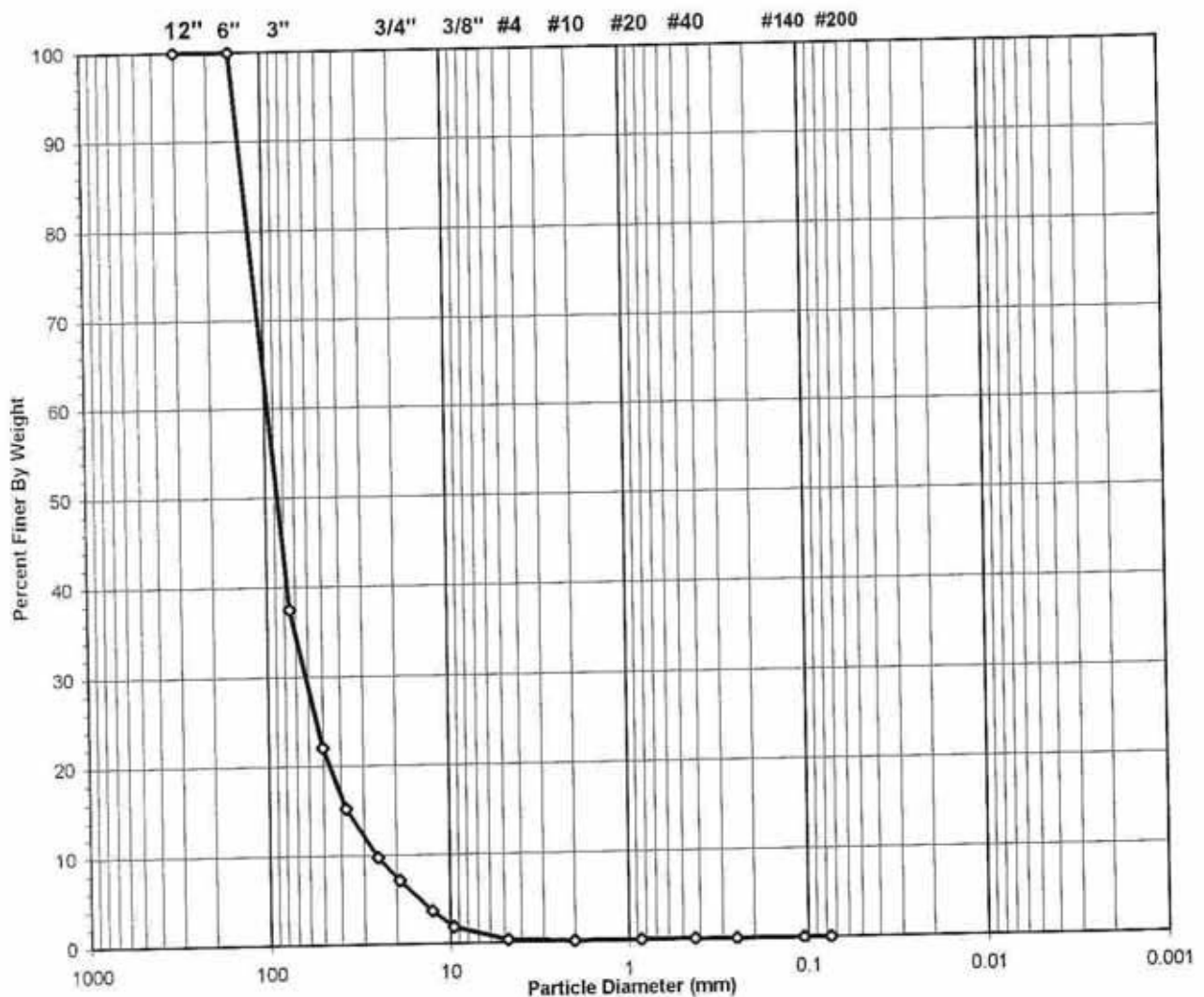
Tested By **PC** Date **2/18/06** Checked By **KRB** Date **2-20-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-36

Boring No. TS-4
Depth (ft) 36-40
Sample No. S-4
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By PC Date 2/18/06 Checked By *YKB* Date *2-20-06*
page 1 of 2 DCN: CT-S3A DATE 6-25-98 REVISION 2 C:\MSOFFICE\ExcelPrint\Q\U146.xls\Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-36

Boring No. TS-4
Depth (ft) 36-40
Sample No. S-4
Soil Color BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	967	Tare No.	883
Wgt. Tare + Wet Specimen (gm)	1256.70	Wgt. Tare + Wet Specimen (gm)	1204.80
Wgt. Tare + Dry Specimen (gm)	1242.50	Wgt. Tare + Dry Specimen (gm)	1199.00
Weight of Tare (gm)	103.71	Weight of Tare (gm)	110.31
Weight of Water (gm)	14.20	Weight of Water (gm)	5.80
Weight of Dry Soil (gm)	1138.79	Weight of Dry Soil (gm)	1088.69
Moisture Content (%)	1.2	Moisture Content (%)	0.5

Wet Weight - 3/4" Sample (gm)	2648	Weight of the Dry Specimen (gm)	1138.79
Dry Weight - 3/4" Sample (gm)	2615.4	Weight of minus #200 material (gm)	3.29
Wet Weight + 3/4" Sample (gm)	34311.00	Weight of plus #200 material (gm)	1135.50
Dry Weight + 3/4" Sample (gm)	34129.18		
Total Dry Weight Sample (gm)	36744.6	J - Factor (Percent Finer than 3/4")	0.0712

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	23098.00	62.53	62.53	37.47	37.47
2"	50	5701.00 (*)	15.43	77.96	22.04	22.04
1 1/2"	37.5	2519.00	6.82	84.78	15.22	15.22
1"	25	2039.00	5.52	90.30	9.70	9.70
3/4"	19	954.00	2.58	92.88	7.12	7.12
1/2"	12.5	553.20	48.58	48.58	51.42	3.66
3/8"	9.5	291.33	25.58	74.16	25.84	1.84
#4	4.75	236.09	20.73	94.89	5.11	0.36
#10	2	46.48	4.08	98.97	1.03	0.07
#20	0.85	4.18 (**)	0.37	99.34	0.66	0.05
#40	0.425	1.50	0.13	99.47	0.53	0.04
#60	0.25	0.94	0.08	99.55	0.45	0.03
#140	0.106	1.35	0.12	99.67	0.33	0.02
#200	0.075	0.43	0.04	99.71	0.29	0.02
Pan	-	3.29	0.29	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

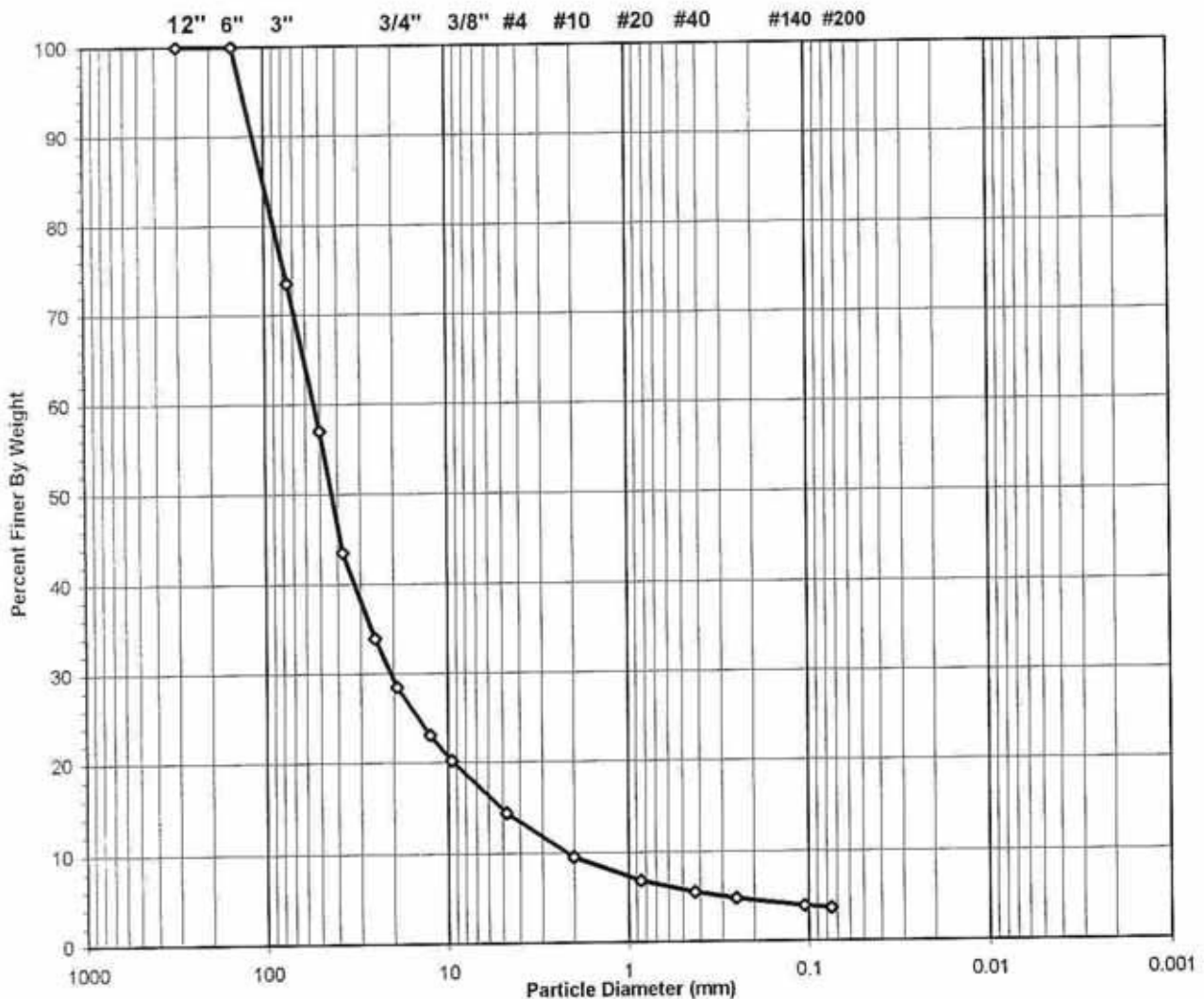
Tested By PC Date 2/18/06 Checked By *YAB* Date 2-20-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-37

Boring No. TS-4
Depth (ft) 40-50
Sample No. S-5
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 53.8 CC = 3.6

USCS Classification **POORLY GRADED GRAVEL**

D30 = 20.5 CU = 24.7

D10 = 2.2

Tested By PC

Date 2/18/06

Checked By

Date 2-20-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-4
Client Reference	TAUM SAUK 06-3551	Depth (ft)	40-50
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-37	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	677	Tare No.	875
Wgt. Tare + Wet Specimen (gm)	1260.40	Wgt. Tare + Wet Specimen (gm)	1228.80
Wgt. Tare + Dry Specimen (gm)	1165.40	Wgt. Tare + Dry Specimen (gm)	1215.10
Weight of Tare (gm)	98.85	Weight of Tare (gm)	110.50
Weight of Water (gm)	95.00	Weight of Water (gm)	13.70
Weight of Dry Soil (gm)	1066.55	Weight of Dry Soil (gm)	1104.60
Moisture Content (%)	8.9	Moisture Content (%)	1.2

Wet Weight - 3/4" Sample (gm)	9824	Weight of the Dry Specimen (gm)	1066.55
Dry Weight - 3/4" Sample (gm)	9020.5	Weight of minus #200 material (gm)	135.93
Wet Weight + 3/4" Sample (gm)	22909.00	Weight of plus #200 material (gm)	930.62
Dry Weight + 3/4" Sample (gm)	22628.35		
Total Dry Weight Sample (gm)	31648.9	J - Factor (Percent Finer than 3/4")	0.2850

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	8490.00	26.50	26.50	73.50	73.50
2"	50	5283.00 (*)	16.49	42.99	57.01	57.01
1 1/2"	37.5	4332.00	13.52	56.51	43.49	43.49
1"	25	3068.00	9.58	66.08	33.92	33.92
3/4"	19	1736.00	5.42	71.50	28.50	28.50
1/2"	12.5	202.11	18.95	18.95	81.05	23.10
3/8"	9.5	106.86	10.02	28.97	71.03	20.25
#4	4.75	219.99	20.63	49.60	50.40	14.37
#10	2	180.94	16.96	66.56	33.44	9.53
#20	0.85	99.77 (**)	9.35	75.91	24.09	6.86
#40	0.425	50.82	4.76	80.68	19.32	5.51
#60	0.25	25.86	2.42	83.10	16.90	4.82
#140	0.106	32.41	3.04	86.14	13.86	3.95
#200	0.075	11.86	1.11	87.26	12.74	3.63
Pan	-	135.93	12.74	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

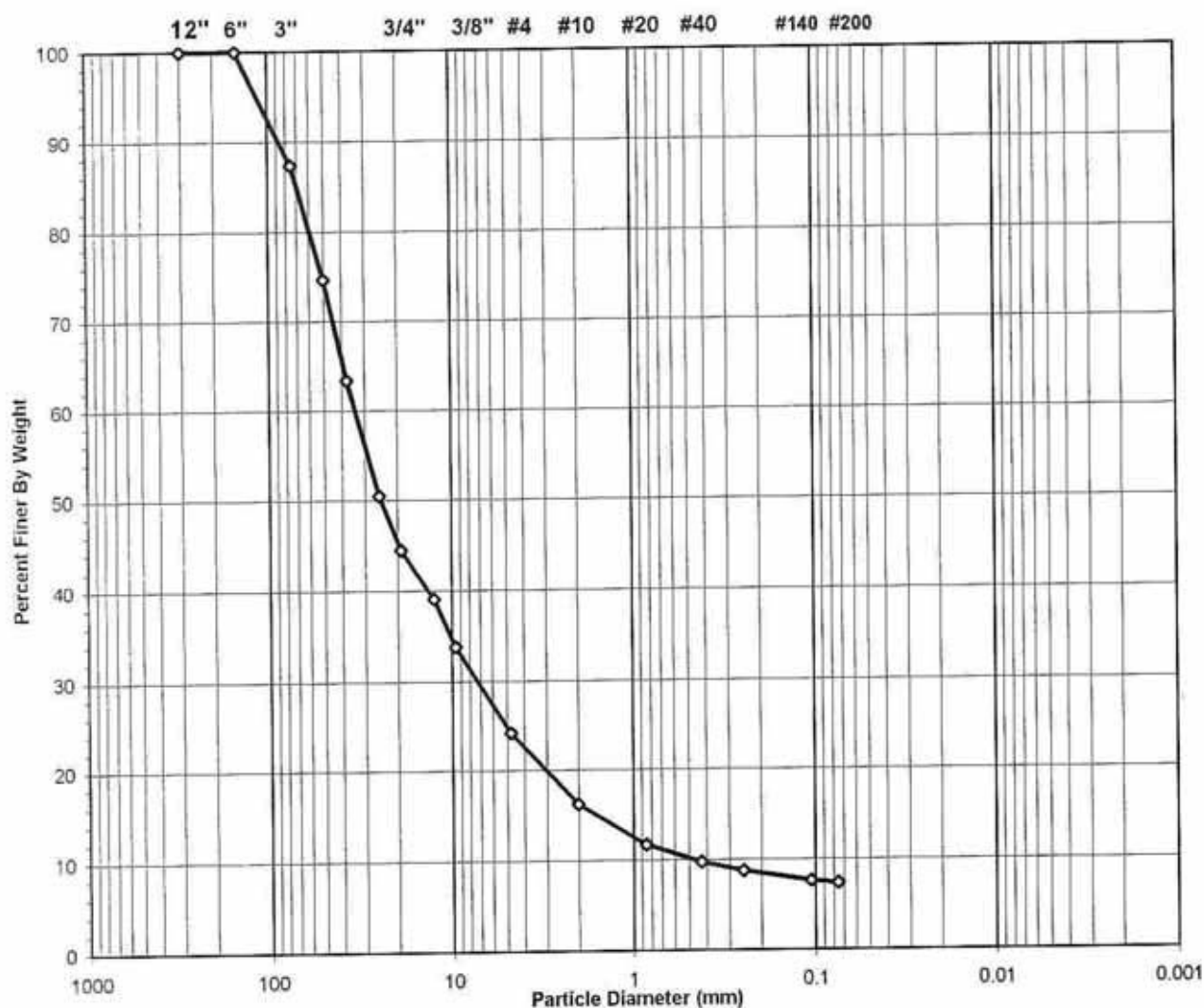
Tested By PC Date 2/18/06 Checked By *YHB* Date 2-20-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-38

Boring No. TS-4
Depth (ft) 50-60
Sample No. S-6
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol *gp-gm, ASSUMED*

D60 = 33.8 CC = 3.3

USCS Classification **POORLY GRADED GRAVEL WITH SILT AND SAND**

D30 = 7.2 CU = 72.2

D10 = 0.5

Tested By PC

Date

2/18/06

Checked By

YKB

Date

2-20-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-4
Client Reference	TAUM SAUK 06-3551	Depth (ft)	50-60
Project No.	2006-060-01	Sample No.	S-6
Lab ID	2006-060-01-38	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	946	Tare No.	873
Wgt. Tare + Wet Specimen (gm)	1621.70	Wgt. Tare + Wet Specimen (gm)	860.80
Wgt. Tare + Dry Specimen (gm)	1475.00	Wgt. Tare + Dry Specimen (gm)	847.30
Weight of Tare (gm)	188.34	Weight of Tare (gm)	109.56
Weight of Water (gm)	146.70	Weight of Water (gm)	13.50
Weight of Dry Soil (gm)	1286.66	Weight of Dry Soil (gm)	737.74
Moisture Content (%)	11.4	Moisture Content (%)	1.8

Wet Weight - 3/4" Sample (gm)	15633	Weight of the Dry Specimen (gm)	1286.66
Dry Weight - 3/4" Sample (gm)	14033.0	Weight of minus #200 material (gm)	211.28
Wet Weight + 3/4" Sample (gm)	17868.00	Weight of plus #200 material (gm)	1075.38
Dry Weight + 3/4" Sample (gm)	17546.91		
Total Dry Weight Sample (gm)	31579.9	J - Factor (Percent Finer than 3/4")	0.4444

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	4070.00	12.66	12.66	87.34	87.34
2"	50	4089.00	12.72	25.37	74.63	74.63
1 1/2"	37.5	3626.00	11.28	36.65	63.35	63.35
1"	25	4164.00	12.95	49.60	50.40	50.40
3/4"	19	1919.00	5.97	55.56	44.44	44.44
1/2"	12.5	156.20	12.14	12.14	87.86	39.04
3/8"	9.5	151.81	11.80	23.94	76.06	33.80
#4	4.75	277.85	21.59	45.53	54.47	24.20
#10	2	232.92	18.10	63.64	36.36	16.16
#20	0.85	129.94	10.10	73.74	26.26	11.67
#40	0.425	56.16	4.36	78.10	21.90	9.73
#60	0.25	29.15	2.27	80.37	19.63	8.72
#140	0.106	32.10	2.49	82.86	17.14	7.62
#200	0.075	9.25	0.72	83.58	16.42	7.30
Pan	-	211.28	16.42	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By PC Date 2/18/06 Checked By JHB Date 2-20-06

RIGID WALL CONSTANT HEAD PERMEABILITY

ASTM D 2434-68 (SOP-S35) Modified

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-02**
Lab ID **2006-060-02-04**

Boring No. **TS-4**
Depth(ft.) **50-70**
Sample No. **S6+S7**
Visual Description **BROWN CLAYEY SAND WITH ROCK FRAGMENTS**

Unit Weight

Wt. of Wet Material (gm) **17626**
Average Length (in) **11.6**
Permeameter Diameter (in) **7.5**
Sample Volume (cc) **8426.9**
Unit Dry Weight (gm/cc) **1.93**
Unit Dry Weight (pcf) **120.2**

Water Content

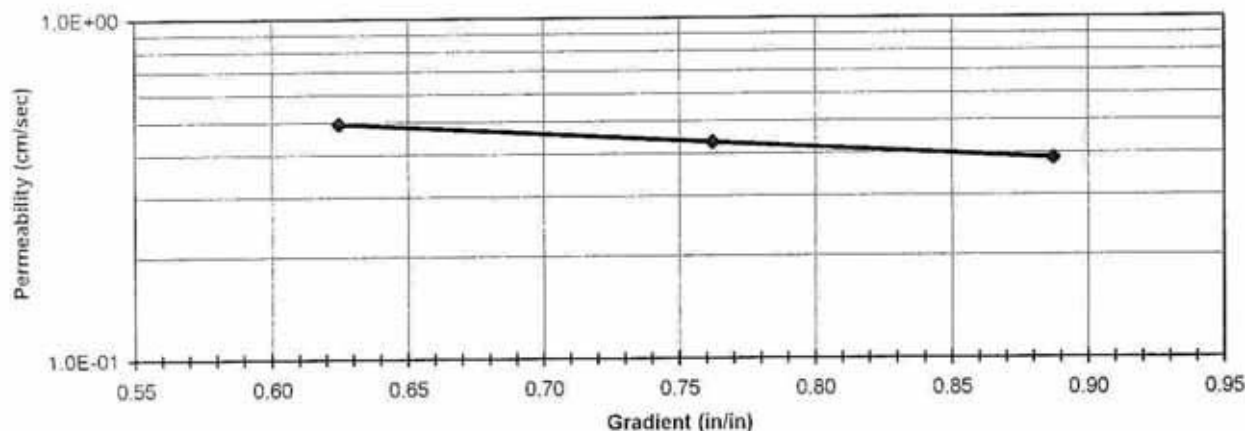
Tare Number **892**
Wt. of Tare & Wet Mat.(gm) **779.40**
Wt. of Tare & Dry Mat.(gm) **726.40**
Wt. of Tare (gm) **110.00**
Wt. Water (gm) **53.00**
Wt. of Dry Material (gm) **616.40**

	Test 1	Test 2	Test 3
Piezometer Spacing (in)	8	8	8
Temperature (° C)	22.5	22.9	23.5
Temp. Correction Factor	0.9421	0.9333	0.9203

Water Content (%) **8.6**
(Measured)

Load (psf) **NA**

Test No.	Replicate No.	Head (in)	Gradient (in/in)	Elapsed Time (sec)	Collection Tube (divisions)	Collected Volume (cc)	Permeability 20° C (cm/s)	Average Permeability (cm/s)
1	1	5.00	0.63	46.6	3	4332.3	4.9E-01	4.9E-01
1	2	5.00	0.63	46.4	3	4332.3	4.9E-01	
1	3	5.00	0.63	46.3	3	4332.3	4.9E-01	
2	1	6.10	0.76	43.1	3	4332.3	4.3E-01	4.3E-01
2	2	6.10	0.76	43.0	3	4332.3	4.3E-01	
2	3	6.10	0.76	43.0	3	4332.3	4.3E-01	
3	1	7.10	0.89	41.0	3	4332.3	3.8E-01	3.8E-01
3	2	7.10	0.89	41.0	3	4332.3	3.8E-01	
3	3	7.10	0.89	41.1	3	4332.3	3.8E-01	



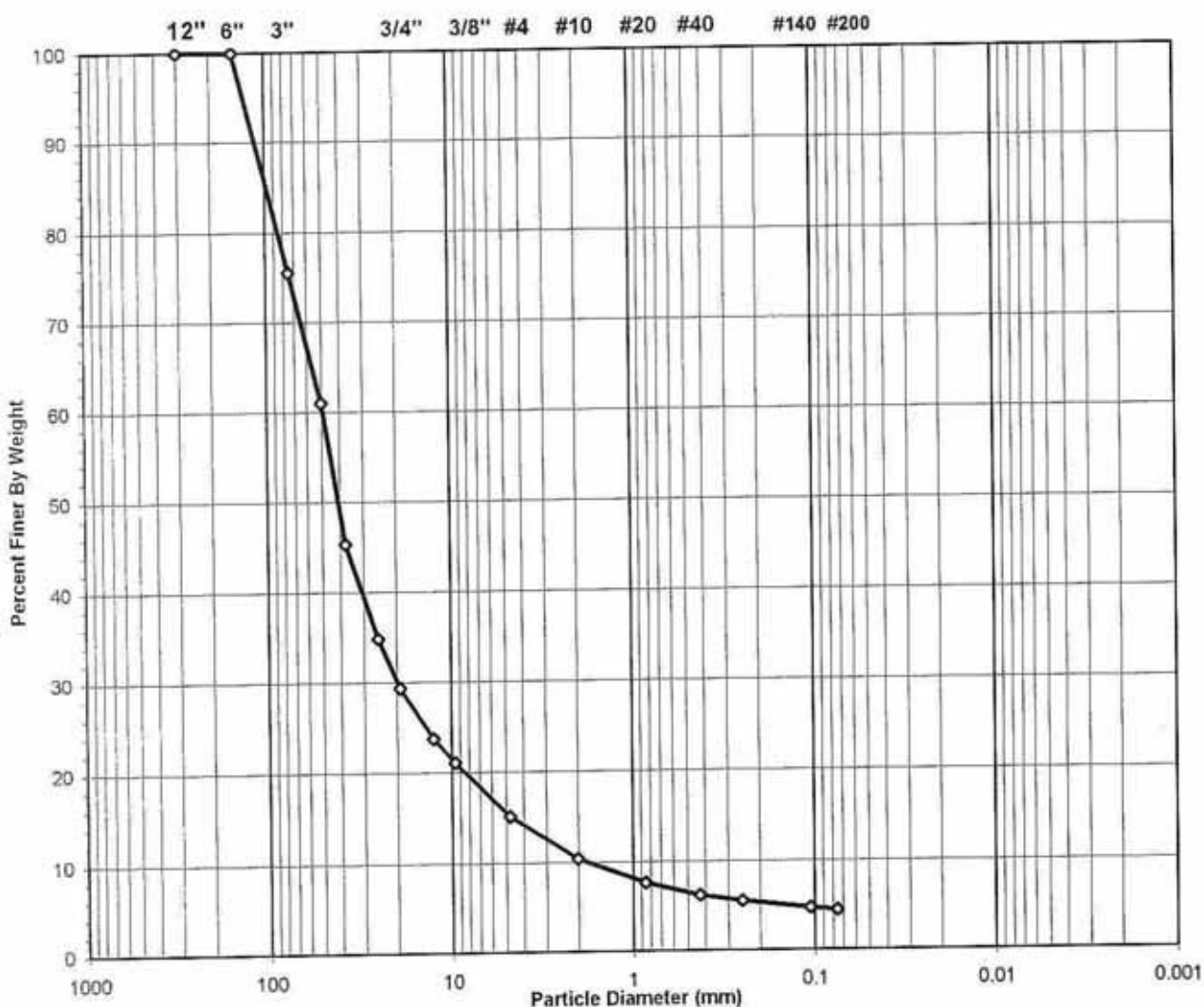
Tested By **DDA** Date **2/27/06** Checked By **KJB** Date **3-2-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-39

Boring No. TS-4
Depth (ft) 60-70
Sample No. S-7
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 49.1 CC = 4.4

USCS Classification **POORLY GRADED GRAVEL**

D30 = 19.7 CU = 27.4

D10 = 1.8

Tested By JP

Date 2/21/06

Checked By *KD*

Date 2-22-06

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-39

Boring No. TS-4
Depth (ft) 60-70
Sample No. S-7
Soil Color BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	927	Tare No.	542
Wgt. Tare + Wet Specimen (gm)	1273.70	Wgt. Tare + Wet Specimen (gm)	486.30
Wgt. Tare + Dry Specimen (gm)	1176.90	Wgt. Tare + Dry Specimen (gm)	474.14
Weight of Tare (gm)	102.88	Weight of Tare (gm)	82.36
Weight of Water (gm)	96.80	Weight of Water (gm)	12.16
Weight of Dry Soil (gm)	1074.02	Weight of Dry Soil (gm)	391.78
Moisture Content (%)	9.0	Moisture Content (%)	3.1

Wet Weight - 3/4" Sample (gm)	10360	Weight of the Dry Specimen (gm)	1074.02
Dry Weight - 3/4" Sample (gm)	9503.5	Weight of minus #200 material (gm)	162.76
Wet Weight + 3/4" Sample (gm)	23629.00	Weight of plus #200 material (gm)	911.26
Dry Weight + 3/4" Sample (gm)	22917.68		
Total Dry Weight Sample (gm)	32421.2	J - Factor (Percent Finer than 3/4")	0.2931

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	8176.00	24.46	24.46	75.54	75.54
2"	50	4847.00	14.50	38.96	61.04	61.04
1 1/2"	37.5	5258.00	15.73	54.69	45.31	45.31
1"	25	3512.00	10.51	65.19	34.81	34.81
3/4"	19	1836.00	5.49	70.69	29.31	29.31
1/2"	12.5	203.24	18.92	18.92	81.08	23.77
3/8"	9.5	99.03	9.22	28.14	71.86	21.06
#4	4.75	219.33	20.42	48.57	51.43	15.08
#10	2	173.11	16.12	64.68	35.32	10.35
#20	0.85	99.06	9.22	73.91	26.09	7.65
#40	0.425	52.65	4.90	78.81	21.19	6.21
#60	0.25	25.64	2.39	81.20	18.80	5.51
#140	0.106	29.49	2.75	83.94	16.06	4.71
#200	0.075	9.71	0.90	84.85	15.15	4.44
Pan	-	162.76	15.15	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

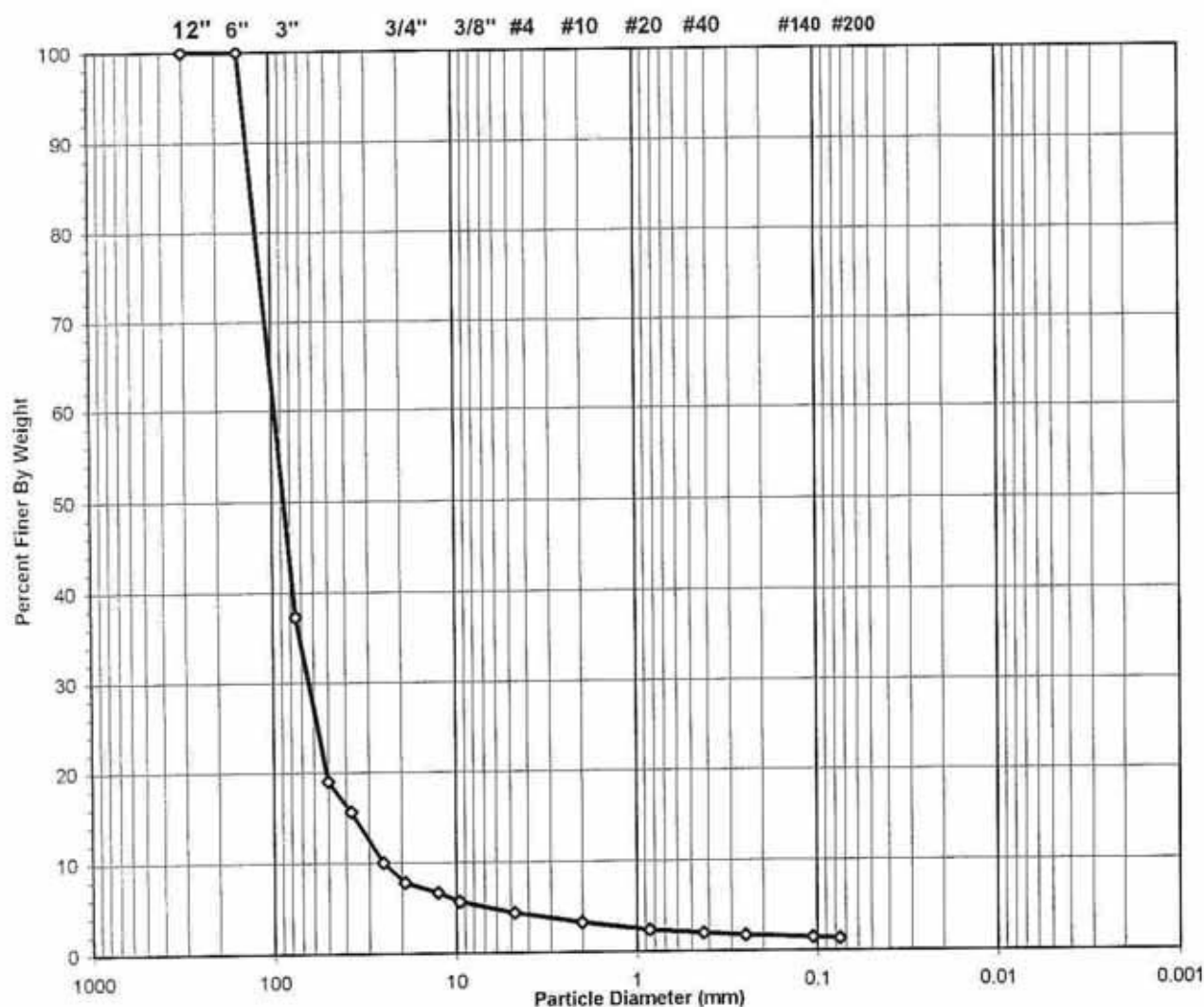
Tested By JP Date 2/21/06 Checked By KB Date 2-22-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-40

Boring No. TS-4
Depth (ft) NA
Sample No. S-8
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By JP Date 2/21/06 Checked By *KVB* Date 2-22-06
page 1 of 2 DCN: CT-S3A DATE 6-26-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ[U190...xls]Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-4
Client Reference	TAUM SAUK 06-3551	Depth (ft)	NA
Project No.	2006-060-01	Sample No.	S-8
Lab ID	2006-060-01-40	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	973	Tare No.	899
Wgt. Tare + Wet Specimen (gm)	1239.30	Wgt. Tare + Wet Specimen (gm)	971.60
Wgt. Tare + Dry Specimen (gm)	1165.20	Wgt. Tare + Dry Specimen (gm)	964.70
Weight of Tare (gm)	102.42	Weight of Tare (gm)	110.10
Weight of Water (gm)	74.10	Weight of Water (gm)	6.90
Weight of Dry Soil (gm)	1062.78	Weight of Dry Soil (gm)	854.60
Moisture Content (%)	7.0	Moisture Content (%)	0.8

Wet Weight - 3/4" Sample (gm)	2186	Weight of the Dry Specimen (gm)	1062.78
Dry Weight - 3/4" Sample (gm)	2043.5	Weight of minus #200 material (gm)	182.74
Wet Weight + 3/4" Sample (gm)	24387.00	Weight of plus #200 material (gm)	880.04
Dry Weight + 3/4" Sample (gm)	24191.68		
Total Dry Weight Sample (gm)	26235.2	J - Factor (Percent Finer than 3/4")	0.0779

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	16581.00	62.70	62.70	37.30	37.30
2"	50	4831.00 (*)	18.27	80.96	19.04	19.04
1 1/2"	37.5	908.00	3.43	84.40	15.60	15.60
1"	25	1485.00	5.61	90.01	9.99	9.99
3/4"	19	582.00	2.20	92.21	7.79	7.79
1/2"	12.5	158.29	14.89	14.89	85.11	6.63
3/8"	9.5	128.91	12.13	27.02	72.98	5.68
#4	4.75	173.07	16.28	43.31	56.69	4.42
#10	2	162.01	15.24	58.55	41.45	3.23
#20	0.85	110.32 (**)	10.38	68.93	31.07	2.42
#40	0.425	56.43	5.31	74.24	25.76	2.01
#60	0.25	33.75	3.18	77.42	22.58	1.76
#140	0.106	43.97	4.14	81.55	18.45	1.44
#200	0.075	13.29	1.25	82.81	17.19	1.34
Pan	-	182.74	17.19	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

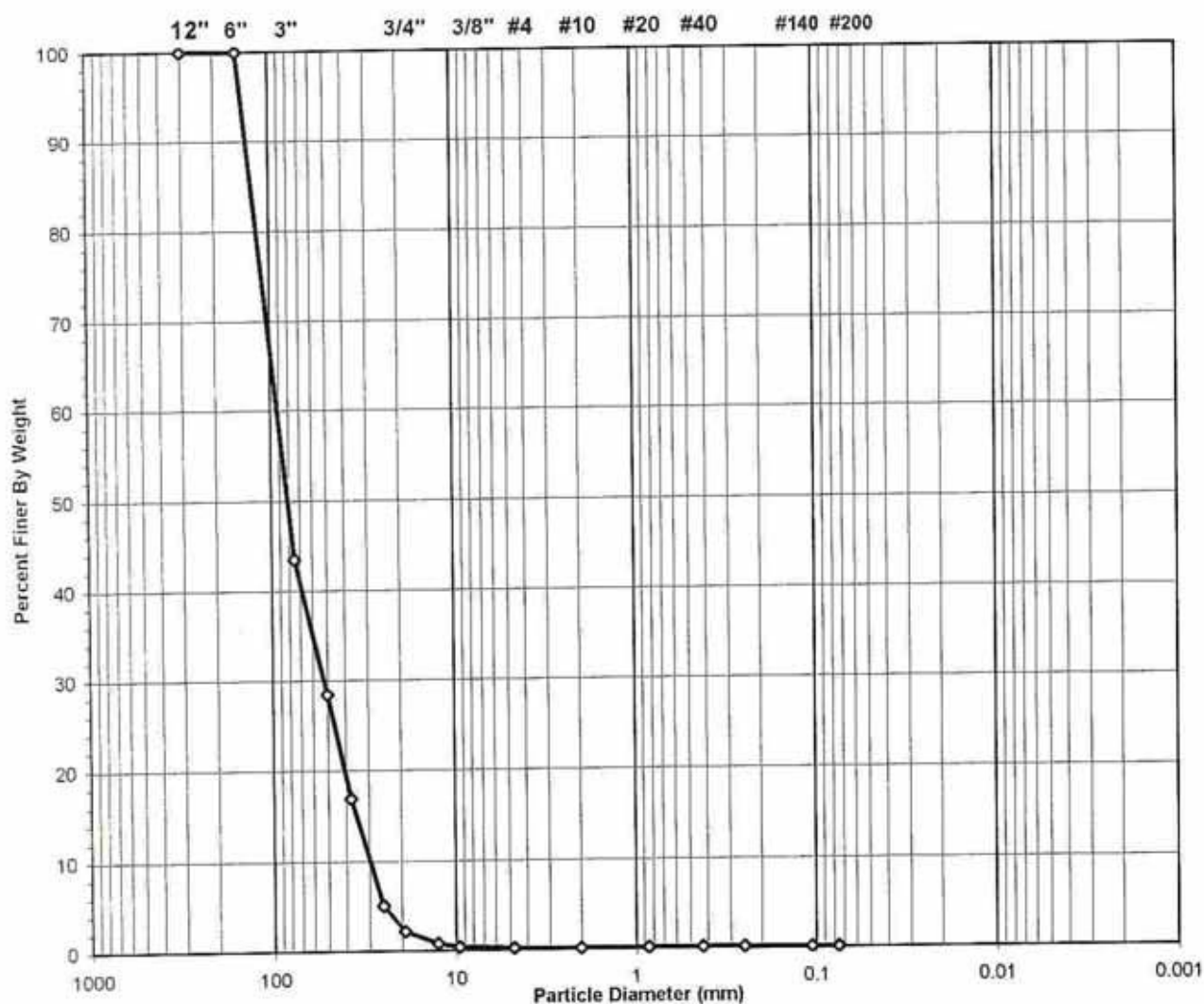
Tested By JP Date 2/21/06 Checked By  Date 2-22-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-41

Boring No. TS-4
Depth (ft) 80-90
Sample No. S-9
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By JP

Date 2/21/06

Checked By

KB

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-41**

Boring No. **TS-4**
Depth (ft) **80-90**
Sample No. **S-9**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	674	Tare No.	897
Wgt. Tare + Wet Specimen (gm)	739.00	Wgt. Tare + Wet Specimen (gm)	814.20
Wgt. Tare + Dry Specimen (gm)	731.00	Wgt. Tare + Dry Specimen (gm)	809.50
Weight of Tare (gm)	99.64	Weight of Tare (gm)	109.86
Weight of Water (gm)	8.00	Weight of Water (gm)	4.70
Weight of Dry Soil (gm)	631.36	Weight of Dry Soil (gm)	699.64
Moisture Content (%)	1.3	Moisture Content (%)	0.7

Wet Weight - 3/4" Sample (gm)	641	Weight of the Dry Specimen (gm)	631.36
Dry Weight - 3/4" Sample (gm)	633.0	Weight of minus #200 material (gm)	22.46
Wet Weight + 3/4" Sample (gm)	28728.40	Weight of plus #200 material (gm)	608.90
Dry Weight + 3/4" Sample (gm)	28536.70		
Total Dry Weight Sample (gm)	29169.7	J - Factor (Percent Finer than 3/4")	0.0217

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	16599.00	56.53	56.53	43.47	43.47
2"	50	4424.00 (*)	15.07	71.59	28.41	28.41
1 1/2"	37.5	3385.00	11.53	83.12	16.88	16.88
1"	25	3468.40	11.81	94.93	5.07	5.07
3/4"	19	852.00	2.90	97.83	2.17	2.17
1/2"	12.5	405.41	64.21	64.21	35.79	0.78
3/8"	9.5	118.74	18.81	83.02	16.98	0.37
#4	4.75	51.71	8.19	91.21	8.79	0.19
#10	2	11.20	1.77	92.98	7.02	0.15
#20	0.85	7.37 (**)	1.17	94.15	5.85	0.13
#40	0.425	4.46	0.71	94.86	5.14	0.11
#60	0.25	3.30	0.52	95.38	4.62	0.10
#140	0.106	5.09	0.81	96.19	3.81	0.08
#200	0.075	1.62	0.26	96.44	3.56	0.08
Pan	-	22.46	3.56	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

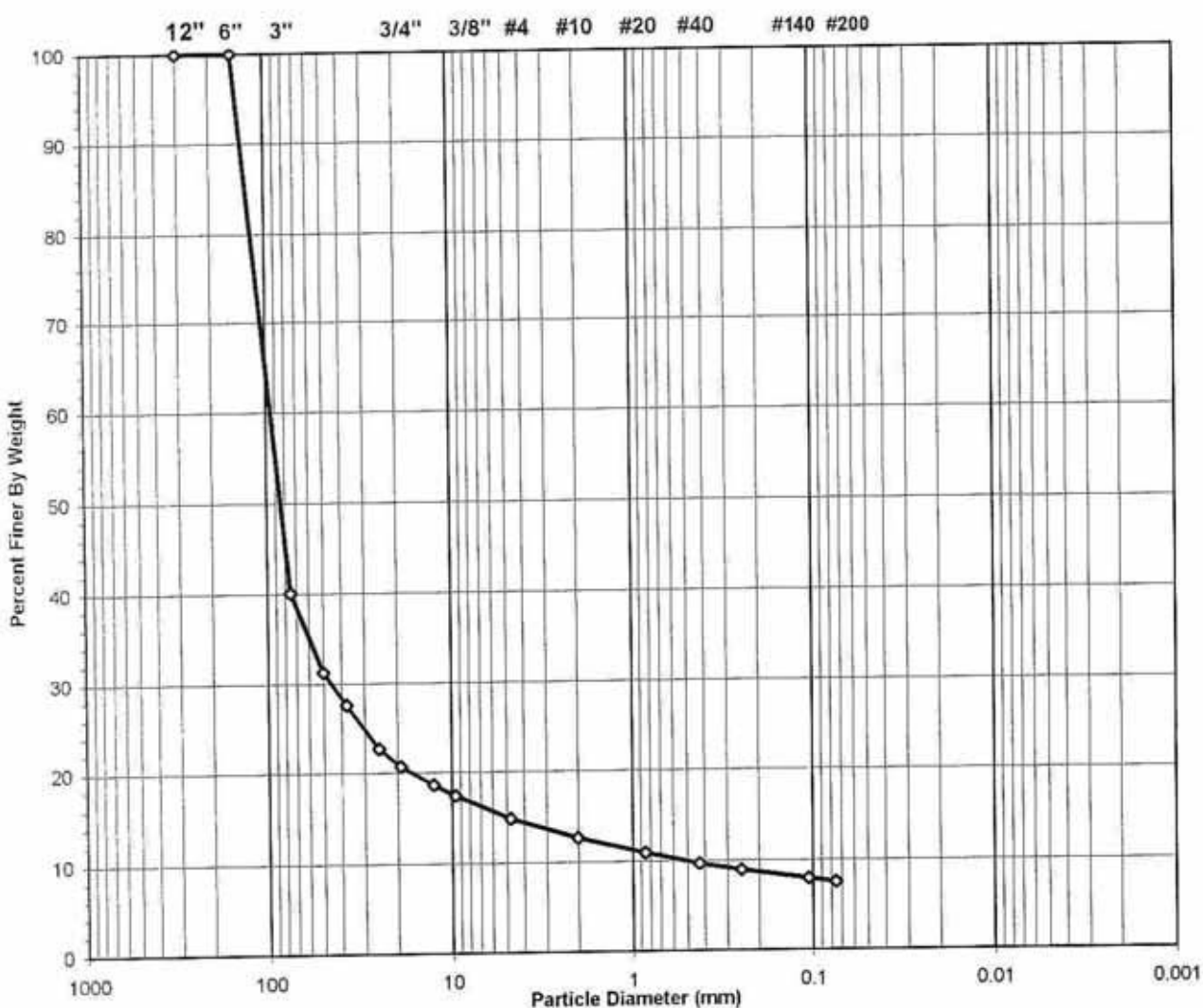
Tested By **JP** Date **2/21/06** Checked By **YHB** Date **2-22-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-42

Boring No. TS-4
Depth (ft) 90-98.25
Sample No. S-10
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL WITH SILT**

Tested By JP

Date 2/21/06

Checked By

KYB

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-42**

Boring No. **TS-4**
Depth (ft) **90-98.25**
Sample No. **S-10**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	683	Tare No.	879
Wgt. Tare + Wet Specimen (gm)	1305.80	Wgt. Tare + Wet Specimen (gm)	504.57
Wgt. Tare + Dry Specimen (gm)	1217.60	Wgt. Tare + Dry Specimen (gm)	499.80
Weight of Tare (gm)	99.83	Weight of Tare (gm)	110.15
Weight of Water (gm)	88.20	Weight of Water (gm)	4.77
Weight of Dry Soil (gm)	1117.77	Weight of Dry Soil (gm)	389.65
Moisture Content (%)	7.9	Moisture Content (%)	1.2

Wet Weight - 3/4" Sample (gm)	12073	Weight of the Dry Specimen (gm)	1117.77
Dry Weight - 3/4" Sample (gm)	11190.0	Weight of minus #200 material (gm)	408.45
Wet Weight + 3/4" Sample (gm)	43487.00	Weight of plus #200 material (gm)	709.32
Dry Weight + 3/4" Sample (gm)	42961.08		
Total Dry Weight Sample (gm)	54151.1	J - Factor (Percent Finer than 3/4")	0.2066

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	32862.00	59.95	59.95	40.05	40.05
2"	50	4825.00 (*)	8.80	68.75	31.25	31.25
1 1/2"	37.5	1991.00	3.63	72.39	27.61	27.61
1"	25	2710.00	4.94	77.33	22.67	22.67
3/4"	19	1099.00	2.00	79.34	20.66	20.66
1/2"	12.5	111.70	9.99	9.99	90.01	18.60
3/8"	9.5	62.74	5.61	15.61	84.39	17.44
#4	4.75	139.44	12.47	28.08	71.92	14.86
#10	2	118.87	10.63	38.72	61.28	12.66
#20	0.85	95.58 (**)	8.55	47.27	52.73	10.90
#40	0.425	66.43	5.94	53.21	46.79	9.67
#60	0.25	39.90	3.57	56.78	43.22	8.93
#140	0.106	54.24	4.85	61.63	38.37	7.93
#200	0.075	20.42	1.83	63.46	36.54	7.55
Pan	-	408.45	36.54	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP** Date **2/21/06** Checked By **YHB** Date **2-22-06**

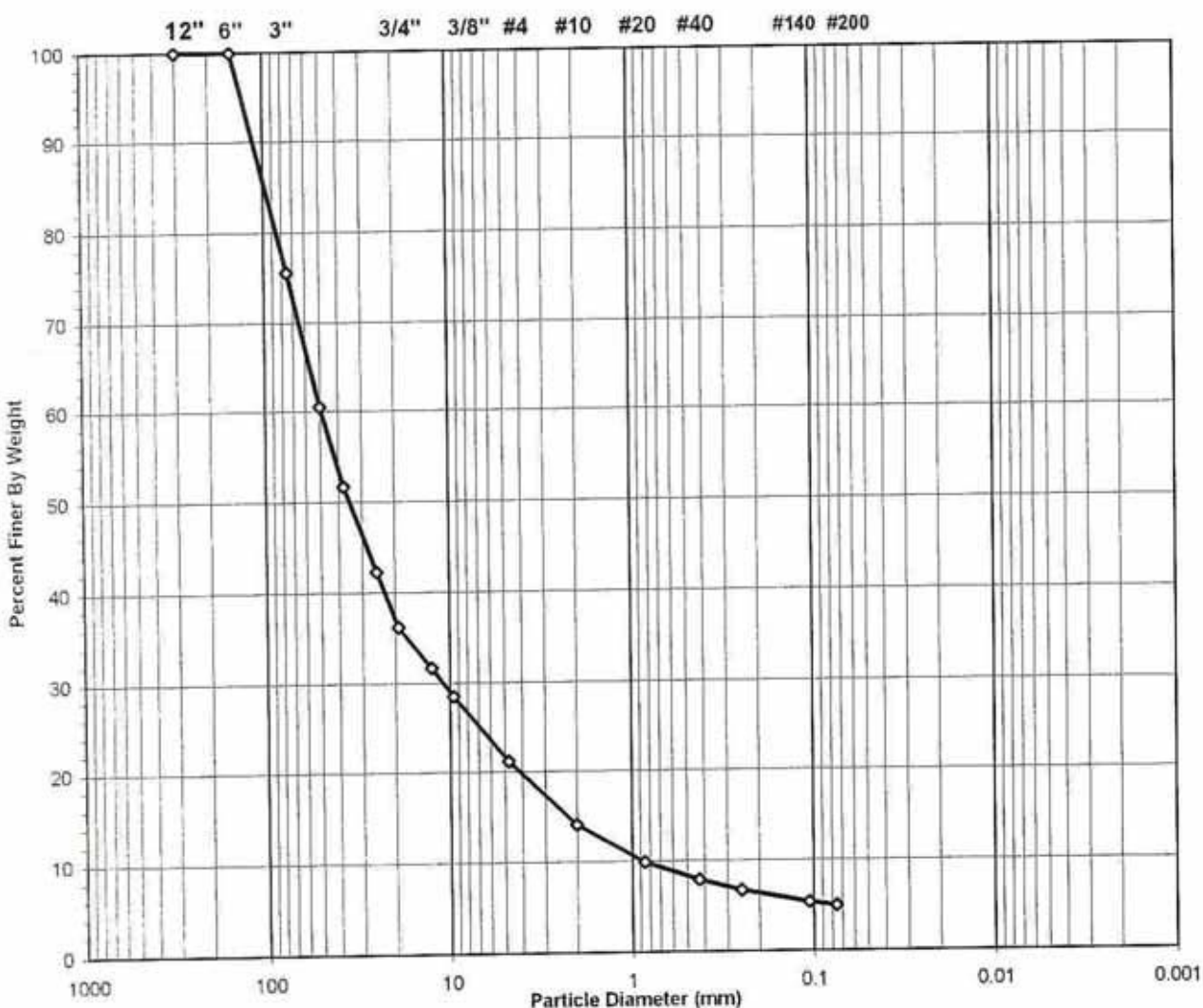
BORING TS-5

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client: PAUL C. RIZZO
Client Reference: TAUM SAUK 06-3551
Project No.: 2006-060-01
Lab ID: 2006-060-01-43

Boring No.: TS-5
Depth (ft): 0-10
Sample No.: S-1
Soil Color: REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol: **GW, TESTED**

D60 = 49.2 CC = 2.7

USCS Classification: **WELL-GRADED GRAVEL WITH SAND**

D30 = 10.9 CU = 56.4

D10 = 0.9

Tested By: JP

Date: 2/27/06

Checked By: *KJB*

Date: 3-1-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-43**

Boring No. **TS-5**
Depth (ft) **0-10**
Sample No. **S-1**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	932	Tare No.	537
Wgt. Tare + Wet Specimen (gm)	1335.50	Wgt. Tare + Wet Specimen (gm)	532.37
Wgt. Tare + Dry Specimen (gm)	1261.20	Wgt. Tare + Dry Specimen (gm)	522.83
Weight of Tare (gm)	103.11	Weight of Tare (gm)	82.48
Weight of Water (gm)	74.30	Weight of Water (gm)	9.54
Weight of Dry Soil (gm)	1158.09	Weight of Dry Soil (gm)	440.35
Moisture Content (%)	6.4	Moisture Content (%)	2.2

Wet Weight - 3/4" Sample (gm)	23953	Weight of the Dry Specimen (gm)	1158.09
Dry Weight - 3/4" Sample (gm)	22508.9	Weight of minus #200 material (gm)	158.29
Wet Weight + 3/4" Sample (gm)	40558.00	Weight of plus #200 material (gm)	999.80
Dry Weight + 3/4" Sample (gm)	39697.96		
Total Dry Weight Sample (gm)	62206.8	J - Factor (Percent Finer than 3/4")	0.3618

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	15571.00	24.50	24.50	75.50	75.50
2"	50	9545.00 (*)	15.02	39.52	60.48	60.48
1 1/2"	37.5	5629.00	8.86	48.38	51.62	51.62
1"	25	5974.00	9.40	57.78	42.22	42.22
3/4"	19	3839.00	6.04	63.82	36.18	36.18
1/2"	12.5	145.17	12.54	12.54	87.46	31.65
3/8"	9.5	102.54	8.85	21.39	78.61	28.44
#4	4.75	233.55	20.17	41.56	58.44	21.15
#10	2	227.87	19.68	61.23	38.77	14.03
#20	0.85	133.02 (**)	11.49	72.72	27.28	9.87
#40	0.425	65.26	5.64	78.35	21.65	7.83
#60	0.25	37.89	3.27	81.63	18.37	6.65
#140	0.106	42.89	3.70	85.33	14.67	5.31
#200	0.075	11.61	1.00	86.33	13.67	4.95
Pan	-	158.29	13.67	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/27/06**

Checked By **WJB**

Date **3-1-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	0-10
Project No.	2006-060-01	Sample No.	S-1
Lab ID	2006-060-01-43	Soil Description	BROWN SILTY CLAY
		(Minus No. 40 sieve material, Airdried)	

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

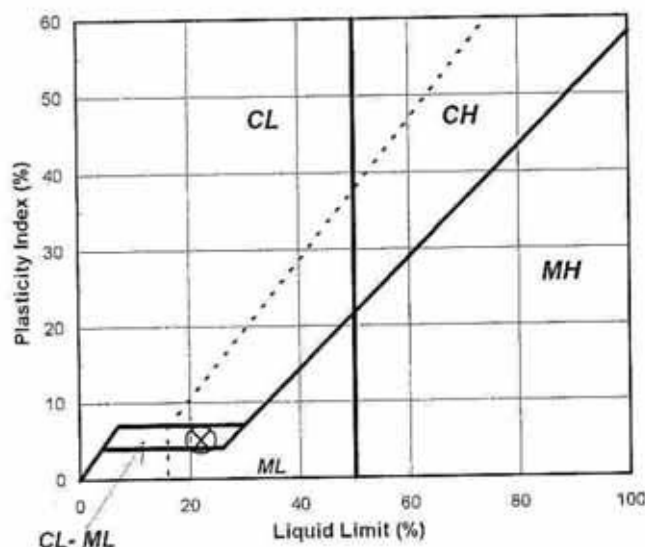
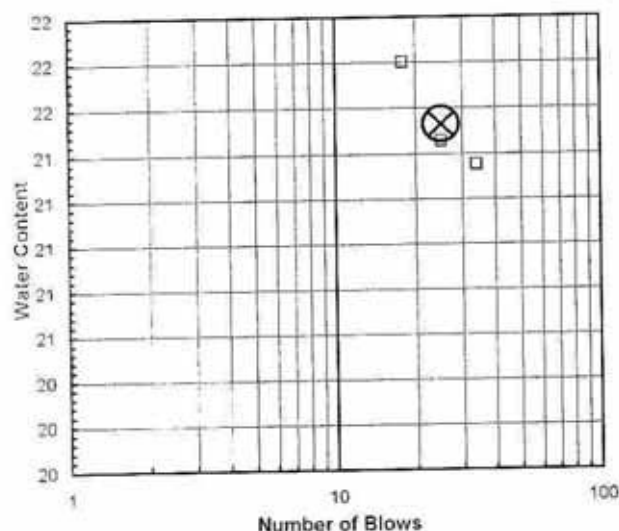
Liquid Limit Test	1	2	3	
Tare Number	001	2045	2223	MULTIPLE POINT
Wt. of Tare & WS (gm)	35.29	41.72	40.04	
Wt. of Tare & DS (gm)	31.50	37.71	36.31	
Wt. of Tare (gm)	13.75	19.02	19.20	
Wt. of Water (gm)	3.8	4.0	3.7	
Wt. of DS (gm)	17.8	18.7	17.1	
Moisture Content (%)	21.4	21.5	21.8	
Number of Blows	34	25	18	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	2294	2303		Liquid Limit (%) 22
Wt. of Tare & WS (gm)	25.71	24.66		Plastic Limit (%) 17
Wt. of Tare & DS (gm)	24.83	23.74		Plasticity Index (%) 5
Wt. of Tare (gm)	19.68	18.38		USCS Symbol CL-ML
Wt. of Water (gm)	0.9	0.9		
Wt. of DS (gm)	5.2	5.4		
Moisture Content (%)	17.1	17.2	-0.1	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



Tested By BS Date 2/27/06 Checked By *KPB* Date 2-28-06

page 1 of 1 DCN: CT-S4B DATE: 10/8/01 REVISION: 2

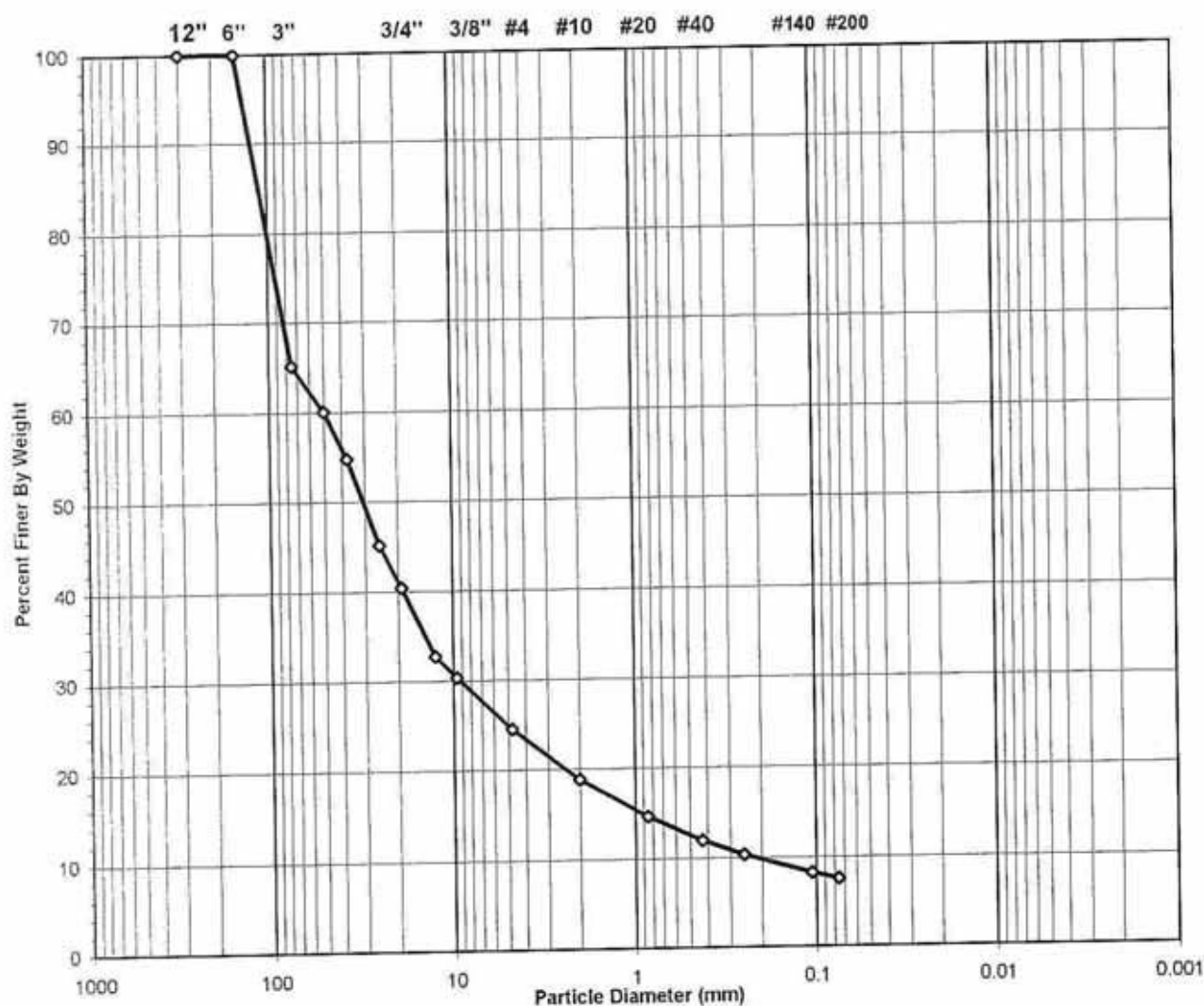
C:\MSOFFICE\Excel\PrintQ\U361.xls\Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-44

Boring No. TS-5
Depth (ft) 10-15
Sample No. S-2
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GM, TESTED

D60 = 49.9 CC = 7.6

USCS Classification POORLY GRADED GRAVEL WITH SILT AND SAND (NON-PLASTIC FINES)

D30 = 9.1 CU = 227.0

D10 = 0.2

Tested By JP

Date

2/28/06

Checked By

JP

Date

3-1-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-44**

Boring No. **TS-5**
Depth (ft) **10-15**
Sample No. **S-2**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2337	Tare No.	883
Wgt. Tare + Wet Specimen (gm)	1356.60	Wgt. Tare + Wet Specimen (gm)	472.93
Wgt. Tare + Dry Specimen (gm)	1293.70	Wgt. Tare + Dry Specimen (gm)	466.42
Weight of Tare (gm)	98.48	Weight of Tare (gm)	110.52
Weight of Water (gm)	62.90	Weight of Water (gm)	6.51
Weight of Dry Soil (gm)	1195.22	Weight of Dry Soil (gm)	355.90
Moisture Content (%)	5.3	Moisture Content (%)	1.8

Wet Weight - 3/4" Sample (gm)	11279	Weight of the Dry Specimen (gm)	1195.22
Dry Weight - 3/4" Sample (gm)	10715.1	Weight of minus #200 material (gm)	223.48
Wet Weight + 3/4" Sample (gm)	16091.00	Weight of plus #200 material (gm)	971.74
Dry Weight + 3/4" Sample (gm)	15801.96		
Total Dry Weight Sample (gm)	26517.1	J - Factor (Percent Finer than 3/4")	0.4041

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	9414.00	34.86	34.86	65.14	65.14
2"	50	1374.00	5.09	39.95	60.05	60.05
1 1/2"	37.5	1436.00	5.32	45.27	54.73	54.73
1"	25	2591.00	9.60	54.87	45.13	45.13
3/4"	19	1276.00	4.73	59.59	40.41	40.41
1/2"	12.5	226.19	18.92	18.92	81.08	32.76
3/8"	9.5	71.64	5.99	24.92	75.08	30.34
#4	4.75	171.68	14.36	39.28	60.72	24.54
#10	2	169.64	14.19	53.48	46.52	18.80
#20	0.85	123.12	10.30	63.78	36.22	14.64
#40	0.425	80.70	6.75	70.53	29.47	11.91
#60	0.25	47.26	3.95	74.48	25.52	10.31
#140	0.106	61.14	5.12	79.60	20.40	8.24
#200	0.075	20.37	1.70	81.30	18.70	7.56
Pan	-	223.48	18.70	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP** Date **2/28/06** Checked By **YKB** Date **3-1-06**

ATTERBERG LIMIT
ASTM D 4318-00 (SOP - S4)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	10-15
Project No.	2006-060-01	Sample No.	S-2
Lab ID	2006-060-01-44	Visual Description	BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

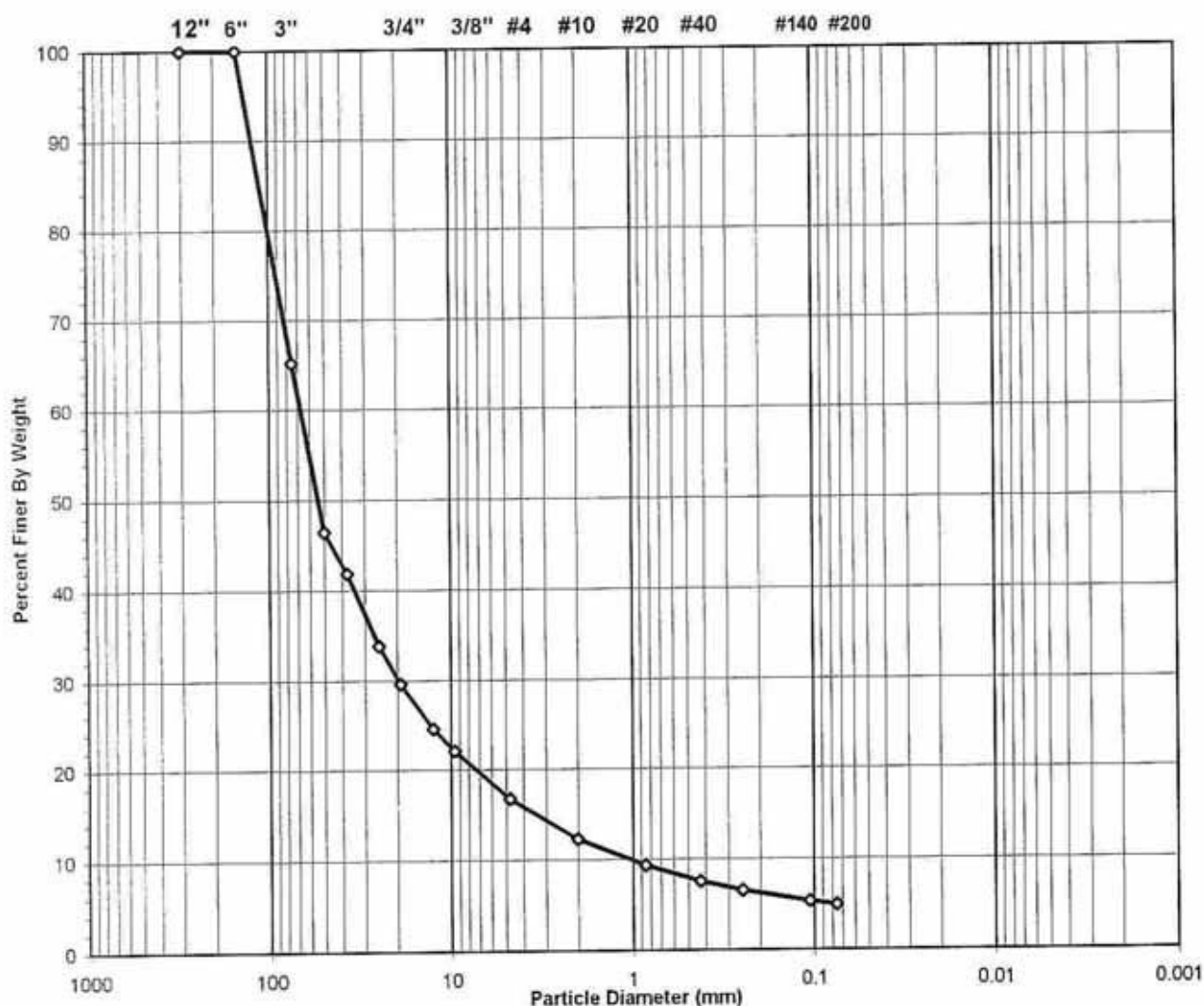
Tested By BS Date 2/28/06 Checked By KB Date 2-28-06
page 1 of 1 DCN: CT-S4C DATE: 7-11-97 REVISION : 2 C:\MSOFFICE\Excel\Print\QU362.xls]Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-45

Boring No. TS-5
Depth (ft) 15-20
Sample No. S-3
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP, TESTED**

D60 = 67.1 CC = 5.4

USCS Classification **POORLY GRADED GRAVEL**

D30 = 19.5 CU = 64.2

D10 = 1.0

Tested By JP

Date 2/28/06

Checked By *KB*

Date 3-1-06

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	15-20
Project No.	2006-060-01	Sample No.	S-3
Lab ID	2006-060-01-45	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1343	Tare No.	612
Wgt. Tare + Wet Specimen (gm)	1351.60	Wgt. Tare + Wet Specimen (gm)	494.86
Wgt. Tare + Dry Specimen (gm)	1300.90	Wgt. Tare + Dry Specimen (gm)	490.77
Weight of Tare (gm)	96.83	Weight of Tare (gm)	83.00
Weight of Water (gm)	50.70	Weight of Water (gm)	4.09
Weight of Dry Soil (gm)	1204.07	Weight of Dry Soil (gm)	407.77
Moisture Content (%)	4.2	Moisture Content (%)	1.0

Wet Weight - 3/4" Sample (gm)	18096	Weight of the Dry Specimen (gm)	1204.07
Dry Weight - 3/4" Sample (gm)	17364.8	Weight of minus #200 material (gm)	199.45
Wet Weight + 3/4" Sample (gm)	41639.00	Weight of plus #200 material (gm)	1004.62
Dry Weight + 3/4" Sample (gm)	41225.50		
Total Dry Weight Sample (gm)	58590.3	J - Factor (Percent Finer than 3/4")	0.2964

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	20601.00	34.81	34.81	65.19	65.19
2"	50	11121.00 (*)	18.79	53.60	46.40	46.40
1 1/2"	37.5	2691.00	4.55	58.15	41.85	41.85
1"	25	4725.00	7.98	66.14	33.86	33.86
3/4"	19	2501.00	4.23	70.36	29.64	29.64
1/2"	12.5	206.55	17.15	17.15	82.85	24.55
3/8"	9.5	100.23	8.32	25.48	74.52	22.09
#4	4.75	216.64	17.99	43.47	56.53	16.75
#10	2	183.60	15.25	58.72	41.28	12.23
#20	0.85	119.58 (**)	9.93	68.65	31.35	9.29
#40	0.425	73.30	6.09	74.74	25.26	7.49
#60	0.25	39.69	3.30	78.03	21.97	6.51
#140	0.106	48.89	4.06	82.09	17.91	5.31
#200	0.075	16.14	1.34	83.44	16.56	4.91
Pan	-	199.45	16.56	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By JP Date 2/28/06 Checked By *YKB* Date 3-1-06

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	15-20
Project No.	2006-060-01	Sample No.	S-3
Lab ID	2006-060-01-45	Soil Description	REDDISH BROWN SILTY CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

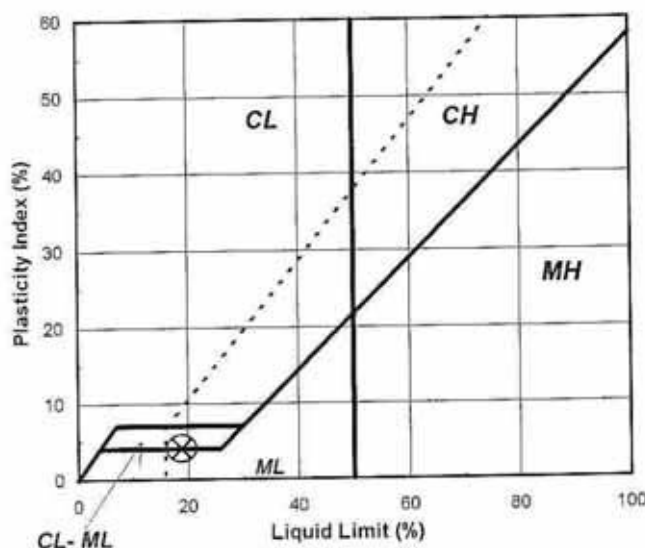
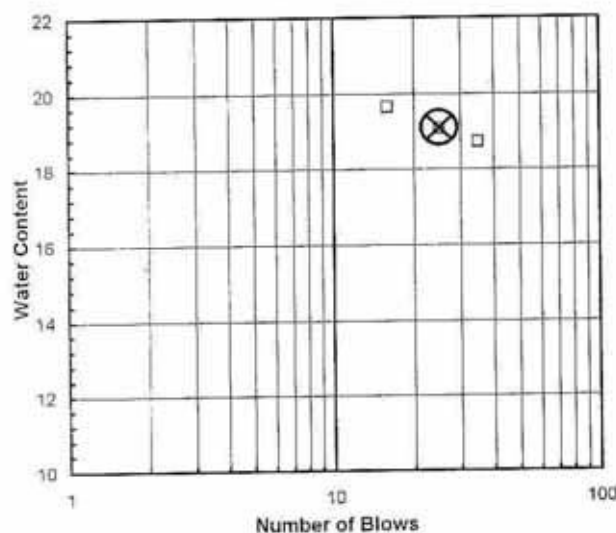
Liquid Limit Test	1	2	3	
Tare Number	2305	2298	2289	MULTIPOINT
Wt. of Tare & WS (gm)	43.09	40.59	44.62	
Wt. of Tare & DS (gm)	39.60	36.96	40.65	
Wt. of Tare (gm)	20.95	17.93	20.43	
Wt. of Water (gm)	3.5	3.6	4.0	
Wt. of DS (gm)	18.7	19.0	20.2	
Moisture Content (%)	18.7	19.1	19.6	
Number of Blows	35	25	16	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	43	53		Liquid Limit (%) 19
Wt. of Tare & WS (gm)	25.16	25.20		Plastic Limit (%) 15
Wt. of Tare & DS (gm)	24.35	24.36		Plasticity Index (%) 4
Wt. of Tare (gm)	19.03	18.80		USCS Symbol CL-ML
Wt. of Water (gm)	0.8	0.8		
Wt. of DS (gm)	5.3	5.6		
Moisture Content (%)	15.2	15.1	0.1	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



Tested By TO Date 2/28/06 Checked By YKB Date 3-1-06
 page 1 of 1 DCN: CT-S4B DATE: 10/8/01 REVISION: 2

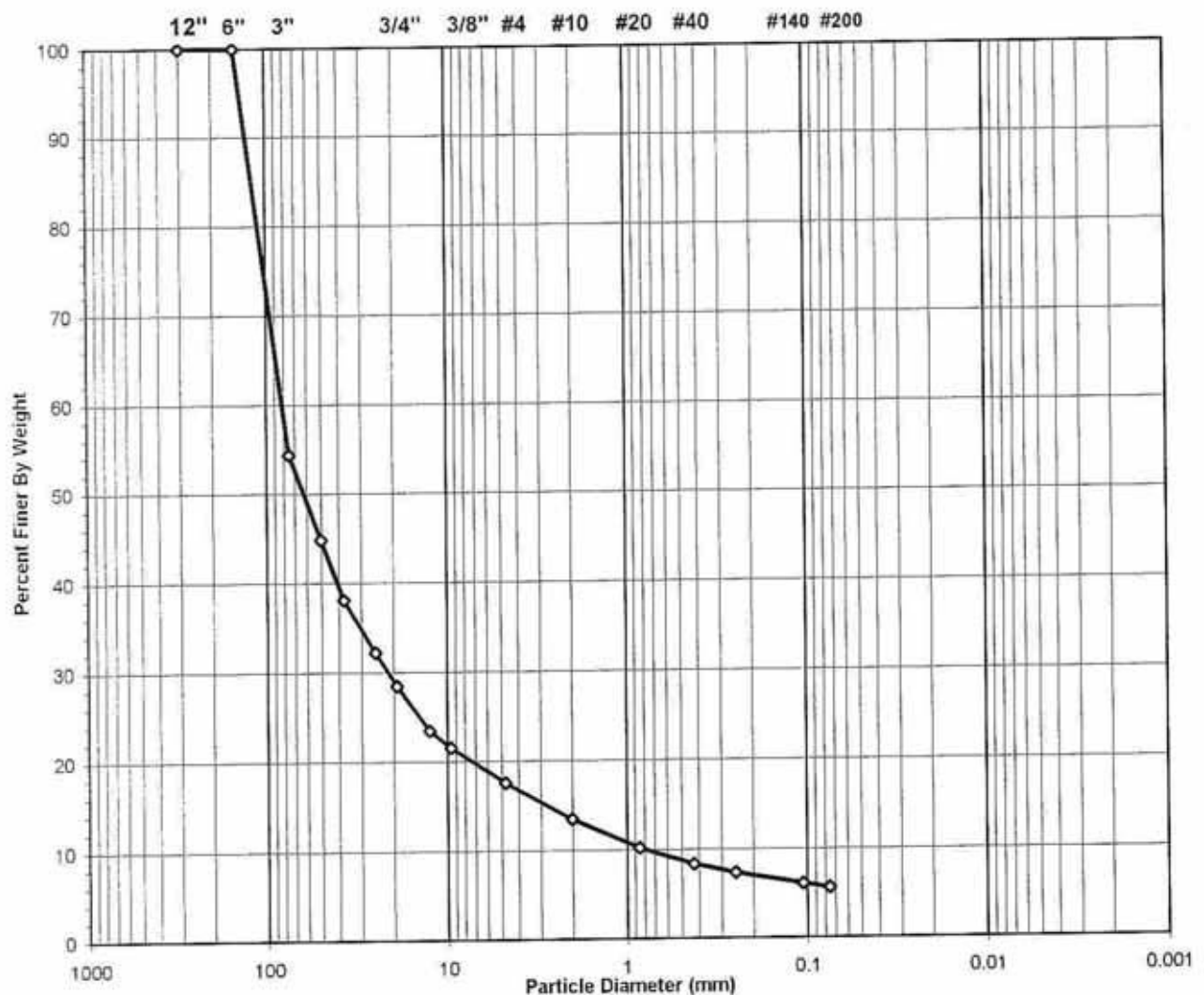
C:\MSOFFICE\Excel\PrintQ\U393.xls\Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-46

Boring No. TS-5
Depth (ft) 20-30
Sample No. S-4
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP-GC, TESTED**

USCS Classification **POORLY GRADED GRAVEL WITH SILTY CLAY**

Tested By **JP**

Date **2/28/06**

Checked By **KJB**

Date **3-1-06**

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-46**

Boring No. **TS-5**
Depth (ft) **20-30**
Sample No. **S-4**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1653	Tare No.	599
Wgt. Tare + Wet Specimen (gm)	1269.70	Wgt. Tare + Wet Specimen (gm)	1036.90
Wgt. Tare + Dry Specimen (gm)	1197.80	Wgt. Tare + Dry Specimen (gm)	1029.50
Weight of Tare (gm)	94.11	Weight of Tare (gm)	84.33
Weight of Water (gm)	71.90	Weight of Water (gm)	7.40
Weight of Dry Soil (gm)	1103.69	Weight of Dry Soil (gm)	945.17
Moisture Content (%)	6.5	Moisture Content (%)	0.8

Wet Weight - 3/4" Sample (gm)	18606	Weight of the Dry Specimen (gm)	1103.69
Dry Weight - 3/4" Sample (gm)	17468.0	Weight of minus #200 material (gm)	217.77
Wet Weight + 3/4" Sample (gm)	44251.00	Weight of plus #200 material (gm)	885.92
Dry Weight + 3/4" Sample (gm)	43907.24		
Total Dry Weight Sample (gm)	61375.3	J - Factor (Percent Finer than 3/4")	0.2846

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	28251.00	45.67	45.67	54.33	54.33
2"	50	5921.00 (*)	9.57	55.24	44.76	44.76
1 1/2"	37.5	4146.00	6.70	61.95	38.05	38.05
1"	25	3618.00	5.85	67.80	32.20	32.20
3/4"	19	2315.00	3.74	71.54	28.46	28.46
1/2"	12.5	192.58	17.45	17.45	82.55	23.49
3/8"	9.5	74.34	6.74	24.18	75.82	21.58
#4	4.75	155.05	14.05	38.23	61.77	17.58
#10	2	159.41	14.44	52.68	47.32	13.47
#20	0.85	126.50 (**)	11.46	64.14	35.86	10.21
#40	0.425	73.16	6.63	70.77	29.23	8.32
#60	0.25	38.56	3.49	74.26	25.74	7.33
#140	0.106	48.74	4.42	78.68	21.32	6.07
#200	0.075	17.58	1.59	80.27	19.73	5.62
Pan	-	217.77	19.73	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP** Date **2/28/06** Checked By **YKB** Date **3-1-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T69 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	20-30
Project No.	2006-060-01	Sample No.	S-4
Lab ID	2006-060-01-46	Soil Description	REDDISH BROWN SILTY CLAY

(Minus No. 40 sieve material, Airdried)

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

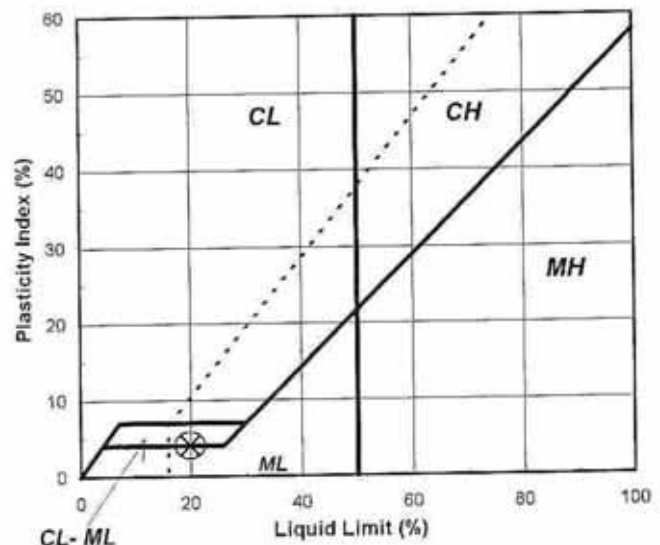
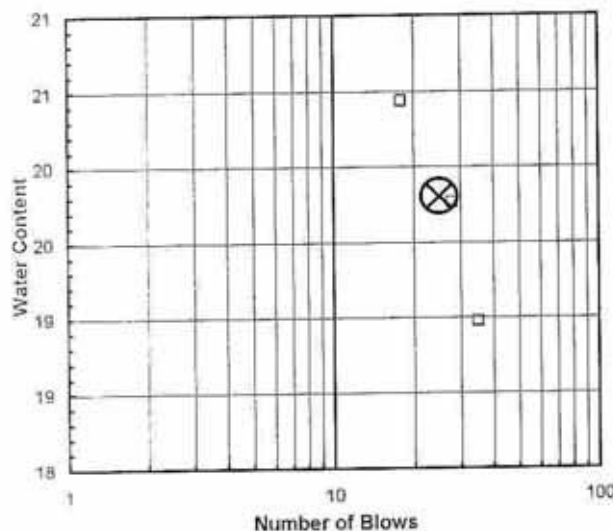
Liquid Limit Test	1	2	3	
Tare Number	261	2232	2253	MULTIPOINT
Wt. of Tare & WS (gm)	40.76	38.70	47.78	
Wt. of Tare & DS (gm)	36.96	35.19	42.92	
Wt. of Tare (gm)	16.93	17.43	19.14	
Wt. of Water (gm)	3.8	3.5	4.9	
Wt. of DS (gm)	20.0	17.8	23.8	
Moisture Content (%)	19.0	19.8	20.4	
Number of Blows	35	28	18	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	2303	2314		Liquid Limit (%) 20
Wt. of Tare & WS (gm)	24.41	25.22		Plastic Limit (%) 16
Wt. of Tare & DS (gm)	23.58	24.25		Plasticity Index (%) 4
Wt. of Tare (gm)	18.37	18.26		USCS Symbol CL-ML
Wt. of Water (gm)	0.8	1.0		
Wt. of DS (gm)	5.2	6.0		
Moisture Content (%)	15.9	16.2	-0.3	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



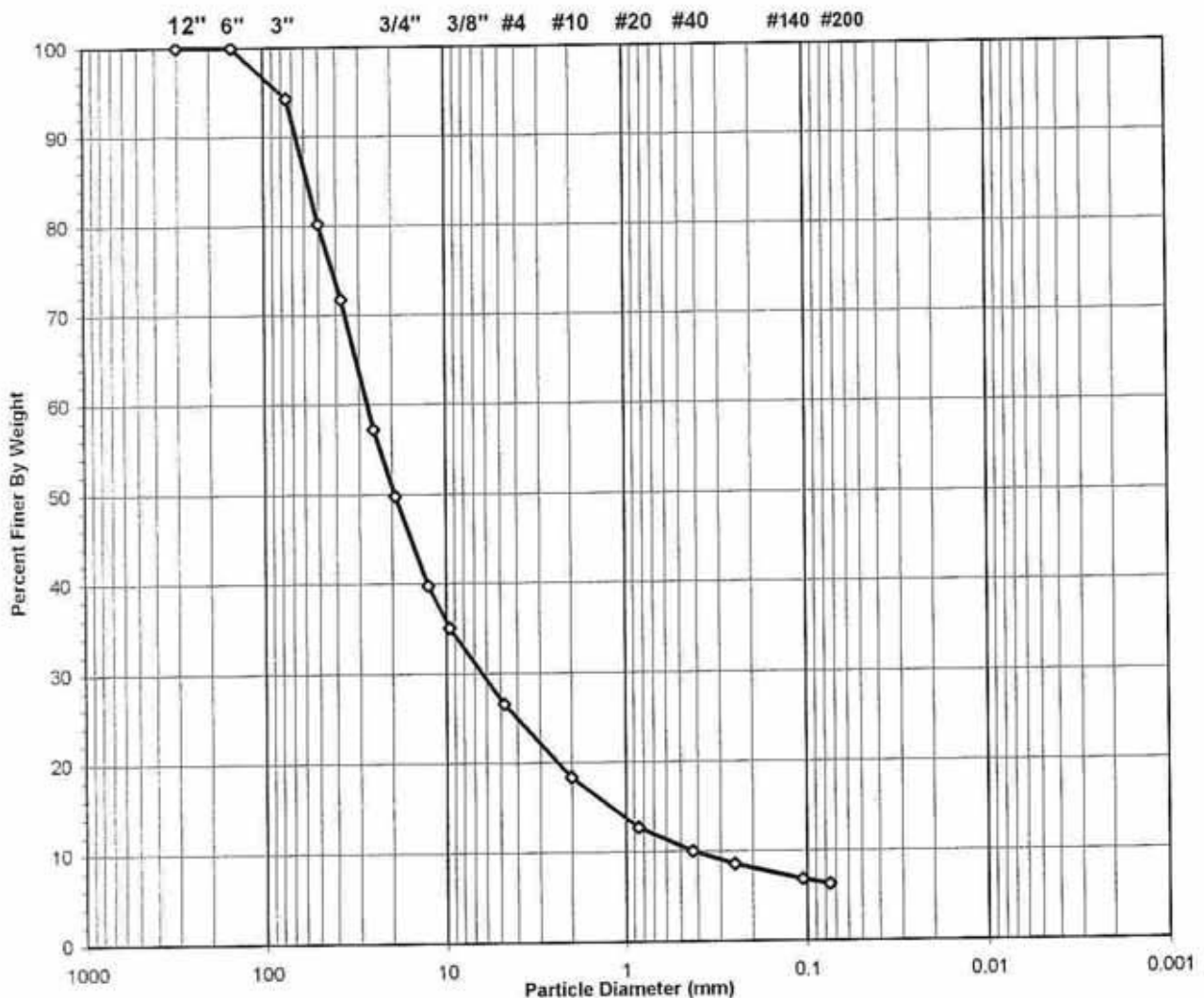
Tested By BS Date 2/28/06 Checked By YKB Date 3-1-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-47**

Boring No. **TS-5**
Depth (ft) **30-40**
Sample No. **S-5**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP-GC, TESTED**

D60 = **27.0** CC = **3.4**

USCS Classification **POORLY GRADED GRAVEL WITH SILTY CLAY AND SAND**

D30 = **6.3** CU = **63.1**

D10 = **0.4**

Tested By **JP**

Date

2/28/06

Checked By

YLB

Date

3-1-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-47**

Boring No. **TS-5**
Depth (ft) **30-40**
Sample No. **S-5**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	517	Tare No.	910
Wgt. Tare + Wet Specimen (gm)	1187.40	Wgt. Tare + Wet Specimen (gm)	707.90
Wgt. Tare + Dry Specimen (gm)	1101.00	Wgt. Tare + Dry Specimen (gm)	687.40
Weight of Tare (gm)	98.58	Weight of Tare (gm)	110.34
Weight of Water (gm)	86.40	Weight of Water (gm)	20.50
Weight of Dry Soil (gm)	1002.42	Weight of Dry Soil (gm)	577.06
Moisture Content (%)	8.6	Moisture Content (%)	3.6

Wet Weight - 3/4" Sample (gm)	18861	Weight of the Dry Specimen (gm)	1002.42
Dry Weight - 3/4" Sample (gm)	17364.3	Weight of minus #200 material (gm)	126.57
Wet Weight + 3/4" Sample (gm)	18157.00	Weight of plus #200 material (gm)	875.85
Dry Weight + 3/4" Sample (gm)	17534.10		
Total Dry Weight Sample (gm)	34898.4	J - Factor (Percent Finer than 3/4")	0.4976

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	2062.00	5.71	5.71	94.29	94.29
2"	50	5094.00	14.10	19.80	80.20	80.20
1 1/2"	37.5	3059.00	8.46	28.27	71.73	71.73
1"	25	5250.00	14.53	42.79	57.21	57.21
3/4"	19	2692.00	7.45	50.24	49.76	49.76
1/2"	12.5	202.08	20.16	20.16	79.84	39.73
3/8"	9.5	93.70	9.35	29.51	70.49	35.08
#4	4.75	171.67	17.13	46.63	53.37	26.55
#10	2	164.35	16.40	63.03	36.97	18.40
#20	0.85	114.81	11.45	74.48	25.52	12.70
#40	0.425	55.01	5.49	79.97	20.03	9.97
#60	0.25	29.52	2.94	82.91	17.09	8.50
#140	0.106	34.61	3.45	86.37	13.63	6.78
#200	0.075	10.10	1.01	87.37	12.63	6.28
Pan	-	126.57	12.63	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/28/06**

Checked By **YKB**

Date **3-1-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	30-40
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-47	Soil Description	REDDISH BROWN SILTY CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

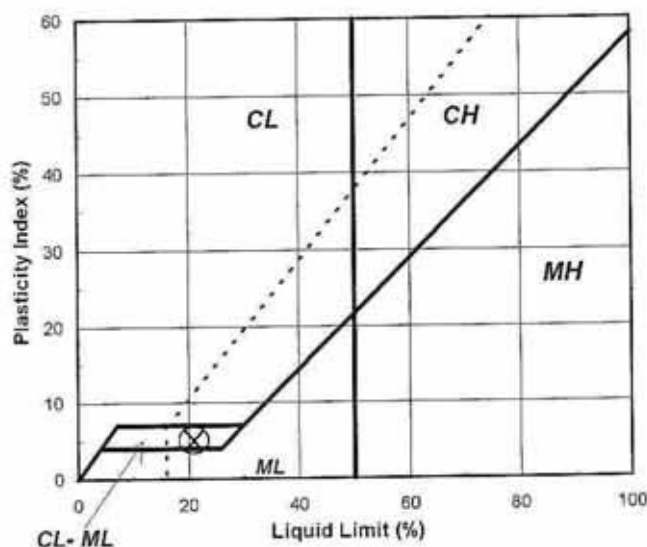
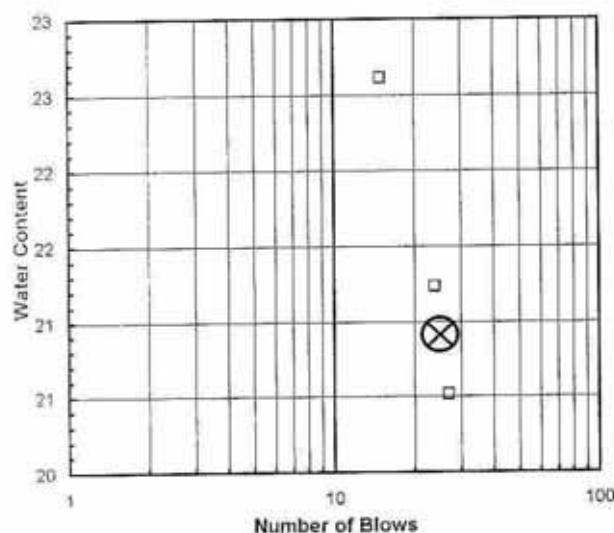
Liquid Limit Test	1	2	3	
Tare Number	242	2184	40A	MULTIPOINT
Wt. of Tare & WS (gm)	42.65	41.05	37.71	
Wt. of Tare & DS (gm)	38.81	37.40	33.97	
Wt. of Tare (gm)	20.09	20.21	17.43	
Wt. of Water (gm)	3.8	3.7	3.7	
Wt. of DS (gm)	18.7	17.2	16.5	
Moisture Content (%)	20.5	21.2	22.6	
Number of Blows	27	24	15	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	225	142		Liquid Limit (%) 21
Wt. of Tare & WS (gm)	26.08	26.81		Plastic Limit (%) 16
Wt. of Tare & DS (gm)	25.19	25.94		Plasticity Index (%) 5
Wt. of Tare (gm)	19.58	20.57		USCS Symbol CL-ML
Wt. of Water (gm)	0.9	0.9		
Wt. of DS (gm)	5.6	5.4		
Moisture Content (%)	15.9	16.2	-0.3	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



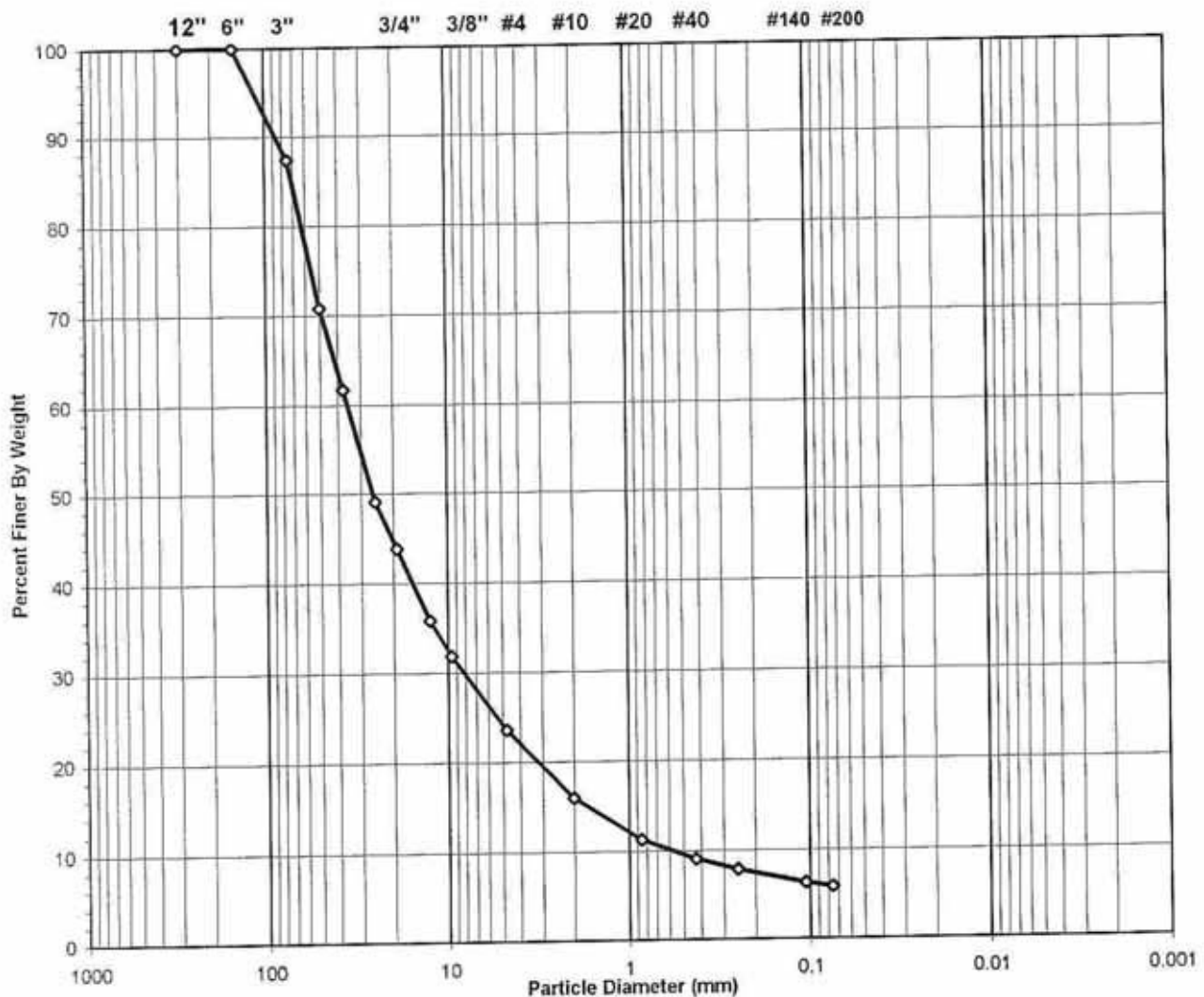
Tested By TO Date 2/28/06 Checked By YKB Date 3-1-06
page 1 of 1 DCN: CT-S4B DATE: 10/8/01 REVISION: 2

C:\MSOFFICE\Excel\PrintQ\U395.xls\Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	40-50
Project No.	2006-060-01	Sample No.	S-6
Lab ID	2006-060-01-48	Soil Color	REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gc, ASSUMED**

D60 = 35.5 CC = 3.3

USCS Classification **POORLY GRADED GRAVEL WITH SILTY CLAY AND SAND**

D30 = 8.1 CU = 61.9

D10 = 0.6

Tested By JP

Date 2/28/06

Checked By *KB*

Date 3-8-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-48**

Boring No. **TS-5**
Depth (ft) **40-50**
Sample No. **S-6**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	514	Tare No.	552
Wgt. Tare + Wet Specimen (gm)	1196.70	Wgt. Tare + Wet Specimen (gm)	698.30
Wgt. Tare + Dry Specimen (gm)	1055.70	Wgt. Tare + Dry Specimen (gm)	683.50
Weight of Tare (gm)	96.71	Weight of Tare (gm)	81.59
Weight of Water (gm)	141.00	Weight of Water (gm)	14.80
Weight of Dry Soil (gm)	958.99	Weight of Dry Soil (gm)	601.91
Moisture Content (%)	14.7	Moisture Content (%)	2.5

Wet Weight - 3/4" Sample (gm)	17195	Weight of the Dry Specimen (gm)	958.99
Dry Weight - 3/4" Sample (gm)	14990.9	Weight of minus #200 material (gm)	127.37
Wet Weight + 3/4" Sample (gm)	19695.00	Weight of plus #200 material (gm)	831.62
Dry Weight + 3/4" Sample (gm)	19222.35		
Total Dry Weight Sample (gm)	34213.2	J - Factor (Percent Finer than 3/4")	0.4382

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	4440.00	12.67	12.67	87.33	87.33
2"	50	5786.00 (*)	16.51	29.17	70.83	70.83
1 1/2"	37.5	3189.00	9.10	38.27	61.73	61.73
1"	25	4442.00	12.67	50.94	49.06	49.06
3/4"	19	1838.00	5.24	56.18	43.82	43.82
1/2"	12.5	174.27	18.17	18.17	81.83	35.85
3/8"	9.5	88.10	9.19	27.36	72.64	31.83
#4	4.75	179.94	18.76	46.12	53.88	23.61
#10	2	167.00	17.41	63.54	36.46	15.98
#20	0.85	103.29 (**)	10.77	74.31	25.69	11.26
#40	0.425	48.42	5.05	79.36	20.64	9.05
#60	0.25	26.92	2.81	82.16	17.84	7.82
#140	0.106	33.51	3.49	85.66	14.34	6.28
#200	0.075	10.17	1.06	86.72	13.28	5.82
Pan	-	127.37	13.28	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/28/06**

Checked By **KLB**

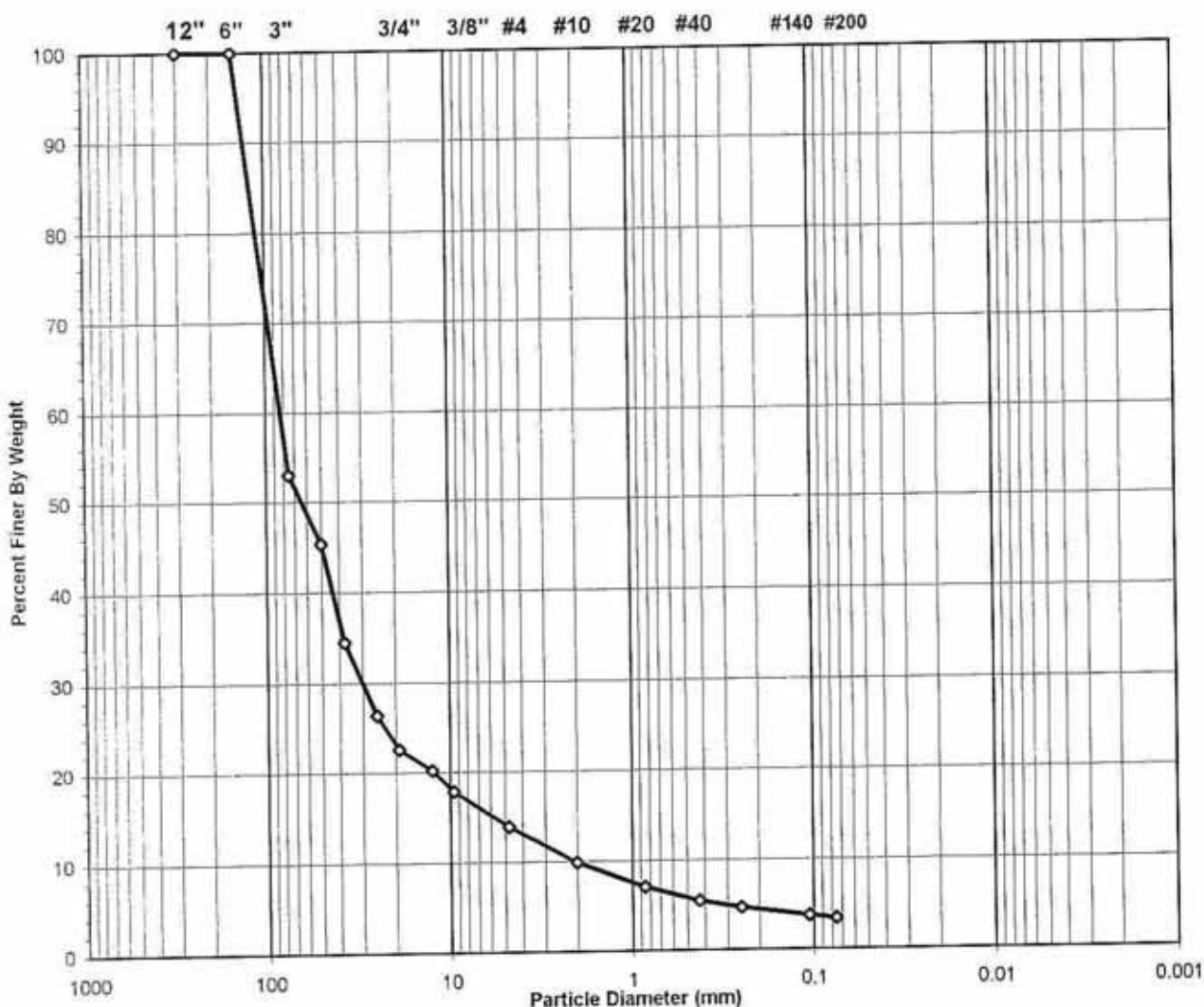
Date **3-8-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-49

Boring No. TS-5
Depth (ft) 50-60
Sample No. S-7
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP, TESTED**

USCS Classification **POORLY GRADED GRAVEL
(NON-PLASTIC FINES)**

Tested By **JP**

Date

2/28/06

Checked By

YCB

Date

3-1-06

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-49

Boring No. TS-5
Depth (ft) 50-60
Sample No. S-7
Soil Color REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1923	Tare No.	615
Wgt. Tare + Wet Specimen (gm)	1196.00	Wgt. Tare + Wet Specimen (gm)	600.20
Wgt. Tare + Dry Specimen (gm)	1143.10	Wgt. Tare + Dry Specimen (gm)	593.10
Weight of Tare (gm)	100.21	Weight of Tare (gm)	84.38
Weight of Water (gm)	52.90	Weight of Water (gm)	7.10
Weight of Dry Soil (gm)	1042.89	Weight of Dry Soil (gm)	508.72
Moisture Content (%)	5.1	Moisture Content (%)	1.4

Wet Weight - 3/4" Sample (gm)	9529	Weight of the Dry Specimen (gm)	1042.89
Dry Weight - 3/4" Sample (gm)	9069.0	Weight of minus #200 material (gm)	157.45
Wet Weight + 3/4" Sample (gm)	31510.00	Weight of plus #200 material (gm)	885.44
Dry Weight + 3/4" Sample (gm)	31076.28		
Total Dry Weight Sample (gm)	40145.3	J - Factor (Percent Finer than 3/4")	0.2259

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	19144.00	47.03	47.03	52.97	52.97
2"	50	3124.00 (*)	7.67	54.71	45.29	45.29
1 1/2"	37.5	4422.00	10.86	65.57	34.43	34.43
1"	25	3258.00	8.00	73.57	26.43	26.43
3/4"	19	1562.00	3.84	77.41	22.59	22.59
1/2"	12.5	110.14	10.56	10.56	89.44	20.20
3/8"	9.5	109.92	10.54	21.10	78.90	17.82
#4	4.75	183.12	17.56	38.66	61.34	13.86
#10	2	184.13	17.66	56.32	43.68	9.87
#20	0.85	131.10 (**)	12.57	68.89	31.11	7.03
#40	0.425	71.69	6.87	75.76	24.24	5.48
#60	0.25	36.26	3.48	79.24	20.76	4.69
#140	0.106	43.94	4.21	83.45	16.55	3.74
#200	0.075	15.14	1.45	84.90	15.10	3.41
Pan	-	157.45	15.10	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By JP Date 2/28/06 Checked By KB Date 3-1-06

ATTERBERG LIMIT
ASTM D 4318-00 (SOP - S4)

Client
Client Reference
Project No.
Lab ID

PAUL C. RIZZO
TAUM SAUK 06-3551
2006-060-01
2006-060-01-49

Boring No.
Depth (ft)
Sample No.
Visual Description

TS-5
50-60
S-7
REDDISH BROWN SILT
(Minus No. 40 sieve material, Airdried)

NON - PLASTIC MATERIAL

Tested By

BS

Date

2/28/06

Checked By

KRB

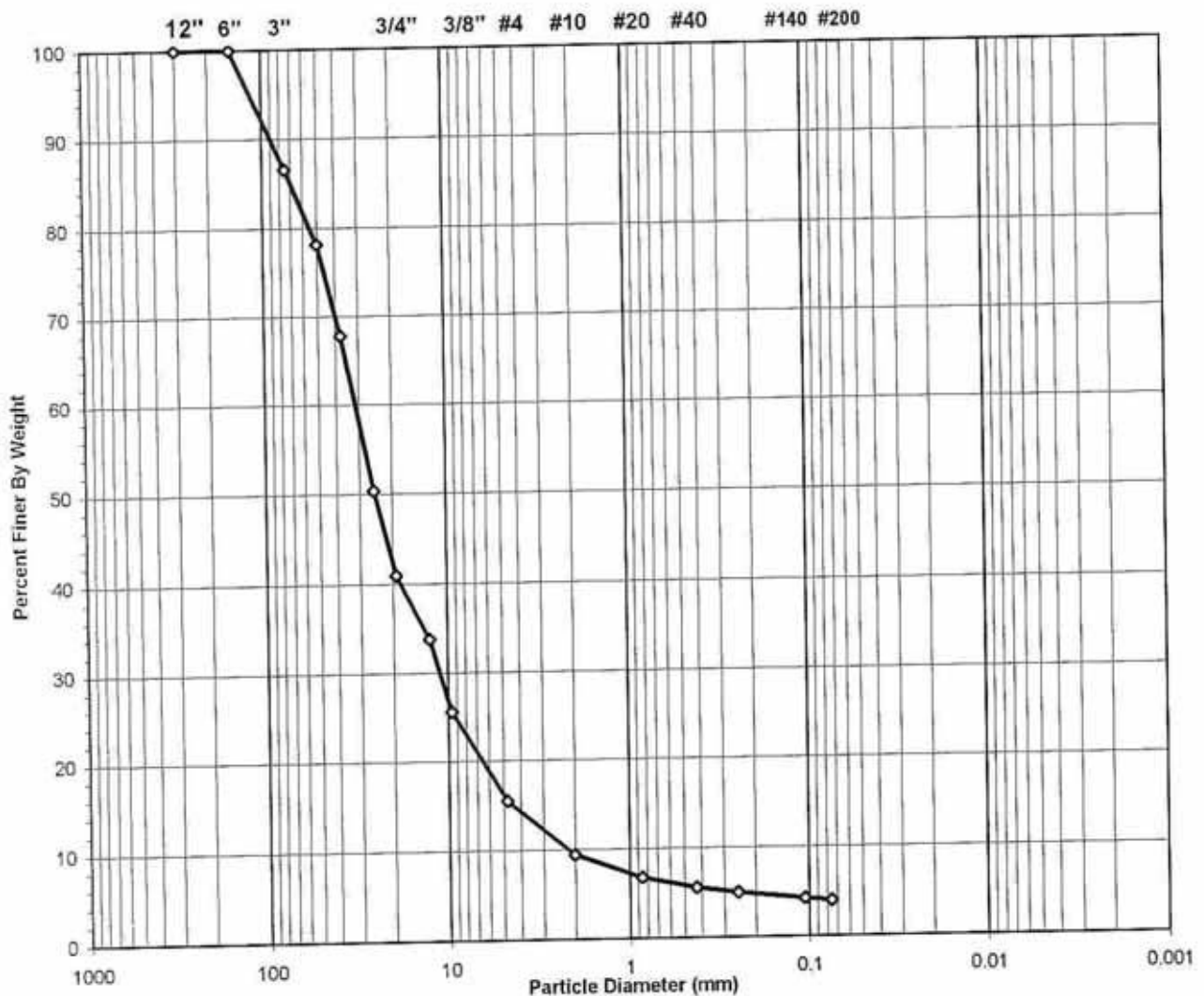
Date

3-1-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	60-67
Project No.	2006-060-01	Sample No.	S-8
Lab ID	2006-060-01-50	Soil Color	REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER	
	gravel	sand	silt and clay	



USCS Symbol **gw, ASSUMED**

D60 = 31.3 CC = 1.8

USCS Classification **WELL-GRADED GRAVEL**

D30 = 11.0 CU = 14.3

D10 = 2.2

Tested By **PC**

Date **2/23/06**

Checked By **KRB**

Date **3-8-06**

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-5
Client Reference	TAUM SAUK 06-3551	Depth (ft)	60-67
Project No.	2006-060-01	Sample No.	S-8
Lab ID	2006-060-01-50	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	959	Tare No.	728
Wgt. Tare + Wet Specimen (gm)	1212.70	Wgt. Tare + Wet Specimen (gm)	691.50
Wgt. Tare + Dry Specimen (gm)	1161.90	Wgt. Tare + Dry Specimen (gm)	677.30
Weight of Tare (gm)	103.11	Weight of Tare (gm)	86.47
Weight of Water (gm)	50.80	Weight of Water (gm)	14.20
Weight of Dry Soil (gm)	1058.79	Weight of Dry Soil (gm)	590.83
Moisture Content (%)	4.8	Moisture Content (%)	2.4

Wet Weight - 3/4" Sample (gm)	14209	Weight of the Dry Specimen (gm)	1058.79
Dry Weight - 3/4" Sample (gm)	13558.5	Weight of minus #200 material (gm)	101.93
Wet Weight + 3/4" Sample (gm)	20027.00	Weight of plus #200 material (gm)	956.86
Dry Weight + 3/4" Sample (gm)	19556.97		
Total Dry Weight Sample (gm)	33115.4	J - Factor (Percent Finer than 3/4")	0.4094

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	4552.00	13.42	13.42	86.58	86.58
2"	50	2881.00 (*)	8.50	21.92	78.08	78.08
1 1/2"	37.5	3482.00	10.27	32.19	67.81	67.81
1"	25	5940.00	17.52	49.70	50.30	50.30
3/4"	19	3172.00	9.35	59.06	40.94	40.94
1/2"	12.5	183.94	17.37	17.37	82.63	33.83
3/8"	9.5	214.71	20.28	37.65	62.35	25.53
#4	4.75	258.70	24.43	62.09	37.91	15.52
#10	2	159.13	15.03	77.11	22.89	9.37
#20	0.85	68.55 (**)	6.47	83.59	16.41	6.72
#40	0.425	30.17	2.85	86.44	13.56	5.55
#60	0.25	16.37	1.55	87.98	12.02	4.92
#140	0.106	19.29	1.82	89.81	10.19	4.17
#200	0.075	6.00	0.57	90.37	9.63	3.94
Pan	-	101.93	9.63	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By PC Date 2/23/06 Checked By *KB* Date 3-8-06

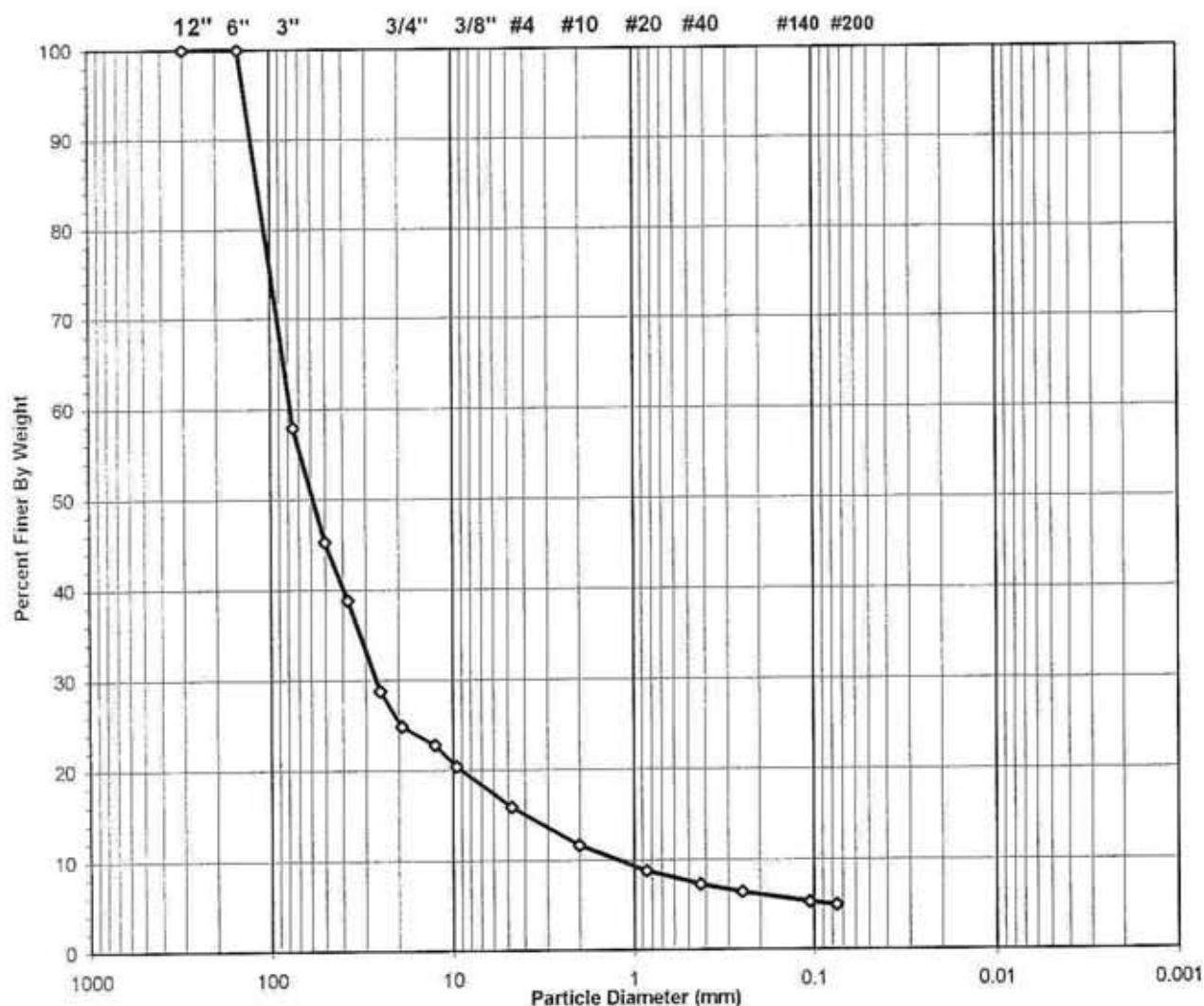
BORING TS-6

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-52

Boring No. TS-6
Depth (ft) 5-10
Sample No. S-2
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By PC Date 2/23/06 Checked By *KVB* Date 2-24-06
page 1 of 2 DCN: CT-53A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\Print\Q(U287.xls)\Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	PAUL C. RIZZO	Boring No.	TS-6
Client Reference	TAUM SAUK 06-3551	Depth (ft)	5-10
Project No.	2006-060-01	Sample No.	S-2
Lab ID	2006-060-01-52	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2492	Tare No.	729
Wgt. Tare + Wet Specimen (gm)	1425.50	Wgt. Tare + Wet Specimen (gm)	636.40
Wgt. Tare + Dry Specimen (gm)	1368.60	Wgt. Tare + Dry Specimen (gm)	629.70
Weight of Tare (gm)	97.16	Weight of Tare (gm)	86.39
Weight of Water (gm)	56.90	Weight of Water (gm)	6.70
Weight of Dry Soil (gm)	1271.44	Weight of Dry Soil (gm)	543.31
Moisture Content (%)	4.5	Moisture Content (%)	1.2

Wet Weight - 3/4" Sample (gm)	14720	Weight of the Dry Specimen (gm)	1271.44
Dry Weight - 3/4" Sample (gm)	14089.5	Weight of minus #200 material (gm)	251.78
Wet Weight + 3/4" Sample (gm)	43118.00	Weight of plus #200 material (gm)	1019.66
Dry Weight + 3/4" Sample (gm)	42592.75		
Total Dry Weight Sample (gm)	56682.2	J - Factor (Percent Finer than 3/4")	0.2486

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	24132.00	42.06	42.06	57.94	57.94
2"	50	7284.00 (*)	12.69	54.75	45.25	45.25
1 1/2"	37.5	3702.00	6.45	61.20	38.80	38.80
1"	25	5734.00	9.99	71.19	28.81	28.81
3/4"	19	2266.00	3.95	75.14	24.86	24.86
1/2"	12.5	102.81	8.09	8.09	91.91	22.85
3/8"	9.5	123.93	9.75	17.83	82.17	20.42
#4	4.75	231.34	18.20	36.03	63.97	15.90
#10	2	217.00	17.07	53.10	46.90	11.66
#20	0.85	148.23 (**)	11.66	64.75	35.25	8.76
#40	0.425	76.80	6.04	70.79	29.21	7.26
#60	0.25	44.92	3.53	74.33	25.67	6.38
#140	0.106	56.70	4.46	78.79	21.21	5.27
#200	0.075	17.93	1.41	80.20	19.80	4.92
Pan	-	251.78	19.80	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

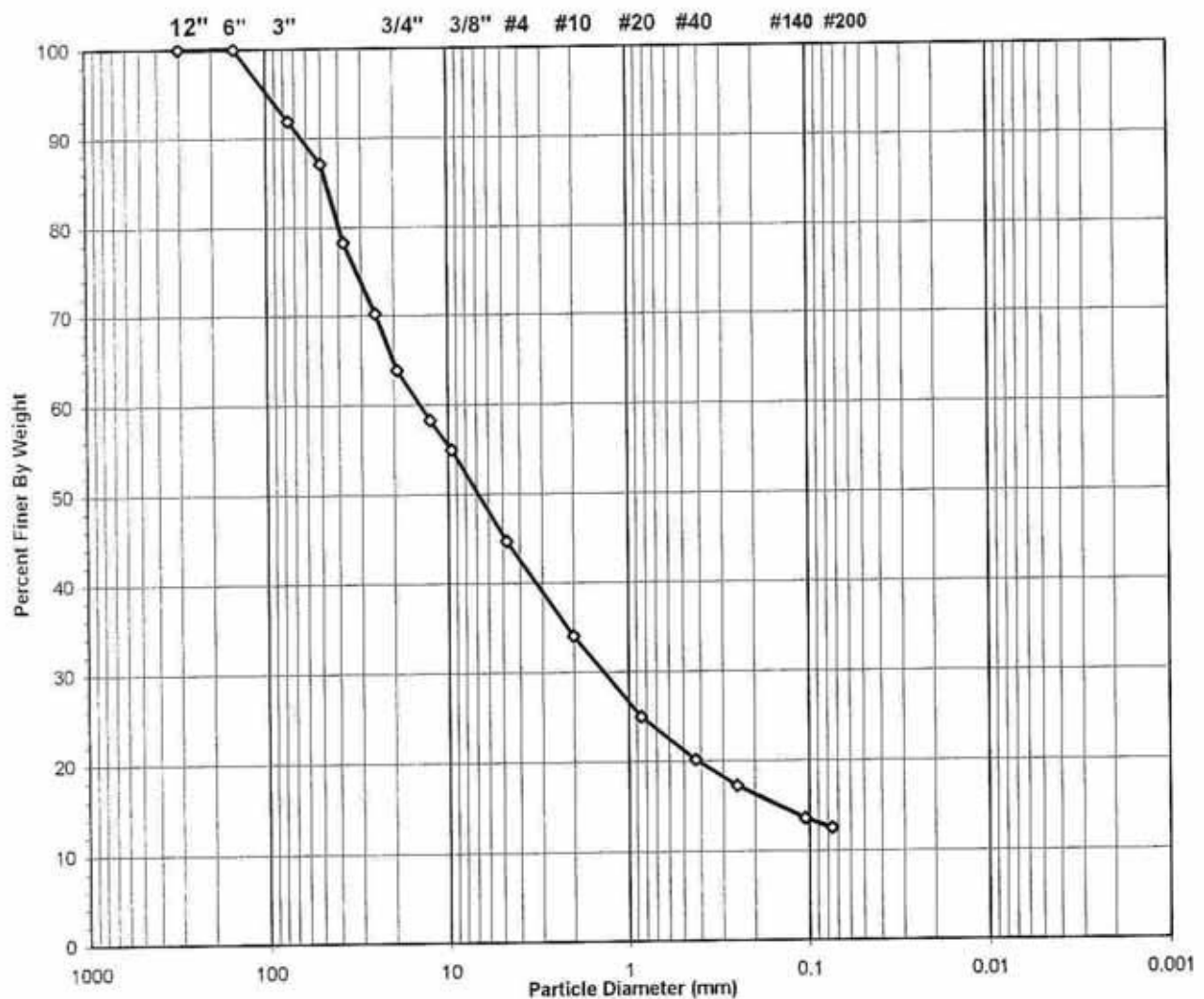
Tested By PC Date 2/23/06 Checked By *KLB* Date *2-24-06*

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-53

Boring No. TS-6
Depth (ft) 10-20
Sample No. S-3
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GM, TESTED**

USCS Classification **SILTY GRAVEL WITH SAND
(NON-PLASTIC FINES)**

Tested By JP

Date 2/28/06

Checked By

Date 3-1-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-53**

Boring No. **TS-6**
Depth (ft) **10-20**
Sample No. **S-3**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	674	Tare No.	584
Wgt. Tare + Wet Specimen (gm)	1244.30	Wgt. Tare + Wet Specimen (gm)	517.24
Wgt. Tare + Dry Specimen (gm)	1196.20	Wgt. Tare + Dry Specimen (gm)	510.66
Weight of Tare (gm)	99.76	Weight of Tare (gm)	82.30
Weight of Water (gm)	48.10	Weight of Water (gm)	6.58
Weight of Dry Soil (gm)	1096.44	Weight of Dry Soil (gm)	428.36
Moisture Content (%)	4.4	Moisture Content (%)	1.5

Wet Weight - 3/4" Sample (gm)	15231	Weight of the Dry Specimen (gm)	1096.44
Dry Weight - 3/4" Sample (gm)	14590.9	Weight of minus #200 material (gm)	214.65
Wet Weight + 3/4" Sample (gm)	8371.00	Weight of plus #200 material (gm)	881.79
Dry Weight + 3/4" Sample (gm)	8244.36		
Total Dry Weight Sample (gm)	22835.3	J - Factor (Percent Finer than 3/4")	0.6390

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	1863.00	8.04	8.04	91.96	91.96
2"	50	1124.00	4.85	12.88	87.12	87.12
1 1/2"	37.5	2058.00	8.88	21.76	78.24	78.24
1"	25	1863.00	8.04	29.79	70.21	70.21
3/4"	19	1463.00	6.31	36.10	63.90	63.90
1/2"	12.5	96.40	8.79	8.79	91.21	58.28
3/8"	9.5	57.57	5.25	14.04	85.96	54.92
#4	4.75	175.03	15.96	30.01	69.99	44.72
#10	2	183.88	16.77	46.78	53.22	34.01
#20	0.85	153.78	14.03	60.80	39.20	25.05
#40	0.425	84.39	7.70	68.50	31.50	20.13
#60	0.25	50.08	4.57	73.07	26.93	17.21
#140	0.106	62.44	5.69	78.76	21.24	13.57
#200	0.075	18.22	1.66	80.42	19.58	12.51
Pan	-	214.65	19.58	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/28/06**

Checked By **KPB**

Date **3-1-06**

ATTERBERG LIMIT
ASTM D 4318-00 (SOP - S4)

Client
Client Reference
Project No.
Lab ID

PAUL C. RIZZO
TAUM SAUK 06-3551
2006-060-01
2006-060-01-53

Boring No.
Depth (ft)
Sample No.
Visual Description

TS-6
10-20
S-3
REDDISH BROWN SILT
(Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

Tested By

TO

Date

2/28/06

Checked By

KLB

Date

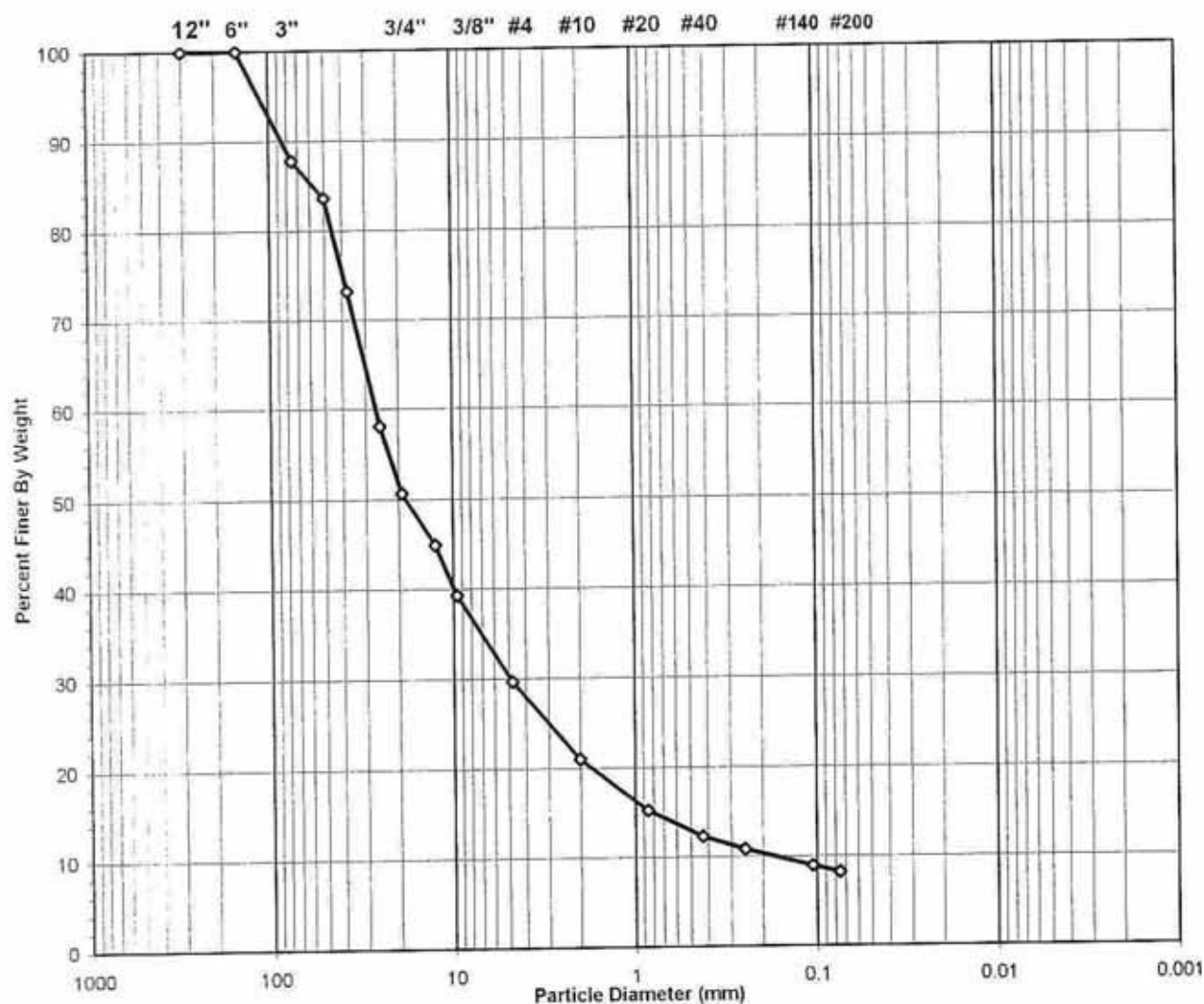
3-1-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-54

Boring No. TS-6
Depth (ft) 20-30
Sample No. S-4
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GC, TESTED

D60 = 26.3 CC = 5.1

USCS Classification POORLY GRADED GRAVEL WITH SILTY CLAY AND SAND

D30 = 4.9 CU = 150.3

D10 = 0.2

Tested By PC

Date

2/22/06

Checked By

KPB

Date

2-28-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-54**

Boring No. **TS-6**
Depth (ft) **20-30**
Sample No. **S-4**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2445	Tare No.	604
Wgt. Tare + Wet Specimen (gm)	1230.30	Wgt. Tare + Wet Specimen (gm)	1037.90
Wgt. Tare + Dry Specimen (gm)	1143.10	Wgt. Tare + Dry Specimen (gm)	1014.80
Weight of Tare (gm)	93.29	Weight of Tare (gm)	87.11
Weight of Water (gm)	87.20	Weight of Water (gm)	23.10
Weight of Dry Soil (gm)	1049.81	Weight of Dry Soil (gm)	927.69
Moisture Content (%)	8.3	Moisture Content (%)	2.5

Wet Weight - 3/4" Sample (gm)	22977	Weight of the Dry Specimen (gm)	1049.81
Dry Weight - 3/4" Sample (gm)	21214.8	Weight of minus #200 material (gm)	170.29
Wet Weight + 3/4" Sample (gm)	21189.00	Weight of plus #200 material (gm)	879.52
Dry Weight + 3/4" Sample (gm)	20674.20		
Total Dry Weight Sample (gm)	41889.0	J - Factor (Percent Finer than 3/4")	0.5065

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	5228.00	12.18	12.18	87.82	87.82
2"	50	1792.00	4.17	16.35	83.65	83.65
1 1/2"	37.5	4496.00	10.47	26.82	73.18	73.18
1"	25	6482.00	15.10	41.92	58.08	58.08
3/4"	19	3191.00	7.43	49.35	50.65	50.65
1/2"	12.5	120.79	11.51	11.51	88.49	44.82
3/8"	9.5	114.79	10.93	22.44	77.56	39.28
#4	4.75	198.88	18.94	41.38	58.62	29.69
#10	2	180.15	17.16	58.54	41.46	21.00
#20	0.85	119.80	11.41	69.96	30.04	15.22
#40	0.425	61.13	5.82	75.78	24.22	12.27
#60	0.25	30.73	2.93	78.71	21.29	10.78
#140	0.106	39.20	3.73	82.44	17.56	8.89
#200	0.075	14.05	1.34	83.78	16.22	8.22
Pan	-	170.29	16.22	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC** Date **2/22/06** Checked By **UKB** Date **2-28-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-6
Client Reference	TAUM SAUK 06-3551	Depth (ft)	20-30
Project No.	2006-060-01	Sample No.	S-4
Lab ID	2006-060-01-54	Soil Description	REDDISH BROWN SILTY CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

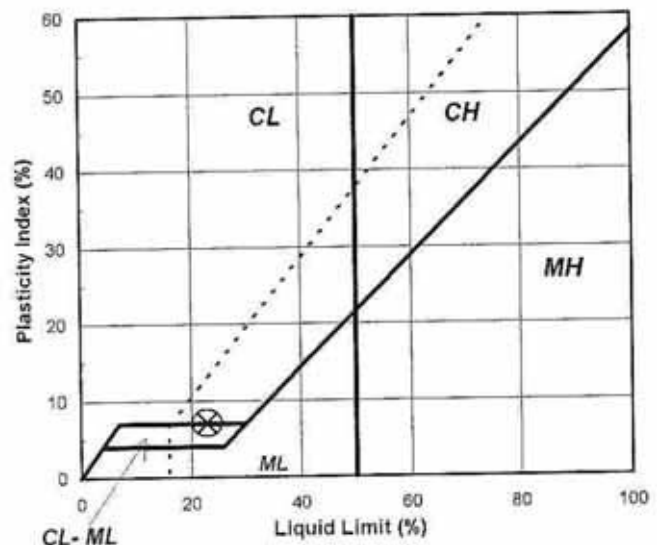
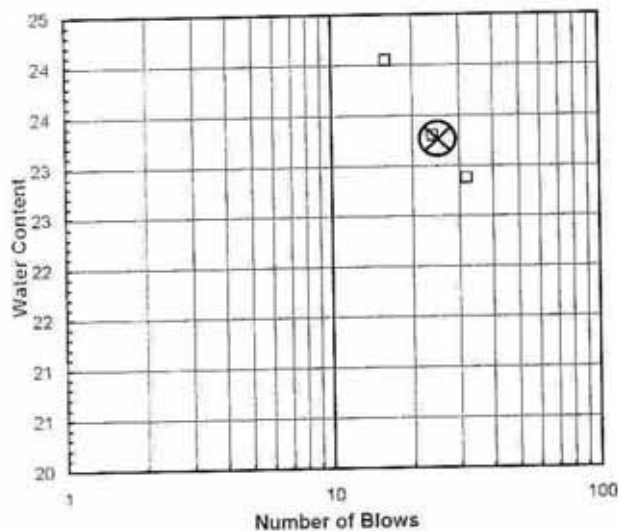
Liquid Limit Test	1	2	3	
Tare Number	224	4000	84	MULTIPOINT
Wt. of Tare & WS (gm)	42.24	45.98	41.44	
Wt. of Tare & DS (gm)	37.94	41.15	36.90	
Wt. of Tare (gm)	19.14	20.42	18.02	
Wt. of Water (gm)	4.3	4.8	4.5	
Wt. of DS (gm)	18.8	20.7	18.9	
Moisture Content (%)	22.9	23.3	24.0	
Number of Blows	32	24	16	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	001	2223		Liquid Limit (%) 23
Wt. of Tare & WS (gm)	19.80	25.60		Plastic Limit (%) 16
Wt. of Tare & DS (gm)	18.98	24.74		Plasticity Index (%) 7
Wt. of Tare (gm)	13.76	19.21		USCS Symbol CL-ML
Wt. of Water (gm)	0.8	0.9		
Wt. of DS (gm)	5.2	5.5		
Moisture Content (%)	15.7	15.6	0.2	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



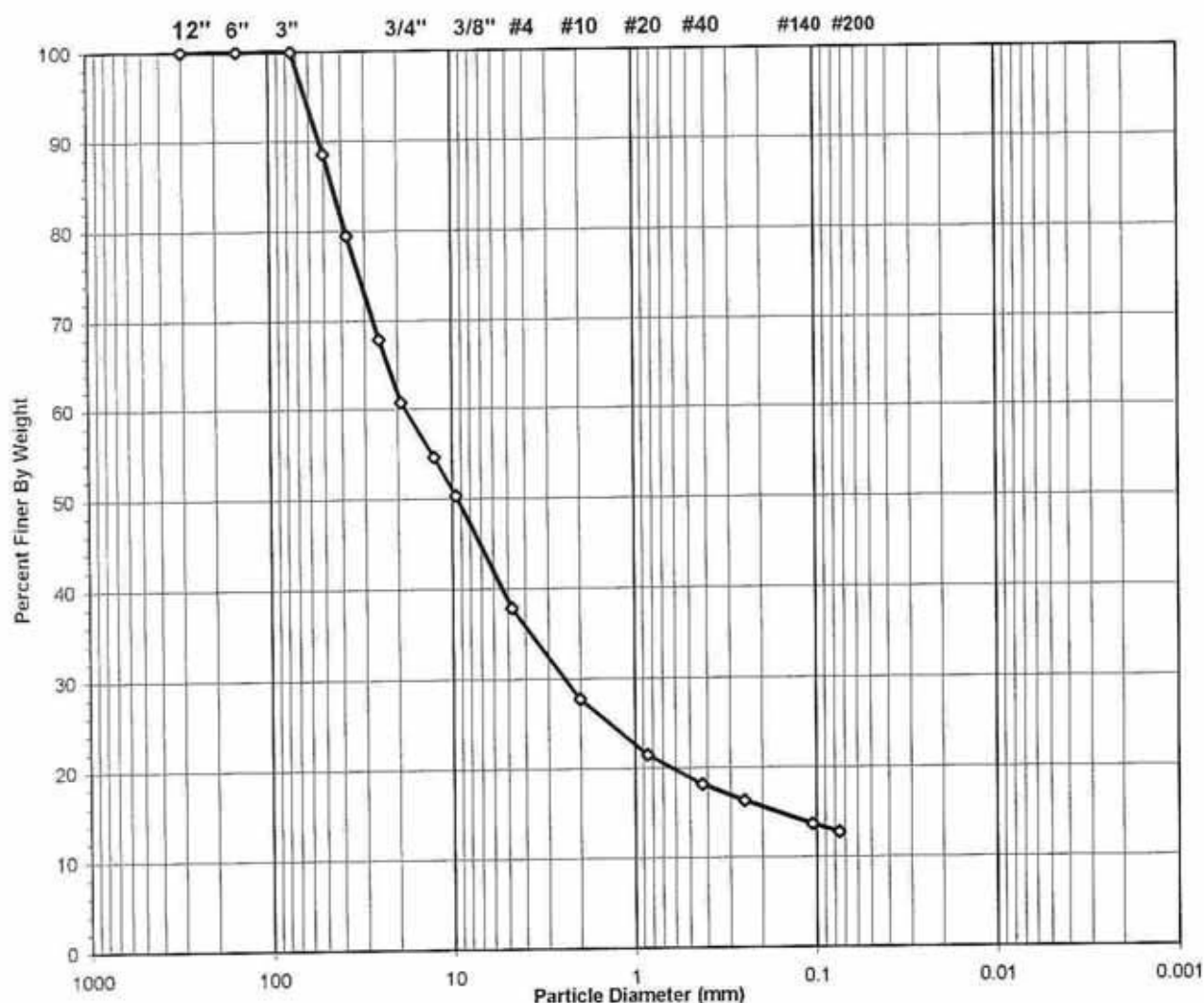
Tested By JP Date 2/24/06 Checked By YKB Date 2-27-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-55

Boring No. TS-6
Depth (ft) 30-40
Sample No. S-5
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GC-GM, TESTED**

USCS Classification **SILTY, CLAYEY GRAVEL WITH SAND**

Tested By PC

Date

2/23/06

Checked By

YKB

Date

3-8-06

WASH SIEVE ANALYSIS ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-55**

Boring No. **TS-6**
Depth (ft) **30-40**
Sample No. **S-5**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	660	Tare No.	577
Wgt. Tare + Wet Specimen (gm)	1200.50	Wgt. Tare + Wet Specimen (gm)	502.76
Wgt. Tare + Dry Specimen (gm)	1068.20	Wgt. Tare + Dry Specimen (gm)	481.43
Weight of Tare (gm)	98.66	Weight of Tare (gm)	84.51
Weight of Water (gm)	132.30	Weight of Water (gm)	21.33
Weight of Dry Soil (gm)	969.54	Weight of Dry Soil (gm)	396.92
Moisture Content (%)	13.6	Moisture Content (%)	5.4

Wet Weight - 3/4" Sample (gm)	20485	Weight of the Dry Specimen (gm)	969.54
Dry Weight - 3/4" Sample (gm)	18025.3	Weight of minus #200 material (gm)	202.36
Wet Weight + 3/4" Sample (gm)	12276.00	Weight of plus #200 material (gm)	767.18
Dry Weight + 3/4" Sample (gm)	11649.95		
Total Dry Weight Sample (gm)	29675.3	J - Factor (Percent Finer than 3/4")	0.6074

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	3584.00	(*) 11.46	11.46	88.54	88.54
1 1/2"	37.5	2854.00	9.13	20.59	79.41	79.41
1"	25	3602.00	11.52	32.11	67.89	67.89
3/4"	19	2236.00	7.15	39.26	60.74	60.74
1/2"	12.5	97.15	10.02	10.02	89.98	54.66
3/8"	9.5	69.39	7.16	17.18	82.82	50.31
#4	4.75	198.38	20.46	37.64	62.36	37.88
#10	2	161.51	16.66	54.30	45.70	27.76
#20	0.85	100.48	(**) 10.36	64.66	35.34	21.47
#40	0.425	53.19	5.49	70.15	29.85	18.13
#60	0.25	29.45	3.04	73.18	26.82	16.29
#140	0.106	41.87	4.32	77.50	22.50	13.67
#200	0.075	15.76	1.63	79.13	20.87	12.68
Pan	-	202.36	20.87	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **PC**

Date **2/23/06**

Checked By **hvb**

Date **3-8-06**

ATTERBERG LIMITS

ASTM D 4318-98 / AASHTO T89 (SOP - S4A)

Client	PAUL C. RIZZO	Boring No.	TS-6
Client Reference	TAUM SAUK 06-3551	Depth (ft)	30-40
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-55	Soil Description	BROWN SILTY CLAY
			(Minus No. 40 sieve material, Airdried)

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

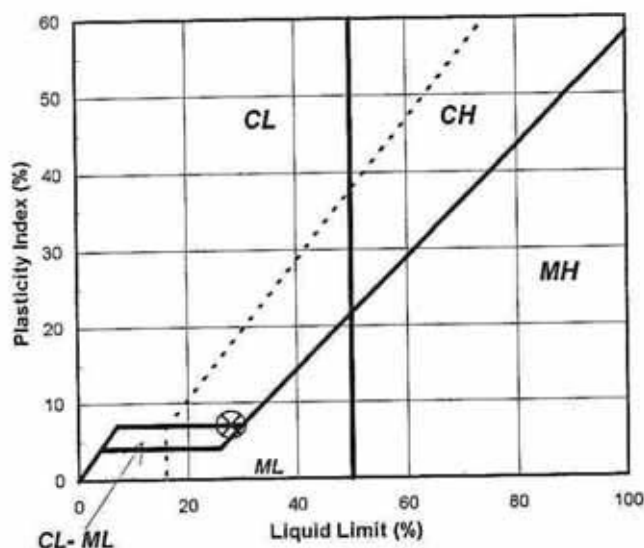
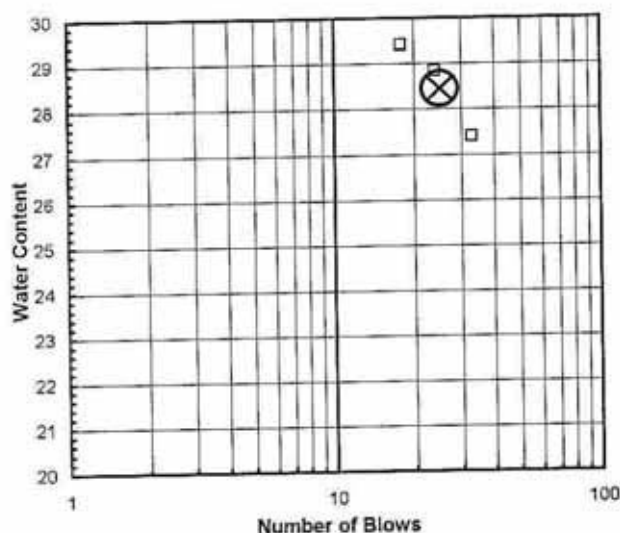
Liquid Limit Test	1	2	3	
Tare Number	162	253	254	MULTIPOINT
Wt. of Tare & WS (gm)	44.58	40.73	40.61	
Wt. of Tare & DS (gm)	38.89	35.61	35.56	
Wt. of Tare (gm)	18.13	17.85	18.39	
Wt. of Water (gm)	5.7	5.1	5.1	
Wt. of DS (gm)	20.8	17.8	17.2	
Moisture Content (%)	27.4	28.8	29.4	
Number of Blows	33	24	18	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	2228	2288		Liquid Limit (%) 28
Wt. of Tare & WS (gm)	23.11	25.53		Plastic Limit (%) 21
Wt. of Tare & DS (gm)	22.06	24.46		Plasticity Index (%) 7
Wt. of Tare (gm)	17.05	19.35		USCS Symbol CL-ML
Wt. of Water (gm)	1.1	1.1		
Wt. of DS (gm)	5.0	5.1		
Moisture Content (%)	21.0	20.9	0.0	

Note: The acceptable range of the two Moisture contents is ± 2.6

Flow Curve

Plasticity Chart



Tested By	BS	Date	3/3/06	Checked By	YRB	Date	3-6-06
page 1 of 1	DCN:	CT-S4B	DATE:	10/8/01	REVISION:	2	

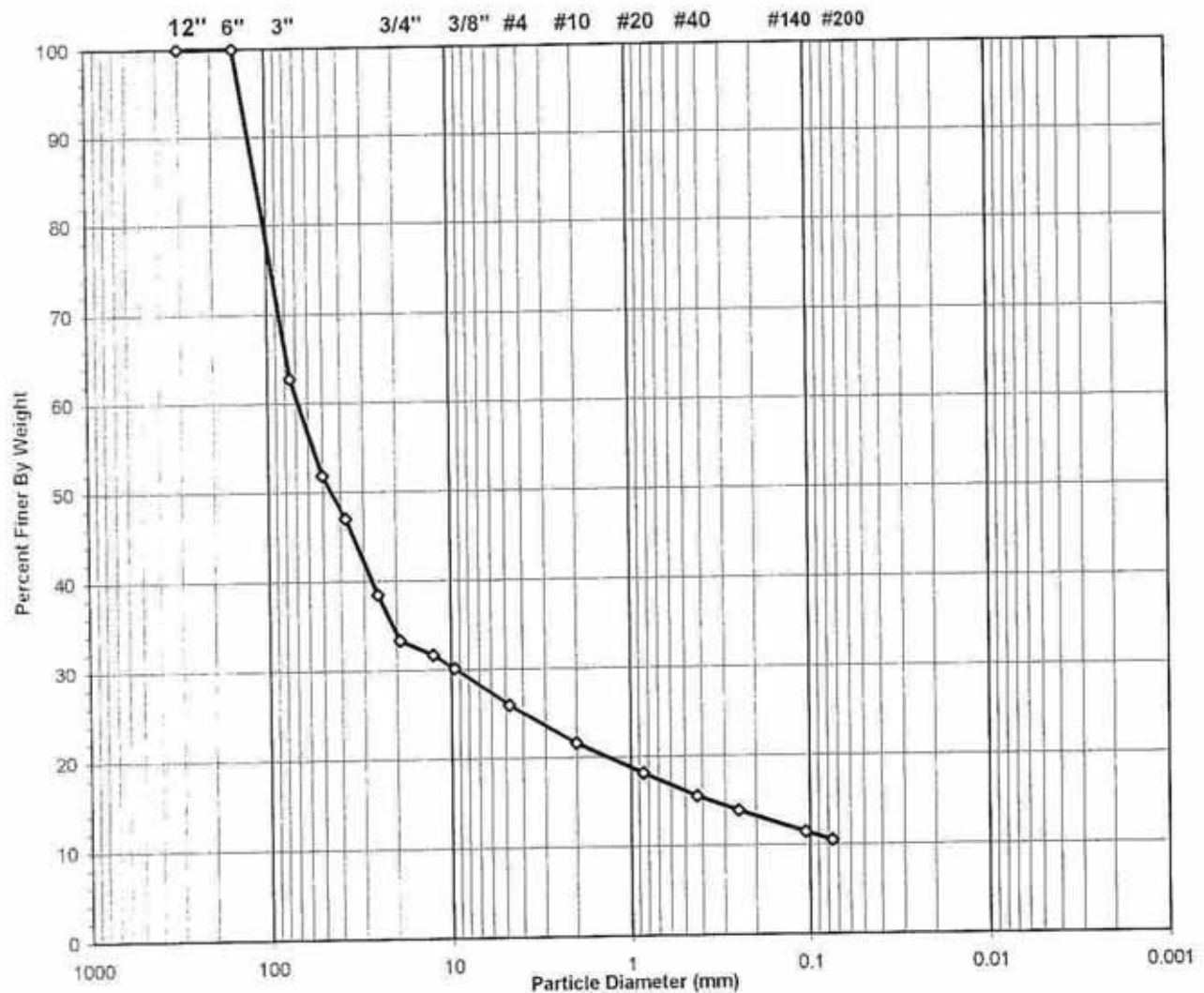
C:\MSOFFICE\Excel\Print\Q\U530.xls\Sheet1

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-02**
Lab ID **2006-060-02-01**

Boring No. **TS-6**
Depth (ft) **50-54**
Sample No. **S-7**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP-GM, TESTED**

USCS Classification **POORLY GRADED GRAVEL WITH SILT AND SAND
(NON-PLASTIC FINES)**

Tested By **PC**

Date

2/24/06

Checked By

KB

Date

3-2-06

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-02
Lab ID 2006-060-02-01

Boring No. TS-6
Depth (ft) 50-54
Sample No. S-7
Soil Color REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	502	Tare No.	906
Wgt. Tare + Wet Specimen (gm)	1090.10	Wgt. Tare + Wet Specimen (gm)	1015.00
Wgt. Tare + Dry Specimen (gm)	998.00	Wgt. Tare + Dry Specimen (gm)	996.90
Weight of Tare (gm)	102.31	Weight of Tare (gm)	110.78
Weight of Water (gm)	92.10	Weight of Water (gm)	18.10
Weight of Dry Soil (gm)	895.69	Weight of Dry Soil (gm)	886.12
Moisture Content (%)	10.3	Moisture Content (%)	2.0

Wet Weight - 3/4" Sample (gm)	5524	Weight of the Dry Specimen (gm)	895.69
Dry Weight - 3/4" Sample (gm)	5009.0	Weight of minus #200 material (gm)	281.61
Wet Weight + 3/4" Sample (gm)	10229.00	Weight of plus #200 material (gm)	614.08
Dry Weight + 3/4" Sample (gm)	10024.24		
Total Dry Weight Sample (gm)	15033.2	J - Factor (Percent Finer than 3/4")	0.3332

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	5713.00	37.24	37.24	62.76	62.76
2"	50	1680.00 (*)	10.95	48.19	51.81	51.81
1 1/2"	37.5	751.00	4.90	53.09	46.91	46.91
1"	25	1293.00	8.43	61.52	38.48	38.48
3/4"	19	792.00	5.16	66.68	33.32	33.32
1/2"	12.5	43.50	4.86	4.86	95.14	31.70
3/8"	9.5	41.76	4.66	9.52	90.48	30.15
#4	4.75	113.18	12.64	22.15	77.85	25.94
#10	2	115.91	12.94	35.10	64.90	21.63
#20	0.85	93.70 (**)	10.46	45.56	54.44	18.14
#40	0.425	71.55	7.99	53.55	46.45	15.48
#60	0.25	44.94	5.02	58.56	41.44	13.81
#140	0.106	65.35	7.30	65.86	34.14	11.38
#200	0.075	24.19	2.70	68.56	31.44	10.48
Pan	-	281.61	31.44	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By PC Date 2/24/06 Checked By YKB Date 3-2-06

ATTERBERG LIMIT
ASTM D 4318-00 (SOP - S4)

Client	PAUL C. RIZZO	Boring No.	TS-6
Client Reference	TAUM SAUK 06-3551	Depth (ft)	50-54
Project No.	2006-060-02	Sample No.	S-7
Lab ID	2006-060-02-01	Visual Description	REDDISH BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

Tested By BS Date 2/24/06 Checked By YRB Date 2-27-06

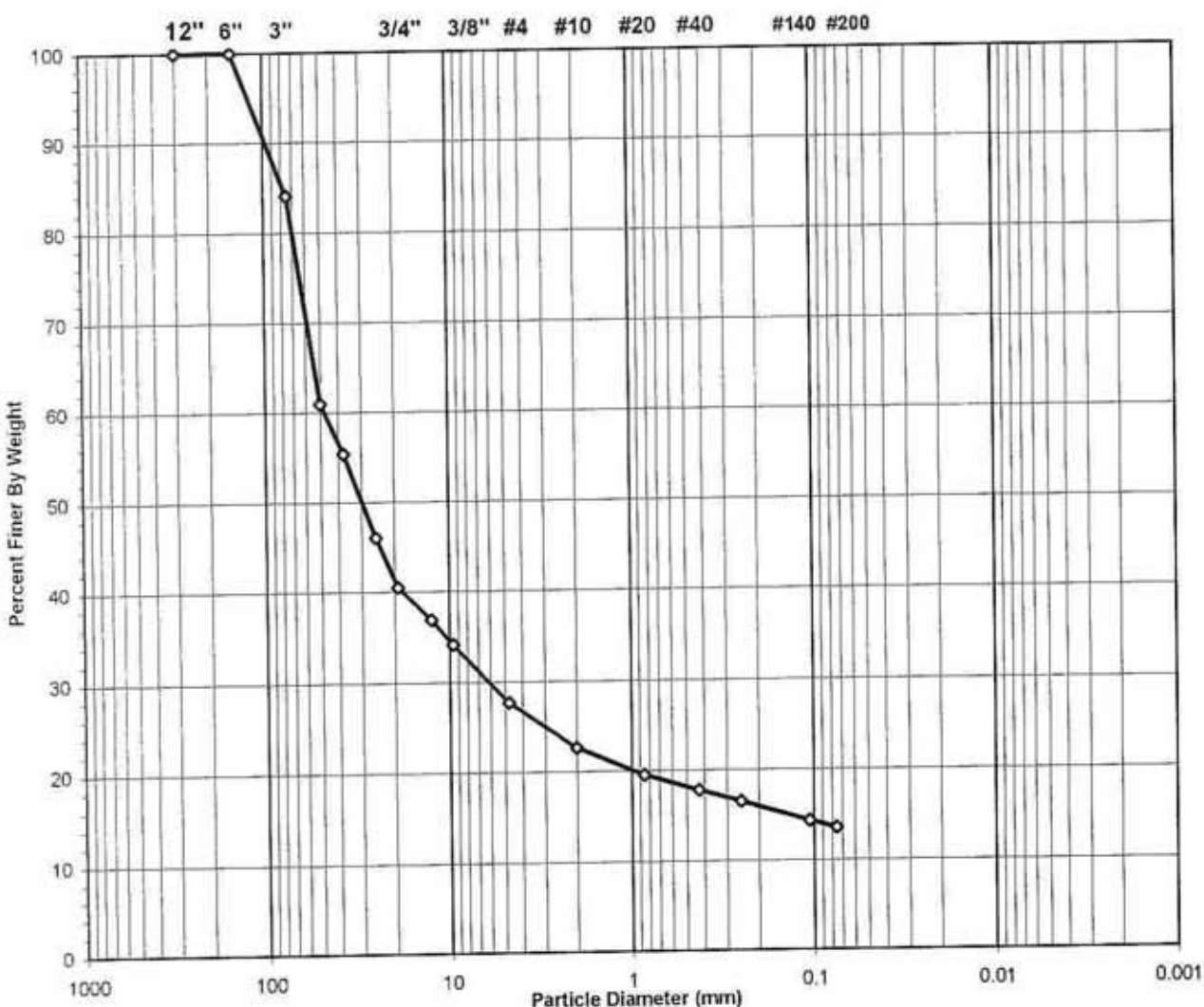
BORING TS-7

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-57

Boring No. TS-7
Depth (ft) NA
Sample No. S-1
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gm, ASSUMED**

USCS Classification **SILTY GRAVEL**

Tested By JP Date 2/21/06 Checked By *HYB* Date 2-22-06
page 1 of 2 DCN: CT-S3A DATE 6-26-98 REVISION 2 C:\WSOFFICE\Excel\PrintQ\U202.xls\Sheet1

WASH SIEVE ANALYSIS ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-57**

Boring No. **TS-7**
Depth (ft) **NA**
Sample No. **S-1**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	931	Tare No.	885
Wgt. Tare + Wet Specimen (gm)	1347.50	Wgt. Tare + Wet Specimen (gm)	462.74
Wgt. Tare + Dry Specimen (gm)	1237.70	Wgt. Tare + Dry Specimen (gm)	449.67
Weight of Tare (gm)	103.37	Weight of Tare (gm)	110.13
Weight of Water (gm)	109.80	Weight of Water (gm)	13.07
Weight of Dry Soil (gm)	1134.33	Weight of Dry Soil (gm)	339.54
Moisture Content (%)	9.7	Moisture Content (%)	3.8

Wet Weight - 3/4" Sample (gm)	9630	Weight of the Dry Specimen (gm)	1134.33
Dry Weight - 3/4" Sample (gm)	8780.1	Weight of minus #200 material (gm)	381.09
Wet Weight + 3/4" Sample (gm)	13420.00	Weight of plus #200 material (gm)	753.24
Dry Weight + 3/4" Sample (gm)	12922.57		
Total Dry Weight Sample (gm)	21702.7	J - Factor (Percent Finer than 3/4")	0.4046

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	3583.00	15.90	15.90	84.10	84.10
2"	50	5221.00	23.17	39.06	60.94	60.94
1 1/2"	37.5	1263.00	5.60	44.67	55.33	55.33
1"	25	2105.00	9.34	54.01	45.99	45.99
3/4"	19	1248.00	5.54	59.54	40.46	40.46
1/2"	12.5	100.39	8.85	8.85	91.15	36.88
3/8"	9.5	77.05	6.79	15.64	84.36	34.13
#4	4.75	181.39	15.99	31.63	68.37	27.66
#10	2	141.36	12.46	44.10	55.90	22.62
#20	0.85	85.18	7.51	51.60	48.40	19.58
#40	0.425	49.59	4.37	55.98	44.02	17.81
#60	0.25	34.39	3.03	59.01	40.99	16.58
#140	0.106	61.30	5.40	64.41	35.59	14.40
#200	0.075	22.59	1.99	66.40	33.60	13.59
Pan	-	381.09	33.60	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

Tested By **JP**

Date **2/21/06**

Checked By **YKB**

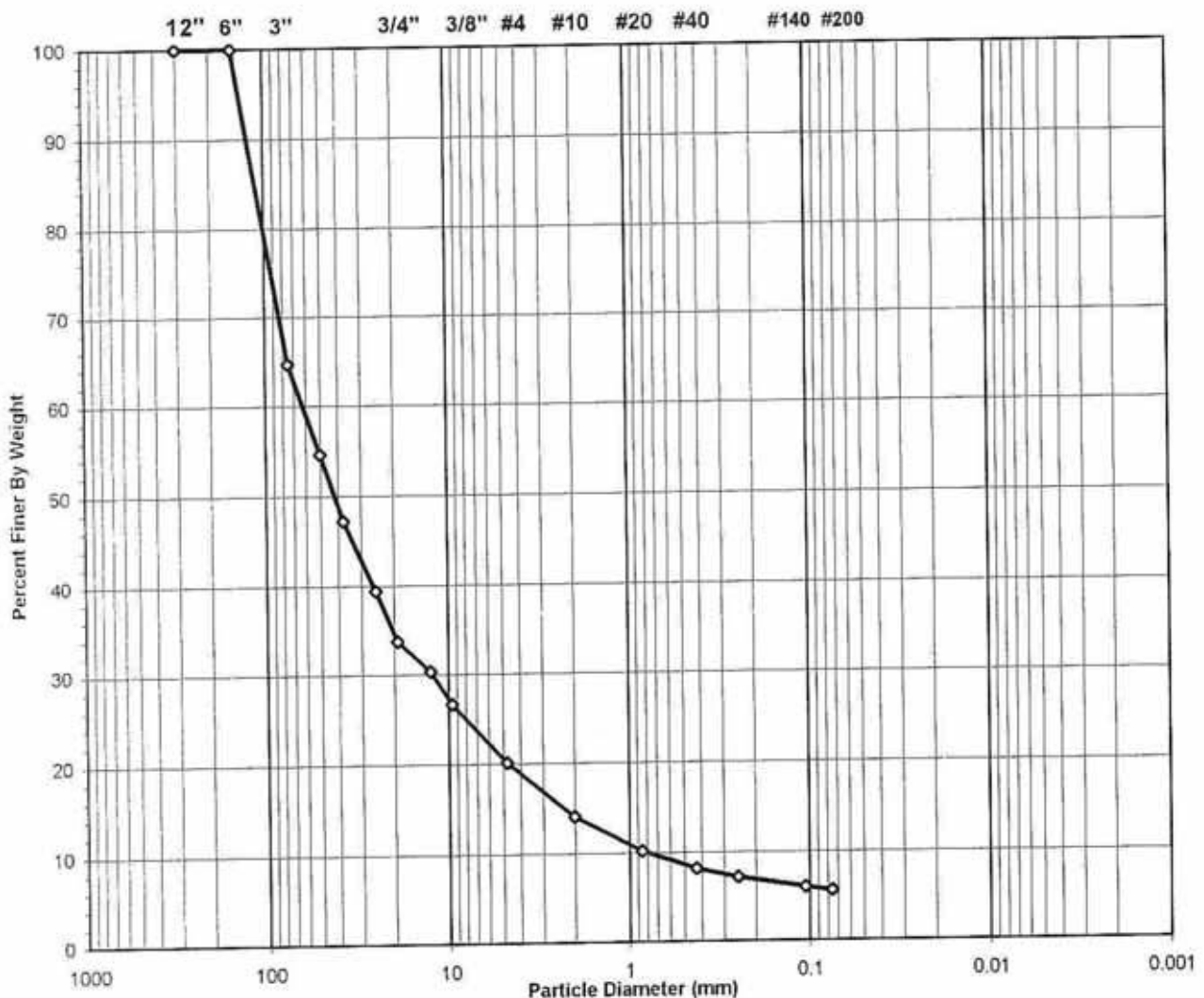
Date **2-22-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-58

Boring No. TS-7
Depth (ft) NA
Sample No. S-2
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER	
	gravel	sand	silt and clay	



USCS Symbol **gw-gm, ASSUMED**

D60 = 62.1 CC = 3.0

USCS Classification **WELL-GRADED GRAVEL WITH SILT**

D30 = 12.2 CU = 76.9

D10 = 0.8

Tested By JP

Date 2/21/06

Checked By KB

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-58**

Boring No. **TS-7**
Depth (ft) **NA**
Sample No. **S-2**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2349	Tare No.	891
Wgt. Tare + Wet Specimen (gm)	1357.70	Wgt. Tare + Wet Specimen (gm)	735.20
Wgt. Tare + Dry Specimen (gm)	1277.70	Wgt. Tare + Dry Specimen (gm)	723.70
Weight of Tare (gm)	97.76	Weight of Tare (gm)	110.45
Weight of Water (gm)	80.00	Weight of Water (gm)	11.50
Weight of Dry Soil (gm)	1179.94	Weight of Dry Soil (gm)	613.25
Moisture Content (%)	6.8	Moisture Content (%)	1.9

Wet Weight - 3/4" Sample (gm)	21937	Weight of the Dry Specimen (gm)	1179.94
Dry Weight - 3/4" Sample (gm)	20544.1	Weight of minus #200 material (gm)	197.16
Wet Weight + 3/4" Sample (gm)	41120.00	Weight of plus #200 material (gm)	982.78
Dry Weight + 3/4" Sample (gm)	40363.09		
Total Dry Weight Sample (gm)	60907.2	J - Factor (Percent Finer than 3/4")	0.3373

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	21922.00	35.33	35.33	64.67	64.67
2"	50	6229.00 (*)	10.04	45.37	54.63	54.63
1 1/2"	37.5	4639.00	7.48	52.85	47.15	47.15
1"	25	4823.00	7.77	60.62	39.38	39.38
3/4"	19	3507.00	5.65	66.27	33.73	33.73
1/2"	12.5	117.75	9.98	9.98	90.02	30.36
3/8"	9.5	129.48	10.97	20.95	79.05	26.66
#4	4.75	227.46	19.28	40.23	59.77	20.16
#10	2	213.47	18.09	58.32	41.68	14.06
#20	0.85	136.81 (**)	11.59	69.92	30.08	10.15
#40	0.425	69.28	5.87	75.79	24.21	8.17
#60	0.25	33.42	2.83	78.62	21.38	7.21
#140	0.106	40.52	3.43	82.05	17.95	6.05
#200	0.075	14.59	1.24	83.29	16.71	5.64
Pan	-	197.16	16.71	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

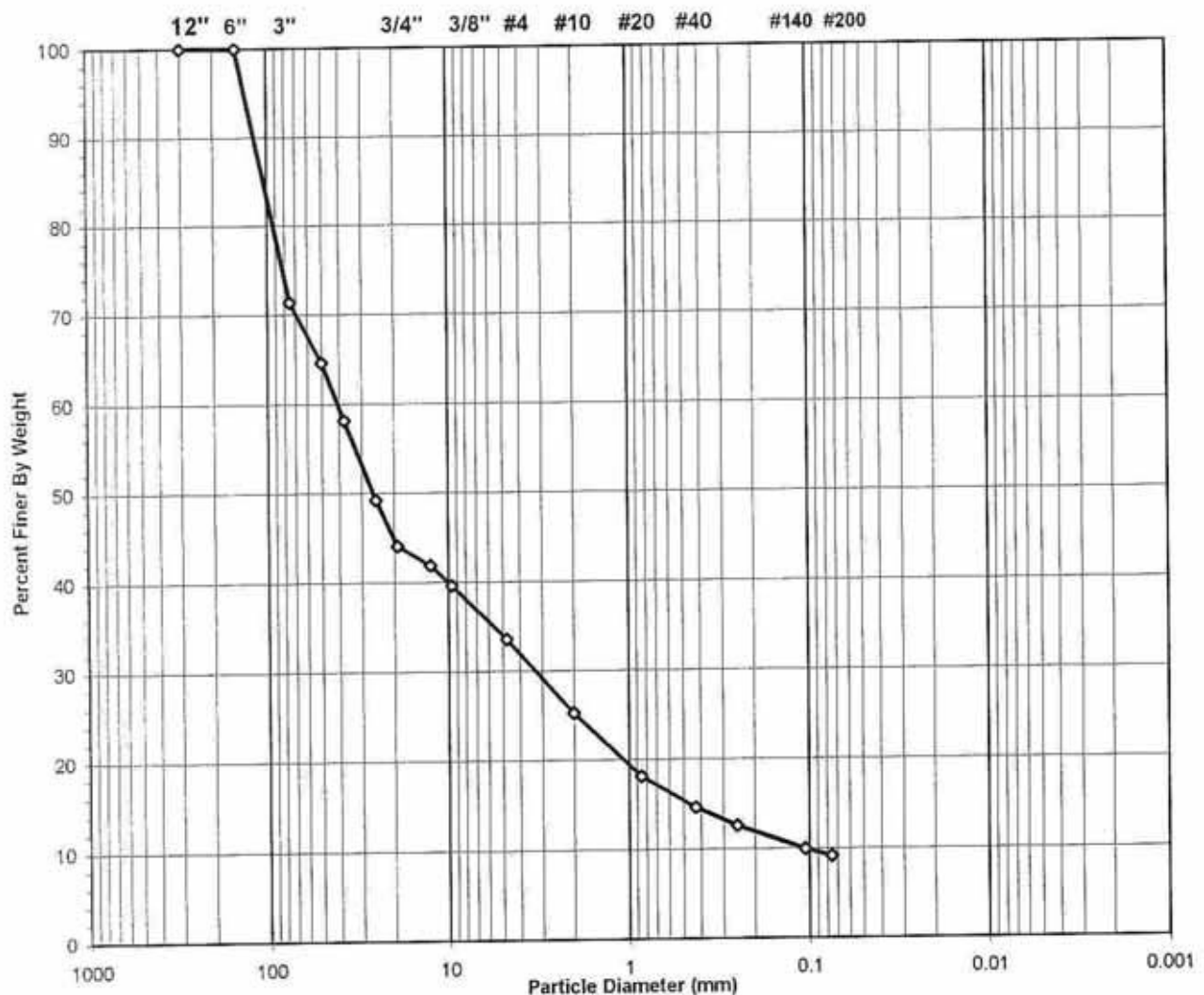
Tested By **JP** Date **2/21/06** Checked By **YVB** Date **2-22-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-59

Boring No. TS-7
Depth (ft) 20-30
Sample No. S-3
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw-gm, ASSUMED**

D60 = 40.7 CC = 2.4

USCS Classification **WELL-GRADED GRAVEL WITH SILT AND SAND**

D30 = 3.3 CU = 374.3

D10 = 0.1

Tested By JP

Date

2/21/06

Checked By

KYB

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-59**

Boring No. **TS-7**
Depth (ft) **20-30**
Sample No. **S-3**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	633	Tare No.	614
Wgt. Tare + Wet Specimen (gm)	1350.40	Wgt. Tare + Wet Specimen (gm)	602.70
Wgt. Tare + Dry Specimen (gm)	1271.50	Wgt. Tare + Dry Specimen (gm)	595.01
Weight of Tare (gm)	100.49	Weight of Tare (gm)	84.64
Weight of Water (gm)	78.90	Weight of Water (gm)	7.69
Weight of Dry Soil (gm)	1171.01	Weight of Dry Soil (gm)	510.37
Moisture Content (%)	6.7	Moisture Content (%)	1.5

Wet Weight - 3/4" Sample (gm)	18125	Weight of the Dry Specimen (gm)	1171.01
Dry Weight - 3/4" Sample (gm)	16980.9	Weight of minus #200 material (gm)	242.35
Wet Weight + 3/4" Sample (gm)	21892.00	Weight of plus #200 material (gm)	928.66
Dry Weight + 3/4" Sample (gm)	21567.04		
Total Dry Weight Sample (gm)	38547.9	J - Factor (Percent Finer than 3/4")	0.4405

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	11200.00	28.62	28.62	71.38	71.38
2"	50	2655.00	6.79	35.41	64.59	64.59
1 1/2"	37.5	2516.00	6.43	41.84	58.16	58.16
1"	25	3523.00	9.00	50.84	49.16	49.16
3/4"	19	1998.00	5.11	55.95	44.05	44.05
1/2"	12.5	59.07	5.04	5.04	94.96	41.83
3/8"	9.5	60.28	5.15	10.19	89.81	39.56
#4	4.75	159.43	13.61	23.81	76.19	33.56
#10	2	219.61	18.75	42.56	57.44	25.30
#20	0.85	191.13	16.32	58.88	41.12	18.11
#40	0.425	94.10	8.04	66.92	33.08	14.57
#60	0.25	54.63	4.67	71.58	28.42	12.52
#140	0.106	69.02	5.89	77.48	22.52	9.92
#200	0.075	21.39	1.83	79.30	20.70	9.12
Pan	-	242.35	20.70	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

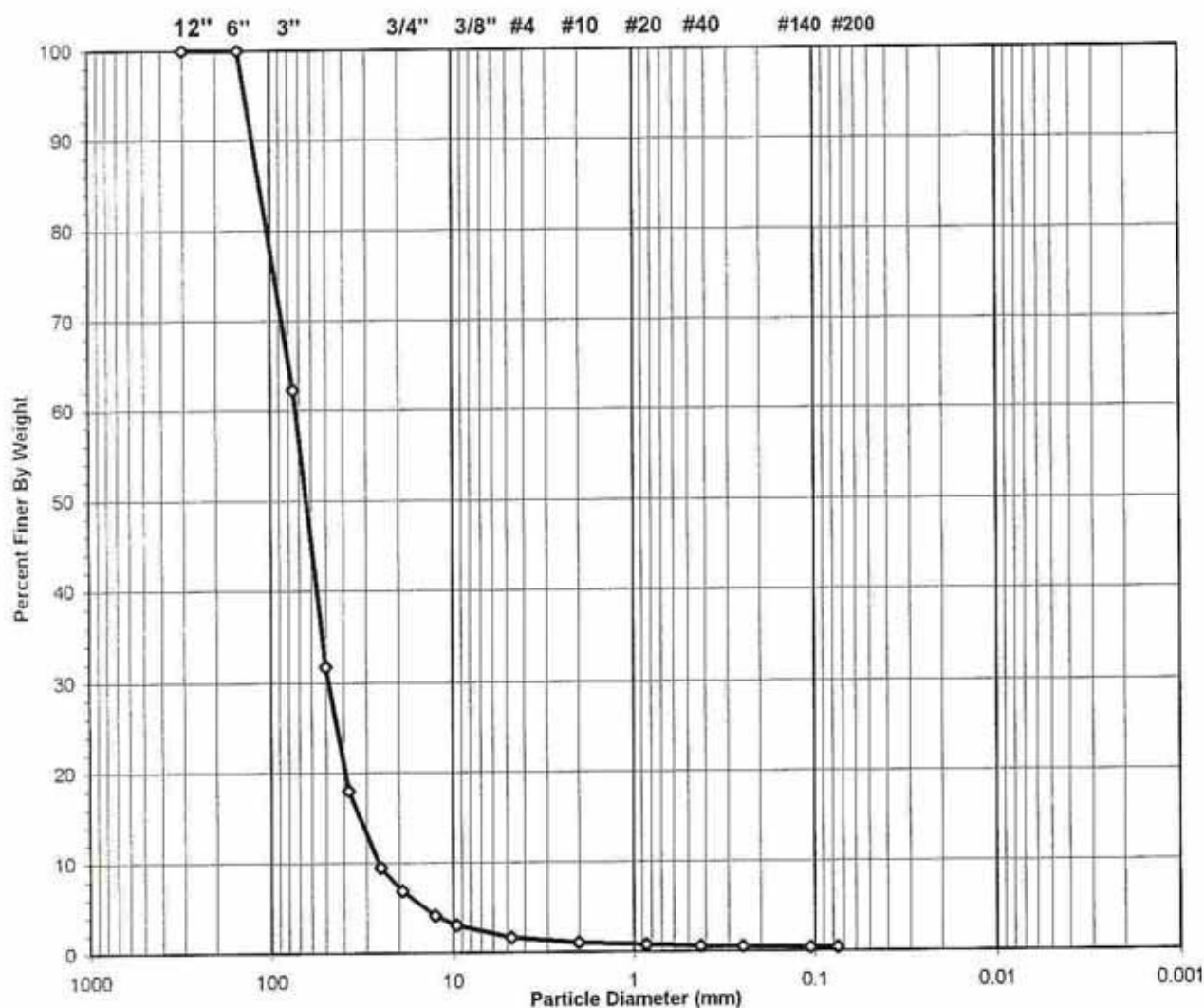
Tested By **JP** Date **2/21/06** Checked By **KHB** Date **2-22-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-60

Boring No. TS-7
Depth (ft) 20-30
Sample No. S-4
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 72.7 CC = 1.2

USCS Classification **POORLY GRADED GRAVEL**

D30 = 48.2 CU = 2.8

D10 = 25.6

Tested By JP

Date 2/21/06

Checked By *KD*

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-60**

Boring No. **TS-7**
Depth (ft) **20-30**
Sample No. **S-4**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	955	Tare No.	876
Wgt. Tare + Wet Specimen (gm)	1197.00	Wgt. Tare + Wet Specimen (gm)	840.50
Wgt. Tare + Dry Specimen (gm)	1179.50	Wgt. Tare + Dry Specimen (gm)	837.90
Weight of Tare (gm)	102.34	Weight of Tare (gm)	110.07
Weight of Water (gm)	17.50	Weight of Water (gm)	2.60
Weight of Dry Soil (gm)	1077.16	Weight of Dry Soil (gm)	727.83
Moisture Content (%)	1.6	Moisture Content (%)	0.4

Wet Weight - 3/4" Sample (gm)	1946	Weight of the Dry Specimen (gm)	1077.16
Dry Weight - 3/4" Sample (gm)	1914.9	Weight of minus #200 material (gm)	58.72
Wet Weight + 3/4" Sample (gm)	26128.00	Weight of plus #200 material (gm)	1018.44
Dry Weight + 3/4" Sample (gm)	26035.00		
Total Dry Weight Sample (gm)	27949.9	J - Factor (Percent Finer than 3/4")	0.0685

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	10573.00	37.69	37.69	62.31	62.31
2"	50	8579.00	30.58	68.28	31.72	31.72
1 1/2"	37.5	3836.00	13.68	81.95	18.05	18.05
1"	25	2407.00	8.58	90.54	9.46	9.46
3/4"	19	733.00	2.61	93.15	6.85	6.85
1/2"	12.5	426.92	39.63	39.63	60.37	4.14
3/8"	9.5	172.11	15.98	55.61	44.39	3.04
#4	4.75	213.66	19.84	75.45	24.55	1.68
#10	2	96.00	8.91	84.36	15.64	1.07
#20	0.85	44.26	4.11	88.47	11.53	0.79
#40	0.425	25.76	2.39	90.86	9.14	0.63
#60	0.25	14.59	1.35	92.21	7.79	0.53
#140	0.106	18.78	1.74	93.96	6.04	0.41
#200	0.075	6.36	0.59	94.55	5.45	0.37
Pan	-	58.72	5.45	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

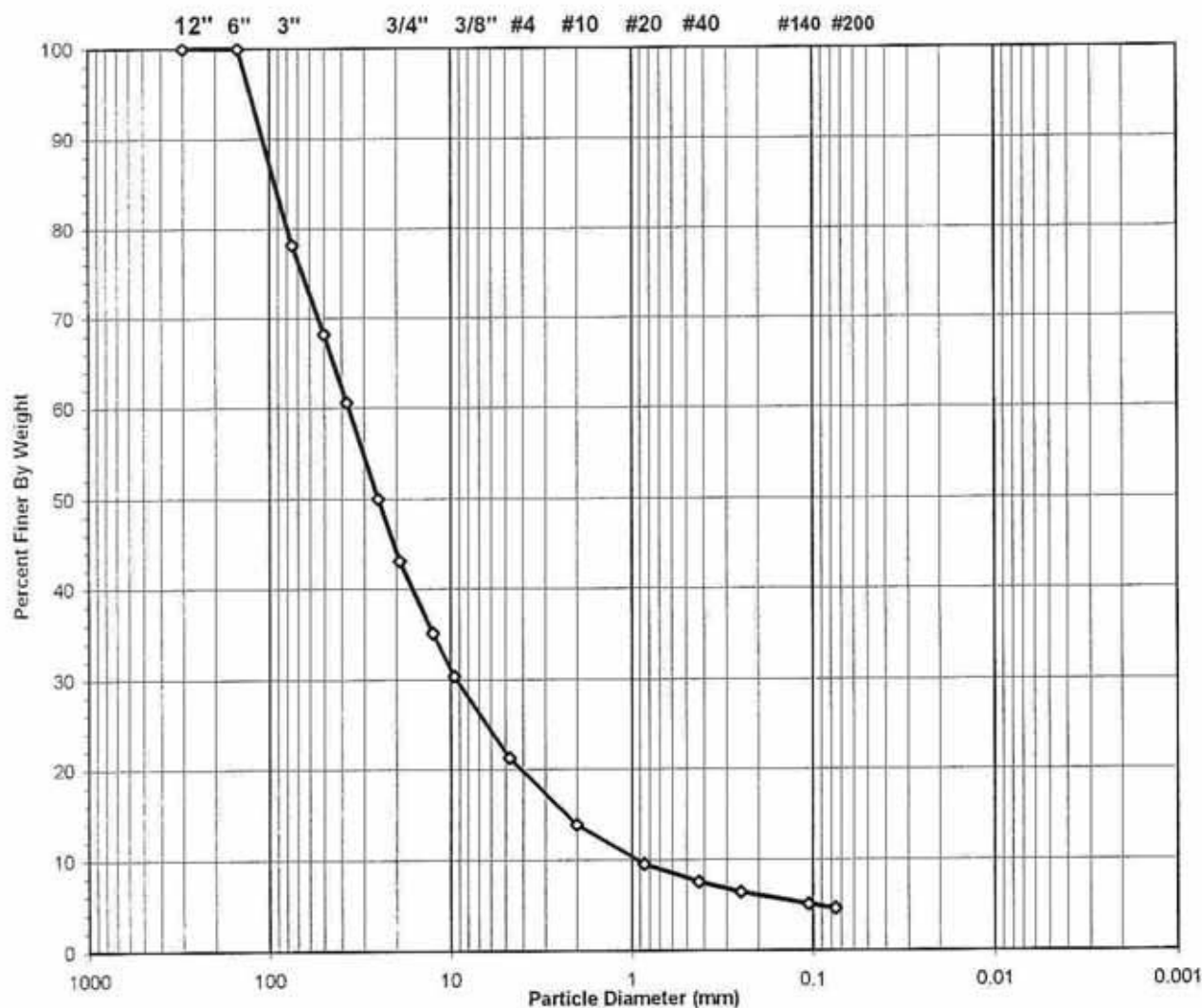
Tested By **JP** Date **2/21/06** Checked By **hbs** Date **2-22-06**

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-61

Boring No. TS-7
Depth (ft) NA
Sample No. S-5
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw, ASSUMED**

D60 = 36.7 CC = 2.5

USCS Classification **WELL-GRADED GRAVEL WITH SAND**

D30 = 9.2 CU = 39.4

D10 = 0.9

Tested By JP

Date 2/21/06

Checked By *KYS*

Date 2-22-06

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

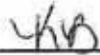
Client	PAUL C. RIZZO	Boring No.	TS-7
Client Reference	TAUM SAUK 06-3551	Depth (ft)	NA
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-61	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	662	Tare No.	729
Wgt. Tare + Wet Specimen (gm)	1199.20	Wgt. Tare + Wet Specimen (gm)	665.70
Wgt. Tare + Dry Specimen (gm)	1199.20	Wgt. Tare + Dry Specimen (gm)	647.40
Weight of Tare (gm)	95.10	Weight of Tare (gm)	86.38
Weight of Water (gm)	0.00	Weight of Water (gm)	18.30
Weight of Dry Soil (gm)	1104.10	Weight of Dry Soil (gm)	561.02
Moisture Content (%)	0.0	Moisture Content (%)	3.3

Wet Weight - 3/4" Sample (gm)	20481	Weight of the Dry Specimen (gm)	1104.10
Dry Weight - 3/4" Sample (gm)	20481.0	Weight of minus #200 material (gm)	118.08
Wet Weight + 3/4" Sample (gm)	27988.00	Weight of plus #200 material (gm)	986.02
Dry Weight + 3/4" Sample (gm)	27103.89		
Total Dry Weight Sample (gm)	47584.9	J - Factor (Percent Finer than 3/4")	0.4304

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	10757.00	21.89	21.89	78.11	78.11
2"	50	4873.00 (*)	9.92	31.81	68.19	68.19
1 1/2"	37.5	3740.00	7.61	39.42	60.58	60.58
1"	25	5219.00	10.62	50.04	49.96	49.96
3/4"	19	3399.00	6.92	56.96	43.04	43.04
1/2"	12.5	203.12	18.40	18.40	81.60	35.12
3/8"	9.5	120.60	10.92	29.32	70.68	30.42
#4	4.75	234.97	21.28	50.60	49.40	21.26
#10	2	189.21	17.14	67.74	32.26	13.89
#20	0.85	111.51 (**)	10.10	77.84	22.16	9.54
#40	0.425	51.19	4.64	82.47	17.53	7.54
#60	0.25	29.06	2.63	85.11	14.89	6.41
#140	0.106	35.36	3.20	88.31	11.69	5.03
#200	0.075	11.00	1.00	89.31	10.69	4.60
Pan	-	118.08	10.69	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

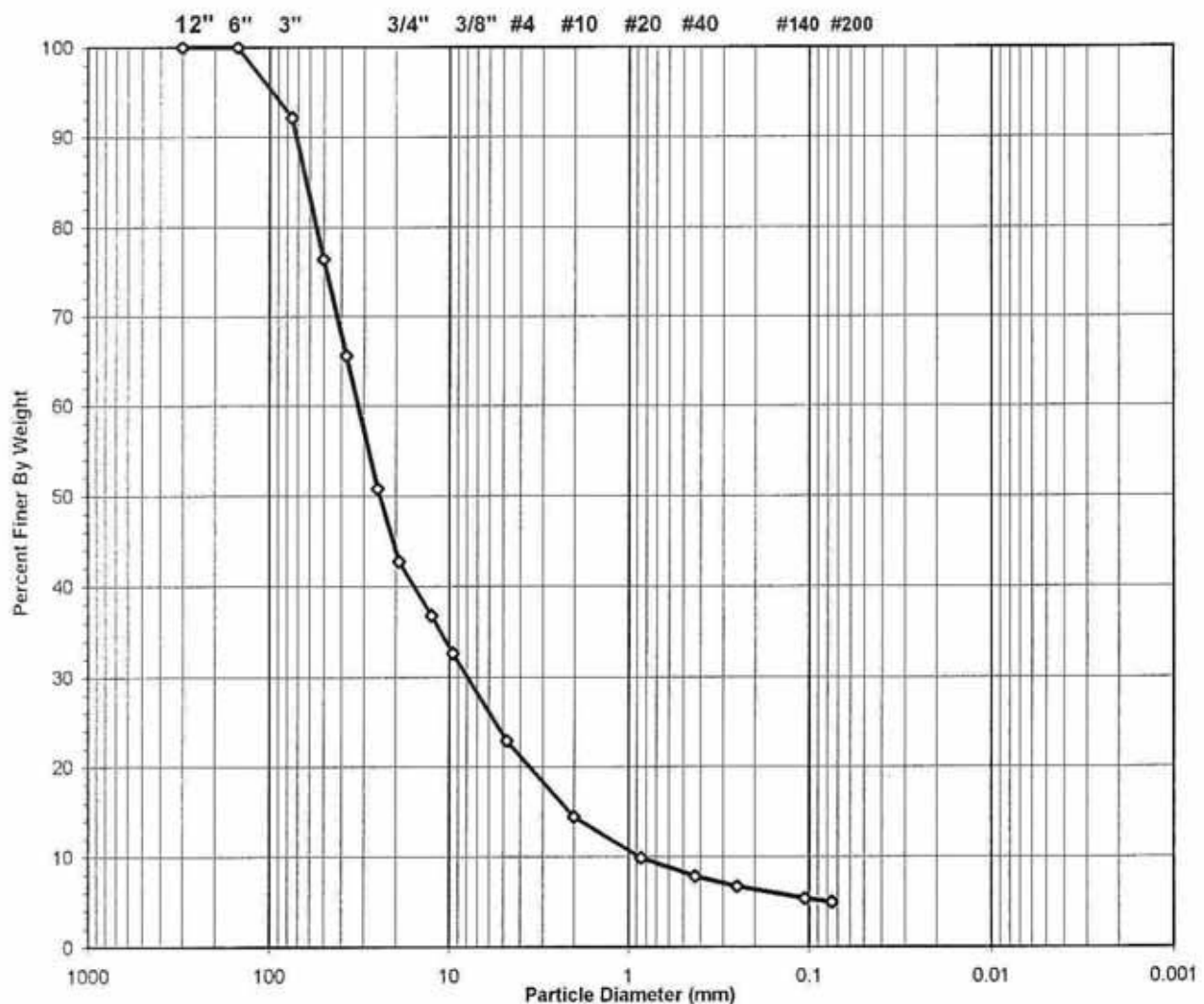
Tested By JP Date 2/21/06 Checked By  Date 2-22-06

SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-62

Boring No. TS-7
Depth (ft) 50-60
Sample No. S-6
Soil Color BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw, ASSUMED** D60 = 32.2 CC = 2.2

USCS Classification **WELL-GRADED GRAVEL WITH SAND** D30 = 7.9 CU = 36.7

D10 = 0.9

Tested By JP Date 2/21/06 Checked By *YHB* Date 2-22-06