

APPENDIX E3

LABORATORY DATA SHEETS

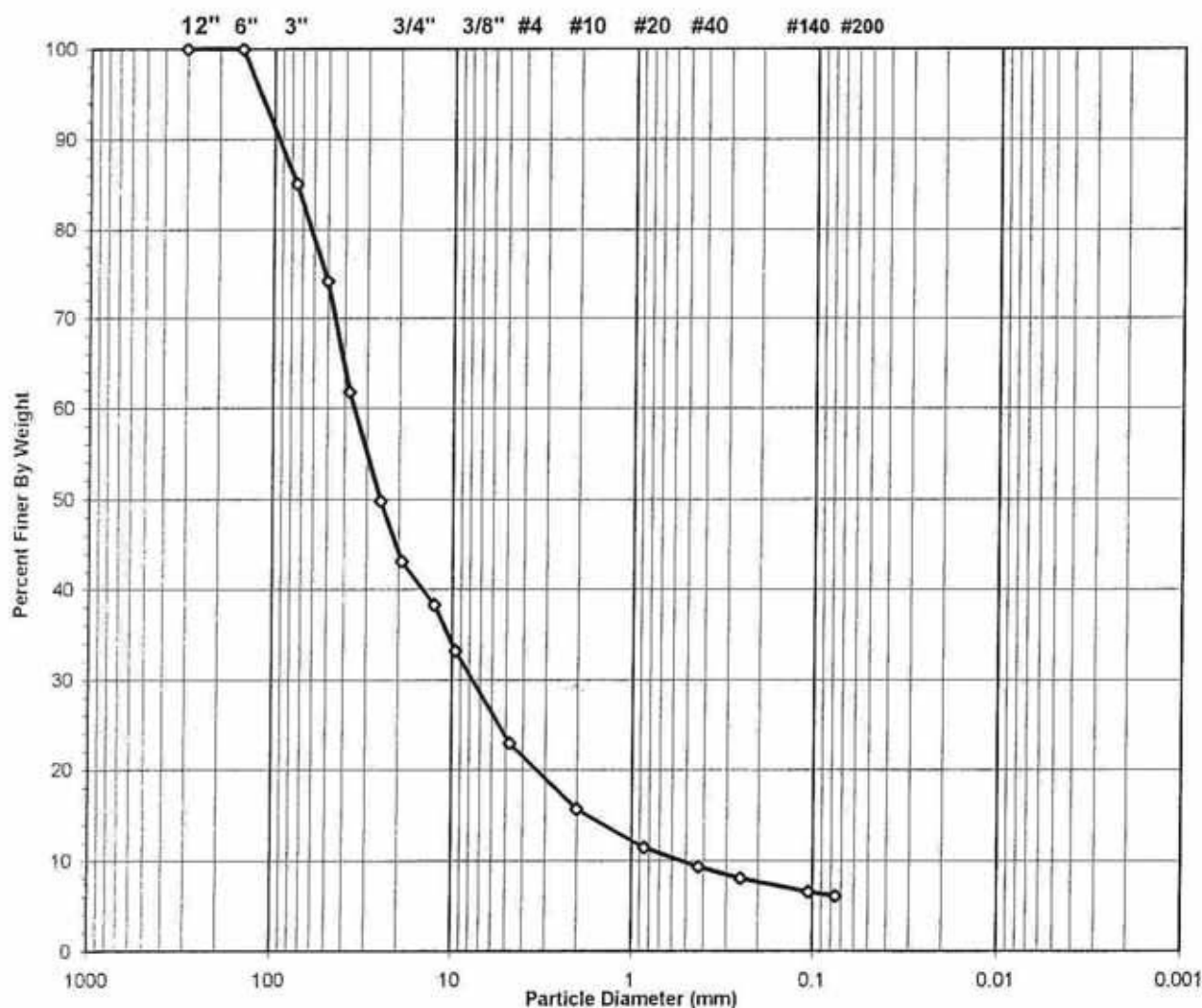
BORING TS-1

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 2006-060-01-01

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

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = 35.3 CC = 3.1

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

D30 = 7.7 CU = 66.4

D10 = 0.5

Tested By PC

Date 2/22/06

Checked By

KVB

Date 2-23-06

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 **2006-060-01-01**

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	656	Tare No.	1744
Wgt. Tare + Wet Specimen (gm)	1541.90	Wgt. Tare + Wet Specimen (gm)	1199.80
Wgt. Tare + Dry Specimen (gm)	1345.10	Wgt. Tare + Dry Specimen (gm)	1174.20
Weight of Tare (gm)	96.25	Weight of Tare (gm)	83.52
Weight of Water (gm)	196.80	Weight of Water (gm)	25.60
Weight of Dry Soil (gm)	1248.85	Weight of Dry Soil (gm)	1090.68
Moisture Content (%)	15.8	Moisture Content (%)	2.3

Wet Weight - 3/4" Sample (gm)	12175	Weight of the Dry Specimen (gm)	1248.85
Dry Weight - 3/4" Sample (gm)	10517.6	Weight of minus #200 material (gm)	175.08
Wet Weight + 3/4" Sample (gm)	14185.00	Weight of plus #200 material (gm)	1073.77
Dry Weight + 3/4" Sample (gm)	13859.69		
Total Dry Weight Sample (gm)	24377.3	J - Factor (Percent Finer than 3/4")	0.4315

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	3722.00	14.92	14.92	85.08	85.08
2"	50	2740.00	10.98	25.90	74.10	74.10
1 1/2"	37.5	3073.00	12.32	38.22	61.78	61.78
1"	25	2990.00	11.98	50.20	49.80	49.80
3/4"	19	1660.00	6.65	56.85	43.15	43.15
1/2"	12.5	141.29	11.31	11.31	88.69	38.26
3/8"	9.5	147.11	11.78	23.09	76.91	33.18
#4	4.75	295.67	23.68	46.77	53.23	22.97
#10	2	209.70	16.79	63.56	36.44	15.72
#20	0.85	122.91	9.84	73.40	26.60	11.48
#40	0.425	63.08	5.05	78.45	21.55	9.30
#60	0.25	36.73	2.94	81.39	18.61	8.03
#140	0.106	44.50	3.56	84.96	15.04	6.49
#200	0.075	12.78	1.02	85.98	14.02	6.05
Pan	-	175.08	14.02	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 **AB**

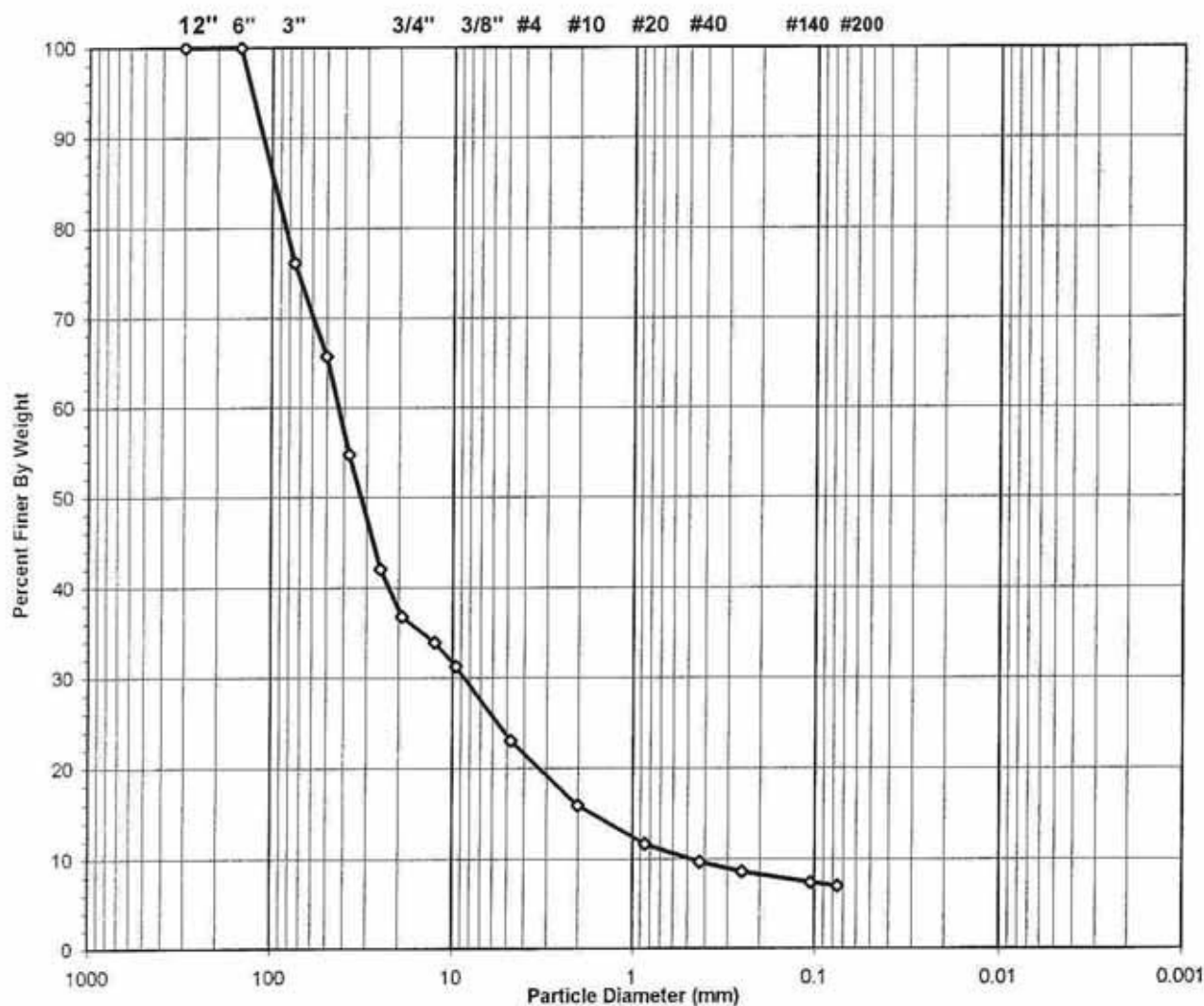
Date **2-23-06**

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 **2006-060-01-02**

Boring No. **TS-1**
Depth (ft) **NA**
Sample No. **S-2**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

D60 = **43.0** CC = **3.5**

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

D30 = **8.5** CU = **90.0**

D10 = **0.5**

Tested By **PC**

Date **2/22/06**

Checked By **YJB**

Date **2-23-06**

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 **2006-060-01-02**

Boring No. **TS-1**
Depth (ft) **NA**
Sample No. **S-2**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2485	Tare No.	591
Wgt. Tare + Wet Specimen (gm)	1337.20	Wgt. Tare + Wet Specimen (gm)	633.90
Wgt. Tare + Dry Specimen (gm)	1147.30	Wgt. Tare + Dry Specimen (gm)	615.90
Weight of Tare (gm)	99.92	Weight of Tare (gm)	87.50
Weight of Water (gm)	189.90	Weight of Water (gm)	18.00
Weight of Dry Soil (gm)	1047.38	Weight of Dry Soil (gm)	528.40
Moisture Content (%)	18.1	Moisture Content (%)	3.4

Wet Weight - 3/4" Sample (gm)	20860	Weight of the Dry Specimen (gm)	1047.38
Dry Weight - 3/4" Sample (gm)	17658.4	Weight of minus #200 material (gm)	199.39
Wet Weight + 3/4" Sample (gm)	31350.00	Weight of plus #200 material (gm)	847.99
Dry Weight + 3/4" Sample (gm)	30317.24		
Total Dry Weight Sample (gm)	47975.6	J - Factor (Percent Finer than 3/4")	0.3681

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	11848.00	23.88	23.88	76.12	76.12
2"	50	5184.00	10.45	34.33	65.67	65.67
1 1/2"	37.5	5397.00	10.88	45.21	54.79	54.79
1"	25	6309.00	12.72	57.93	42.07	42.07
3/4"	19	2612.00	5.27	63.19	36.81	36.81
1/2"	12.5	81.12	7.75	7.75	92.25	33.96
3/8"	9.5	76.63	7.32	15.06	84.94	31.26
#4	4.75	232.35	22.18	37.25	62.75	23.10
#10	2	205.08	19.58	56.83	43.17	15.89
#20	0.85	120.90	11.54	68.37	31.63	11.64
#40	0.425	56.35	5.38	73.75	26.25	9.66
#60	0.25	30.14	2.88	76.63	23.37	8.60
#140	0.106	35.10	3.35	79.98	20.02	7.37
#200	0.075	10.32	0.99	80.96	19.04	7.01
Pan	-	199.39	19.04	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

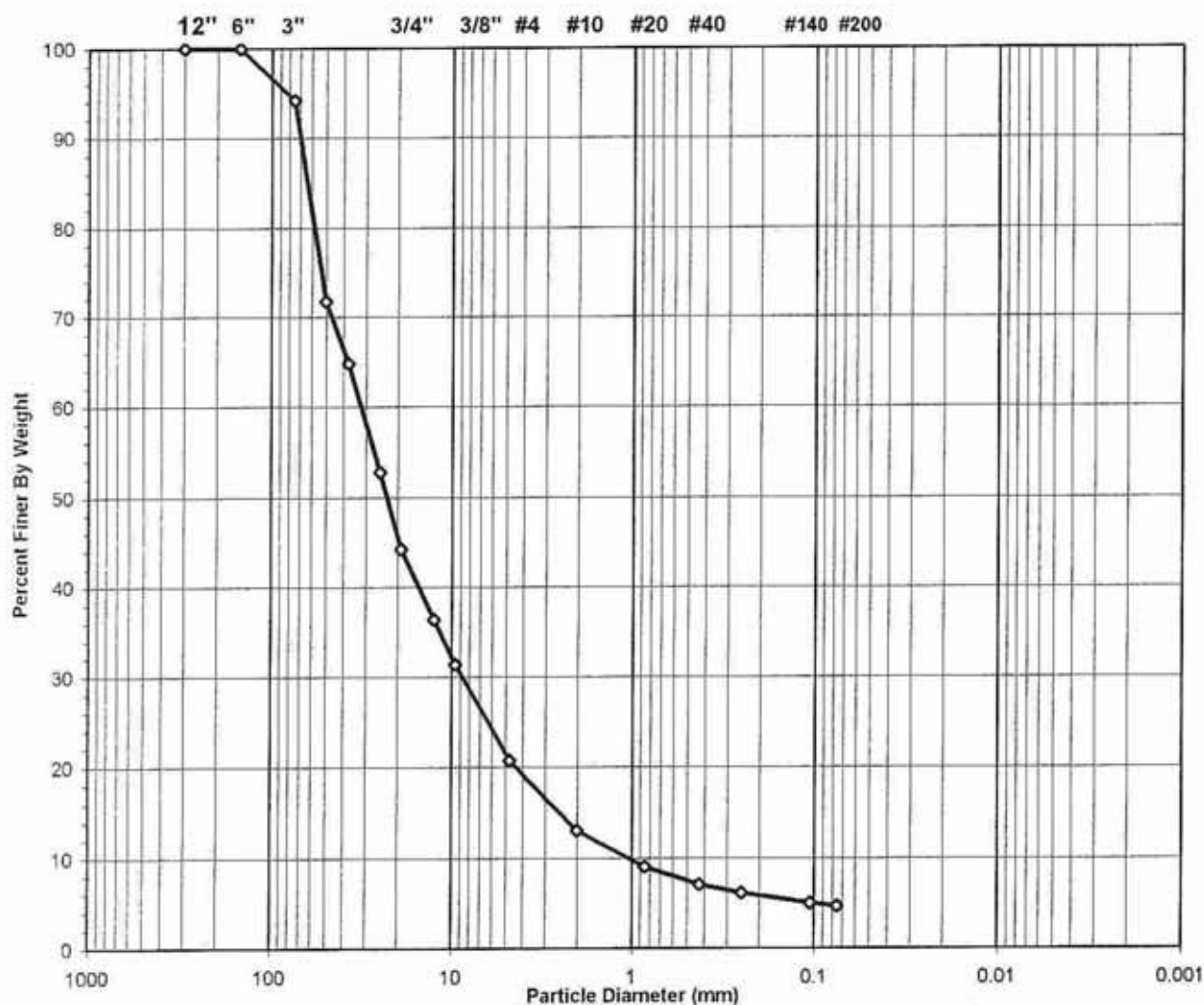
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-03

Boring No. TS-1
Depth (ft) 20-40
Sample No. S-3
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw, ASSUMED**

D60 = 31.9 CC = 2.3

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

D30 = 8.7 CU = 30.6

D10 = 1.0

Tested By PC

Date 2/22/06

Checked By *KRB*

Date *2-23-06*

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 **2006-060-01-03**

Boring No. **TS-1**
 Depth (ft) **20-40**
 Sample No. **S-3**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	708	Tare No.	579
Wgt. Tare + Wet Specimen (gm)	1260.40	Wgt. Tare + Wet Specimen (gm)	545.06
Wgt. Tare + Dry Specimen (gm)	1121.60	Wgt. Tare + Dry Specimen (gm)	533.49
Weight of Tare (gm)	98.76	Weight of Tare (gm)	83.85
Weight of Water (gm)	138.80	Weight of Water (gm)	11.57
Weight of Dry Soil (gm)	1022.84	Weight of Dry Soil (gm)	449.64
Moisture Content (%)	13.6	Moisture Content (%)	2.6

Wet Weight - 3/4" Sample (gm)	6457	Weight of the Dry Specimen (gm)	1022.84
Dry Weight - 3/4" Sample (gm)	5685.5	Weight of minus #200 material (gm)	107.53
Wet Weight + 3/4" Sample (gm)	7356.00	Weight of plus #200 material (gm)	915.31
Dry Weight + 3/4" Sample (gm)	7171.47		
Total Dry Weight Sample (gm)	12856.9	J - Factor (Percent Finer than 3/4")	0.4422

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	767.00	5.82	5.82	94.18	94.18
2"	50	2962.00 (*)	22.46	28.28	71.72	71.72
1 1/2"	37.5	909.00	6.89	35.17	64.83	64.83
1"	25	1590.00	12.06	47.23	52.77	52.77
3/4"	19	1128.00	8.55	55.78	44.22	44.22
1/2"	12.5	181.09	17.70	17.70	82.30	36.39
3/8"	9.5	115.22	11.26	28.97	71.03	31.41
#4	4.75	245.70	24.02	52.99	47.01	20.79
#10	2	179.40	17.54	70.53	29.47	13.03
#20	0.85	92.05 (**)	9.00	79.53	20.47	9.05
#40	0.425	45.61	4.46	83.99	16.01	7.08
#60	0.25	21.97	2.15	86.14	13.86	6.13
#140	0.106	25.73	2.52	88.65	11.35	5.02
#200	0.075	8.54	0.83	89.49	10.51	4.65
Pan	-	107.53	10.51	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

YKB

Date

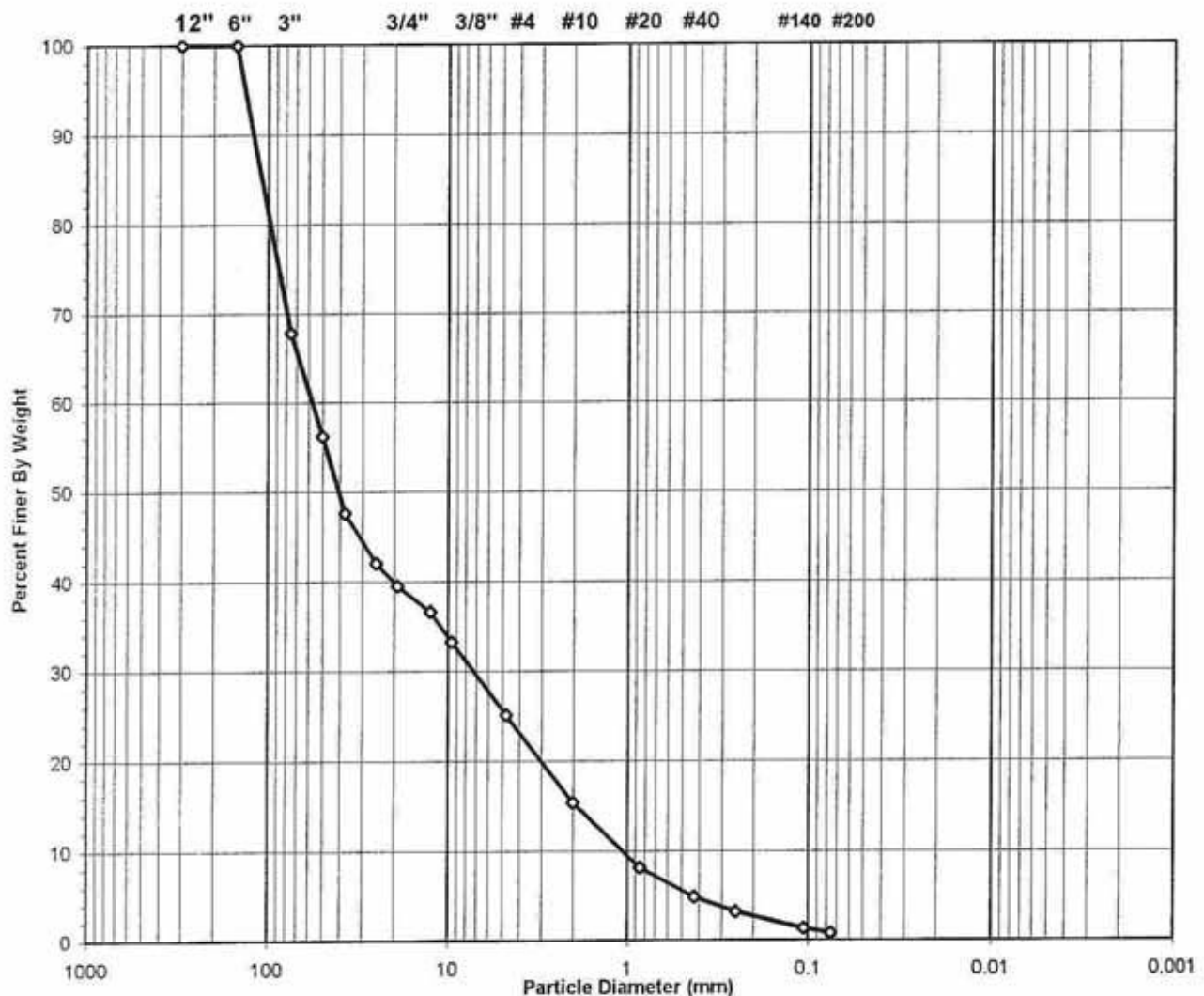
2-23-06

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 2006-060-01-04

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

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol *gp, ASSUMED*

D60 = 57.1 CC = 0.9

USCS Classification *POORLY GRADED GRAVEL WITH SAND*

D30 = 7.2 CU = 53.7

D10 = 1.1

Tested By PC

Date 2/22/06

Checked By *KVB*

Date *2-23-06*

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 **2006-060-01-04**

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2487	Tare No.	629
Wgt. Tare + Wet Specimen (gm)	1223.00	Wgt. Tare + Wet Specimen (gm)	487.62
Wgt. Tare + Dry Specimen (gm)	1015.20	Wgt. Tare + Dry Specimen (gm)	478.97
Weight of Tare (gm)	95.29	Weight of Tare (gm)	86.53
Weight of Water (gm)	207.80	Weight of Water (gm)	8.65
Weight of Dry Soil (gm)	919.91	Weight of Dry Soil (gm)	392.44
Moisture Content (%)	22.6	Moisture Content (%)	2.2

Wet Weight - 3/4" Sample (gm)	2318	Weight of the Dry Specimen (gm)	919.91
Dry Weight - 3/4" Sample (gm)	1890.9	Weight of minus #200 material (gm)	19.15
Wet Weight + 3/4" Sample (gm)	2955.00	Weight of plus #200 material (gm)	900.76
Dry Weight + 3/4" Sample (gm)	2891.27		
Total Dry Weight Sample (gm)	4782.1	J - Factor (Percent Finer than 3/4")	0.3954

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	1575.00	32.22	32.22	67.78	67.78
2"	50	566.00 (*)	11.58	43.81	56.19	56.19
1 1/2"	37.5	423.00	8.65	52.46	47.54	47.54
1"	25	267.00	5.46	57.92	42.08	42.08
3/4"	19	124.00	2.54	60.46	39.54	39.54
1/2"	12.5	67.43	7.33	7.33	92.67	36.64
3/8"	9.5	78.56	8.54	15.87	84.13	33.27
#4	4.75	188.53	20.49	36.36	63.64	25.16
#10	2	227.52	24.73	61.10	38.90	15.38
#20	0.85	169.55 (**)	18.43	79.53	20.47	8.09
#40	0.425	75.71	8.23	87.76	12.24	4.84
#60	0.25	38.29	4.16	91.92	8.08	3.19
#140	0.106	43.52	4.73	96.65	3.35	1.32
#200	0.075	11.65	1.27	97.92	2.08	0.82
Pan	-	19.15	2.08	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

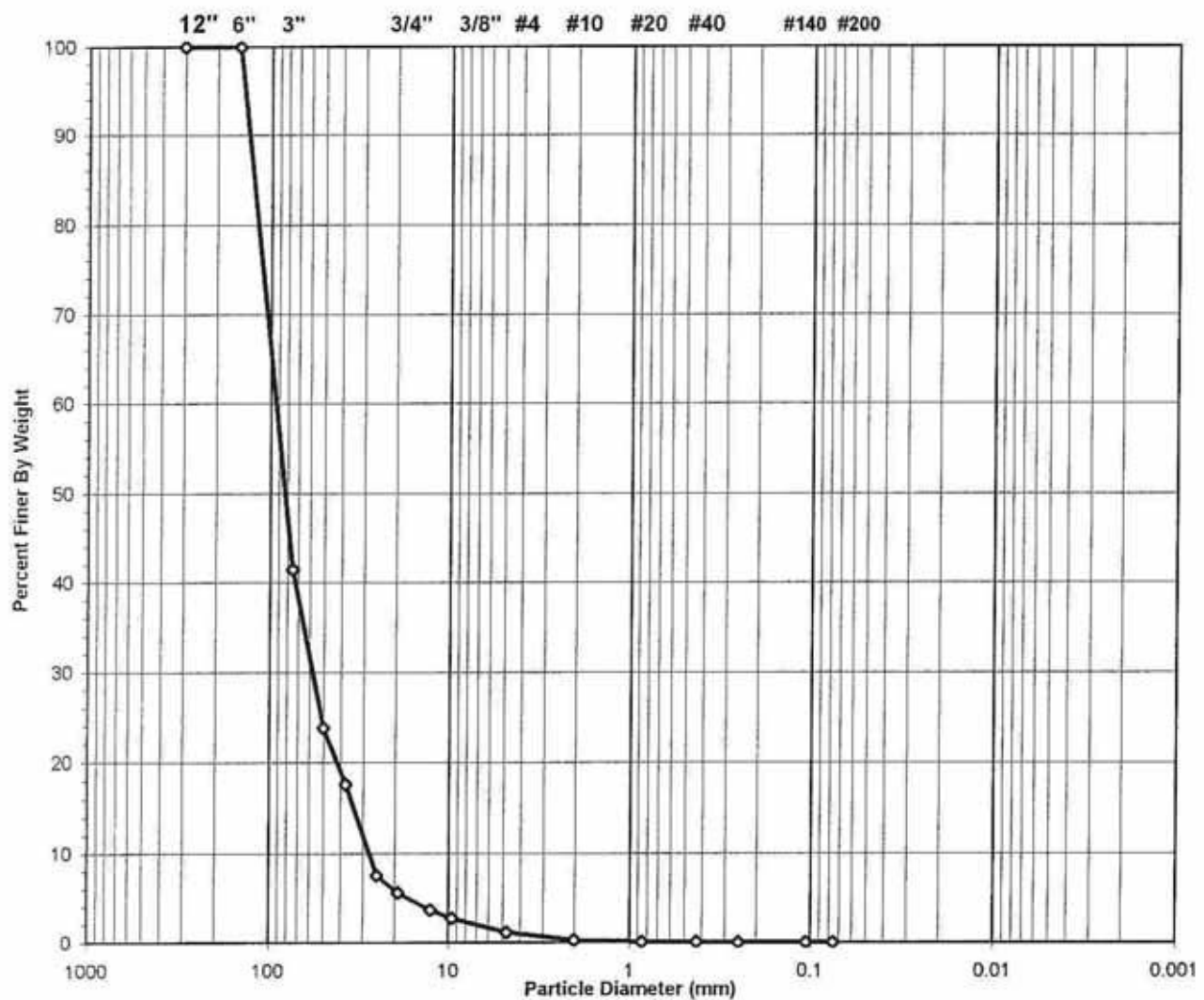
Tested By **PC** Date **2/22/06** Checked By **YKB** Date **2-23-06**

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 2006-060-01-05

Boring No. TS-1
Depth (ft) NA
Sample No. S-5
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 2/22/06 Checked By *YKB* Date 2-23-06
page 1 of 2 DCN: CT-S3A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ\U249.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 **2006-060-01-05**

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	707	Tare No.	543
Wgt. Tare + Wet Specimen (gm)	339.80	Wgt. Tare + Wet Specimen (gm)	462.40
Wgt. Tare + Dry Specimen (gm)	332.80	Wgt. Tare + Dry Specimen (gm)	453.01
Weight of Tare (gm)	99.53	Weight of Tare (gm)	82.28
Weight of Water (gm)	7.00	Weight of Water (gm)	9.39
Weight of Dry Soil (gm)	233.27	Weight of Dry Soil (gm)	370.73
Moisture Content (%)	3.0	Moisture Content (%)	2.5

Wet Weight - 3/4" Sample (gm)	251	Weight of the Dry Specimen (gm)	233.27
Dry Weight - 3/4" Sample (gm)	243.7	Weight of minus #200 material (gm)	0.94
Wet Weight + 3/4" Sample (gm)	4226.00	Weight of plus #200 material (gm)	232.33
Dry Weight + 3/4" Sample (gm)	4121.61		
Total Dry Weight Sample (gm)	4365.3	J - Factor (Percent Finer than 3/4")	0.0558

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	2620.00	58.54	58.54	41.46	41.46
2"	50	790.00 (*)	17.65	76.19	23.81	23.81
1 1/2"	37.5	277.00	6.19	82.38	17.62	17.62
1"	25	453.00	10.12	92.50	7.50	7.50
3/4"	19	86.00	1.92	94.42	5.58	5.58
1/2"	12.5	80.80	34.64	34.64	65.36	3.65
3/8"	9.5	37.49	16.07	50.71	49.29	2.75
#4	4.75	69.06	29.61	80.31	19.69	1.10
#10	2	35.08	15.04	95.35	4.65	0.26
#20	0.85	7.74 (**)	3.32	98.67	1.33	0.07
#40	0.425	1.46	0.63	99.30	0.70	0.04
#60	0.25	0.34	0.15	99.44	0.56	0.03
#140	0.106	0.20	0.09	99.53	0.47	0.03
#200	0.075	0.16	0.07	99.60	0.40	0.02
Pan	-	0.94	0.40	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

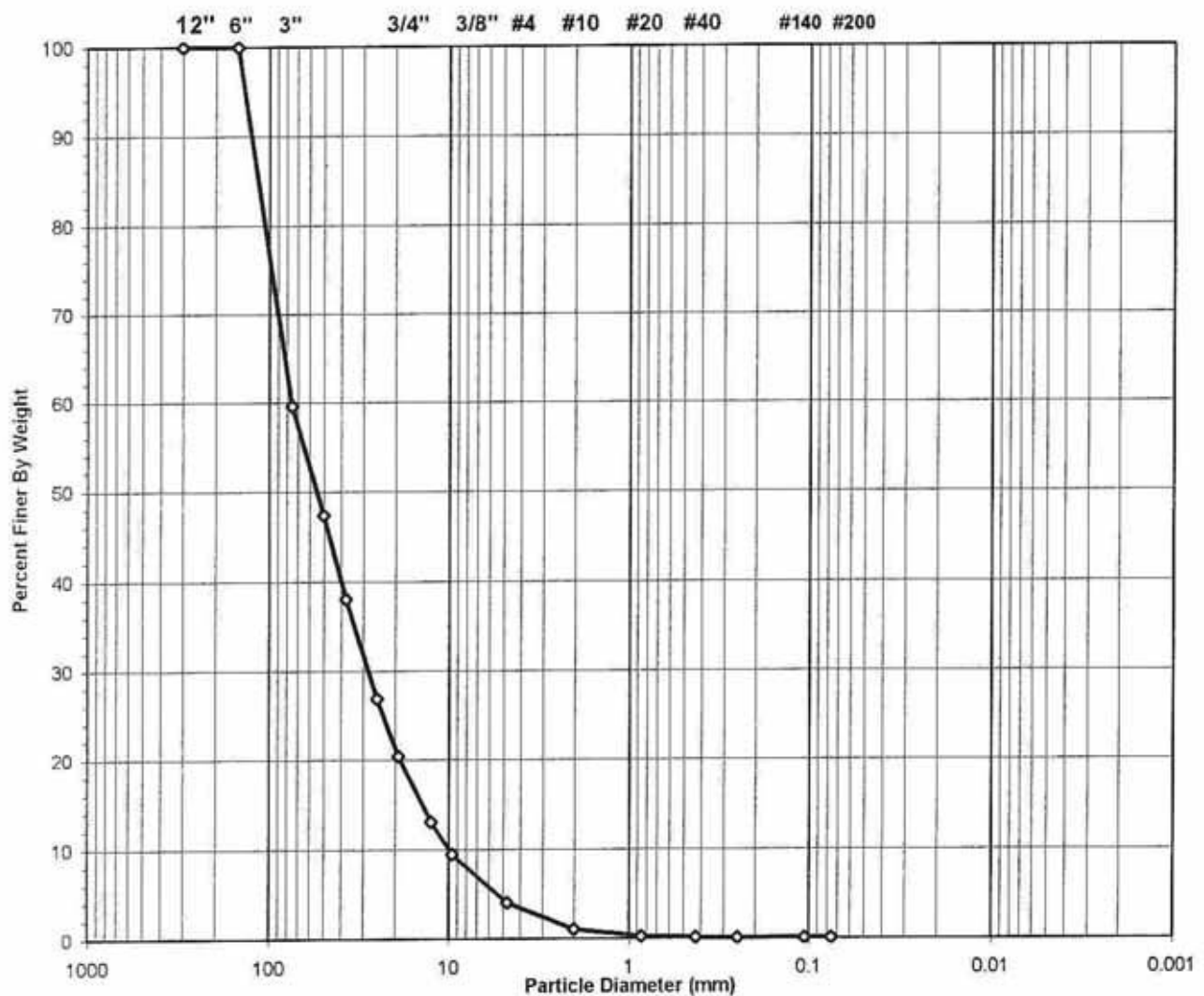
Tested By **PC** Date **2/22/06** Checked By **KYB** Date **2-23-06**

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 2006-060-01-06

Boring No. TS-1
Depth (ft) 60-70
Sample No. S-6
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 2/22/06 Checked By *YKB* Date 2-23-06
page 1 of 2 DCN: CT-SSA DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ\U250.xls]Sheet1

WASH SIEVE ANALYSIS
ASTM D 422-63/AASHTO T86-00 (SOP-S3)

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

Boring No. **TS-1**
Depth (ft) **60-70**
Sample No. **S-6**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	970	Tare No.	565
Wgt. Tare + Wet Specimen (gm)	1216.30	Wgt. Tare + Wet Specimen (gm)	882.00
Wgt. Tare + Dry Specimen (gm)	1175.30	Wgt. Tare + Dry Specimen (gm)	873.80
Weight of Tare (gm)	102.84	Weight of Tare (gm)	82.93
Weight of Water (gm)	41.00	Weight of Water (gm)	8.20
Weight of Dry Soil (gm)	1072.46	Weight of Dry Soil (gm)	790.87
Moisture Content (%)	3.8	Moisture Content (%)	1.0

Wet Weight - 3/4" Sample (gm)	4626	Weight of the Dry Specimen (gm)	1072.46
Dry Weight - 3/4" Sample (gm)	4455.7	Weight of minus #200 material (gm)	2.83
Wet Weight + 3/4" Sample (gm)	17547.00	Weight of plus #200 material (gm)	1069.63
Dry Weight + 3/4" Sample (gm)	17366.93		
Total Dry Weight Sample (gm)	21822.6	J - Factor (Percent Finer than 3/4")	0.2042

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	8911.00	40.41	40.41	59.59	59.59
2"	50	2708.00	12.28	52.70	47.30	47.30
1 1/2"	37.5	2035.00	9.23	61.93	38.07	38.07
1"	25	2461.00	11.16	73.09	26.91	26.91
3/4"	19	1432.00	6.49	79.58	20.42	20.42
1/2"	12.5	385.91	35.98	35.98	64.02	13.07
3/8"	9.5	190.72	17.78	53.77	46.23	9.44
#4	4.75	283.16	26.40	80.17	19.83	4.05
#10	2	157.09	14.65	94.82	5.18	1.06
#20	0.85	42.59	3.97	98.79	1.21	0.25
#40	0.425	7.38	0.69	99.48	0.52	0.11
#60	0.25	1.47	0.14	99.61	0.39	0.08
#140	0.106	1.01	0.09	99.71	0.29	0.06
#200	0.075	0.30	0.03	99.74	0.26	0.05
Pan	-	2.83	0.26	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 **YKB**

Date

2-23-06

Dry Density

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

Boring No. TS-2
 Depth (ft) 60-70
 Sample No. S-7
 Test Type CORE

Visual Description Reddish Gray Rock

Weight of Wet Soil + Tare (gm)	8389.00
Weight of Tare (gm)	0.00
Volume (cm ³)	3192.00

MOISTURE / DENSITY

Tare Number	X
Wt. of Tare & WS (gm)	8389.00
Wt. of Tare & DS (gm)	8382.00
Wt. of Tare (gm)	0.00
Wt. of Water (gm)	7.00
Wt. of DS (gm)	8382.00
Wet Density (gm/cc)	2.63
Wet Density (pcf)	164.1
Moisture Content (%)	0.1
Dry Density (pcf)	163.9

Tested By DB

Date 3/23/06

Checked By *KPB*

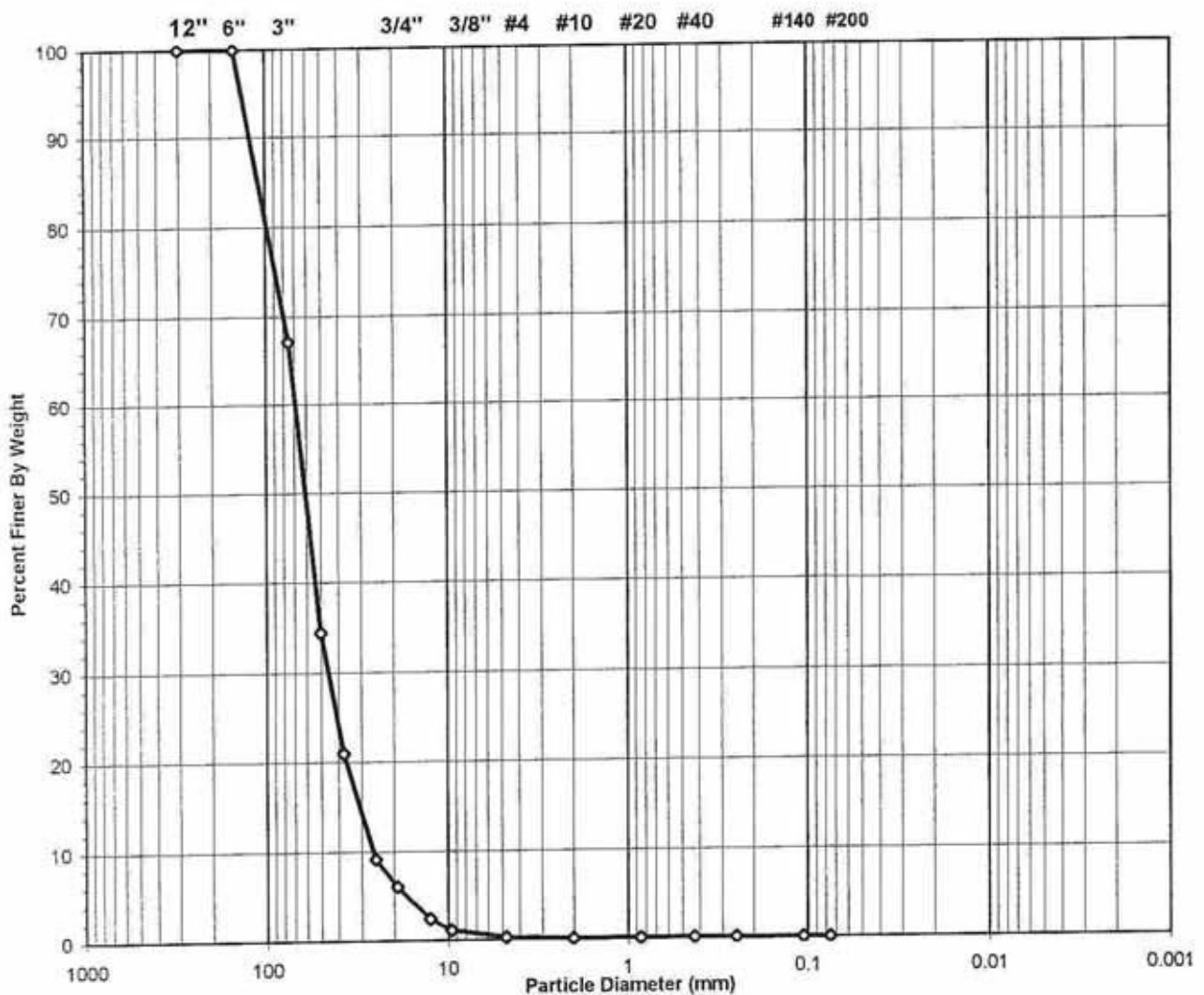
Date 3-23-06

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 2006-060-01-07

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

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 68.7 CC = 1.2

USCS Classification **POORLY GRADED GRAVEL**

D30 = 45.5 CU = 2.7

D10 = 25.8

Tested By PC

Date 2/22/06

Checked By *KJB*

Date *2-23-06*

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 2006-060-01-07

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2327	Tare No.	628
Wgt. Tare + Wet Specimen (gm)	825.80	Wgt. Tare + Wet Specimen (gm)	397.57
Wgt. Tare + Dry Specimen (gm)	813.20	Wgt. Tare + Dry Specimen (gm)	392.85
Weight of Tare (gm)	98.51	Weight of Tare (gm)	85.22
Weight of Water (gm)	12.60	Weight of Water (gm)	4.72
Weight of Dry Soil (gm)	714.69	Weight of Dry Soil (gm)	307.63
Moisture Content (%)	1.8	Moisture Content (%)	1.5

Wet Weight - 3/4" Sample (gm)	748	Weight of the Dry Specimen (gm)	714.69
Dry Weight - 3/4" Sample (gm)	735.0	Weight of minus #200 material (gm)	2.72
Wet Weight + 3/4" Sample (gm)	11690.00	Weight of plus #200 material (gm)	711.97
Dry Weight + 3/4" Sample (gm)	11513.35		
Total Dry Weight Sample (gm)	12248.4	J - Factor (Percent Finer than 3/4")	0.0600

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	4090.00	32.89	32.89	67.11	67.11
2"	50	4060.00	32.65	65.53	34.47	34.47
1 1/2"	37.5	1680.00	13.51	79.04	20.96	20.96
1"	25	1471.00	11.83	90.87	9.13	9.13
3/4"	19	389.00	3.13	94.00	6.00	6.00
1/2"	12.5	425.86	59.59	59.59	40.41	2.43
3/8"	9.5	151.91	21.26	80.84	19.16	1.15
#4	4.75	107.80	15.08	95.93	4.07	0.24
#10	2	19.85	2.78	98.70	1.30	0.08
#20	0.85	3.35	0.47	99.17	0.83	0.05
#40	0.425	1.20	0.17	99.34	0.66	0.04
#60	0.25	0.64	0.09	99.43	0.57	0.03
#140	0.106	1.00	0.14	99.57	0.43	0.03
#200	0.075	0.36	0.05	99.62	0.38	0.02
Pan	-	2.72	0.38	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 *KVB*

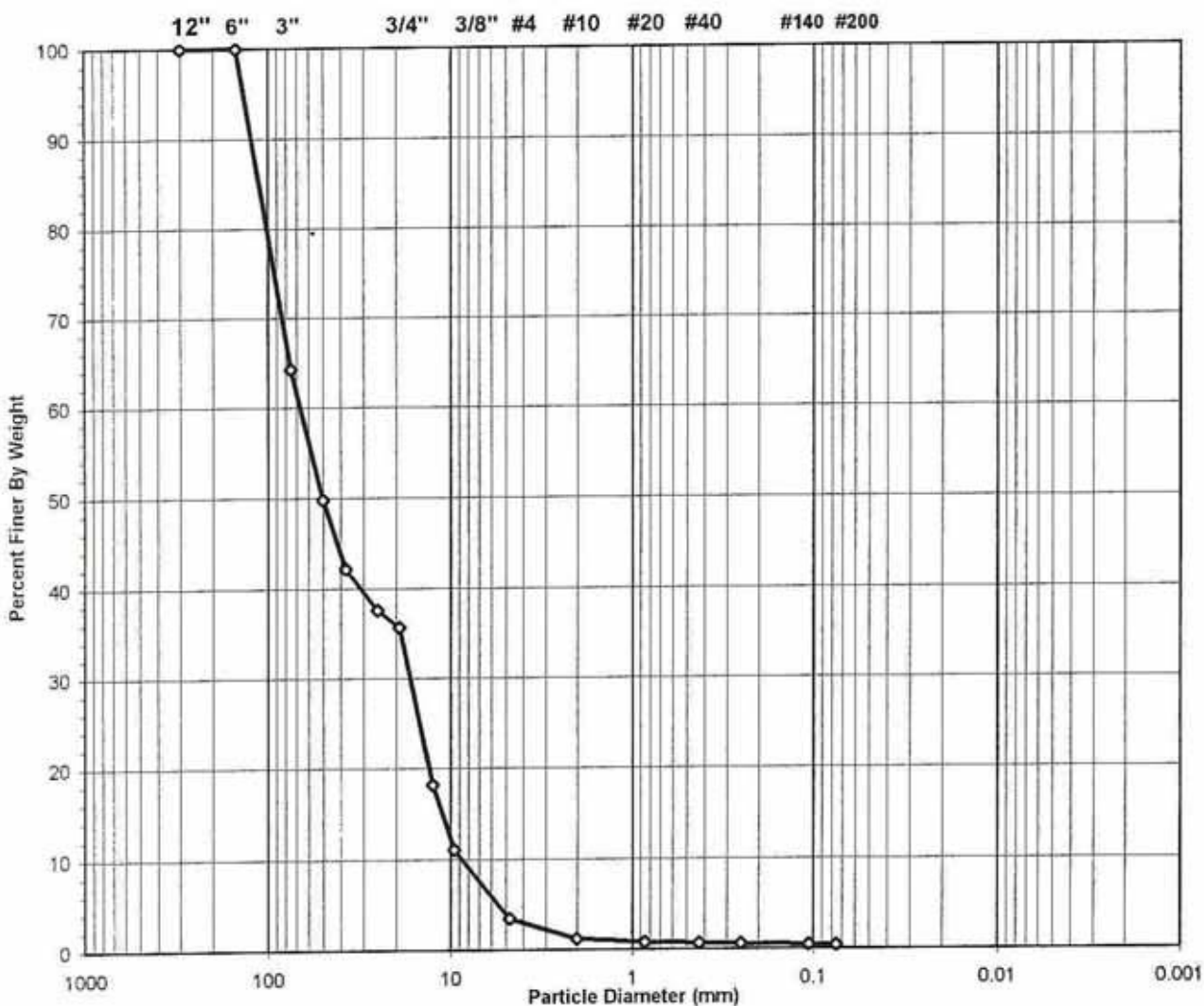
Date 2-23-06

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 2006-060-01-08

Boring No. TS-1
Depth (ft) 80-90
Sample No. S-8
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 66.5 CC = 0.5

USCS Classification **POORLY GRADED GRAVEL**

D30 = 16.6 CU = 7.7

D10 = 8.6

Tested By PC

Date 2/22/06

Checked By *KPB*

Date *2-23-06*

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 **2006-060-01-08**

Boring No. **TS-1**
 Depth (ft) **80-90**
 Sample No. **S-8**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	637	Tare No.	673
Wgt. Tare + Wet Specimen (gm)	1338.70	Wgt. Tare + Wet Specimen (gm)	547.31
Wgt. Tare + Dry Specimen (gm)	1291.50	Wgt. Tare + Dry Specimen (gm)	538.89
Weight of Tare (gm)	101.40	Weight of Tare (gm)	72.66
Weight of Water (gm)	47.20	Weight of Water (gm)	8.42
Weight of Dry Soil (gm)	1190.10	Weight of Dry Soil (gm)	466.23
Moisture Content (%)	4.0	Moisture Content (%)	1.8

Wet Weight - 3/4" Sample (gm)	13864	Weight of the Dry Specimen (gm)	1190.10
Dry Weight - 3/4" Sample (gm)	13335.1	Weight of minus #200 material (gm)	14.00
Wet Weight + 3/4" Sample (gm)	24495.00	Weight of plus #200 material (gm)	1176.10
Dry Weight + 3/4" Sample (gm)	24060.47		
Total Dry Weight Sample (gm)	37395.6	J - Factor (Percent Finer than 3/4")	0.3566

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	13593.00	35.70	35.70	64.30	64.30
2"	50	5532.00 (*)	14.53	50.24	49.76	49.76
1 1/2"	37.5	2881.00	7.57	57.80	42.20	42.20
1"	25	1760.00	4.62	62.43	37.57	37.57
3/4"	19	729.00	1.91	64.34	35.66	35.66
1/2"	12.5	583.50	49.03	49.03	50.97	18.18
3/8"	9.5	237.61	19.97	69.00	31.00	11.06
#4	4.75	253.79	21.33	90.32	9.68	3.45
#10	2	75.37	6.33	96.65	3.35	1.19
#20	0.85	13.38 (**)	1.12	97.78	2.22	0.79
#40	0.425	4.24	0.36	98.13	1.87	0.67
#60	0.25	2.69	0.23	98.36	1.64	0.58
#140	0.106	4.14	0.35	98.71	1.29	0.46
#200	0.075	1.38	0.12	98.82	1.18	0.42
Pan	-	14.00	1.18	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

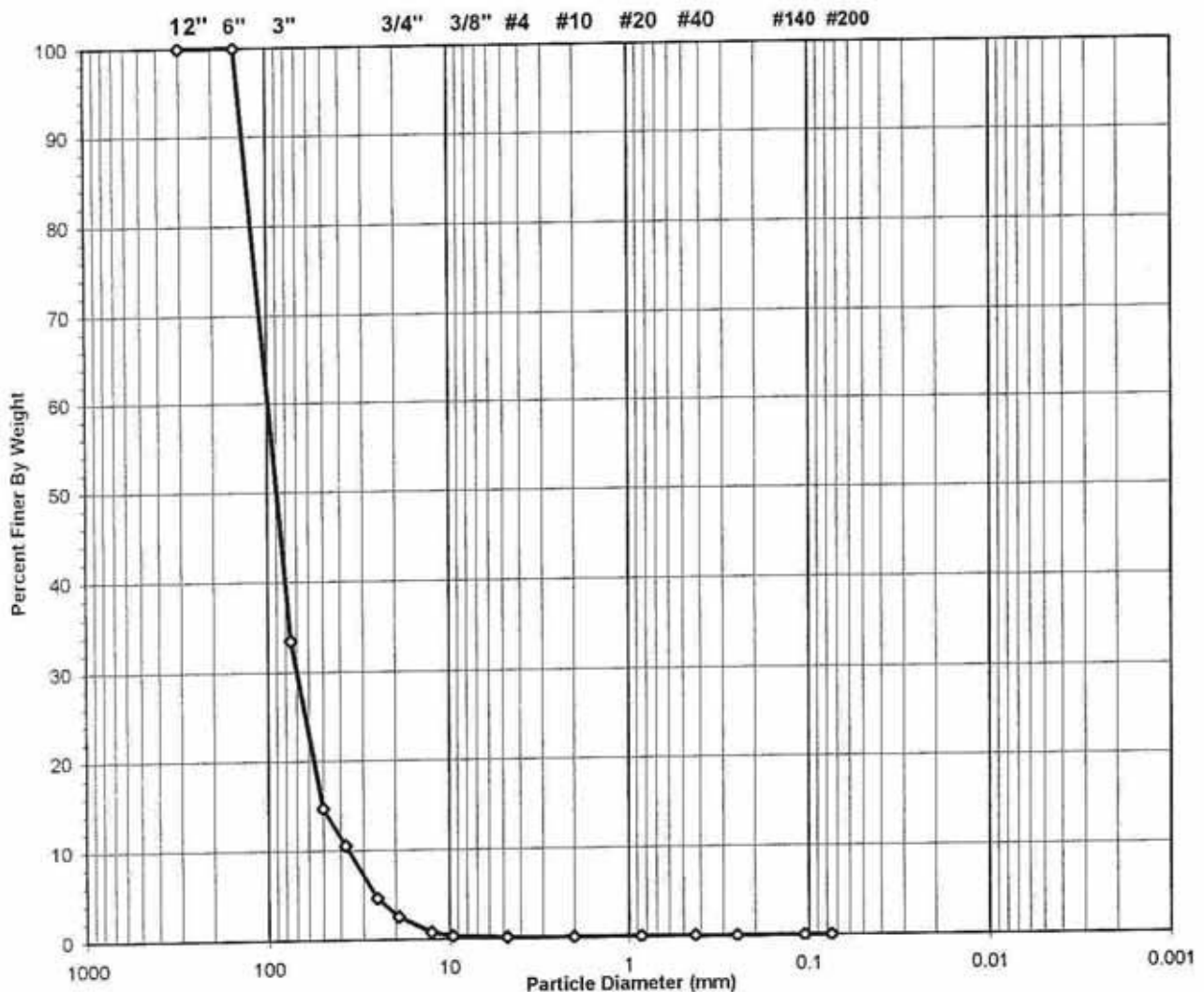
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-09

Boring No. TS-1
Depth (ft) 90-100
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 2/22/06 Checked By *KP* Date 2-23-06

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 **2006-060-01-09**

Boring No. **TS-1**
 Depth (ft) **90-100**
 Sample No. **S-9**
 Soil Color **REDDISH BROWN
AND GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1619	Tare No.	604
Wgt. Tare + Wet Specimen (gm)	482.50	Wgt. Tare + Wet Specimen (gm)	891.30
Wgt. Tare + Dry Specimen (gm)	479.15	Wgt. Tare + Dry Specimen (gm)	888.20
Weight of Tare (gm)	95.51	Weight of Tare (gm)	87.13
Weight of Water (gm)	3.35	Weight of Water (gm)	3.10
Weight of Dry Soil (gm)	383.64	Weight of Dry Soil (gm)	801.07
Moisture Content (%)	0.9	Moisture Content (%)	0.4

Wet Weight - 3/4" Sample (gm)	493	Weight of the Dry Specimen (gm)	383.64
Dry Weight - 3/4" Sample (gm)	488.7	Weight of minus #200 material (gm)	3.87
Wet Weight + 3/4" Sample (gm)	18976.00	Weight of plus #200 material (gm)	379.77
Dry Weight + 3/4" Sample (gm)	18902.85		
Total Dry Weight Sample (gm)	19391.6	J - Factor (Percent Finer than 3/4")	0.0252

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	12942.00	66.48	66.48	33.52	33.52
2"	50	3660.00 (*)	18.80	85.28	14.72	14.72
1 1/2"	37.5	812.00	4.17	89.46	10.54	10.54
1"	25	1162.00	5.97	95.42	4.58	4.58
3/4"	19	400.00	2.05	97.48	2.52	2.52
1/2"	12.5	259.58	67.66	67.66	32.34	0.82
3/8"	9.5	69.50	18.12	85.78	14.22	0.36
#4	4.75	38.90	10.14	95.92	4.08	0.10
#10	2	6.96	1.81	97.73	2.27	0.06
#20	0.85	2.33 (**)	0.61	98.34	1.66	0.04
#40	0.425	0.89	0.23	98.57	1.43	0.04
#60	0.25	0.52	0.14	98.71	1.29	0.03
#140	0.106	0.77	0.20	98.91	1.09	0.03
#200	0.075	0.32	0.08	98.99	1.01	0.03
Pan	-	3.87	1.01	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 **KJB**

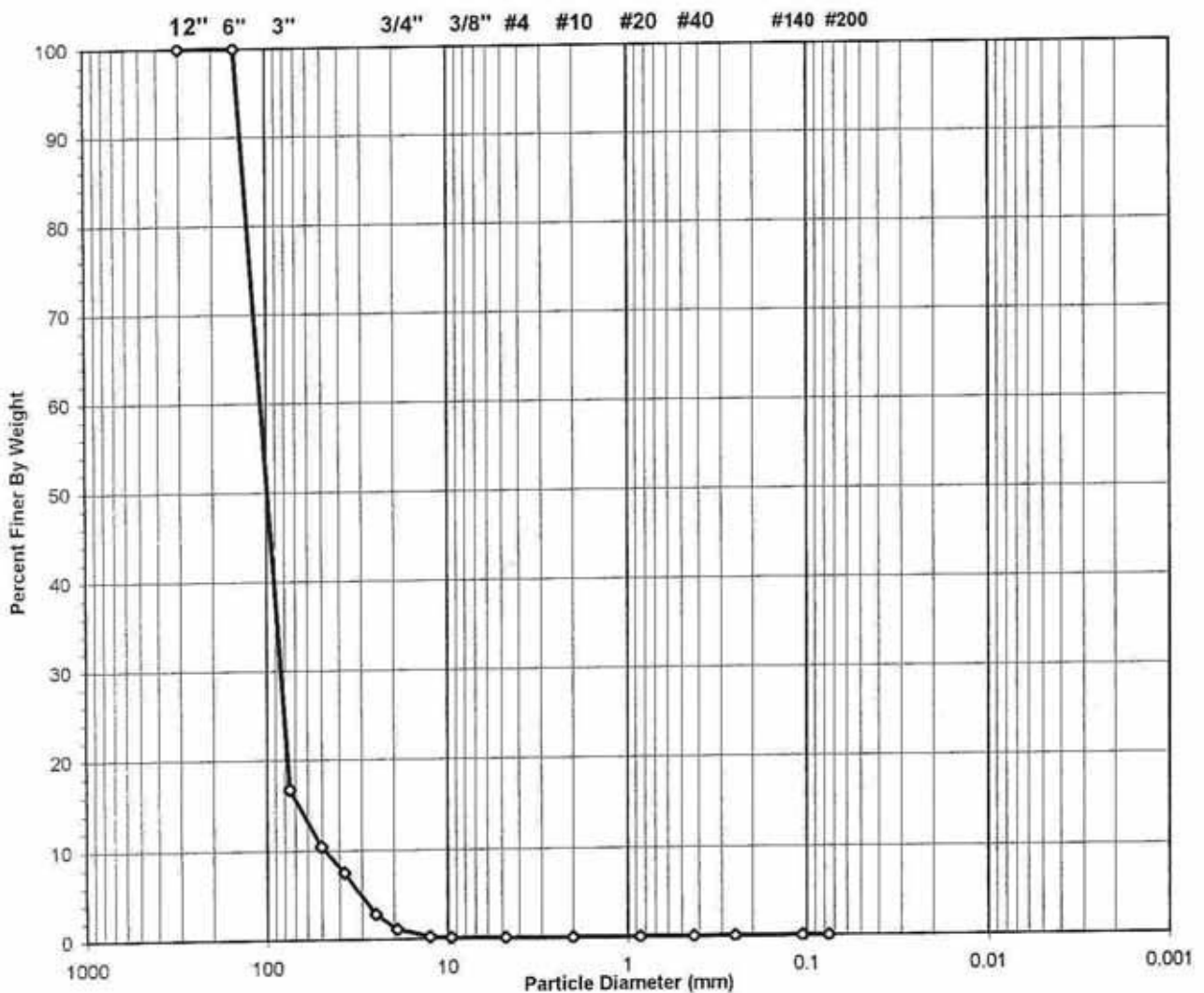
 Date **2-23-06**

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 2006-060-01-10

Boring No. TS-1
Depth (ft) NA
Sample No. S-10
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 2/22/06 Checked By *KB* Date 2-23-06

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 **2006-060-01-10**

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	669	Tare No.	607
Wgt. Tare + Wet Specimen (gm)	323.19	Wgt. Tare + Wet Specimen (gm)	422.02
Wgt. Tare + Dry Specimen (gm)	320.14	Wgt. Tare + Dry Specimen (gm)	419.52
Weight of Tare (gm)	96.83	Weight of Tare (gm)	83.05
Weight of Water (gm)	3.05	Weight of Water (gm)	2.50
Weight of Dry Soil (gm)	223.31	Weight of Dry Soil (gm)	336.47
Moisture Content (%)	1.4	Moisture Content (%)	0.7

Wet Weight - 3/4" Sample (gm)	230	Weight of the Dry Specimen (gm)	223.31
Dry Weight - 3/4" Sample (gm)	226.9	Weight of minus #200 material (gm)	0.67
Wet Weight + 3/4" Sample (gm)	19751.00	Weight of plus #200 material (gm)	222.64
Dry Weight + 3/4" Sample (gm)	19605.33		
Total Dry Weight Sample (gm)	19832.2	J - Factor (Percent Finer than 3/4")	0.0114

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	16632.00	83.24	83.24	16.76	16.76
2"	50	1265.00 (*)	6.33	89.58	10.42	10.42
1 1/2"	37.5	574.00	2.87	92.45	7.55	7.55
1"	25	937.00	4.69	97.14	2.86	2.86
3/4"	19	343.00	1.72	98.86	1.14	1.14
1/2"	12.5	167.57	75.04	75.04	24.96	0.29
3/8"	9.5	28.75	12.87	87.91	12.09	0.14
#4	4.75	19.43	8.70	96.61	3.39	0.04
#10	2	5.35	2.40	99.01	0.99	0.01
#20	0.85	0.72 (**)	0.32	99.33	0.67	0.01
#40	0.425	0.31	0.14	99.47	0.53	0.01
#60	0.25	0.17	0.08	99.55	0.45	0.01
#140	0.106	0.22	0.10	99.65	0.35	0.00
#200	0.075	0.12	0.05	99.70	0.30	0.00
Pan	-	0.67	0.30	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

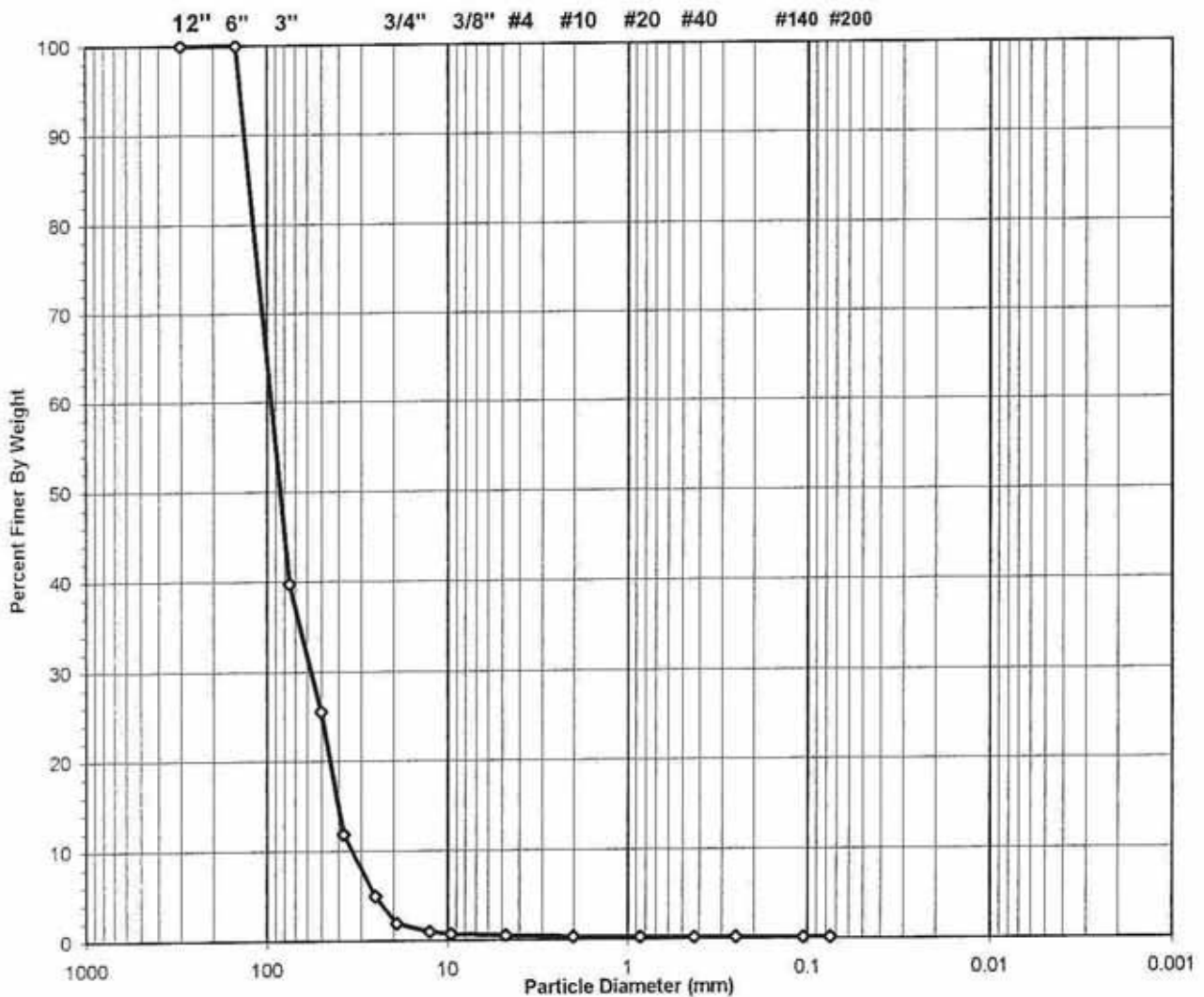
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-11

Boring No. TS-1
Depth (ft) 100-103
Sample No. S-11
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 2/22/06 Checked By *KYB* Date *2-23-06*
page 1 of 2 DCN: CT-S3A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\Print\Q\U255.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 **2006-060-01-11**

Boring No. **TS-1**
Depth (ft) **100-103**
Sample No. **S-11**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	950	Tare No.	872
Wgt. Tare + Wet Specimen (gm)	372.60	Wgt. Tare + Wet Specimen (gm)	983.40
Wgt. Tare + Dry Specimen (gm)	361.77	Wgt. Tare + Dry Specimen (gm)	974.10
Weight of Tare (gm)	102.82	Weight of Tare (gm)	110.55
Weight of Water (gm)	10.83	Weight of Water (gm)	9.30
Weight of Dry Soil (gm)	258.95	Weight of Dry Soil (gm)	863.55
Moisture Content (%)	4.2	Moisture Content (%)	1.1

Wet Weight - 3/4" Sample (gm)	303	Weight of the Dry Specimen (gm)	258.95
Dry Weight - 3/4" Sample (gm)	290.8	Weight of minus #200 material (gm)	20.96
Wet Weight + 3/4" Sample (gm)	15087.00	Weight of plus #200 material (gm)	237.99
Dry Weight + 3/4" Sample (gm)	14926.25		
Total Dry Weight Sample (gm)	15217.1	J - Factor (Percent Finer than 3/4")	0.0191

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	9275.00	60.30	60.30	39.70	39.70
2"	50	2175.00	14.14	74.44	25.56	25.56
1 1/2"	37.5	2105.00	13.69	88.13	11.87	11.87
1"	25	1068.00	6.94	95.07	4.93	4.93
3/4"	19	464.00	3.02	98.09	1.91	1.91
1/2"	12.5	123.84	47.82	47.82	52.18	1.00
3/8"	9.5	37.88	14.63	62.45	37.55	0.72
#4	4.75	29.15	11.26	73.71	26.29	0.50
#10	2	21.22	8.19	81.90	18.10	0.35
#20	0.85	11.48	4.43	86.34	13.66	0.26
#40	0.425	6.01	2.32	88.66	11.34	0.22
#60	0.25	2.89	1.12	89.77	10.23	0.20
#140	0.106	4.10	1.58	91.36	8.64	0.17
#200	0.075	1.42	0.55	91.91	8.09	0.15
Pan	-	20.96	8.09	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 **KRB**

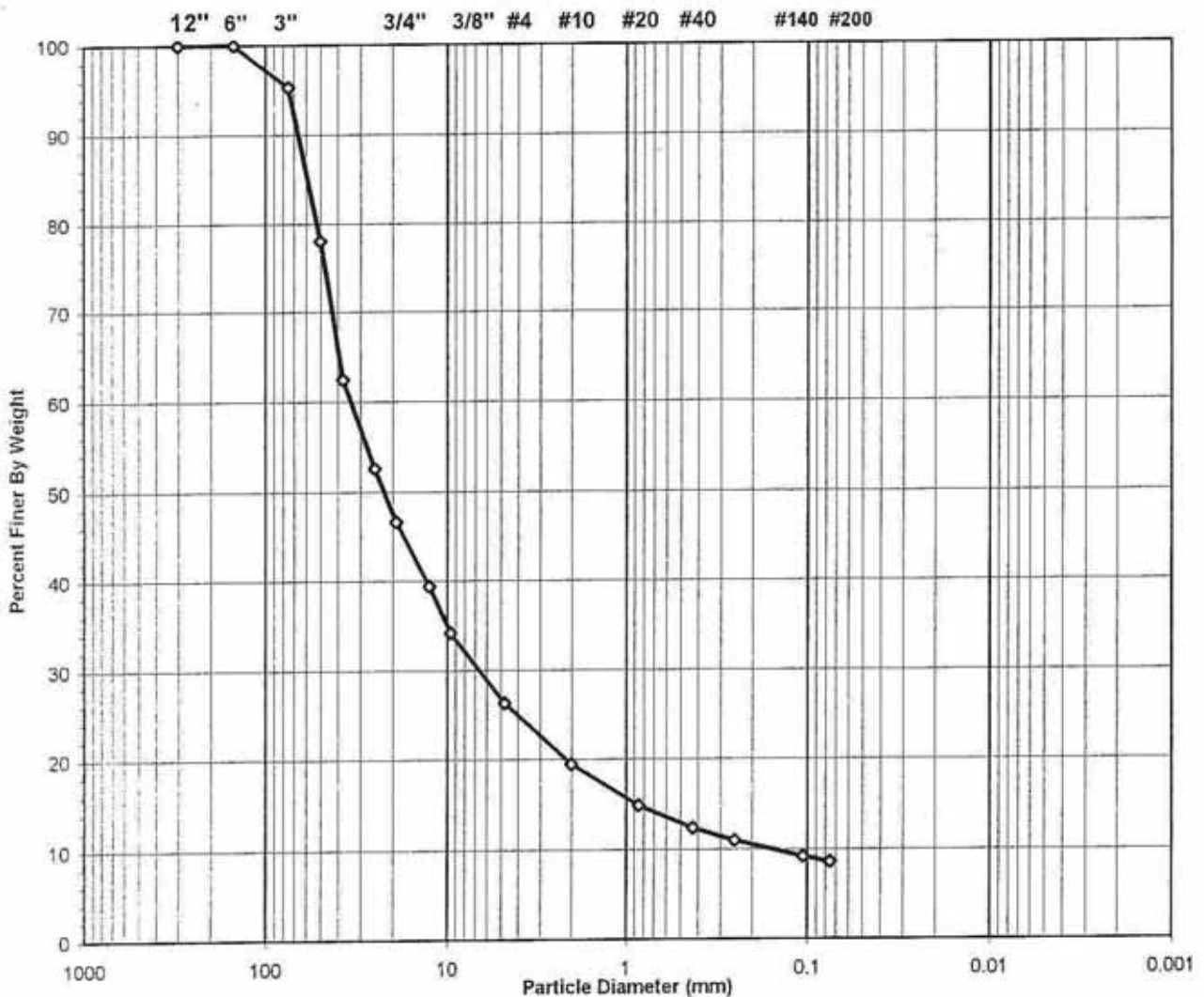
Date **2-23-06**

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 **2006-060-01-12**

Boring No. **TS-1**
Depth (ft) **103-105**
Sample No. **S-12**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP-GM, TESTED**

D60 = **33.9** CC = **8.1**

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

D30 = **6.5** CU = **216.3**

D10 = **0.2**

Tested By **PC**

Date **2/22/06**

Checked By **KJB**

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 **2006-060-01-12**

Boring No. **TS-1**
Depth (ft) **103-105**
Sample No. **S-12**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	658	Tare No.	615
Wgt. Tare + Wet Specimen (gm)	1333.80	Wgt. Tare + Wet Specimen (gm)	591.33
Wgt. Tare + Dry Specimen (gm)	1273.90	Wgt. Tare + Dry Specimen (gm)	581.89
Weight of Tare (gm)	97.61	Weight of Tare (gm)	84.25
Weight of Water (gm)	59.90	Weight of Water (gm)	9.44
Weight of Dry Soil (gm)	1176.29	Weight of Dry Soil (gm)	497.64
Moisture Content (%)	5.1	Moisture Content (%)	1.9

Wet Weight - 3/4" Sample (gm)	15756	Weight of the Dry Specimen (gm)	1176.29
Dry Weight - 3/4" Sample (gm)	14992.5	Weight of minus #200 material (gm)	215.70
Wet Weight + 3/4" Sample (gm)	17482.00	Weight of plus #200 material (gm)	960.59
Dry Weight + 3/4" Sample (gm)	17156.55		
Total Dry Weight Sample (gm)	32149.1	J - Factor (Percent Finer than 3/4")	0.4663

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	1534.00	4.68	4.68	95.32	95.32
2"	50	5663.00	17.29	21.97	78.03	78.03
1 1/2"	37.5	5088.00	15.53	37.50	62.50	62.50
1"	25	3257.00	9.94	47.44	52.56	52.56
3/4"	19	1940.00	5.92	53.37	46.63	46.63
1/2"	12.5	183.50	15.60	15.60	84.40	39.36
3/8"	9.5	129.55	11.01	26.61	73.39	34.22
#4	4.75	197.94	16.83	43.44	56.56	26.38
#10	2	173.93	14.79	58.23	41.77	19.48
#20	0.85	114.81	9.76	67.99	32.01	14.93
#40	0.425	64.90	5.52	73.50	26.50	12.36
#60	0.25	34.90	2.97	76.47	23.53	10.97
#140	0.106	44.95	3.82	80.29	19.71	9.19
#200	0.075	16.11	1.37	81.66	18.34	8.55
Pan	-	215.70	18.34	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 **KJB** Date **2-28-06**

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

Client	PAUL C. RIZZO	Boring No.	TS-1
Client Reference	TAUM SAUK 06-3551	Depth (ft)	103-105
Project No.	2006-060-01	Sample No.	S-12
Lab ID	2006-060-01-12	Visual Description	BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

Tested By DB Date 2/24/06 Checked By KRB Date 2-27-06

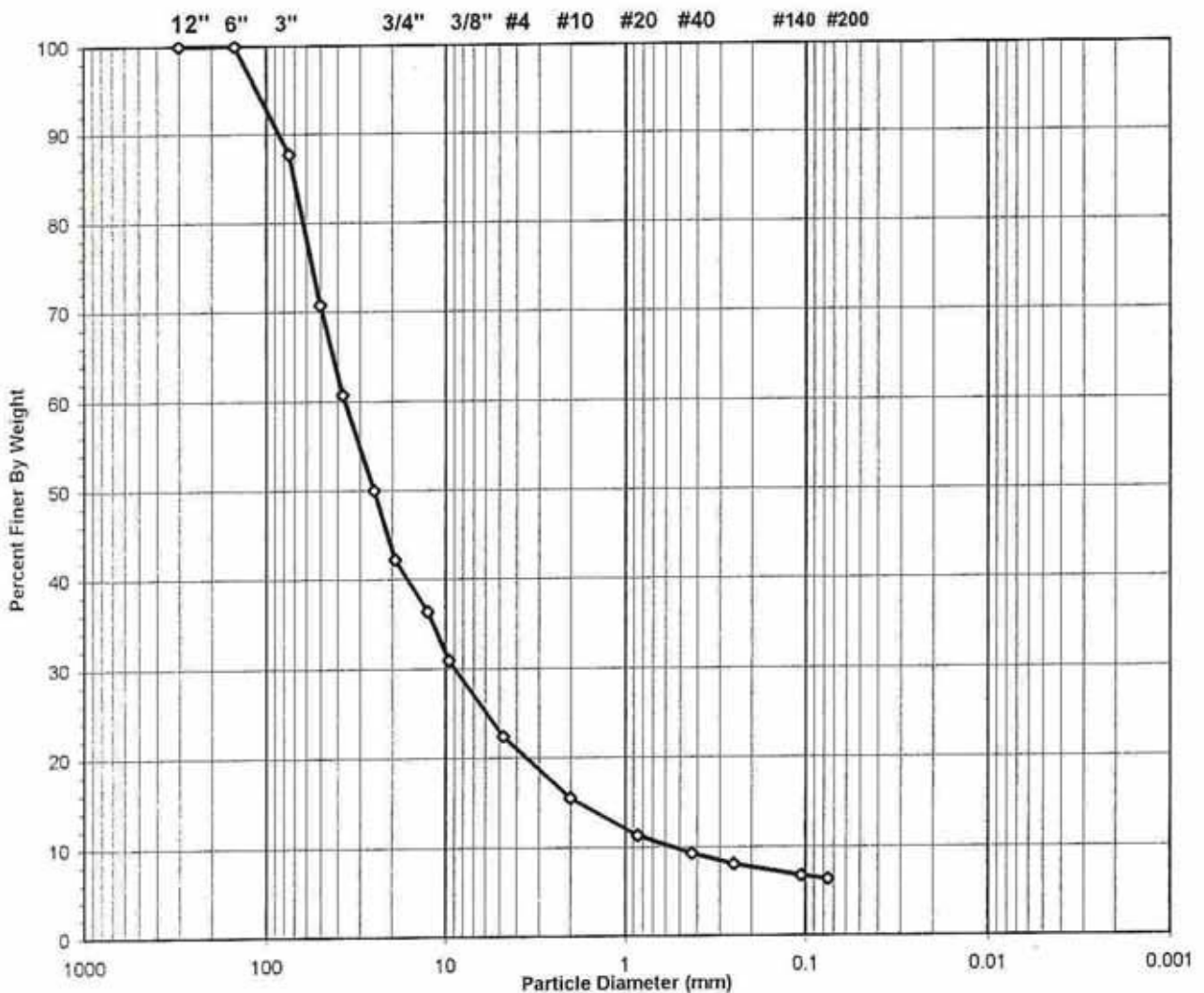
BORING TS-2

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 2006-060-01-13

Boring No. TS-2
Depth (ft) 0-10
Sample No. S-1
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GM, TESTED

D60 = 36.5 CC = 3.9

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

D30 = 8.8 CU = 67.3

D10 = 0.5

Tested By PC Date 2/24/06 Checked By KRB 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 **2006-060-01-13**

Boring No. **TS-2**
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.	951	Tare No.	548
Wgt. Tare + Wet Specimen (gm)	1191.70	Wgt. Tare + Wet Specimen (gm)	923.30
Wgt. Tare + Dry Specimen (gm)	1105.30	Wgt. Tare + Dry Specimen (gm)	899.20
Weight of Tare (gm)	102.74	Weight of Tare (gm)	80.68
Weight of Water (gm)	86.40	Weight of Water (gm)	24.10
Weight of Dry Soil (gm)	1002.56	Weight of Dry Soil (gm)	818.52
Moisture Content (%)	8.6	Moisture Content (%)	2.9

Wet Weight - 3/4" Sample (gm)	21120	Weight of the Dry Specimen (gm)	1002.56
Dry Weight - 3/4" Sample (gm)	19444.3	Weight of minus #200 material (gm)	149.71
Wet Weight + 3/4" Sample (gm)	27400.00	Weight of plus #200 material (gm)	852.85
Dry Weight + 3/4" Sample (gm)	26616.33		
Total Dry Weight Sample (gm)	46060.6	J - Factor (Percent Finer than 3/4")	0.4221

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	5832.00	12.30	12.30	87.70	87.70
2"	50	8044.00	16.96	29.26	70.74	70.74
1 1/2"	37.5	4741.00	10.00	39.26	60.74	60.74
1"	25	5098.00	10.75	50.01	49.99	49.99
3/4"	19	3685.00	7.77	57.79	42.21	42.21
1/2"	12.5	140.58	14.02	14.02	85.98	36.30
3/8"	9.5	127.43	12.71	26.73	73.27	30.93
#4	4.75	201.40	20.09	46.82	53.18	22.45
#10	2	165.66	16.52	63.34	36.66	15.47
#20	0.85	98.28	9.80	73.15	26.85	11.34
#40	0.425	48.90	4.88	78.03	21.97	9.28
#60	0.25	28.55	2.85	80.87	19.13	8.07
#140	0.106	32.75	3.27	84.14	15.86	6.70
#200	0.075	9.30	0.93	85.07	14.93	6.30
Pan	-	149.71	14.93	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 **2-28-06**

ATTERBERG LIMITS

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	0-10
Project No.	2006-060-01	Sample No.	S-1
Lab ID	2006-060-01-13	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.

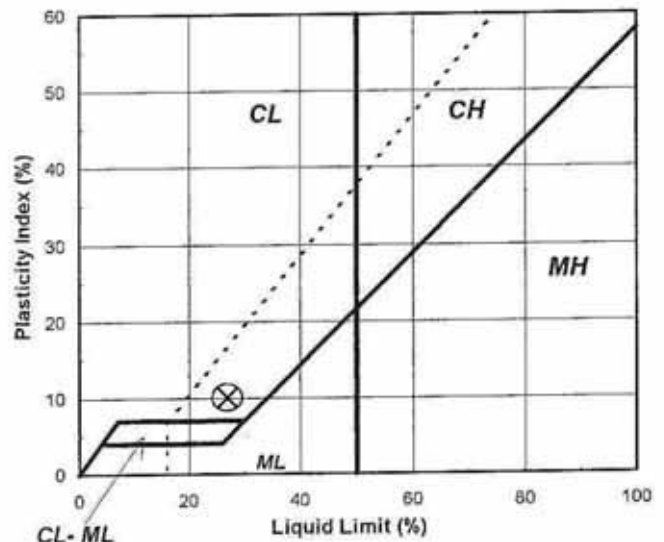
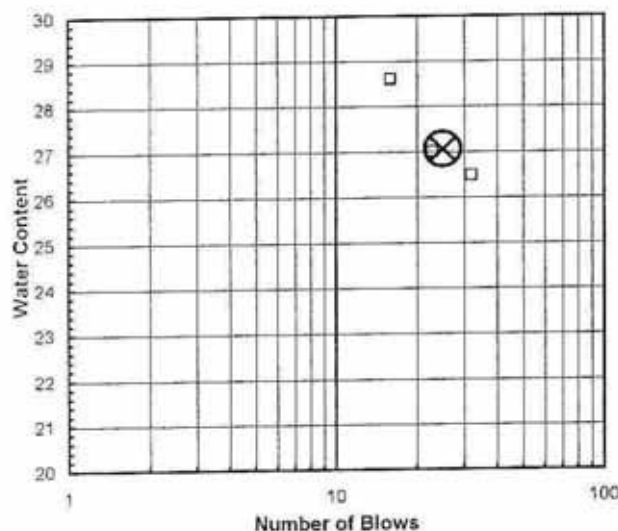
Liquid Limit Test	1	2	3	
Tare Number	183	225	238	MULTIPOINT
Wt. of Tare & WS (gm)	41.41	39.80	41.64	
Wt. of Tare & DS (gm)	37.11	35.50	37.01	
Wt. of Tare (gm)	20.87	19.57	20.83	
Wt. of Water (gm)	4.3	4.3	4.6	
Wt. of DS (gm)	16.2	15.9	16.2	
Moisture Content (%)	26.5	27.0	28.6	
Number of Blows	32	23	16	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	248	249		Liquid Limit (%) 27
Wt. of Tare & WS (gm)	25.64	26.39		Plastic Limit (%) 17
Wt. of Tare & DS (gm)	24.69	25.60		Plasticity Index (%) 10
Wt. of Tare (gm)	19.21	20.97		USCS Symbol CL
Wt. of Water (gm)	0.9	0.8		
Wt. of DS (gm)	5.5	4.6		
Moisture Content (%)	17.3	17.1	0.3	

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

Flow Curve

Plasticity Chart



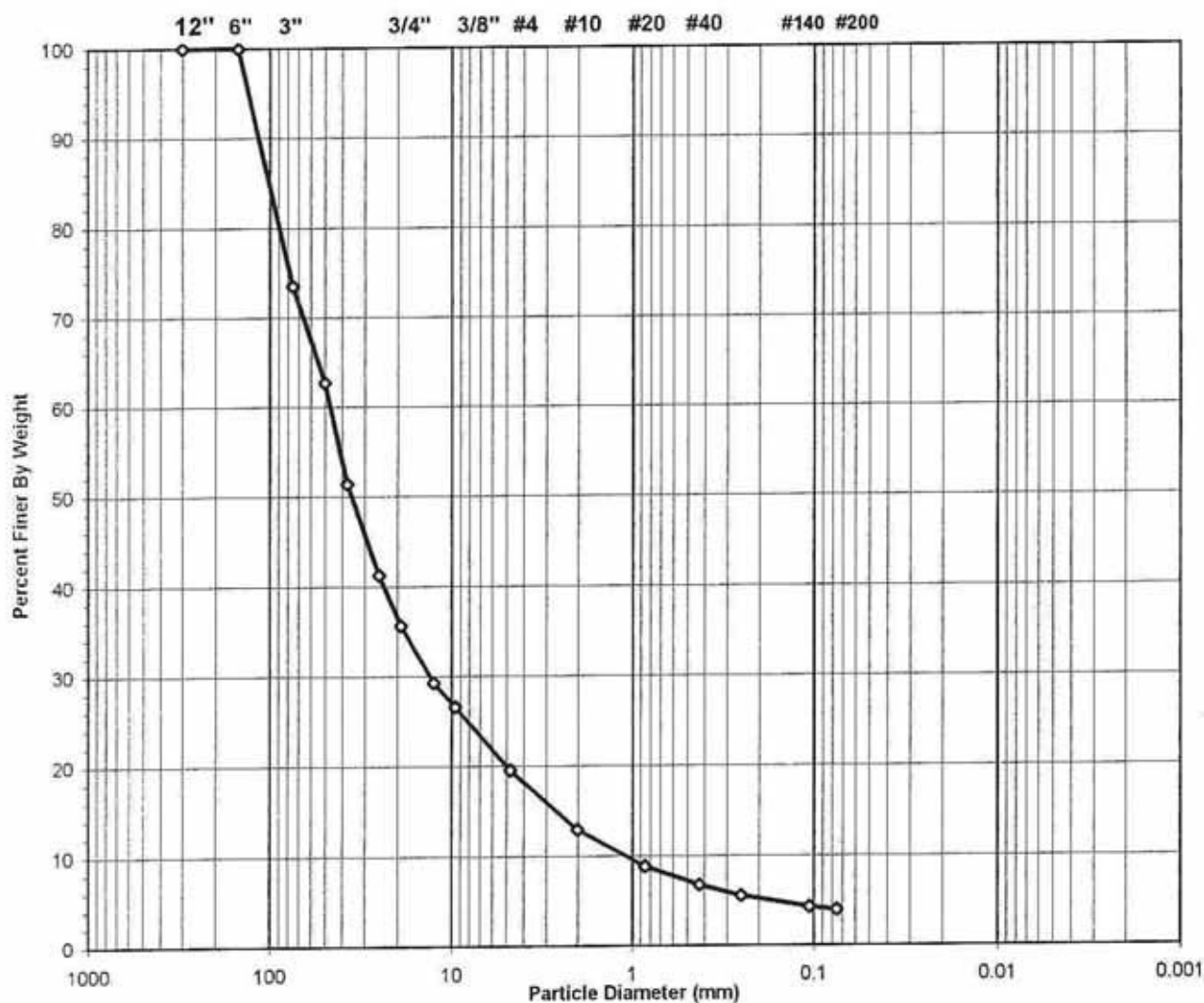
Tested By TO Date 2/24/06 Checked By *YKB* Date 2-27-06

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 2006-060-01-14

Boring No. TS-2
Depth (ft) 10-20
Sample No. S-2
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 46.7 CC = 3.4

USCS Classification **POORLY GRADED GRAVEL WITH SAND**

D30 = 13.1 CU = 43.0

D10 = 1.1

Tested By PC

Date 2/24/06

Checked By *KRB*

Date 2-24-06

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 **2006-060-01-14**

Boring No. **TS-2**
Depth (ft) **10-20**
Sample No. **S-2**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	964	Tare No.	617
Wgt. Tare + Wet Specimen (gm)	1406.30	Wgt. Tare + Wet Specimen (gm)	986.70
Wgt. Tare + Dry Specimen (gm)	1314.00	Wgt. Tare + Dry Specimen (gm)	973.70
Weight of Tare (gm)	102.92	Weight of Tare (gm)	83.94
Weight of Water (gm)	92.30	Weight of Water (gm)	13.00
Weight of Dry Soil (gm)	1211.08	Weight of Dry Soil (gm)	889.76
Moisture Content (%)	7.6	Moisture Content (%)	1.5

Wet Weight - 3/4" Sample (gm)	18684	Weight of the Dry Specimen (gm)	1211.08
Dry Weight - 3/4" Sample (gm)	17360.9	Weight of minus #200 material (gm)	135.30
Wet Weight + 3/4" Sample (gm)	31737.00	Weight of plus #200 material (gm)	1075.78
Dry Weight + 3/4" Sample (gm)	31279.98		
Total Dry Weight Sample (gm)	48640.9	J - Factor (Percent Finer than 3/4")	0.3569

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	13079.00	26.50	26.50	73.50	73.50
2"	50	5342.00	10.82	37.33	62.67	62.67
1 1/2"	37.5	5571.00	11.29	48.61	51.39	51.39
1"	25	4989.00	10.11	58.72	41.28	41.28
3/4"	19	2756.00	5.58	64.31	35.69	35.69
1/2"	12.5	217.72	17.98	17.98	82.02	29.28
3/8"	9.5	90.49	7.47	25.45	74.55	26.61
#4	4.75	239.71	19.79	45.24	54.76	19.54
#10	2	225.80	18.64	63.89	36.11	12.89
#20	0.85	137.62	11.36	75.25	24.75	8.83
#40	0.425	69.87	5.77	81.02	18.98	6.77
#60	0.25	39.13	3.23	84.25	15.75	5.62
#140	0.106	44.08	3.64	87.89	12.11	4.32
#200	0.075	11.36	0.94	88.83	11.17	3.99
Pan	-	135.30	11.17	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

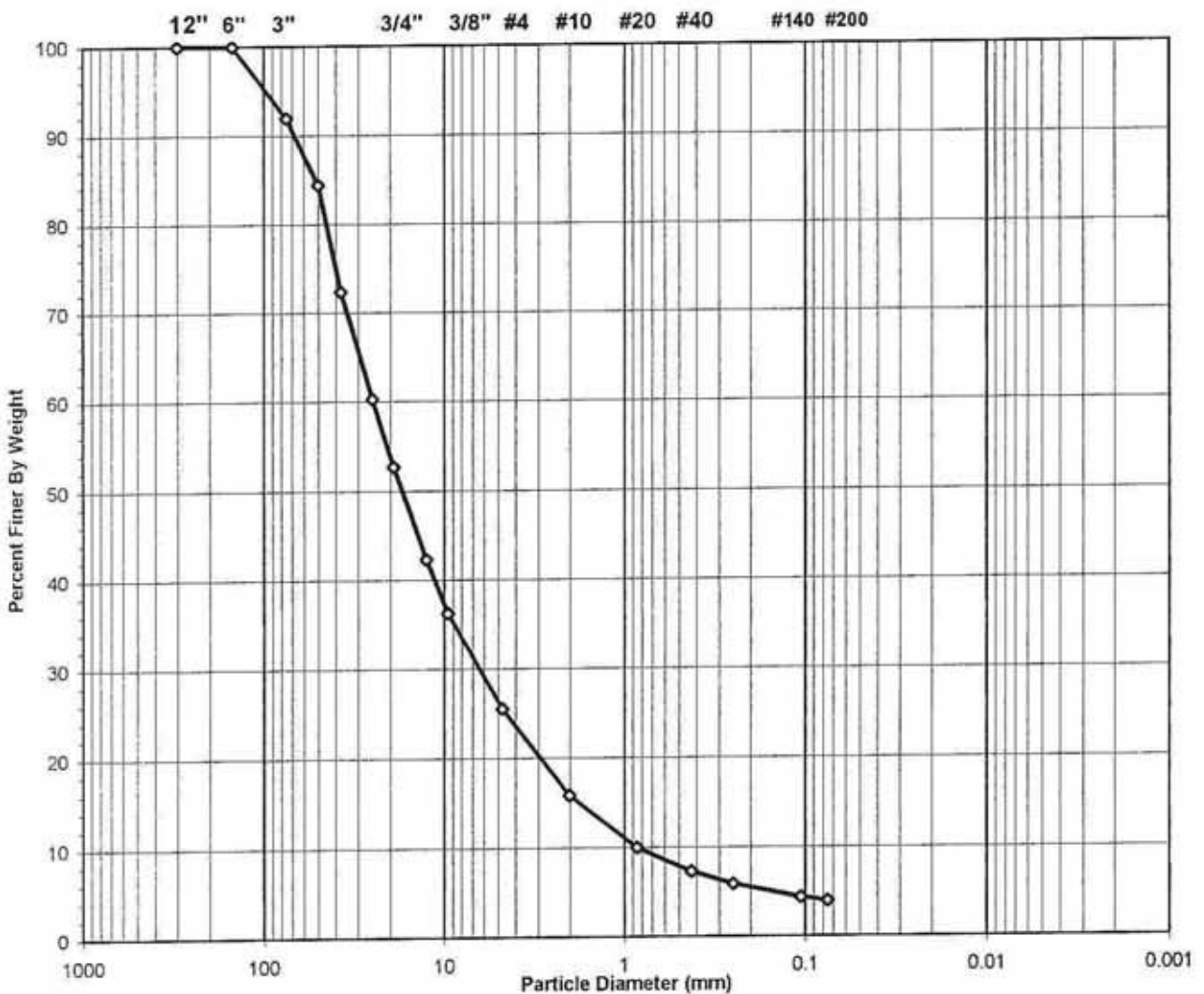
Tested By **PC** Date **2/24/06** Checked By **KR** Date **2-24-06**

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 **2006-060-01-15**

Boring No. **TS-2**
Depth (ft) **20-30**
Sample No. **S-3**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw, ASSUMED**

D60 = **24.7** CC = **1.9**

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

D30 = **6.3** CU = **28.9**

D10 = **0.9**

Tested By **PC**

Date **2/24/06**

Checked By **K-B**

Date **2-24-06**

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	20-30
Project No.	2006-060-01	Sample No.	S-3
Lab ID	2006-060-01-15	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	665	Tare No.	883
Wgt. Tare + Wet Specimen (gm)	1578.10	Wgt. Tare + Wet Specimen (gm)	1223.90
Wgt. Tare + Dry Specimen (gm)	1462.80	Wgt. Tare + Dry Specimen (gm)	1201.10
Weight of Tare (gm)	95.86	Weight of Tare (gm)	110.38
Weight of Water (gm)	115.30	Weight of Water (gm)	22.80
Weight of Dry Soil (gm)	1366.94	Weight of Dry Soil (gm)	1090.72
Moisture Content (%)	8.4	Moisture Content (%)	2.1

Wet Weight - 3/4" Sample (gm)	26121	Weight of the Dry Specimen (gm)	1366.94
Dry Weight - 3/4" Sample (gm)	24089.1	Weight of minus #200 material (gm)	103.46
Wet Weight + 3/4" Sample (gm)	22093.00	Weight of plus #200 material (gm)	1263.48
Dry Weight + 3/4" Sample (gm)	21640.63		
Total Dry Weight Sample (gm)	45729.7	J - Factor (Percent Finer than 3/4")	0.5268

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	3759.00	8.05	8.05	91.95	91.95
2"	50	3528.00	7.56	15.61	84.39	84.39
1 1/2"	37.5	5620.00	12.04	27.65	72.35	72.35
1"	25	5626.00	12.05	39.70	60.30	60.30
3/4"	19	3560.00	7.63	47.32	52.68	52.68
1/2"	12.5	269.14	19.69	19.69	80.31	42.31
3/8"	9.5	157.30	11.51	31.20	68.80	36.24
#4	4.75	278.31	20.36	51.56	48.44	25.52
#10	2	251.36	18.39	69.95	30.05	15.83
#20	0.85	152.42	11.15	81.10	18.90	9.96
#40	0.425	68.58	5.02	86.11	13.89	7.32
#60	0.25	35.79	2.62	88.73	11.27	5.94
#140	0.106	39.71	2.91	91.64	8.36	4.41
#200	0.075	10.87	0.80	92.43	7.57	3.99
Pan	-	103.46	7.57	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

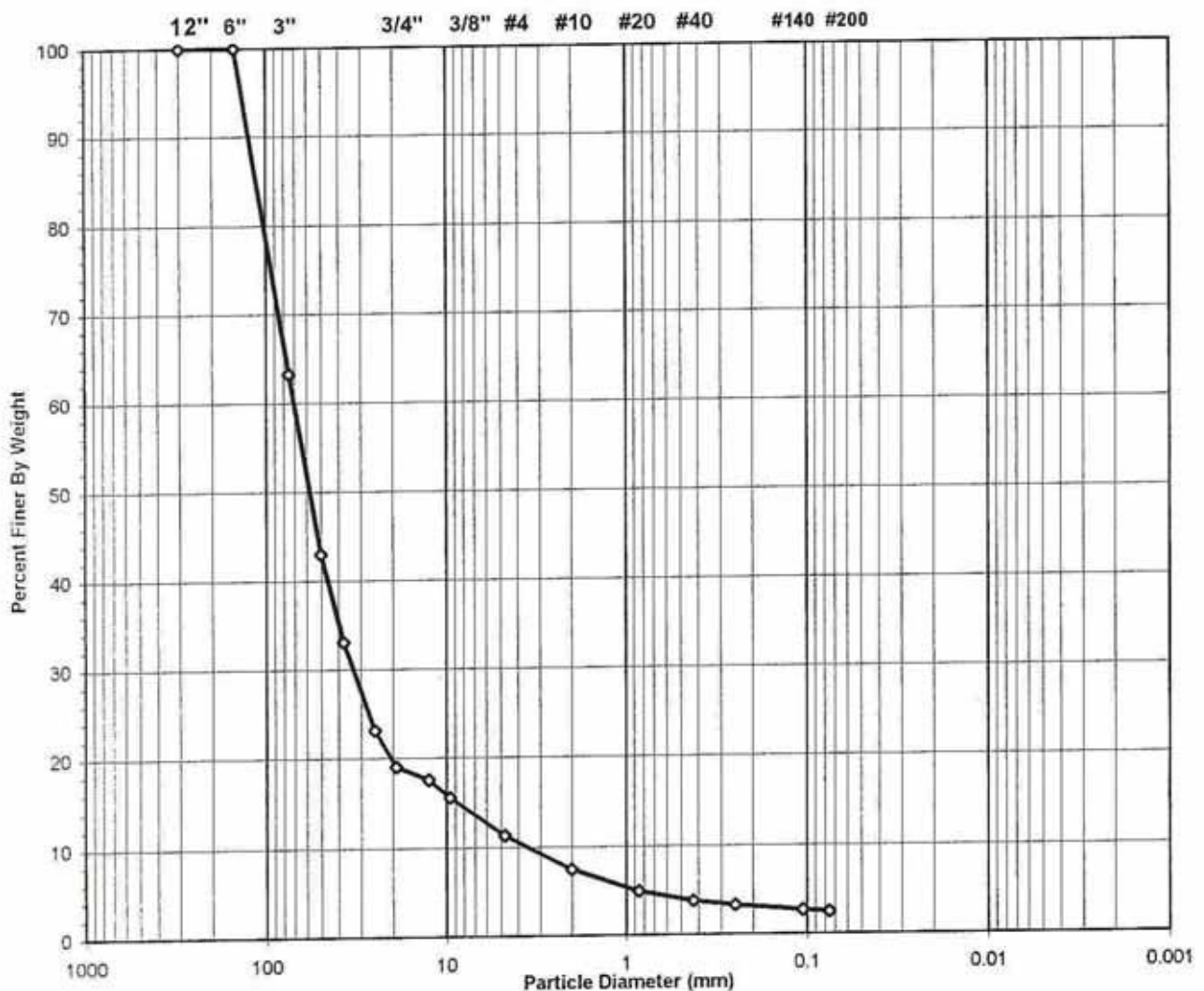
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client **PAUL C. RIZZO**
Client Reference **TAUM SAUK 06-3551**
Project No. **2006-060-01**
Lab ID **2006-060-01-16**

Boring No. **TS-2**
Depth (ft) **30-40**
Sample No. **S-4**
Soil Color **REDDISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp, ASSUMED**

D60 = 70.2 CC = 4.4

USCS Classification **POORLY GRADED GRAVEL**

D30 = 33.1 CU = 19.8

D10 = 3.5

Tested By **PC** Date **2/24/06** Checked By **KJB** Date **2-27-06**

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 **2006-060-01-16**

Boring No. **TS-2**
Depth (ft) **30-40**
Sample No. **S-4**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	700	Tare No.	553
Wgt. Tare + Wet Specimen (gm)	1242.80	Wgt. Tare + Wet Specimen (gm)	440.70
Wgt. Tare + Dry Specimen (gm)	1195.20	Wgt. Tare + Dry Specimen (gm)	436.45
Weight of Tare (gm)	98.36	Weight of Tare (gm)	84.33
Weight of Water (gm)	47.60	Weight of Water (gm)	4.25
Weight of Dry Soil (gm)	1096.84	Weight of Dry Soil (gm)	352.12
Moisture Content (%)	4.3	Moisture Content (%)	1.2

Wet Weight - 3/4" Sample (gm)	8814	Weight of the Dry Specimen (gm)	1096.84
Dry Weight - 3/4" Sample (gm)	8447.4	Weight of minus #200 material (gm)	141.02
Wet Weight + 3/4" Sample (gm)	36416.00	Weight of plus #200 material (gm)	955.82
Dry Weight + 3/4" Sample (gm)	35981.71		
Total Dry Weight Sample (gm)	44429.1	J - Factor (Percent Finer than 3/4")	0.1901

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	16503.00	36.70	36.70	63.30	63.30
2"	50	9144.00	20.34	57.04	42.96	42.96
1 1/2"	37.5	4448.00	9.89	66.93	33.07	33.07
1"	25	4451.00	9.90	76.83	23.17	23.17
3/4"	19	1870.00	4.16	80.99	19.01	19.01
1/2"	12.5	82.16	7.49	7.49	92.51	17.59
3/8"	9.5	115.18	10.50	17.99	82.01	15.59
#4	4.75	247.87	22.60	40.59	59.41	11.30
#10	2	220.73	20.12	60.71	39.29	7.47
#20	0.85	145.28	13.25	73.96	26.04	4.95
#40	0.425	66.35	6.05	80.01	19.99	3.80
#60	0.25	29.77	2.71	82.72	17.28	3.28
#140	0.106	35.90	3.27	86.00	14.00	2.66
#200	0.075	12.58	1.15	87.14	12.86	2.44
Pan	-	141.02	12.86	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 **YAB** Date **2-27-06**

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	30-40
Project No.	2006-060-01	Sample No.	S-4
Lab ID	2006-060-01-16	Visual Description	BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

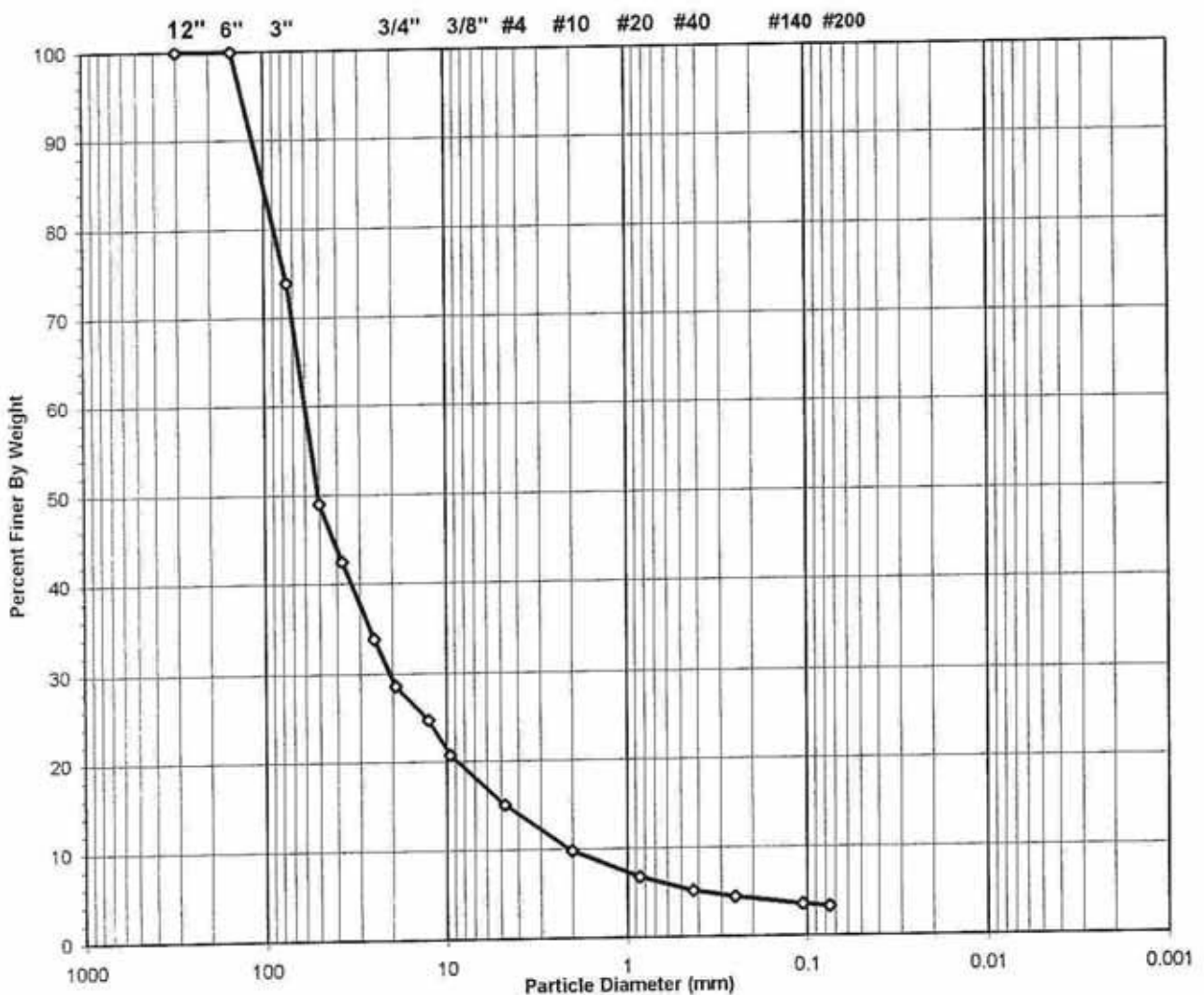
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-17

Boring No. TS-2
Depth (ft) 40-50
Sample No. S-5
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	40-50
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-17	Soil Color	REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	846	Tare No.	599
Wgt. Tare + Wet Specimen (gm)	1219.50	Wgt. Tare + Wet Specimen (gm)	756.80
Wgt. Tare + Dry Specimen (gm)	1137.40	Wgt. Tare + Dry Specimen (gm)	727.70
Weight of Tare (gm)	100.49	Weight of Tare (gm)	84.15
Weight of Water (gm)	82.10	Weight of Water (gm)	29.10
Weight of Dry Soil (gm)	1036.91	Weight of Dry Soil (gm)	643.55
Moisture Content (%)	7.9	Moisture Content (%)	4.5

Wet Weight - 3/4" Sample (gm)	11848	Weight of the Dry Specimen (gm)	1036.91
Dry Weight - 3/4" Sample (gm)	10978.7	Weight of minus #200 material (gm)	117.57
Wet Weight + 3/4" Sample (gm)	28615.00	Weight of plus #200 material (gm)	919.34
Dry Weight + 3/4" Sample (gm)	27377.07		
Total Dry Weight Sample (gm)	38355.8	J - Factor (Percent Finer than 3/4")	0.2862

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	10490.00	26.17	26.17	73.83	73.83
2"	50	9974.00	24.88	51.04	48.96	48.96
1 1/2"	37.5	2613.00	6.52	57.56	42.44	42.44
1"	25	3441.00	8.58	66.15	33.85	33.85
3/4"	19	2097.00	5.23	71.38	28.62	28.62
1/2"	12.5	139.10	13.41	13.41	86.59	24.78
3/8"	9.5	145.50	14.03	27.45	72.55	20.77
#4	4.75	205.41	19.81	47.26	52.74	15.10
#10	2	193.08	18.62	65.88	34.12	9.77
#20	0.85	111.07	10.71	76.59	23.41	6.70
#40	0.425	55.96	5.40	81.99	18.01	5.16
#60	0.25	26.69	2.57	84.56	15.44	4.42
#140	0.106	31.79	3.07	87.63	12.37	3.54
#200	0.075	10.74	1.04	88.66	11.34	3.25
Pan	-	117.57	11.34	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

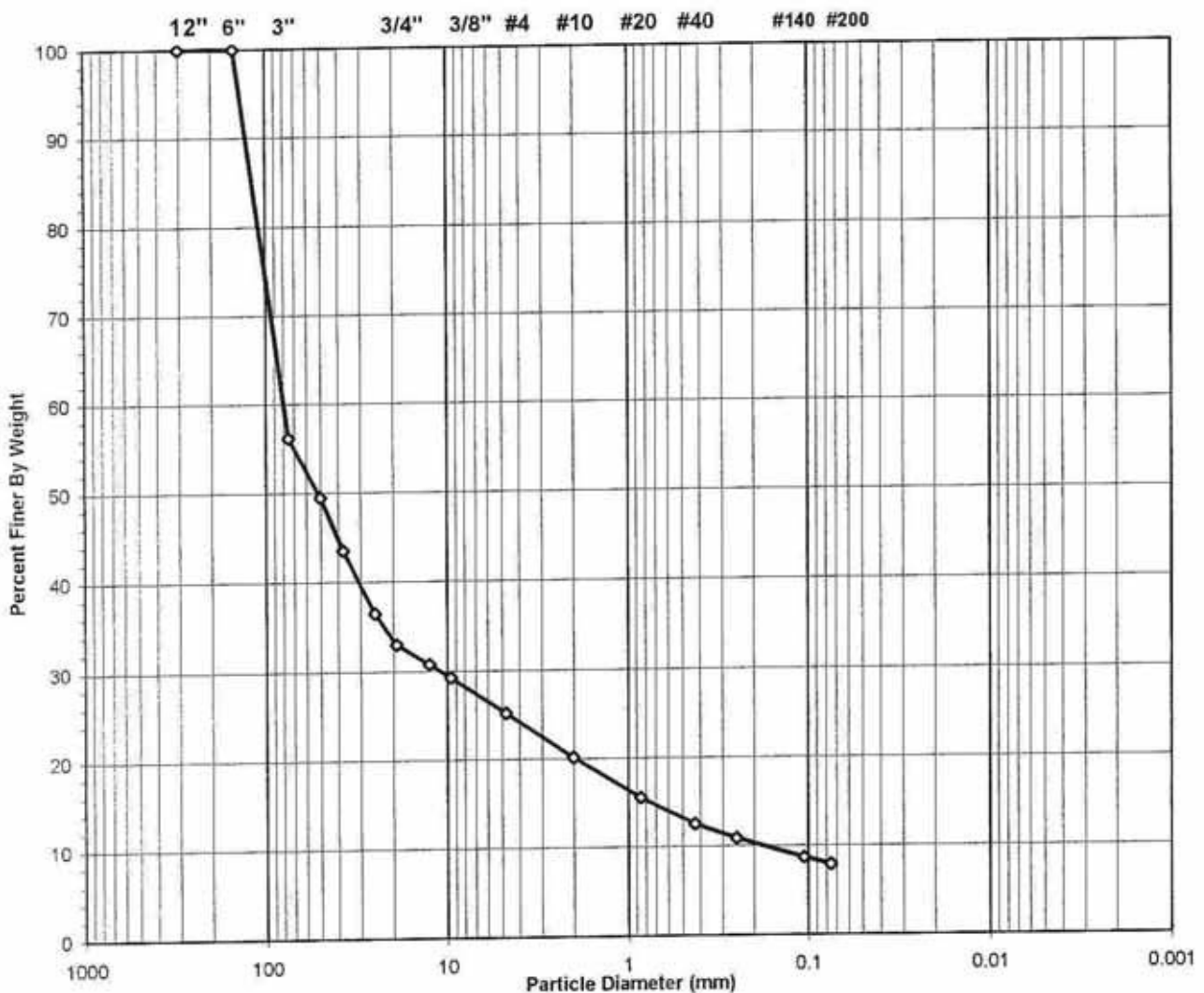
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-18

Boring No. TS-2
Depth (ft) 50-60
Sample No. S-6
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gp-gm, ASSUMED**

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

Tested By PC Date 2/24/06 Checked By *YKB* Date 2-27-06

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 **2006-060-01-18**

Boring No. **TS-2**
Depth (ft) **50-60**
Sample No. **S-6**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	663	Tare No.	607
Wgt. Tare + Wet Specimen (gm)	1259.20	Wgt. Tare + Wet Specimen (gm)	543.41
Wgt. Tare + Dry Specimen (gm)	1184.00	Wgt. Tare + Dry Specimen (gm)	533.30
Weight of Tare (gm)	98.31	Weight of Tare (gm)	82.96
Weight of Water (gm)	75.20	Weight of Water (gm)	10.11
Weight of Dry Soil (gm)	1085.69	Weight of Dry Soil (gm)	450.34
Moisture Content (%)	6.9	Moisture Content (%)	2.2

Wet Weight - 3/4" Sample (gm)	16549	Weight of the Dry Specimen (gm)	1085.69
Dry Weight - 3/4" Sample (gm)	15477.0	Weight of minus #200 material (gm)	259.10
Wet Weight + 3/4" Sample (gm)	32110.00	Weight of plus #200 material (gm)	826.59
Dry Weight + 3/4" Sample (gm)	31404.97		
Total Dry Weight Sample (gm)	46882.0	J - Factor (Percent Finer than 3/4")	0.3301

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	21017.00	43.85	43.85	56.15	56.15
2"	50	3210.00 (*)	6.70	50.54	49.46	49.46
1 1/2"	37.5	2880.00	6.01	56.55	43.45	43.45
1"	25	3363.00	7.02	63.57	36.43	36.43
3/4"	19	1640.00	3.42	66.99	33.01	33.01
1/2"	12.5	73.26	6.75	6.75	93.25	30.79
3/8"	9.5	50.66	4.67	11.41	88.59	29.24
#4	4.75	132.53	12.21	23.62	76.38	25.21
#10	2	166.05	15.29	38.92	61.08	20.17
#20	0.85	150.98 (**)	13.91	52.82	47.18	15.57
#40	0.425	99.91	9.20	62.02	37.98	12.54
#60	0.25	55.43	5.11	67.13	32.87	10.85
#140	0.106	72.66	6.69	73.82	26.18	8.64
#200	0.075	25.11	2.31	76.13	23.87	7.88
Pan	-	259.10	23.87	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 **2/24/06** Checked By **YVB** Date **2-27-06**

ATTERBERG LIMITS

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	50-60
Project No.	2006-060-01	Sample No.	S-6
Lab ID	2006-060-01-18	Soil Description	BROWN SILT

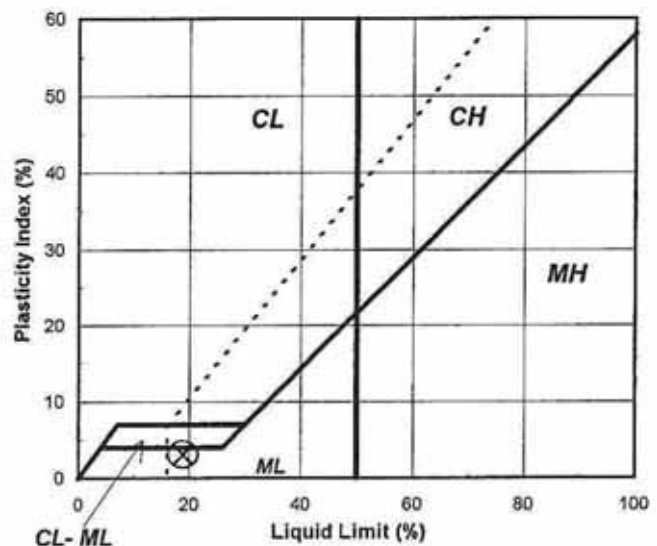
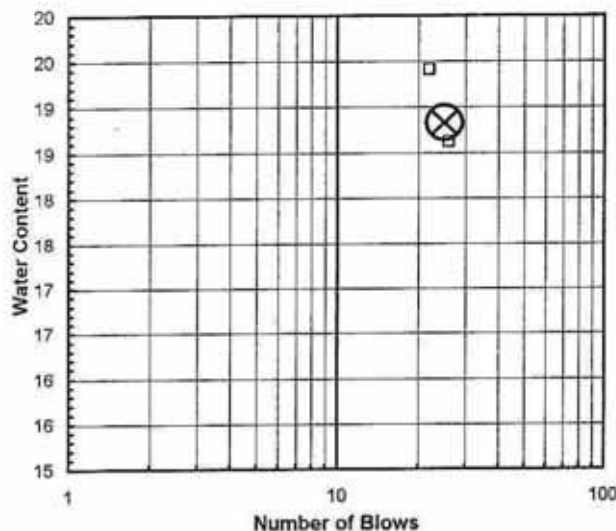
Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

Liquid Limit Test	1	2	3	
Tare Number	2289	2314	2305	MULTIPLE POINT
Wt. of Tare & WS (gm)	44.70	43.23	42.60	
Wt. of Tare & DS (gm)	40.89	39.17	38.89	
Wt. of Tare (gm)	20.43	18.25	20.95	
Wt. of Water (gm)	3.8	4.1	3.7	
Wt. of DS (gm)	20.5	20.9	17.9	
Moisture Content (%)	18.6	19.4	20.7	
Number of Blows	26	22	15	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	119	2298		Liquid Limit (%)
Wt. of Tare & WS (gm)	23.72	24.50		19
Wt. of Tare & DS (gm)	22.90	23.60		Plastic Limit (%)
Wt. of Tare (gm)	17.69	17.92		16
Wt. of Water (gm)	0.8	0.9		Plasticity Index (%)
Wt. of DS (gm)	5.2	5.7		3
Moisture Content (%)	15.7	15.8	-0.1	USCS Symbol
<i>Note: The acceptable range of the two Moisture contents is ± 2.6</i>				ML

Flow Curve

Plasticity Chart



Tested By	TO	Date	3/5/06	Checked By	YLB	Date	3-6-06
page 1 of 1	DCN:	CT-S4B	DATE:	10/8/01	REVISION:	2	

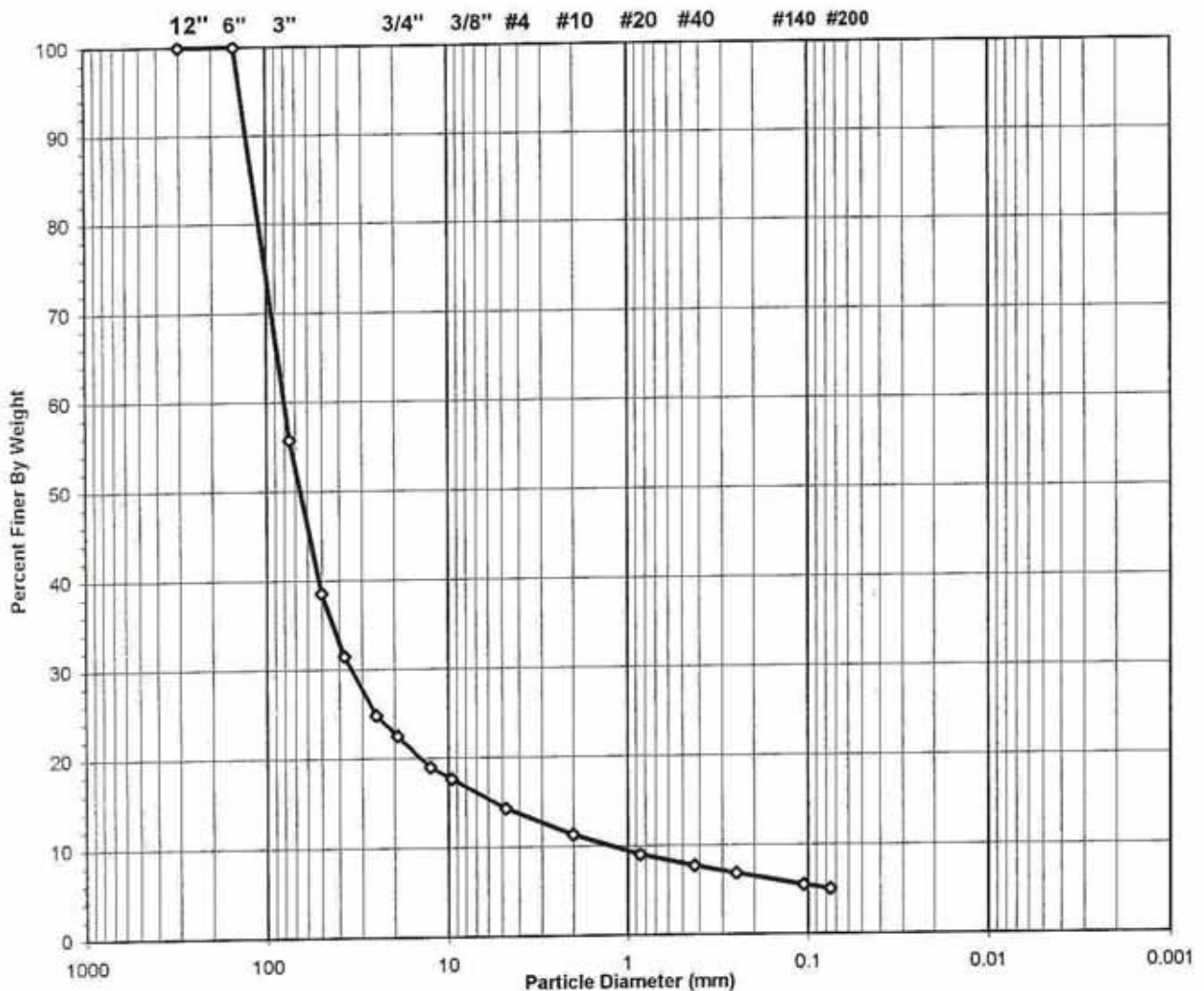
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-19

Boring No. TS-2
Depth (ft) 60-70
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
(NON-PLASTIC FINES)**

Tested By JP Date 2/27/06 Checked By *YKB*

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 **2006-060-01-19**

Boring No. **TS-2**
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.	952	Tare No.	578
Wgt. Tare + Wet Specimen (gm)	1378.00	Wgt. Tare + Wet Specimen (gm)	1294.40
Wgt. Tare + Dry Specimen (gm)	1287.00	Wgt. Tare + Dry Specimen (gm)	1283.60
Weight of Tare (gm)	103.51	Weight of Tare (gm)	84.45
Weight of Water (gm)	91.00	Weight of Water (gm)	10.80
Weight of Dry Soil (gm)	1183.49	Weight of Dry Soil (gm)	1199.15
Moisture Content (%)	7.7	Moisture Content (%)	0.9

Wet Weight - 3/4" Sample (gm)	15973	Weight of the Dry Specimen (gm)	1183.49
Dry Weight - 3/4" Sample (gm)	14832.5	Weight of minus #200 material (gm)	264.62
Wet Weight + 3/4" Sample (gm)	51579.00	Weight of plus #200 material (gm)	918.87
Dry Weight + 3/4" Sample (gm)	51118.61		
Total Dry Weight Sample (gm)	65951.1	J - Factor (Percent Finer than 3/4")	0.2249

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	29424.00	44.22	44.22	55.78	55.78
2"	50	11476.00 (*)	17.25	61.46	38.54	38.54
1 1/2"	37.5	4688.00	7.04	68.51	31.49	31.49
1"	25	4437.00	6.67	75.17	24.83	24.83
3/4"	19	1554.00	2.34	77.51	22.49	22.49
1/2"	12.5	185.19	15.65	15.65	84.35	18.97
3/8"	9.5	71.00	6.00	21.65	78.35	17.62
#4	4.75	177.15	14.97	36.62	63.38	14.26
#10	2	158.12	13.36	49.98	50.02	11.25
#20	0.85	119.15 (**)	10.07	60.04	39.96	8.99
#40	0.425	67.41	5.70	65.74	34.26	7.71
#60	0.25	44.80	3.79	69.52	30.48	6.85
#140	0.106	70.83	5.98	75.51	24.49	5.51
#200	0.075	25.22	2.13	77.64	22.36	5.03
Pan	-	264.62	22.36	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 **KPB** Date **3-1-06**

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	60-70
Project No.	2006-060-01	Sample No.	S-7
Lab ID	2006-060-01-19	Visual Description	REDDISH BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

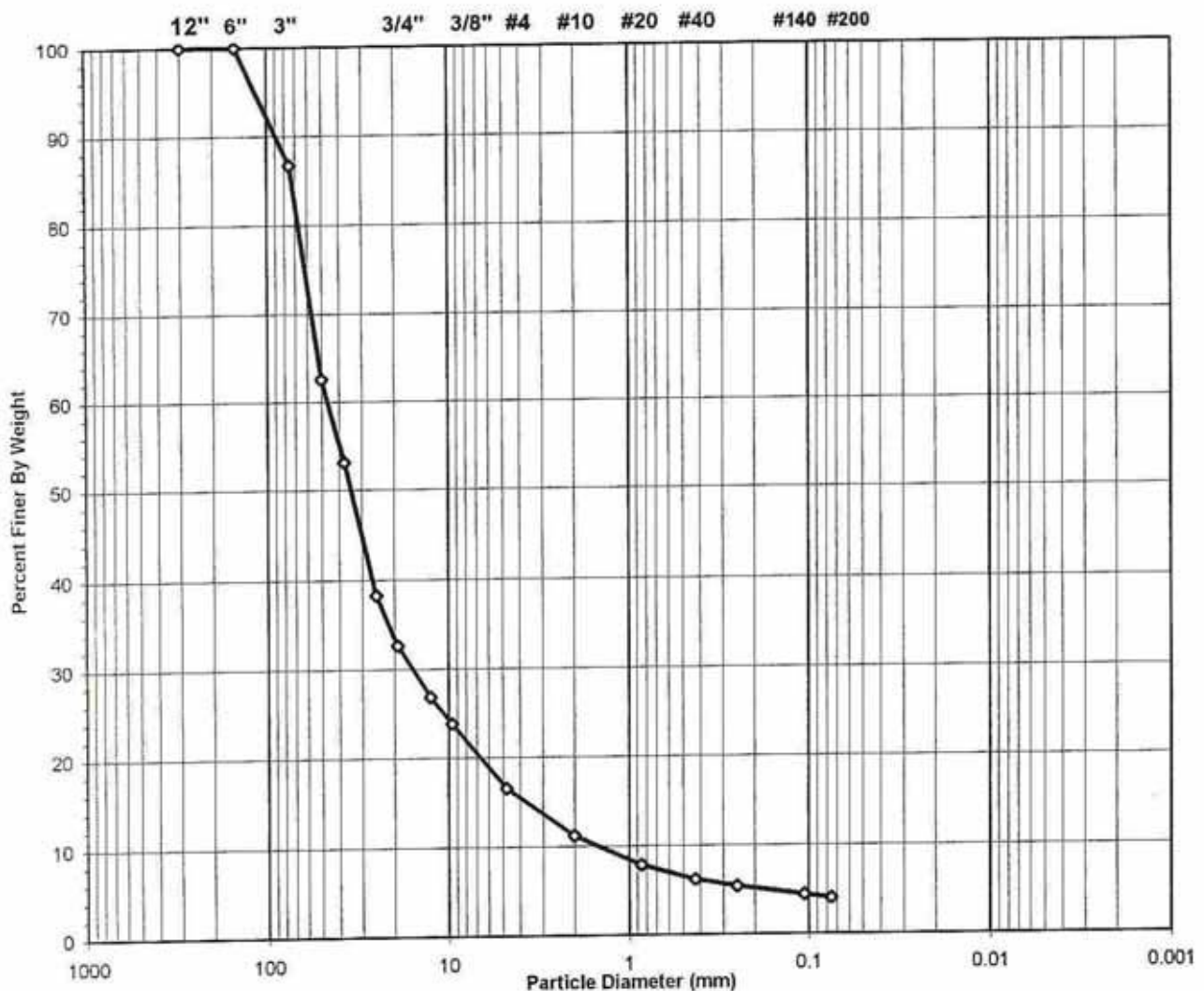
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page 1 of 1 DCN: CT-S4C DATE: 7-11-97 REVISION : 2 C:\MSOFFICE\Excel\PrintQ\U389.xls]Sheet1

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 2006-060-01-20

Boring No. TS-2
Depth (ft) 70-80
Sample No. S-8
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP, TESTED**

D60 = 46.3 CC = 3.6

USCS Classification **POORLY GRADED GRAVEL**

D30 = 15.7 CU = 31.2

D10 = 1.5

Tested By JP

Date 2/27/06

Checked By *KPB*

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 **2006-060-01-20**

Boring No. **TS-2**
Depth (ft) **70-80**
Sample No. **S-8**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	703	Tare No.	564
Wgt. Tare + Wet Specimen (gm)	1395.40	Wgt. Tare + Wet Specimen (gm)	1165.00
Wgt. Tare + Dry Specimen (gm)	1303.20	Wgt. Tare + Dry Specimen (gm)	1142.30
Weight of Tare (gm)	100.66	Weight of Tare (gm)	82.56
Weight of Water (gm)	92.20	Weight of Water (gm)	22.70
Weight of Dry Soil (gm)	1202.54	Weight of Dry Soil (gm)	1059.74
Moisture Content (%)	7.7	Moisture Content (%)	2.1

Wet Weight - 3/4" Sample (gm)	14665	Weight of the Dry Specimen (gm)	1202.54
Dry Weight - 3/4" Sample (gm)	13620.7	Weight of minus #200 material (gm)	150.51
Wet Weight + 3/4" Sample (gm)	28702.00	Weight of plus #200 material (gm)	1052.03
Dry Weight + 3/4" Sample (gm)	28100.09		
Total Dry Weight Sample (gm)	41720.8	J - Factor (Percent Finer than 3/4")	0.3265

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	5672.00	13.31	13.31	86.69	86.69
2"	50	10282.00 (*)	24.13	37.44	62.56	62.56
1 1/2"	37.5	4041.00	9.48	46.92	53.08	53.08
1"	25	6325.00	14.84	61.76	38.24	38.24
3/4"	19	2382.00	5.59	67.35	32.65	32.65
1/2"	12.5	211.89	17.62	17.62	82.38	26.89
3/8"	9.5	110.25	9.17	26.79	73.21	23.90
#4	4.75	273.79	22.77	49.56	50.44	16.47
#10	2	195.87	16.29	65.84	34.16	11.15
#20	0.85	121.11 (**)	10.07	75.92	24.08	7.86
#40	0.425	60.73	5.05	80.97	19.03	6.21
#60	0.25	29.71	2.47	83.44	16.56	5.41
#140	0.106	36.09	3.00	86.44	13.56	4.43
#200	0.075	12.59	1.05	87.48	12.52	4.09
Pan	-	150.51	12.52	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 **KB** Date **3-1-06**

ATTERBERG LIMITS

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	70-80
Project No.	2006-060-01	Sample No.	S-8
Lab ID	2006-060-01-20	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.

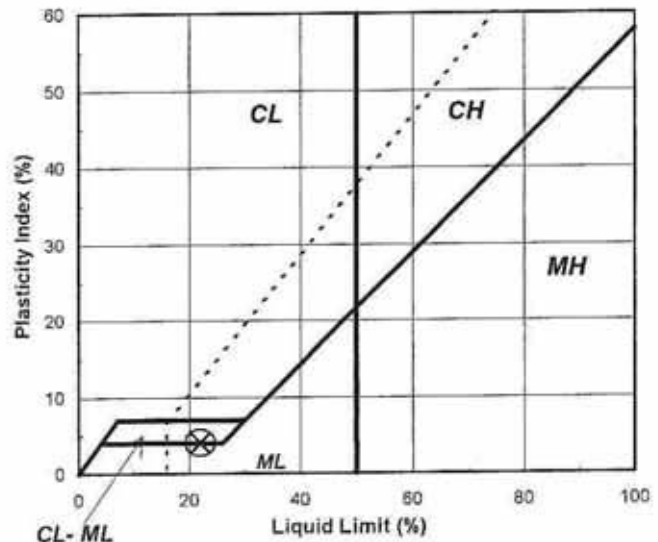
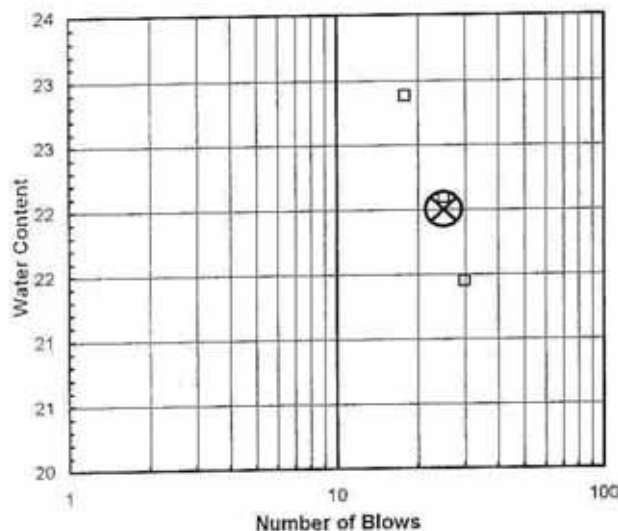
Liquid Limit Test	1	2	3	
Tare Number	2	58	137	MULTIPOINT
Wt. of Tare & WS (gm)	38.82	41.56	42.91	
Wt. of Tare & DS (gm)	34.55	37.19	38.37	
Wt. of Tare (gm)	14.64	17.41	18.53	
Wt. of Water (gm)	4.3	4.4	4.5	
Wt. of DS (gm)	19.9	19.8	19.8	
Moisture Content (%)	21.4	22.1	22.9	
Number of Blows	30	25	18	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	217	240		Liquid Limit (%) 22
Wt. of Tare & WS (gm)	25.97	26.06		Plastic Limit (%) 18
Wt. of Tare & DS (gm)	25.05	25.12		Plasticity Index (%) 4
Wt. of Tare (gm)	19.94	19.87		USCS Symbol CL-ML
Wt. of Water (gm)	0.9	0.9		
Wt. of DS (gm)	5.1	5.3		
Moisture Content (%)	18.0	17.9	0.1	

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

Flow Curve

Plasticity Chart



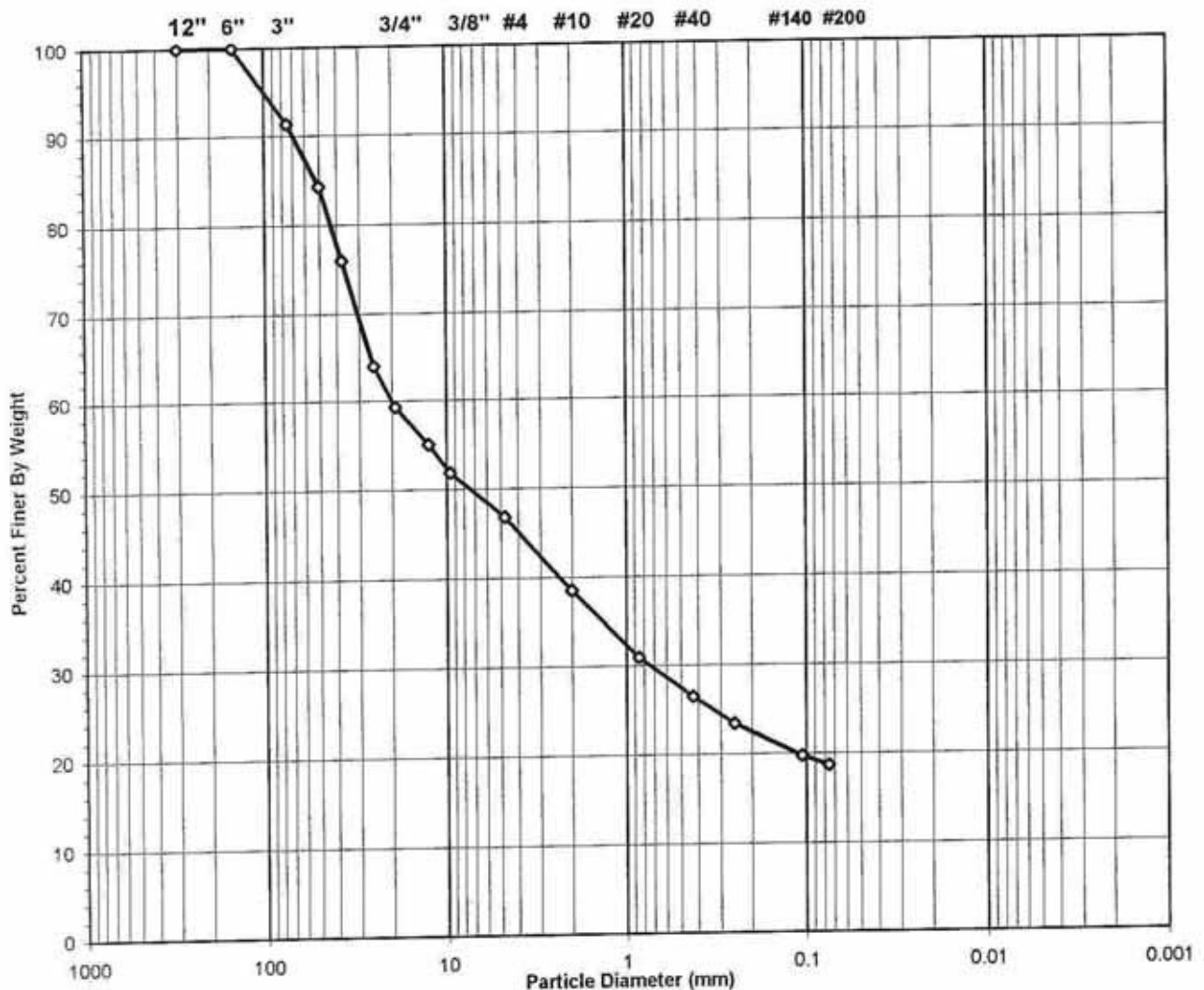
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page 1 of 1	DCN:	CT-S4B	DATE:	10/8/01	REVISION:	2	

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 2006-060-01-21

Boring No. TS-2
Depth (ft) 80-100
Sample No. S-9
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GC, TESTED**

USCS Classification **CLAYEY GRAVEL WITH SAND**

Tested By JP Date 2/27/06 Checked By *KB* Date 3-1-06
page 1 of 2 DCN: CT-53A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ[U417.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 **2006-060-01-21**

Boring No. **TS-2**
 Depth (ft) **80-100**
 Sample No. **S-9**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1644	Tare No.	1123
Wgt. Tare + Wet Specimen (gm)	1126.70	Wgt. Tare + Wet Specimen (gm)	1171.00
Wgt. Tare + Dry Specimen (gm)	1048.90	Wgt. Tare + Dry Specimen (gm)	1156.90
Weight of Tare (gm)	93.09	Weight of Tare (gm)	85.27
Weight of Water (gm)	77.80	Weight of Water (gm)	14.10
Weight of Dry Soil (gm)	955.81	Weight of Dry Soil (gm)	1071.63
Moisture Content (%)	8.1	Moisture Content (%)	1.3

Wet Weight - 3/4" Sample (gm)	12388	Weight of the Dry Specimen (gm)	955.81
Dry Weight - 3/4" Sample (gm)	11455.6	Weight of minus #200 material (gm)	301.55
Wet Weight + 3/4" Sample (gm)	7963.00	Weight of plus #200 material (gm)	654.26
Dry Weight + 3/4" Sample (gm)	7859.59		
Total Dry Weight Sample (gm)	19315.1	J - Factor (Percent Finer than 3/4")	0.5931

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	1688.00	8.63	8.63	91.37	91.37
2"	50	1386.00 (*)	7.08	15.71	84.29	84.29
1 1/2"	37.5	1627.00	8.31	24.02	75.98	75.98
1"	25	2340.00	11.96	35.98	64.02	64.02
3/4"	19	922.00	4.71	40.69	59.31	59.31
1/2"	12.5	69.45	7.27	7.27	92.73	55.00
3/8"	9.5	50.85	5.32	12.59	87.41	51.84
#4	4.75	81.83	8.56	21.15	78.85	46.77
#10	2	132.74	13.89	35.04	64.96	38.53
#20	0.85	121.85 (**)	12.75	47.78	52.22	30.97
#40	0.425	72.71	7.61	55.39	44.61	26.46
#60	0.25	48.76	5.10	60.49	39.51	23.43
#140	0.106	59.03	6.18	66.67	33.33	19.77
#200	0.075	17.04	1.78	68.45	31.55	18.71
Pan	-	301.55	31.55	100.00	-	-

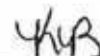
Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
 (**) The - 3/4" sieve analysis is based on the Weight of the Dry Specimen

 Tested By **JP**

Date

2/27/06

Checked By



 Date **3-1-06**

ATTERBERG LIMITS

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	80-100
Project No.	2006-060-01	Sample No.	S-9
Lab ID	2006-060-01-21	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.

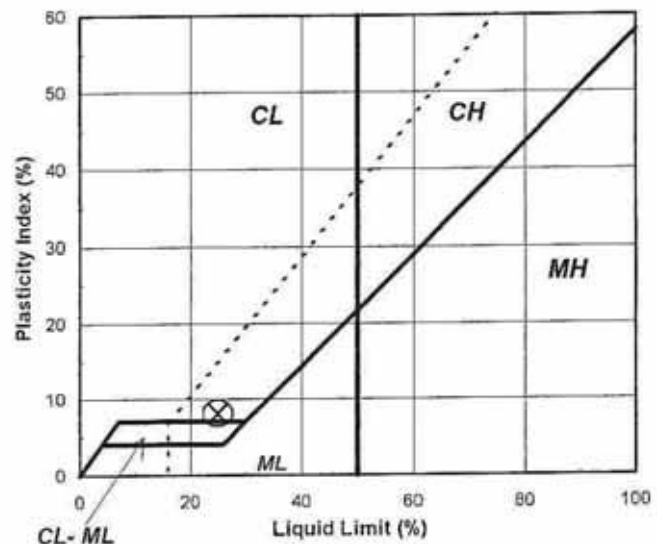
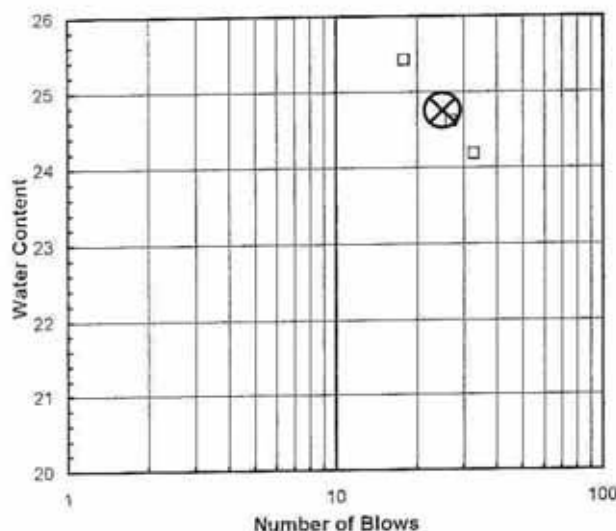
Liquid Limit Test	1	2	3	
Tare Number	29	O2	246	MULTIPOINT
Wt. of Tare & WS (gm)	38.42	37.34	38.76	
Wt. of Tare & DS (gm)	34.29	32.80	34.48	
Wt. of Tare (gm)	17.21	14.35	17.64	
Wt. of Water (gm)	4.1	4.5	4.3	
Wt. of DS (gm)	17.1	18.5	16.8	
Moisture Content (%)	24.2	24.6	25.4	
Number of Blows	33	27	18	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	68	224		Liquid Limit (%) 25
Wt. of Tare & WS (gm)	22.41	26.26		Plastic Limit (%) 17
Wt. of Tare & DS (gm)	21.53	25.22		Plasticity Index (%) 8
Wt. of Tare (gm)	16.41	19.15		USCS Symbol CL
Wt. of Water (gm)	0.9	1.0		
Wt. of DS (gm)	5.1	6.1		
Moisture Content (%)	17.2	17.1	0.1	

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

Flow Curve

Plasticity Chart



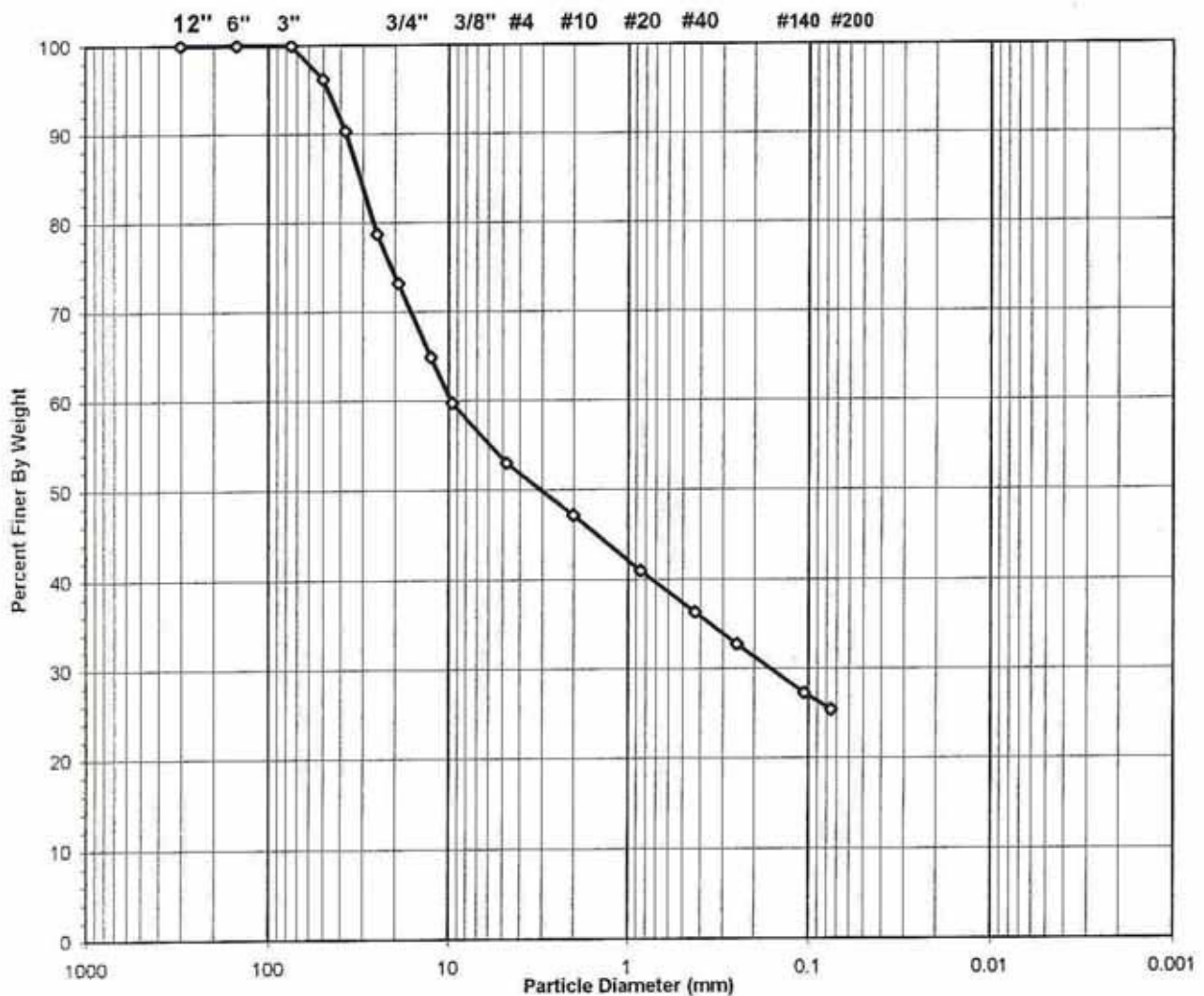
Tested By TO Date 2/28/06 Checked By KVB Date 3-1-06

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 **2006-060-01-22**

Boring No. **TS-2**
Depth (ft) **100-104.5**
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 WITH SAND**

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 **2006-060-01-22**

 Boring No. **TS-2**
 Depth (ft) **100-104.5**
 Sample No. **S-10**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	701	Tare No.	602
Wgt. Tare + Wet Specimen (gm)	1276.70	Wgt. Tare + Wet Specimen (gm)	1154.80
Wgt. Tare + Dry Specimen (gm)	1182.30	Wgt. Tare + Dry Specimen (gm)	1131.30
Weight of Tare (gm)	100.37	Weight of Tare (gm)	85.69
Weight of Water (gm)	94.40	Weight of Water (gm)	23.50
Weight of Dry Soil (gm)	1081.93	Weight of Dry Soil (gm)	1045.61
Moisture Content (%)	8.7	Moisture Content (%)	2.2

Wet Weight - 3/4" Sample (gm)	35182	Weight of the Dry Specimen (gm)	1081.93
Dry Weight - 3/4" Sample (gm)	32358.7	Weight of minus #200 material (gm)	375.69
Wet Weight + 3/4" Sample (gm)	12117.00	Weight of plus #200 material (gm)	706.24
Dry Weight + 3/4" Sample (gm)	11850.66		
Total Dry Weight Sample (gm)	44209.3	J - Factor (Percent Finer than 3/4")	0.7319

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	1722.00	(*) 3.81	3.81	96.19	96.19
1 1/2"	37.5	2646.00	5.85	9.66	90.34	90.34
1"	25	5258.00	11.63	21.30	78.70	78.70
3/4"	19	2491.00	5.51	26.81	73.19	73.19
1/2"	12.5	123.27	11.39	11.39	88.61	64.85
3/8"	9.5	75.86	7.01	18.41	81.59	59.72
#4	4.75	100.04	9.25	27.65	72.35	52.95
#10	2	86.62	8.01	35.66	64.34	47.09
#20	0.85	90.70	(**) 8.38	44.04	55.96	40.96
#40	0.425	68.17	6.30	50.34	49.66	36.35
#60	0.25	53.14	4.91	55.25	44.75	32.75
#140	0.106	80.86	7.47	62.73	37.27	27.28
#200	0.075	27.58	2.55	65.28	34.72	25.42
Pan	-	375.69	34.72	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 **YKB**

 Date **3-1-06**

ATTERBERG LIMITS

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

Client	PAUL C. RIZZO	Boring No.	TS-2
Client Reference	TAUM SAUK 06-3551	Depth (ft)	100-104.5
Project No.	2006-060-01	Sample No.	S-10
Lab ID	2006-060-01-22	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.

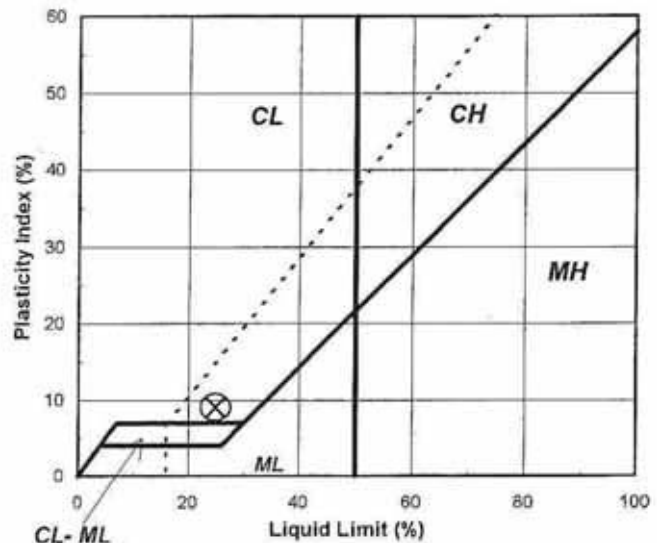
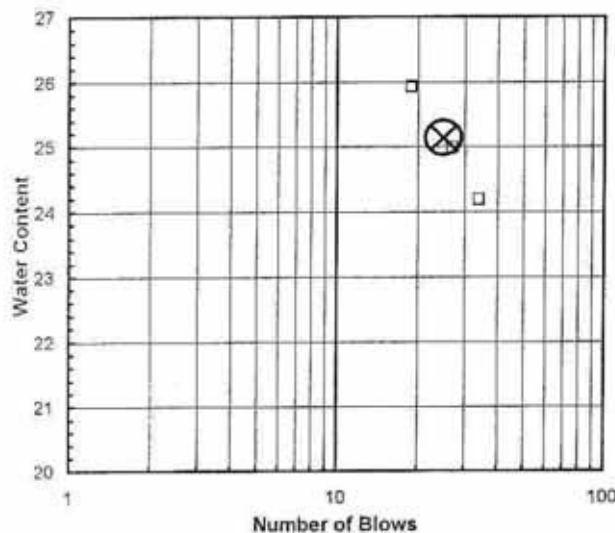
Liquid Limit Test	1	2	3	
Tare Number	226	252	259	MULTIPOINT
Wt. of Tare & WS (gm)	44.31	41.65	44.50	
Wt. of Tare & DS (gm)	39.19	37.06	38.91	
Wt. of Tare (gm)	18.02	18.69	17.35	
Wt. of Water (gm)	5.1	4.6	5.6	
Wt. of DS (gm)	21.2	18.4	21.6	
Moisture Content (%)	24.2	25.0	25.9	
Number of Blows	34	27	19	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	2254	2301		Liquid Limit (%) 25
Wt. of Tare & WS (gm)	22.95	26.14		Plastic Limit (%) 16
Wt. of Tare & DS (gm)	22.13	25.28		Plasticity Index (%) 9
Wt. of Tare (gm)	16.82	19.78		USCS Symbol CL
Wt. of Water (gm)	0.8	0.9		
Wt. of DS (gm)	5.3	5.5		
Moisture Content (%)	15.4	15.6	-0.2	

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

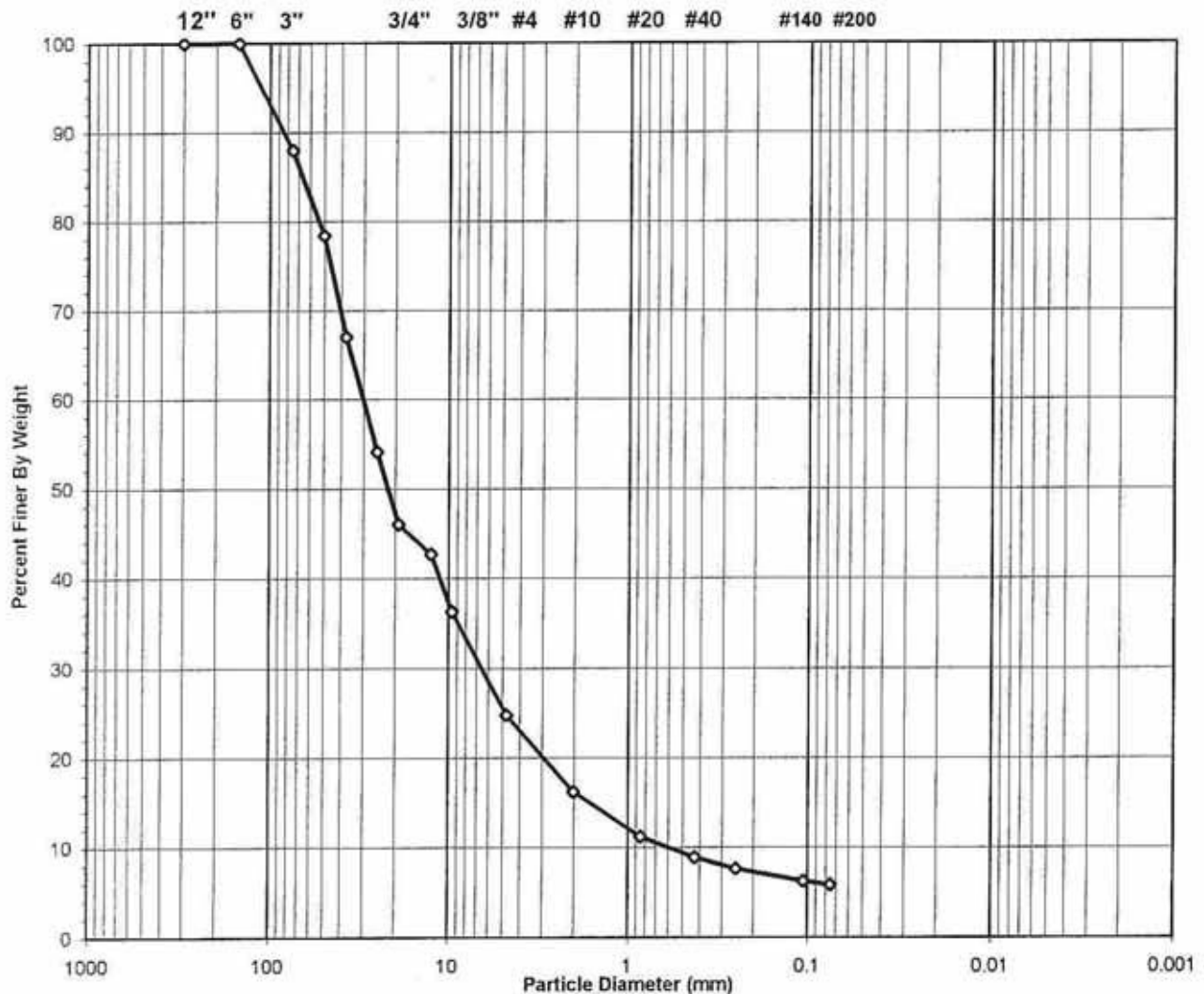
BORING TS-3

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 2006-060-01-23

Boring No. TS-3
Depth (ft) NA
Sample No. S-1
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **gw-gm, ASSUMED**

D60 = 30.1 CC = 2.3

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

D30 = 6.5 CU = 50.3

D10 = 0.6

Tested By PC

Date 2/22/06

Checked By

Date 2-23-06

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 **2006-060-01-23**

Boring No. **TS-3**
Depth (ft) **NA**
Sample No. **S-1**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2344	Tare No.	555
Wgt. Tare + Wet Specimen (gm)	1372.80	Wgt. Tare + Wet Specimen (gm)	544.93
Wgt. Tare + Dry Specimen (gm)	1282.80	Wgt. Tare + Dry Specimen (gm)	533.37
Weight of Tare (gm)	95.59	Weight of Tare (gm)	81.98
Weight of Water (gm)	90.00	Weight of Water (gm)	11.56
Weight of Dry Soil (gm)	1187.21	Weight of Dry Soil (gm)	451.39
Moisture Content (%)	7.6	Moisture Content (%)	2.6

Wet Weight - 3/4" Sample (gm)	23345	Weight of the Dry Specimen (gm)	1187.21
Dry Weight - 3/4" Sample (gm)	21700.0	Weight of minus #200 material (gm)	149.97
Wet Weight + 3/4" Sample (gm)	26166.00	Weight of plus #200 material (gm)	1037.24
Dry Weight + 3/4" Sample (gm)	25512.63		
Total Dry Weight Sample (gm)	47212.6	J - Factor (Percent Finer than 3/4")	0.4596

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	5797.00	11.97	11.97	88.03	88.03
2"	50	4670.00 (*)	9.64	21.62	78.38	78.38
1 1/2"	37.5	5511.00	11.38	33.00	67.00	67.00
1"	25	6264.00	12.94	45.93	54.07	54.07
3/4"	19	3924.00	8.10	54.04	45.96	45.96
1/2"	12.5	85.60	7.21	7.21	92.79	42.65
3/8"	9.5	163.37	13.76	20.97	79.03	36.32
#4	4.75	298.86	25.17	46.14	53.86	24.75
#10	2	220.44	18.57	64.71	35.29	16.22
#20	0.85	130.05 (**)	10.95	75.67	24.33	11.18
#40	0.425	60.40	5.09	80.75	19.25	8.85
#60	0.25	31.95	2.69	83.45	16.55	7.61
#140	0.106	36.36	3.06	86.51	13.49	6.20
#200	0.075	10.21	0.86	87.37	12.63	5.81
Pan	-	149.97	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 **PC**

Date **2/22/06**

Checked By **KVB**

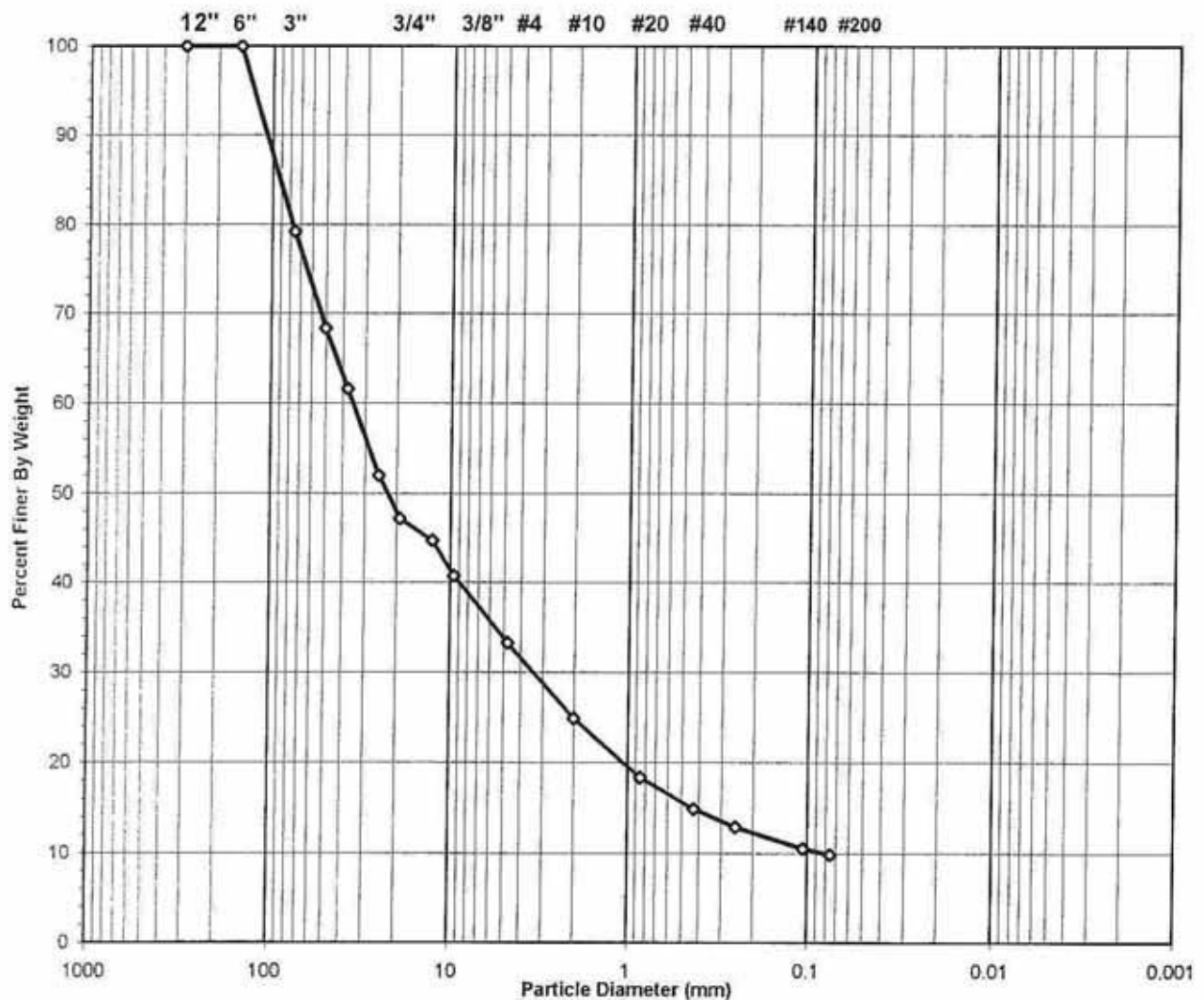
Date **2-23-06**

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 2006-060-01-24

Boring No. TS-3
Depth (ft) 10-20
Sample No. S-2
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GC, TESTED

D60 = 35.1 CC = 4.0

USCS Classification POORLY GRADED GRAVEL WITH CLAY AND SAND

D30 = 3.4 CU = 431.7

D10 = 0.1

Tested By PC

Date 2/22/06

Checked By KB

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 2006-060-01-24

Boring No. TS-3
Depth (ft) 10-20
Sample No. S-2
Soil Color REDDISH BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	686	Tare No.	585
Wgt. Tare + Wet Specimen (gm)	1227.90	Wgt. Tare + Wet Specimen (gm)	1185.20
Wgt. Tare + Dry Specimen (gm)	1158.50	Wgt. Tare + Dry Specimen (gm)	1169.10
Weight of Tare (gm)	97.42	Weight of Tare (gm)	85.61
Weight of Water (gm)	69.40	Weight of Water (gm)	16.10
Weight of Dry Soil (gm)	1061.08	Weight of Dry Soil (gm)	1083.49
Moisture Content (%)	6.5	Moisture Content (%)	1.5

Wet Weight - 3/4" Sample (gm)	24936	Weight of the Dry Specimen (gm)	1061.08
Dry Weight - 3/4" Sample (gm)	23405.2	Weight of minus #200 material (gm)	221.55
Wet Weight + 3/4" Sample (gm)	26632.00	Weight of plus #200 material (gm)	839.53
Dry Weight + 3/4" Sample (gm)	26242.06		
Total Dry Weight Sample (gm)	49647.2	J - Factor (Percent Finer than 3/4")	0.4714

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	10481.00	20.80	20.80	79.20	79.20
2"	50	5489.00 (*)	10.89	31.70	68.30	68.30
1 1/2"	37.5	3386.00	6.72	38.42	61.58	61.58
1"	25	4858.00	9.64	48.06	51.94	51.94
3/4"	19	2418.00	4.80	52.86	47.14	47.14
1/2"	12.5	55.31	5.21	5.21	94.79	44.69
3/8"	9.5	89.90	8.47	13.69	86.31	40.69
#4	4.75	167.07	15.75	29.43	70.57	33.27
#10	2	188.00	17.72	47.15	52.85	24.92
#20	0.85	147.54 (**)	13.90	61.05	38.95	18.36
#40	0.425	78.42	7.39	68.44	31.56	14.88
#60	0.25	44.68	4.21	72.65	27.35	12.89
#140	0.106	53.39	5.03	77.69	22.31	10.52
#200	0.075	15.22	1.43	79.12	20.88	9.84
Pan	-	221.55	20.88	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 KB 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)	10-20
Project No.	2006-060-01	Sample No.	S-2
Lab ID	2006-060-01-24	Soil Description	REDDISH BROWN LEAN CLAY

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

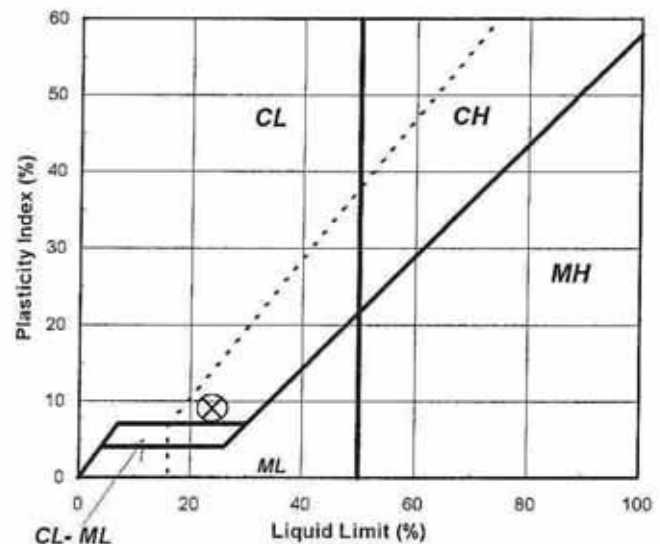
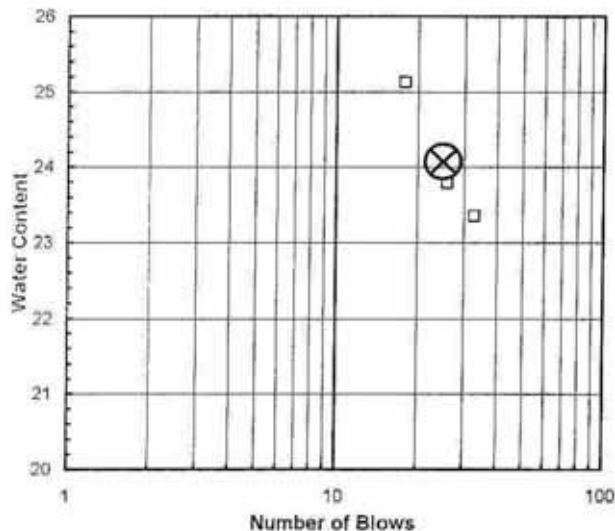
Liquid Limit Test	1	2	3	
Tare Number	174	250	252	M
Wt. of Tare & WS (gm)	42.99	43.54	43.43	U
Wt. of Tare & DS (gm)	37.81	38.54	38.46	L
Wt. of Tare (gm)	15.63	17.52	18.68	T
Wt. of Water (gm)	5.2	5.0	5.0	I
Wt. of DS (gm)	22.2	21.0	19.8	P
				O
				I
Moisture Content (%)	23.4	23.8	25.1	N
Number of Blows	33	26	18	T

Plastic Limit Test	1	2	Range	Test Results
Tare Number	253	254		Liquid Limit (%) 24
Wt. of Tare & WS (gm)	24.69	24.45		Plastic Limit (%) 15
Wt. of Tare & DS (gm)	23.79	23.65		Plasticity Index (%) 9
Wt. of Tare (gm)	17.82	18.38		USCS Symbol CL
Wt. of Water (gm)	0.9	0.8		
Wt. of DS (gm)	6.0	5.3		
Moisture Content (%)	15.1	15.2	-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 *KVR* Date 2-27-06

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

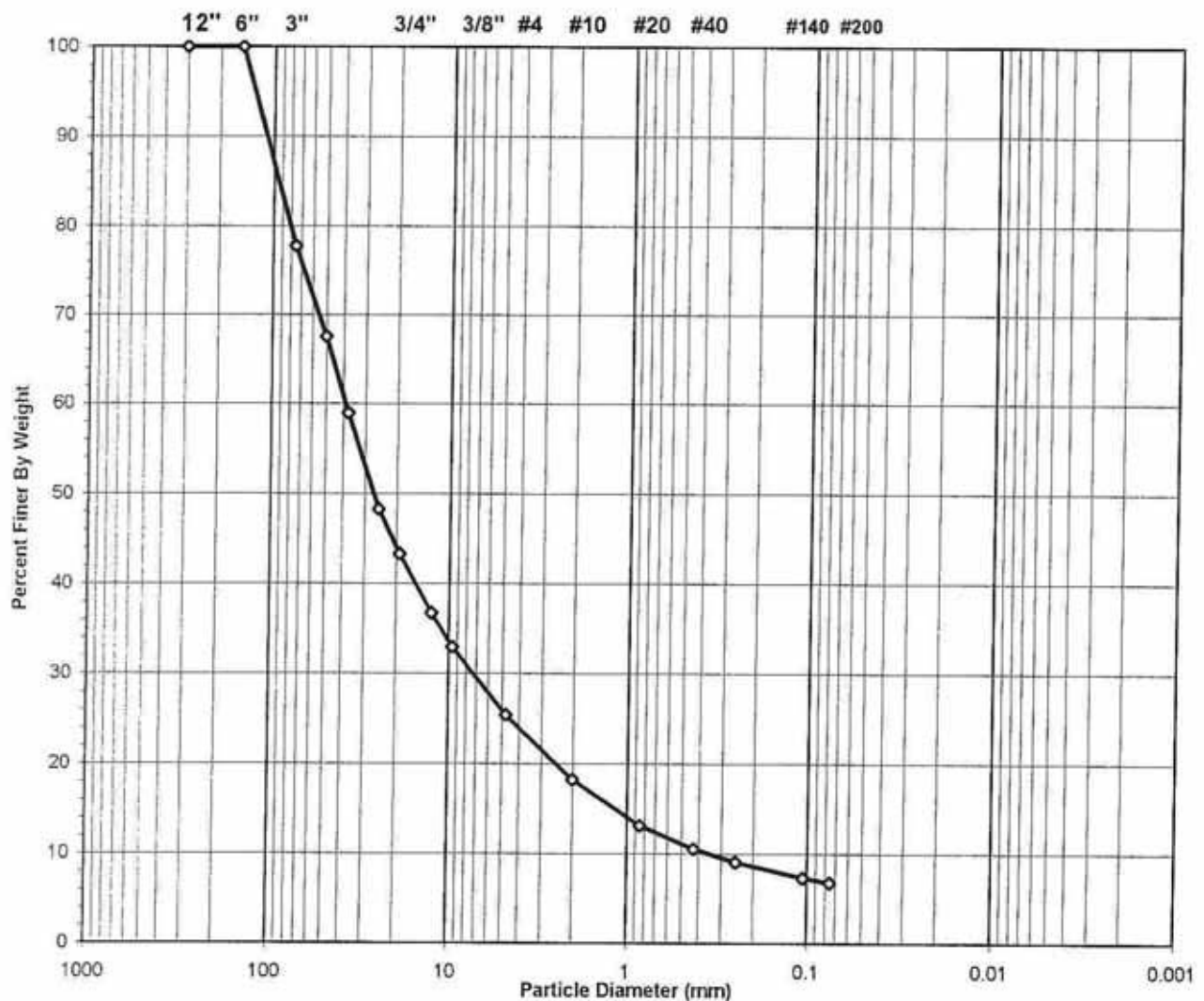
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-25

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

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GC, TESTED

D60 = 38.9 CC = 3.8

USCS Classification POORLY GRADED GRAVEL WITH CLAY AND SAND

D30 = 7.2 CU = 109.9

D10 = 0.4

Tested By PC

Date 2/23/06

Checked By KRB

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 2006-060-01-25

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

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	706	Tare No.	892
Wgt. Tare + Wet Specimen (gm)	1368.50	Wgt. Tare + Wet Specimen (gm)	1327.20
Wgt. Tare + Dry Specimen (gm)	1265.30	Wgt. Tare + Dry Specimen (gm)	1293.40
Weight of Tare (gm)	100.96	Weight of Tare (gm)	109.93
Weight of Water (gm)	103.20	Weight of Water (gm)	33.80
Weight of Dry Soil (gm)	1164.34	Weight of Dry Soil (gm)	1183.47
Moisture Content (%)	8.9	Moisture Content (%)	2.9

Wet Weight - 3/4" Sample (gm)	22425	Weight of the Dry Specimen (gm)	1164.34
Dry Weight - 3/4" Sample (gm)	20599.2	Weight of minus #200 material (gm)	183.29
Wet Weight + 3/4" Sample (gm)	27796.00	Weight of plus #200 material (gm)	981.05
Dry Weight + 3/4" Sample (gm)	27024.19		
Total Dry Weight Sample (gm)	47623.4	J - Factor (Percent Finer than 3/4")	0.4325

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	10917.00	22.29	22.29	77.71	77.71
2"	50	5002.00 (*)	10.21	32.50	67.50	67.50
1 1/2"	37.5	4195.00	8.56	41.06	58.94	58.94
1"	25	5229.00	10.68	51.74	48.26	48.26
3/4"	19	2453.00	5.01	56.75	43.25	43.25
1/2"	12.5	176.46	15.16	15.16	84.84	36.70
3/8"	9.5	101.19	8.69	23.85	76.15	32.94
#4	4.75	202.52	17.39	41.24	58.76	25.42
#10	2	193.77	16.64	57.88	42.12	18.22
#20	0.85	137.56 (**)	11.81	69.70	30.30	13.11
#40	0.425	70.23	6.03	75.73	24.27	10.50
#60	0.25	38.82	3.33	79.06	20.94	9.06
#140	0.106	46.46	3.99	83.05	16.95	7.33
#200	0.075	14.04	1.21	84.26	15.74	6.81
Pan	-	183.29	15.74	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 2/23/06 Checked By *KVB* 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)	20-30
Project No.	2006-060-01	Sample No.	S-3
Lab ID	2006-060-01-25	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.

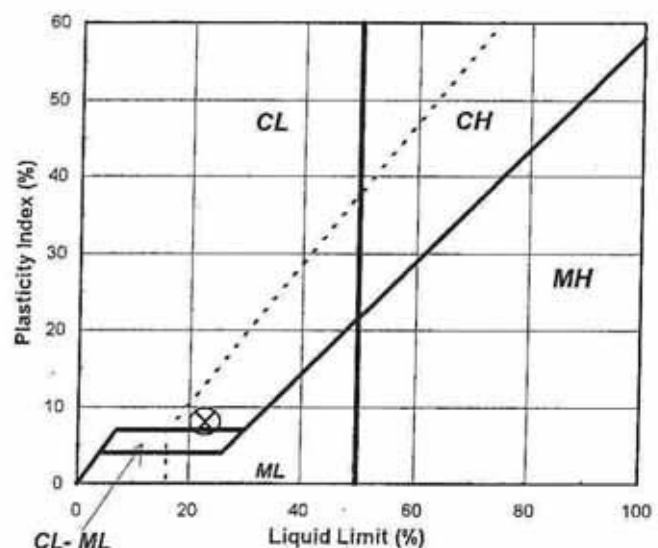
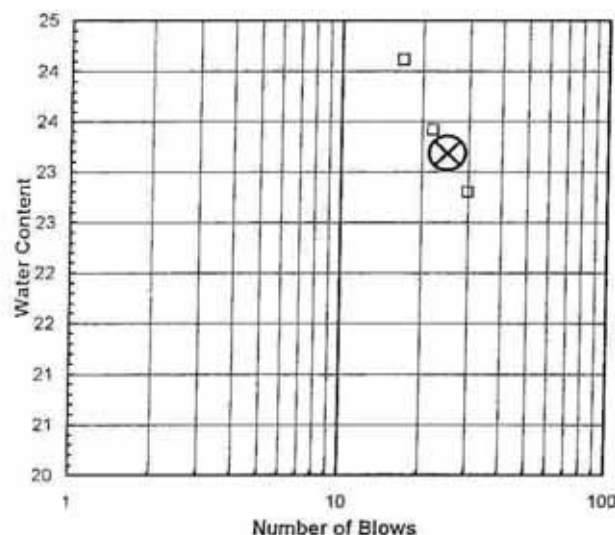
Liquid Limit Test	1	2	3	
Tare Number	68	182	219	MULTIPLE
Wt. of Tare & WS (gm)	40.62	44.07	45.40	
Wt. of Tare & DS (gm)	36.13	39.23	40.41	
Wt. of Tare (gm)	16.42	18.56	19.72	
Wt. of Water (gm)	4.5	4.8	5.0	
Wt. of DS (gm)	19.7	20.7	20.7	
Moisture Content (%)	22.8	23.4	24.1	
Number of Blows	30	22	17	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	234	2294		Liquid Limit (%) 23
Wt. of Tare & WS (gm)	25.11	26.22		Plastic Limit (%) 15
Wt. of Tare & DS (gm)	24.29	25.34		Plasticity Index (%) 8
Wt. of Tare (gm)	18.98	19.68		USCS Symbol CL
Wt. of Water (gm)	0.8	0.9		
Wt. of DS (gm)	5.3	5.7		
Moisture Content (%)	15.4	15.5	-0.1	

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

Flow Curve

Plasticity Chart



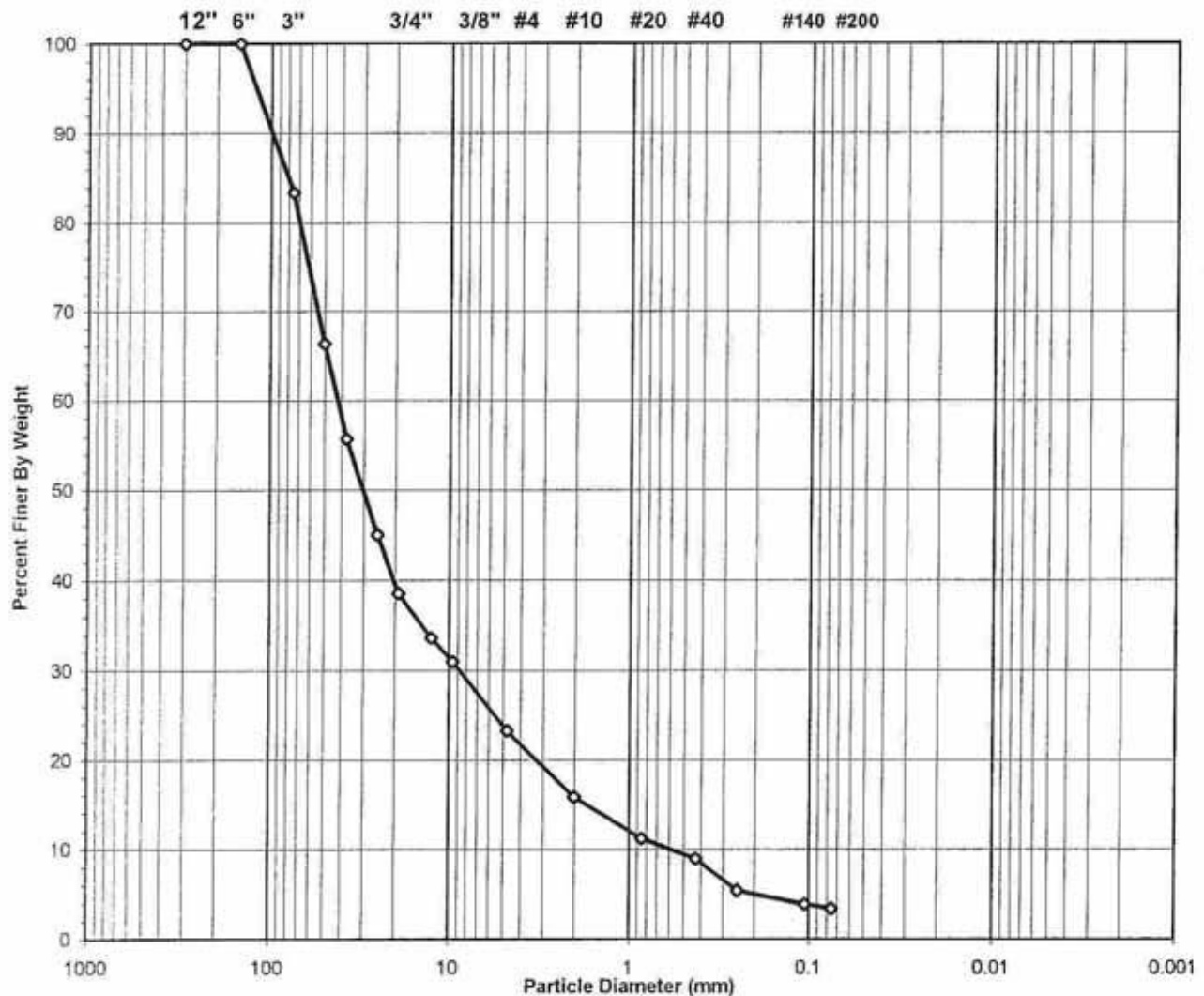
Tested By JP Date 2/24/06 Checked By YHB Date 2-27-06

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

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

Client	PAUL C. RIZZO	Boring No.	TS-3
Client Reference	TAUM SAUK 06-3551	Depth (ft)	30-40
Project No.	2006-060-01	Sample No.	S-4
Lab ID	2006-060-01-26	Soil Color	BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol	GW, TESTED	D60 =	42.1	CC =	3.0
USCS Classification	WELL-GRADED GRAVEL WITH SAND	D30 =	8.7	CU =	70.4

D10 = 0.6

Tested By PC Date 2/23/06 Checked By KB 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 **2006-060-01-26**

Boring No. **TS-3**
Depth (ft) **30-40**
Sample No. **S-4**
Soil Color **BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2338	Tare No.	1694
Wgt. Tare + Wet Specimen (gm)	1262.30	Wgt. Tare + Wet Specimen (gm)	405.99
Wgt. Tare + Dry Specimen (gm)	1157.30	Wgt. Tare + Dry Specimen (gm)	390.36
Weight of Tare (gm)	97.56	Weight of Tare (gm)	83.80
Weight of Water (gm)	105.00	Weight of Water (gm)	15.63
Weight of Dry Soil (gm)	1059.74	Weight of Dry Soil (gm)	306.56
Moisture Content (%)	9.9	Moisture Content (%)	5.1

Wet Weight - 3/4" Sample (gm)	15003	Weight of the Dry Specimen (gm)	1059.74
Dry Weight - 3/4" Sample (gm)	13650.5	Weight of minus #200 material (gm)	92.92
Wet Weight + 3/4" Sample (gm)	22855.00	Weight of plus #200 material (gm)	966.82
Dry Weight + 3/4" Sample (gm)	21746.26		
Total Dry Weight Sample (gm)	35396.8	J - Factor (Percent Finer than 3/4")	0.3856

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	6195.00	16.65	16.65	83.35	83.35
2"	50	6316.00	16.98	33.63	66.37	66.37
1 1/2"	37.5	3958.00	10.64	44.27	55.73	55.73
1"	25	3976.00	10.69	54.96	45.04	45.04
3/4"	19	2410.00	6.48	61.44	38.56	38.56
1/2"	12.5	134.98	12.74	12.74	87.26	33.65
3/8"	9.5	73.04	6.89	19.63	80.37	30.99
#4	4.75	211.36	19.94	39.57	60.43	23.30
#10	2	204.95	19.34	58.91	41.09	15.84
#20	0.85	129.30	12.20	71.11	28.89	11.14
#40	0.425	61.64	5.82	76.93	23.07	8.90
#60	0.25	95.99	9.06	85.99	14.01	5.40
#140	0.106	42.57	4.02	90.01	9.99	3.85
#200	0.075	12.99	1.23	91.23	8.77	3.38
Pan	-	92.92	8.77	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)	30-40
Project No.	2006-060-01	Sample No.	S-4
Lab ID	2006-060-01-26	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.

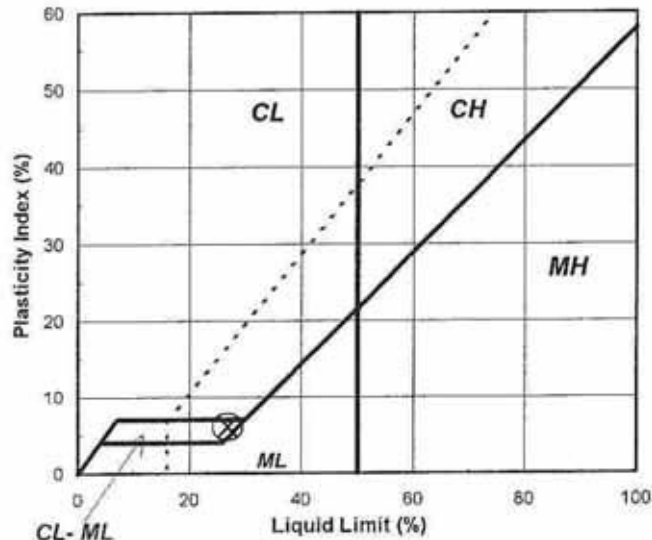
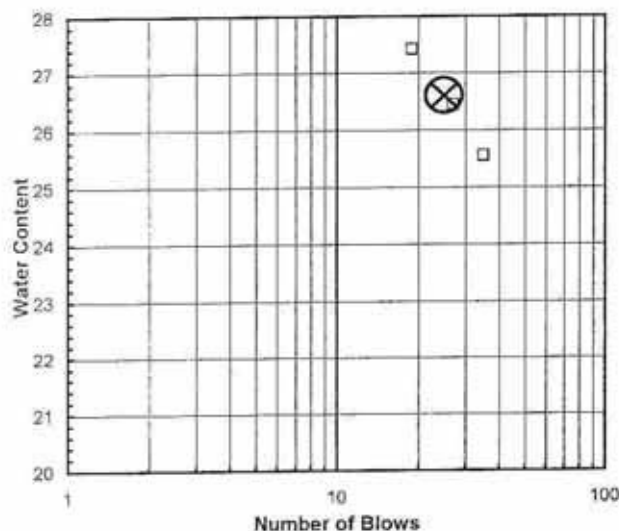
Liquid Limit Test	1	2	3	
Tare Number	O2	95	189	M U L T I P O I N T
Wt. of Tare & WS (gm)	27.96	28.78	36.29	
Wt. of Tare & DS (gm)	25.19	26.16	32.71	
Wt. of Tare (gm)	14.35	16.25	19.65	
Wt. of Water (gm)	2.8	2.6	3.6	
Wt. of DS (gm)	10.8	9.9	13.1	
Moisture Content (%)	25.6	26.4	27.4	
Number of Blows	35	27	19	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	240	245		Liquid Limit (%) 27
Wt. of Tare & WS (gm)	25.52	26.09		Plastic Limit (%) 21
Wt. of Tare & DS (gm)	24.54	25.05		Plasticity Index (%) 6
Wt. of Tare (gm)	19.88	20.03		USCS Symbol CL-ML
Wt. of Water (gm)	1.0	1.0		
Wt. of DS (gm)	4.7	5.0		
Moisture Content (%)	21.0	20.7	0.3	

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

Flow Curve

Plasticity Chart



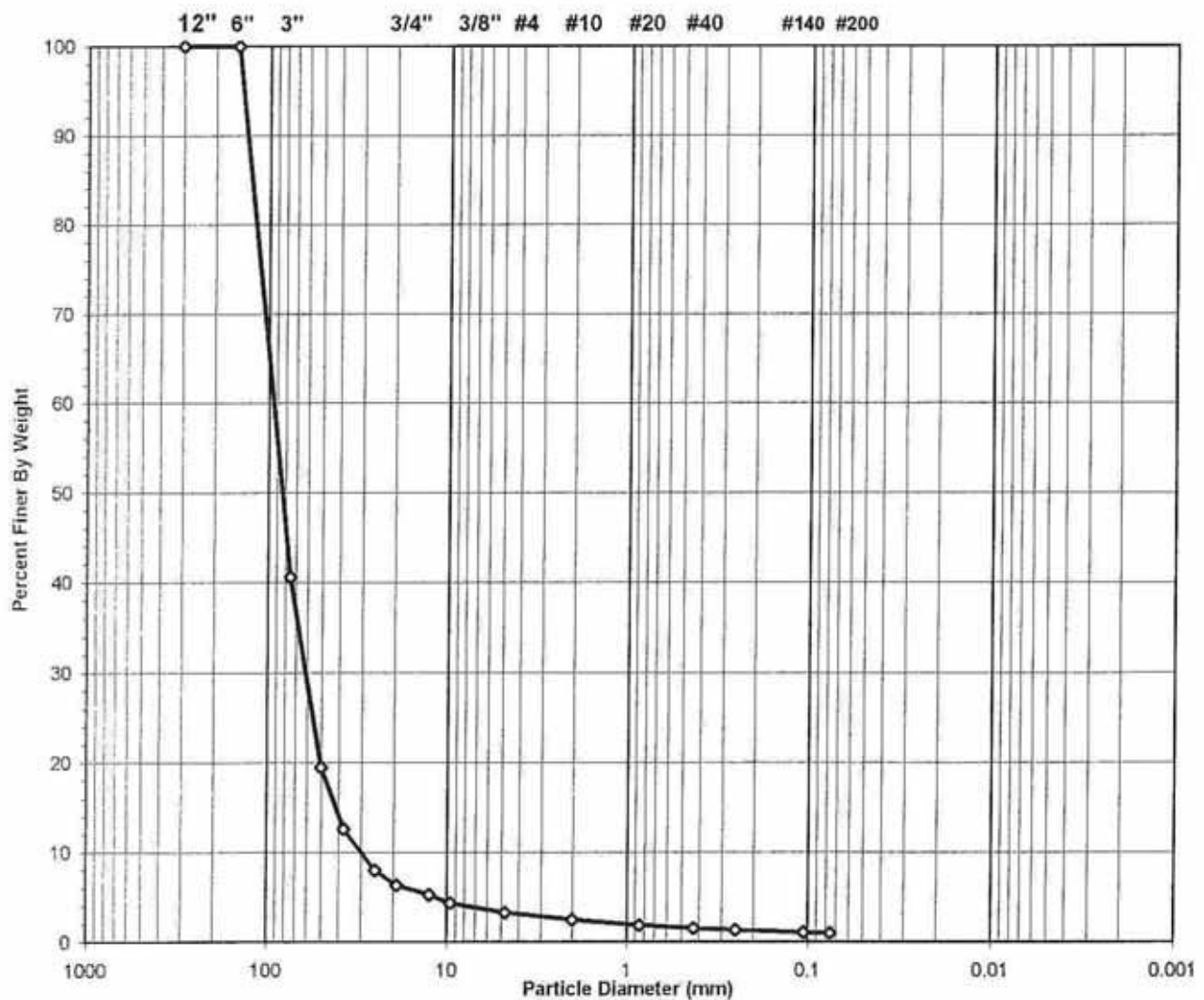
Tested By BS Date 2/24/06 Checked By *YJB* Date 2-27-06

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 2006-060-01-27

Boring No. TS-3
Depth (ft) 40-50
Sample No. S-5
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol **GP, TESTED**

USCS Classification **POORLY GRADED GRAVEL**

Tested By PC Date 2/23/06 Checked By *YKB* Date 2-28-06
page 1 of 2 DCN: CT-S3A DATE 6-25-98 REVISION 2 C:\MSOFFICE\Excel\PrintQ\U281.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 **2006-060-01-27**

Boring No. **TS-3**
Depth (ft) **40-50**
Sample No. **S-5**
Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	928	Tare No.	900
Wgt. Tare + Wet Specimen (gm)	925.10	Wgt. Tare + Wet Specimen (gm)	1116.30
Wgt. Tare + Dry Specimen (gm)	864.40	Wgt. Tare + Dry Specimen (gm)	1075.90
Weight of Tare (gm)	103.43	Weight of Tare (gm)	110.09
Weight of Water (gm)	60.70	Weight of Water (gm)	40.40
Weight of Dry Soil (gm)	760.97	Weight of Dry Soil (gm)	965.81
Moisture Content (%)	8.0	Moisture Content (%)	4.2

Wet Weight - 3/4" Sample (gm)	1792	Weight of the Dry Specimen (gm)	760.97
Dry Weight - 3/4" Sample (gm)	1659.6	Weight of minus #200 material (gm)	120.12
Wet Weight + 3/4" Sample (gm)	25584.00	Weight of plus #200 material (gm)	640.85
Dry Weight + 3/4" Sample (gm)	24556.79		
Total Dry Weight Sample (gm)	26216.4	J - Factor (Percent Finer than 3/4")	0.0633

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	16226.00	59.41	59.41	40.59	40.59
2"	50	5765.00 (*)	21.11	80.51	19.49	19.49
1 1/2"	37.5	1891.00	6.92	87.44	12.56	12.56
1"	25	1250.00	4.58	92.01	7.99	7.99
3/4"	19	452.00	1.65	93.67	6.33	6.33
1/2"	12.5	127.44	16.75	16.75	83.25	5.27
3/8"	9.5	109.85	14.44	31.18	68.82	4.36
#4	4.75	127.88	16.80	47.99	52.01	3.29
#10	2	98.07	12.89	60.87	39.13	2.48
#20	0.85	74.36 (**)	9.77	70.65	29.35	1.86
#40	0.425	40.24	5.29	75.93	24.07	1.52
#60	0.25	23.25	3.06	78.99	21.01	1.33
#140	0.106	29.97	3.94	82.93	17.07	1.08
#200	0.075	9.79	1.29	84.21	15.79	1.00
Pan	-	120.12	15.79	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)	40-50
Project No.	2006-060-01	Sample No.	S-5
Lab ID	2006-060-01-27	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.

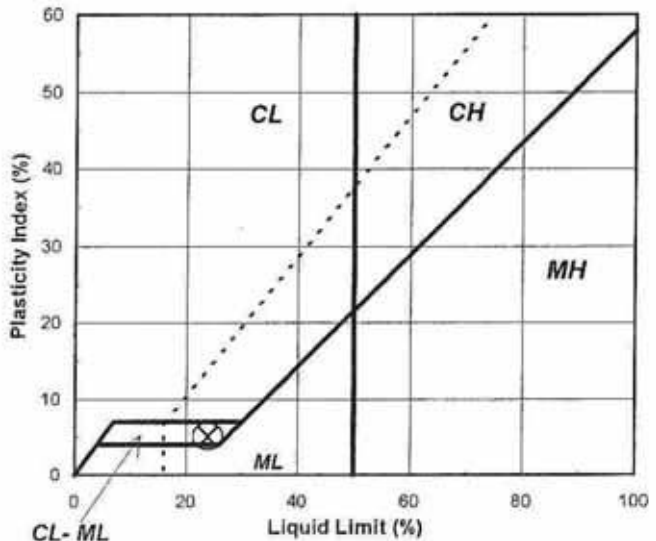
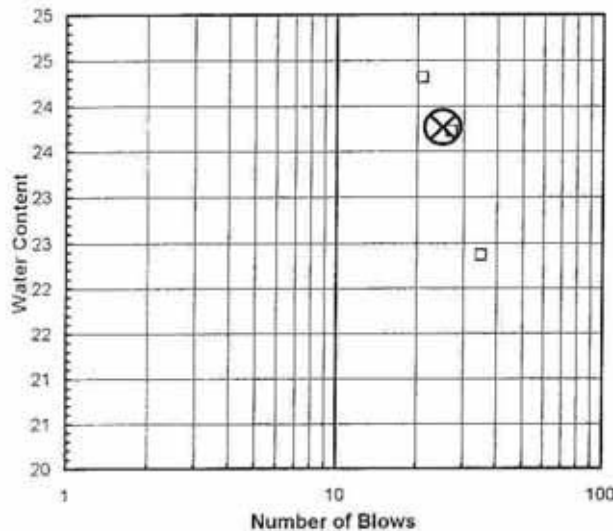
Liquid Limit Test	1	2	3	
Tare Number	119	194	226	MULTIPOINT
Wt. of Tare & WS (gm)	40.06	36.86	39.75	
Wt. of Tare & DS (gm)	35.97	32.99	35.50	
Wt. of Tare (gm)	17.68	16.67	18.02	
Wt. of Water (gm)	4.1	3.9	4.3	
Wt. of DS (gm)	18.3	16.3	17.5	
Moisture Content (%)	22.4	23.7	24.3	
Number of Blows	35	27	21	

Plastic Limit Test	1	2	Range	Test Results
Tare Number	232	259		Liquid Limit (%) 24
Wt. of Tare & WS (gm)	24.02	25.50		Plastic Limit (%) 19
Wt. of Tare & DS (gm)	23.03	24.18		Plasticity Index (%) 5
Wt. of Tare (gm)	17.91	17.36		USCS Symbol CL-ML
Wt. of Water (gm)	1.0	1.3		
Wt. of DS (gm)	5.1	6.8		
Moisture Content (%)	19.3	19.4	0.0	

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

Flow Curve

Plasticity Chart



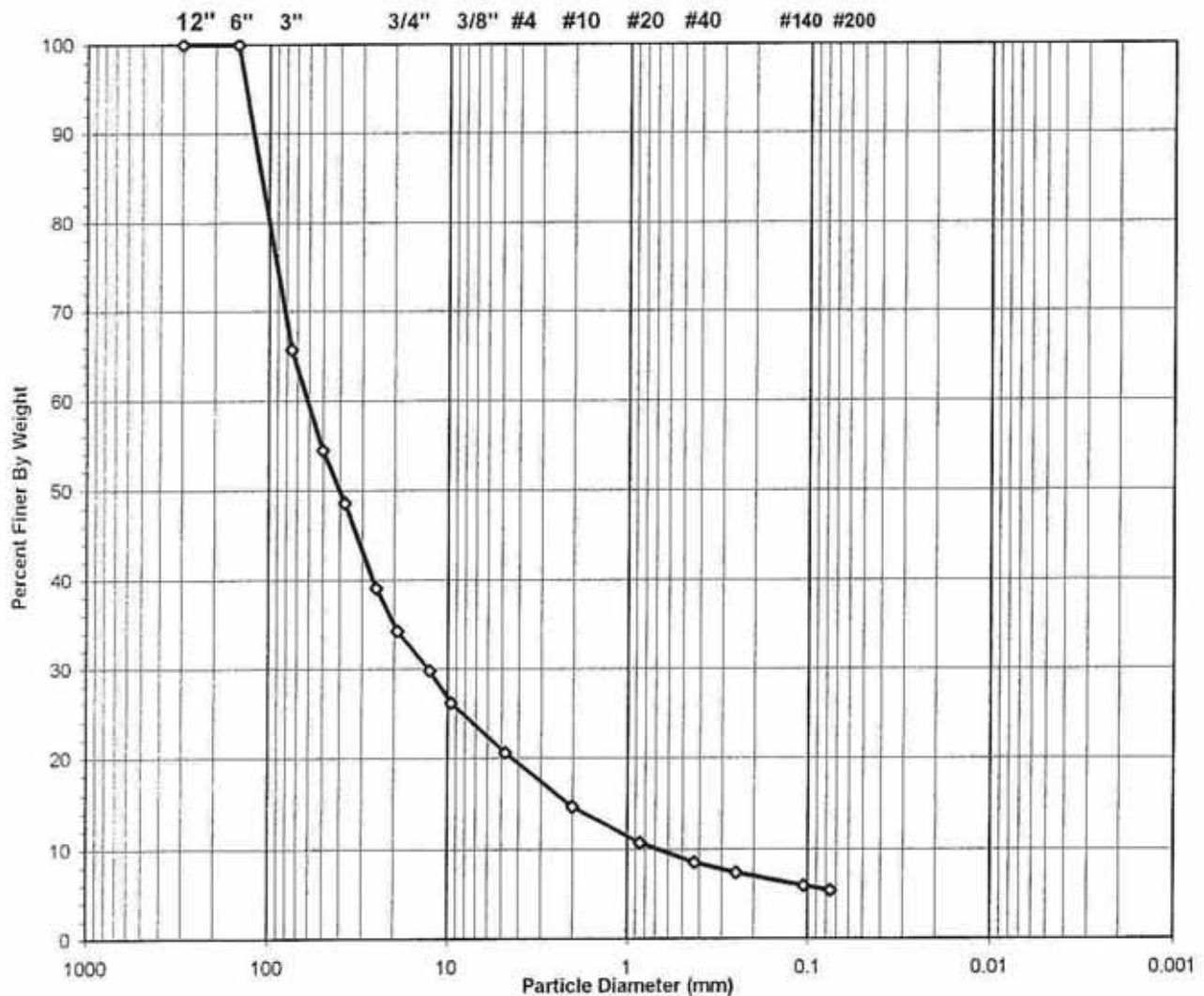
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SIEVE ANALYSIS
ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client PAUL C. RIZZO
Client Reference TAUM SAUK 06-3551
Project No. 2006-060-01
Lab ID 2006-060-01-28

Boring No. TS-3
Depth (ft) 50-60
Sample No. S-6
Soil Color REDDISH BROWN

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GM, TESTED

D60 = 61.0 CC = 3.9

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

D30 = 12.7 CU = 90.7

D10 = 0.7

Tested By PC

Date 2/23/06

Checked By KB

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 **2006-060-01-28**

Boring No. **TS-3**
 Depth (ft) **50-60**
 Sample No. **S-6**
 Soil Color **REDDISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1005	Tare No.	901
Wgt. Tare + Wet Specimen (gm)	1337.20	Wgt. Tare + Wet Specimen (gm)	1064.40
Wgt. Tare + Dry Specimen (gm)	1266.90	Wgt. Tare + Dry Specimen (gm)	1054.70
Weight of Tare (gm)	100.15	Weight of Tare (gm)	110.39
Weight of Water (gm)	70.30	Weight of Water (gm)	9.70
Weight of Dry Soil (gm)	1166.75	Weight of Dry Soil (gm)	944.31
Moisture Content (%)	6.0	Moisture Content (%)	1.0

Wet Weight - 3/4" Sample (gm)	20239	Weight of the Dry Specimen (gm)	1166.75
Dry Weight - 3/4" Sample (gm)	19088.8	Weight of minus #200 material (gm)	183.52
Wet Weight + 3/4" Sample (gm)	36945.00	Weight of plus #200 material (gm)	983.23
Dry Weight + 3/4" Sample (gm)	36569.36		
Total Dry Weight Sample (gm)	55658.2	J - Factor (Percent Finer than 3/4")	0.3430

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	19274.00	34.28	34.28	65.72	65.72
2"	50	6337.00	11.27	45.55	54.45	54.45
1 1/2"	37.5	3299.00	5.87	51.41	48.59	48.59
1"	25	5373.00	9.56	60.97	39.03	39.03
3/4"	19	2662.00	4.73	65.70	34.30	34.30
1/2"	12.5	152.98	13.11	13.11	86.89	29.80
3/8"	9.5	122.09	10.46	23.58	76.42	26.21
#4	4.75	190.74	16.35	39.92	60.08	20.60
#10	2	201.50	17.27	57.19	42.81	14.68
#20	0.85	134.16	11.50	68.69	31.31	10.74
#40	0.425	74.52	6.39	75.08	24.92	8.55
#60	0.25	39.08	3.35	78.43	21.57	7.40
#140	0.106	50.48	4.33	82.76	17.24	5.91
#200	0.075	17.68	1.52	84.27	15.73	5.39
Pan	-	183.52	15.73	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 **PC** Date **2/23/06** Checked By **YKB** Date **2-28-06**

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

Client	PAUL C. RIZZO	Boring No.	TS-3
Client Reference	TAUM SAUK 06-3551	Depth (ft)	50-60
Project No.	2006-060-01	Sample No.	S-6
Lab ID	2006-060-01-28	Visual Description	REDDISH BROWN SILT (Minus No. 40 sieve material, Airdried)

**NON - PLASTIC
MATERIAL**

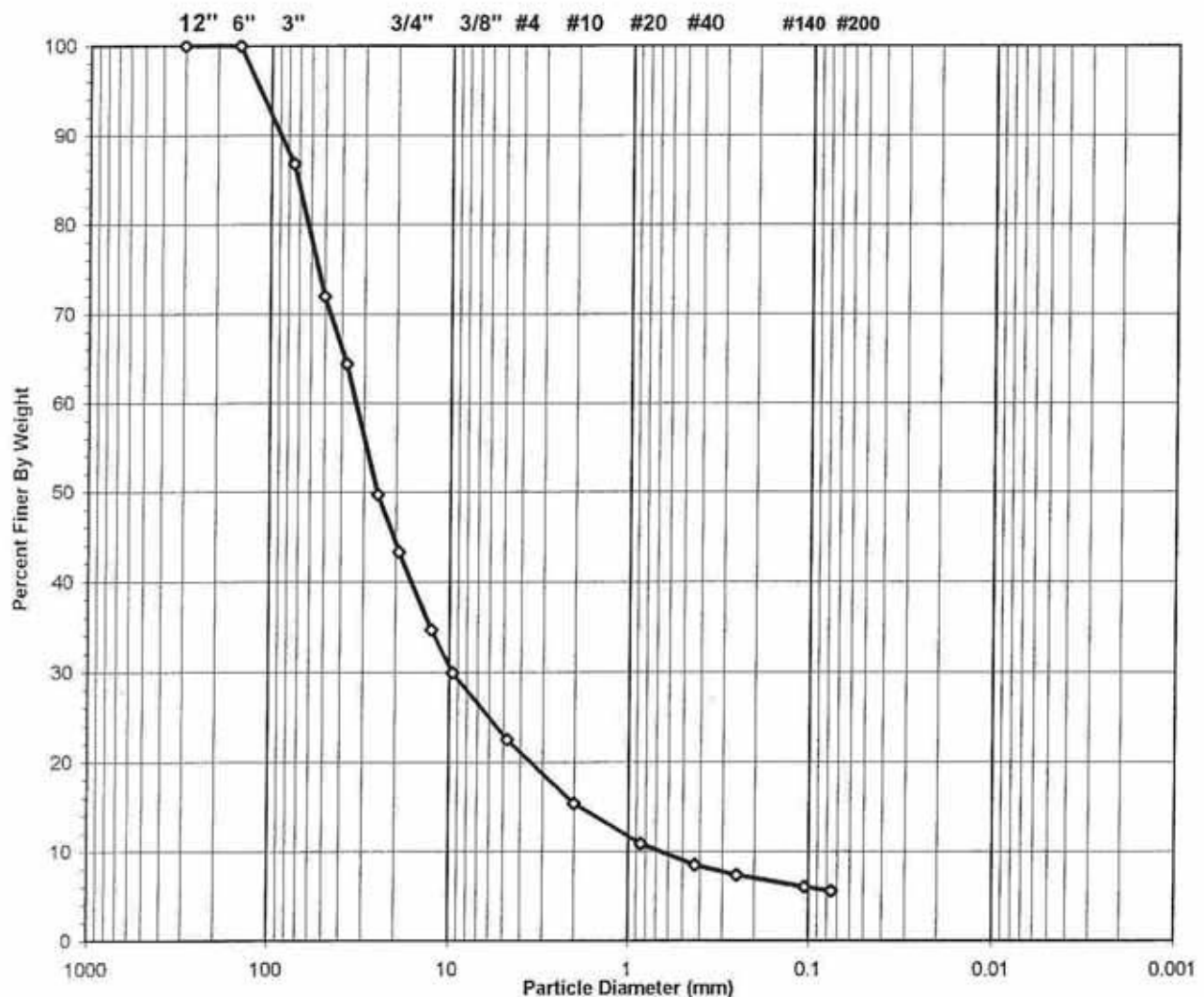
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page 1 of 1 DCN: CT-S4C DATE: 7-11-97 REVISION : 2 C:\MSOFFICE\Excel\Print\QU322.xls]Sheet1

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 2006-060-01-29

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

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol GP-GM, TESTED

D60 = 33.2 CC = 4.1

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

D30 = 9.5 CU = 49.7

D10 = 0.7

Tested By PC

Date 2/23/06

Checked By KB

Date 3-8-06