

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

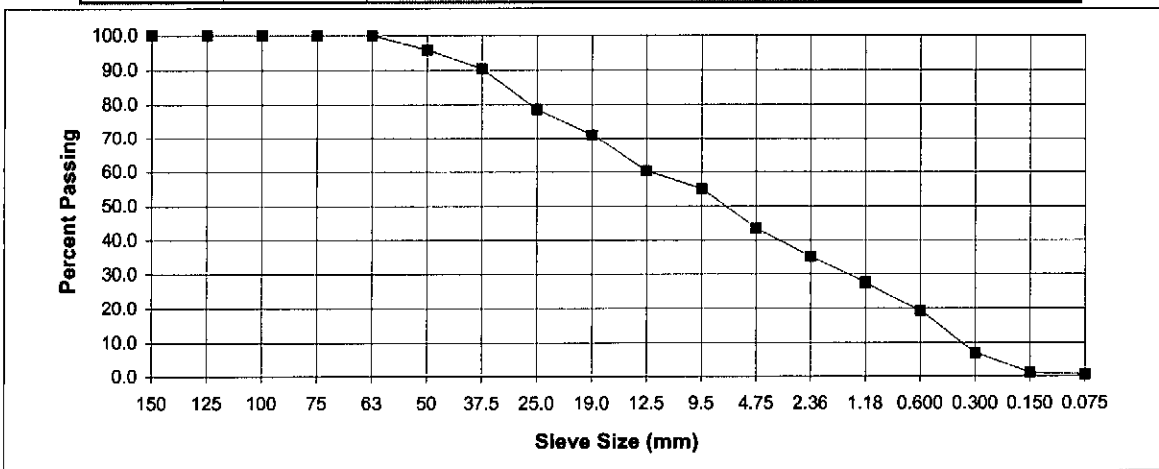
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|------------------------------|
| Sample: | TP 05-2 (Bag # 52873) |
|----------------|------------------------------|

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 4.1 | 95.9 | 7.3 | | | |
| 37.5 | 5.5 | 90.4 | 9.7 | | | |
| 25.0 | 11.7 | 78.6 | 20.7 | | | |
| 19.0 | 7.5 | 71.1 | 13.3 | | | |
| 12.5 | 10.8 | 60.3 | 19.0 | | | |
| 9.5 | 5.2 | 55.1 | 9.2 | | | |
| 4.75 | 11.8 | 43.4 | 20.8 | | | |
| 2.36 | 8.1 | 35.3 | | 18.6 | | |
| 1.18 | 7.8 | 27.5 | | 18.0 | | |
| 0.600 | 8.3 | 19.2 | | 19.1 | | |
| 0.300 | 12.3 | 6.9 | | 28.5 | | |
| 0.150 | 5.8 | 1.1 | | 13.4 | | |
| 0.075 | 0.5 | 0.6 | | 1.2 | | |
| PAN | 0.6 | | | 1.3 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 56.6%
Percent Sand (- 4.75 and finer) : 43.4%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

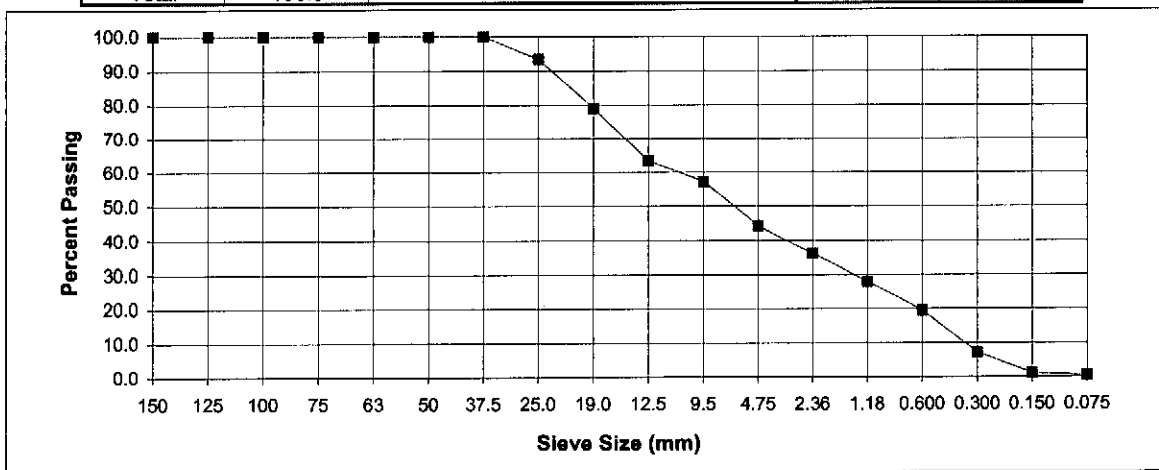
PROJECT: Aggregate Testing, Telegraph Pit

Sample: TP 05-02 Bag # 52873 (CRUSHED)

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 0.0 | 100.0 | 0.0 | | | |
| 37.5 | 0.0 | 100.0 | 0.0 | | | |
| 25.0 | 6.6 | 93.4 | 11.8 | | | |
| 19.0 | 14.3 | 79.1 | 25.7 | | | |
| 12.5 | 15.7 | 63.4 | 28.1 | | | |
| 9.5 | 6.2 | 57.2 | 11.0 | | | |
| 4.75 | 13.0 | 44.2 | 23.4 | | | |
| 2.36 | 8.2 | 36.0 | | 18.5 | | |
| 1.18 | 8.1 | 27.9 | | 18.3 | | |
| 0.600 | 8.5 | 19.4 | | 19.2 | | |
| 0.300 | 12.2 | 7.2 | | 27.6 | | |
| 0.150 | 6.1 | 1.1 | | 13.8 | | |
| 0.075 | 0.7 | 0.4 | | 1.5 | | |
| PAN | 0.4 | | | 1.0 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 55.8%
Percent Sand (- 4.75 and finer) : 44.2%

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

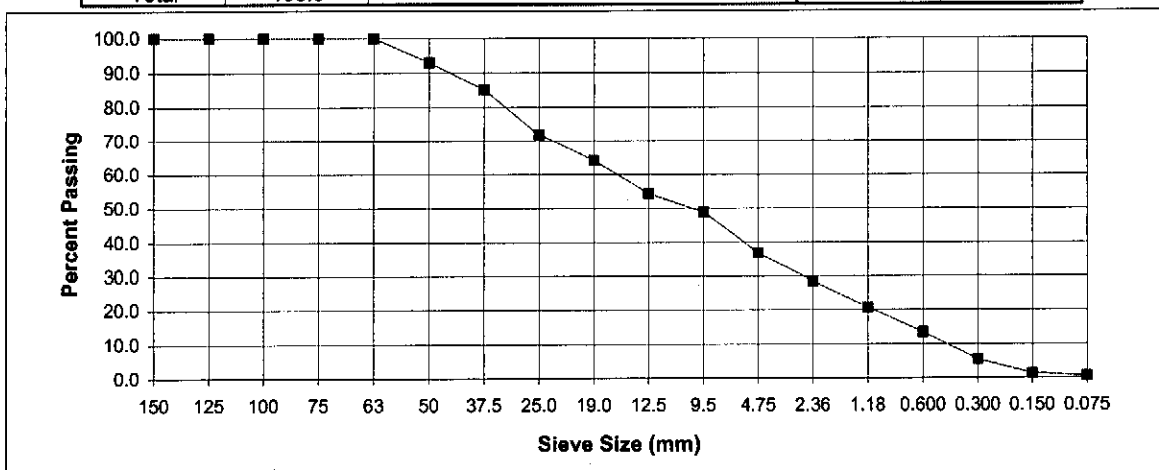
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|---------|-------------------------|
| Sample: | TP 05-06 (Bag # 52875) |
|---------|-------------------------|

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | |
| | | | + 4.75 | - 4.75 | |
| 150 | 0.0 | 100.0 | 0.0 | | |
| 125 | 0.0 | 100.0 | 0.0 | | |
| 100 | 0.0 | 100.0 | 0.0 | | |
| 75 | 0.0 | 100.0 | 0.0 | | |
| 63 | 0.0 | 100.0 | 0.0 | | |
| 50 | 7.0 | 93.0 | 11.1 | | |
| 37.5 | 8.0 | 85.0 | 12.6 | | |
| 25.0 | 13.2 | 71.9 | 20.9 | | |
| 19.0 | 7.8 | 64.1 | 12.3 | | |
| 12.5 | 9.8 | 54.3 | 15.5 | | |
| 9.5 | 5.5 | 48.8 | 8.6 | | |
| 4.75 | 12.0 | 36.9 | 19.0 | | |
| 2.36 | 8.3 | 28.5 | | 22.6 | |
| 1.18 | 7.9 | 20.7 | | 21.3 | |
| 0.600 | 7.2 | 13.5 | | 19.5 | |
| 0.300 | 8.1 | 5.4 | | 21.9 | |
| 0.150 | 4.1 | 1.3 | | 11.2 | |
| 0.075 | 0.6 | 0.6 | | 1.8 | |
| PAN | 0.6 | | | 1.7 | |
| Total | 100.0 | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 63.1%
Percent Sand (- 4.75 and finer) : 36.9%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

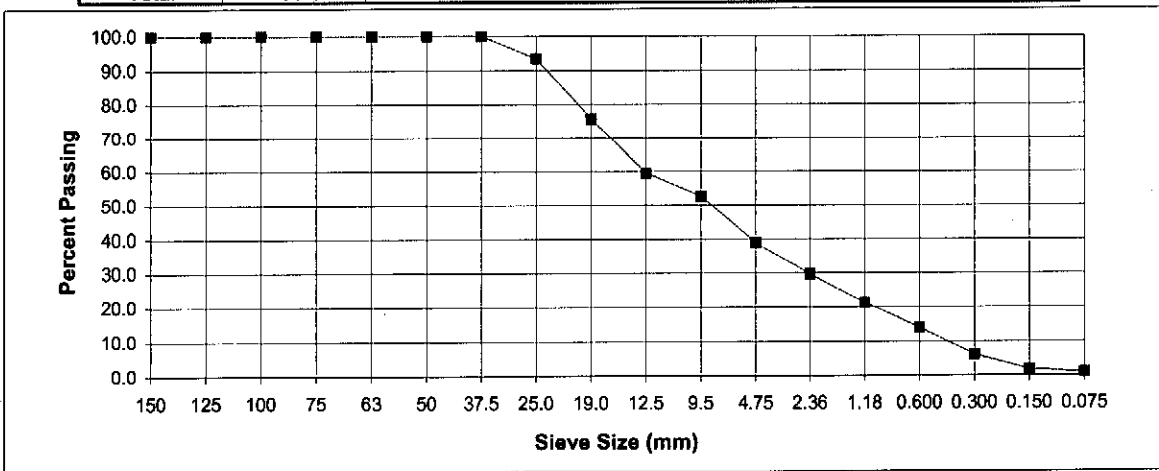
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|---|
| Sample: | TP 05-06 (Bag # 52875) Crushed |
|----------------|---|

DATE SAMPLED: **October 13, 2005**

SAMPLED BY: **S.L.**

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 0.0 | 100.0 | 0.0 | | | |
| 37.5 | 0.0 | 100.0 | 0.0 | | | |
| 25.0 | 6.6 | 93.4 | 10.8 | | | |
| 19.0 | 17.6 | 75.8 | 28.8 | | | |
| 12.5 | 16.3 | 59.5 | 26.6 | | | |
| 9.5 | 6.9 | 52.6 | 11.3 | | | |
| 4.75 | 13.8 | 38.8 | 22.5 | | | |
| 2.36 | 9.2 | 29.7 | | 23.6 | | |
| 1.18 | 8.5 | 21.2 | | 21.8 | | |
| 0.600 | 7.2 | 14.0 | | 18.5 | | |
| 0.300 | 8.0 | 6.0 | | 20.5 | | |
| 0.150 | 4.3 | 1.8 | | 11.0 | | |
| 0.075 | 0.7 | 1.1 | | 1.9 | | |
| PAN | 1.1 | | | 2.8 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 61.2%
Percent Sand (- 4.75 and finer) : 38.8%

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

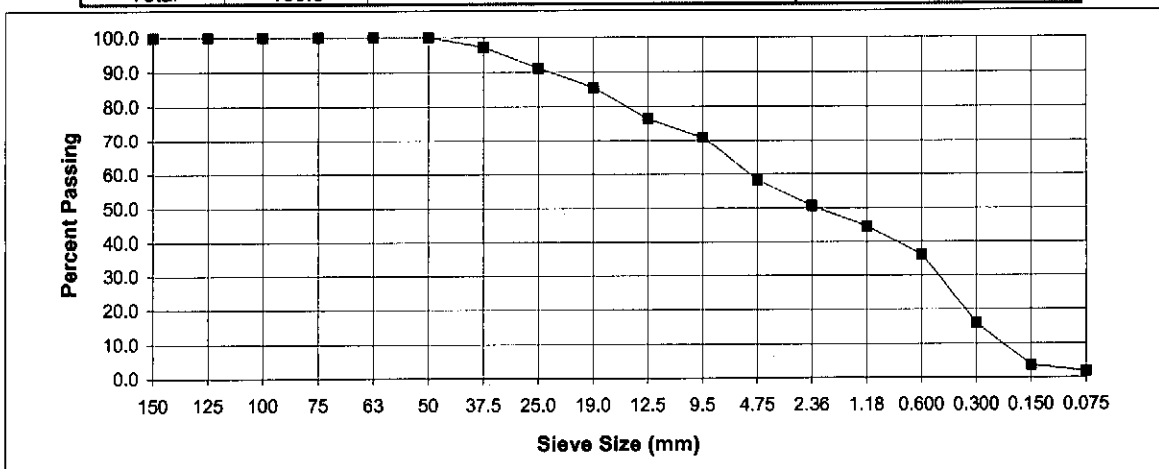
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|--------------------------------|
| Sample: | TP 05-09 (Bag # 52877) |
|----------------|--------------------------------|

DATE SAMPLED: **October 13, 2005**

SAMPLED BY: **S.L.**

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 0.0 | 100.0 | 0.0 | | | |
| 37.5 | 2.8 | 97.2 | 6.6 | | | |
| 25.0 | 6.1 | 91.1 | 14.7 | | | |
| 19.0 | 5.6 | 85.5 | 13.4 | | | |
| 12.5 | 9.2 | 76.4 | 21.9 | | | |
| 9.5 | 5.4 | 70.9 | 13.0 | | | |
| 4.75 | 12.7 | 58.2 | 30.4 | | | |
| 2.36 | 7.7 | 50.6 | | 13.2 | | |
| 1.18 | 6.1 | 44.4 | | 10.5 | | |
| 0.600 | 8.2 | 36.2 | | 14.1 | | |
| 0.300 | 20.3 | 15.9 | | 34.9 | | |
| 0.150 | 12.4 | 3.5 | | 21.3 | | |
| 0.075 | 1.7 | 1.8 | | 3.0 | | |
| PAN | 1.8 | | | 3.0 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 41.8%
Percent Sand (- 4.75 and finer) : 58.2%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

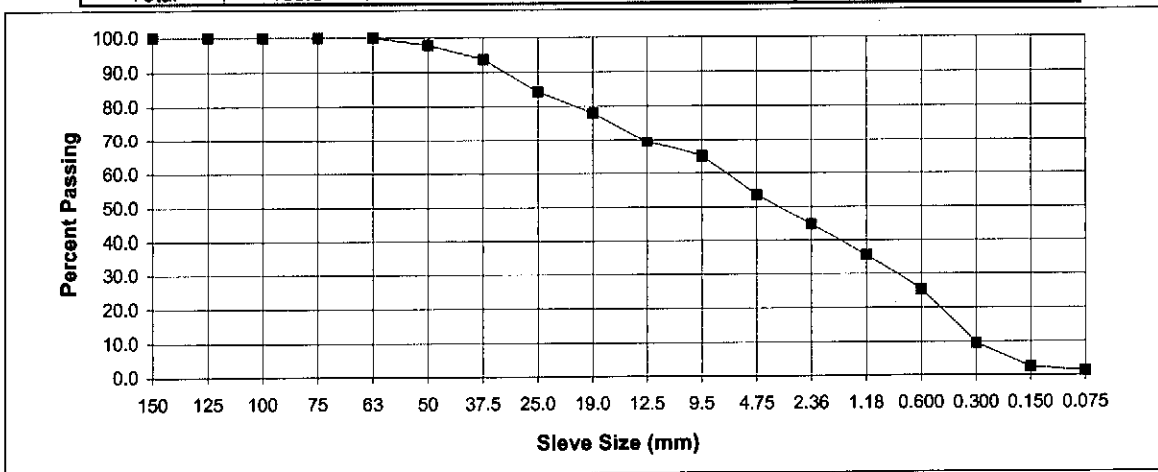
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|---------|------------------------|
| Sample: | TP 05-11 (Bag # 52879) |
|---------|------------------------|

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | MATERIAL SPECIFICATION : | | |
|-----------------|------------|-----------|--------------------------------------|--------------------------|--|--------|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | | | - 4.75 |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 2.3 | 97.7 | 4.9 | | | |
| 37.5 | 4.0 | 93.7 | 8.7 | | | |
| 25.0 | 9.5 | 84.2 | 20.4 | | | |
| 19.0 | 6.3 | 77.9 | 13.4 | | | |
| 12.5 | 8.4 | 69.5 | 18.1 | | | |
| 9.5 | 4.4 | 65.1 | 9.3 | | | |
| 4.75 | 11.7 | 53.4 | 25.1 | | | |
| 2.36 | 8.7 | 44.7 | | 16.3 | | |
| 1.18 | 9.0 | 35.7 | | 16.9 | | |
| 0.600 | 10.2 | 25.5 | | 19.1 | | |
| 0.300 | 15.9 | 9.6 | | 29.7 | | |
| 0.150 | 7.2 | 2.3 | | 13.5 | | |
| 0.075 | 1.1 | 1.3 | | 2.0 | | |
| PAN | 1.3 | | | 2.4 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 46.6%
Percent Sand (- 4.75 and finer) : 53.4%

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

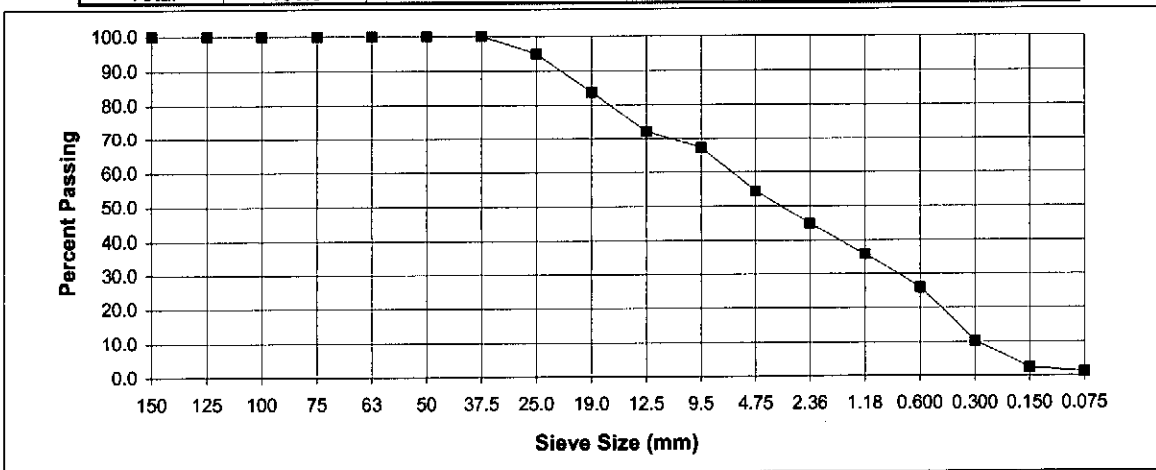
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|---|
| Sample: | TP 05-11 (Bag # 52879) Crushed |
|----------------|---|

DATE SAMPLED: **October 13, 2005**

SAMPLED BY: **S.L.**

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 0.0 | 100.0 | 0.0 | | | |
| 37.5 | 0.0 | 100.0 | 0.0 | | | |
| 25.0 | 5.1 | 94.9 | 11.2 | | | |
| 19.0 | 11.3 | 83.6 | 24.7 | | | |
| 12.5 | 11.4 | 72.2 | 25.0 | | | |
| 9.5 | 5.1 | 67.1 | 11.3 | | | |
| 4.75 | 12.7 | 54.4 | 27.8 | | | |
| 2.36 | 9.7 | 44.7 | | 17.8 | | |
| 1.18 | 8.8 | 35.9 | | 16.2 | | |
| 0.600 | 9.8 | 26.1 | | 18.0 | | |
| 0.300 | 15.9 | 10.2 | | 29.2 | | |
| 0.150 | 7.8 | 2.4 | | 14.4 | | |
| 0.075 | 1.2 | 1.2 | | 2.2 | | |
| PAN | 1.2 | | | 2.2 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 45.6%
Percent Sand (- 4.75 and finer) : 54.4%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

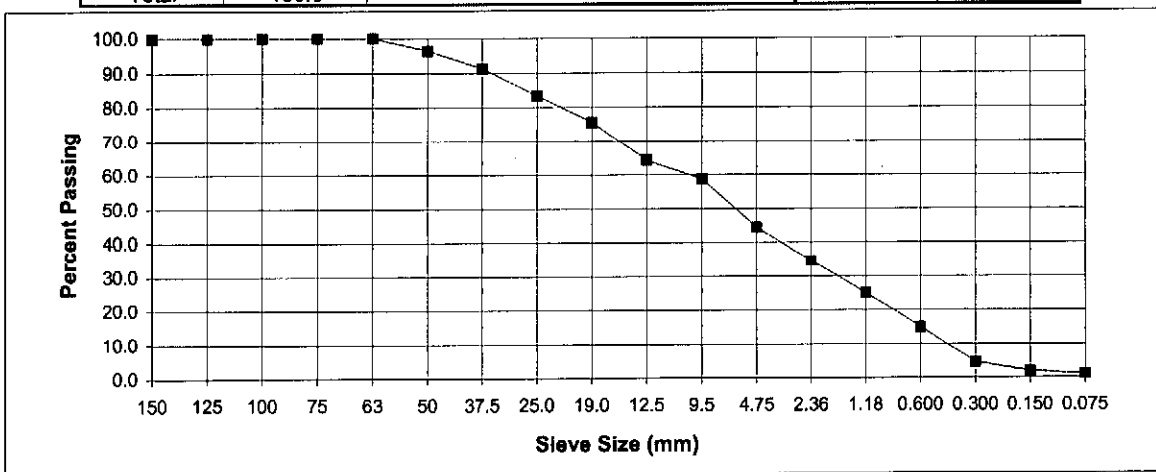
PROJECT: Aggregate Testing, Telegraph Pit

Sample: TP 05-14 (Bag # 52882)

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 3.6 | 96.4 | 6.5 | | | |
| 37.5 | 5.1 | 91.3 | 9.1 | | | |
| 25.0 | 7.9 | 83.4 | 14.2 | | | |
| 19.0 | 7.8 | 75.6 | 14.0 | | | |
| 12.5 | 11.3 | 64.3 | 20.3 | | | |
| 9.5 | 5.5 | 58.7 | 10.0 | | | |
| 4.75 | 14.4 | 44.3 | 25.8 | | | |
| 2.36 | 9.7 | 34.6 | | 22.0 | | |
| 1.18 | 9.4 | 25.2 | | 21.3 | | |
| 0.600 | 10.2 | 15.0 | | 23.0 | | |
| 0.300 | 10.3 | 4.6 | | 23.3 | | |
| 0.150 | 2.6 | 2.0 | | 5.9 | | |
| 0.075 | 0.9 | 1.1 | | 1.9 | | |
| PAN | 1.1 | | | 2.5 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 55.7%
Percent Sand (- 4.75 and finer) : 44.3%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P. Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

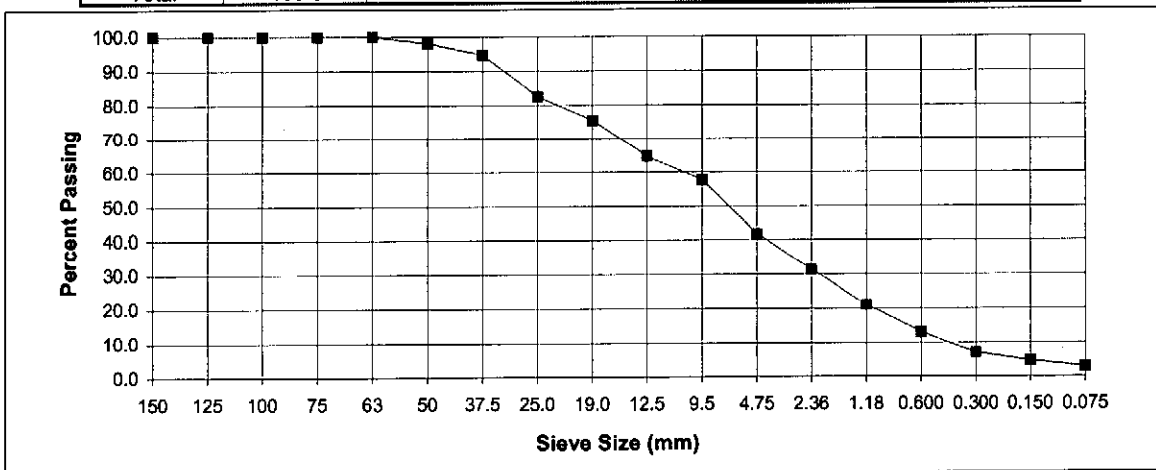
PROJECT: Aggregate Testing, Telegraph Pit

Sample: TP 05-17 (Bag # 52883)

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | |
| | | | + 4.75 | - 4.75 | |
| 150 | 0.0 | 100.0 | 0.0 | | |
| 125 | 0.0 | 100.0 | 0.0 | | |
| 100 | 0.0 | 100.0 | 0.0 | | |
| 75 | 0.0 | 100.0 | 0.0 | | |
| 63 | 0.0 | 100.0 | 0.0 | | |
| 50 | 2.0 | 98.0 | 3.4 | | |
| 37.5 | 3.3 | 94.7 | 5.7 | | |
| 25.0 | 12.2 | 82.5 | 21.0 | | |
| 19.0 | 7.0 | 75.5 | 12.0 | | |
| 12.5 | 10.8 | 64.7 | 18.6 | | |
| 9.5 | 7.0 | 57.7 | 12.0 | | |
| 4.75 | 15.9 | 41.8 | 27.3 | | |
| 2.36 | 10.4 | 31.4 | | 24.9 | |
| 1.18 | 10.3 | 21.0 | | 24.7 | |
| 0.600 | 8.0 | 13.0 | | 19.2 | |
| 0.300 | 6.0 | 7.0 | | 14.4 | |
| 0.150 | 2.4 | 4.6 | | 5.8 | |
| 0.075 | 1.7 | 2.9 | | 4.0 | |
| PAN | 2.9 | | | 6.9 | |
| Total | 100.0 | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 58.2%
Percent Sand (- 4.75 and finer) : 41.8%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

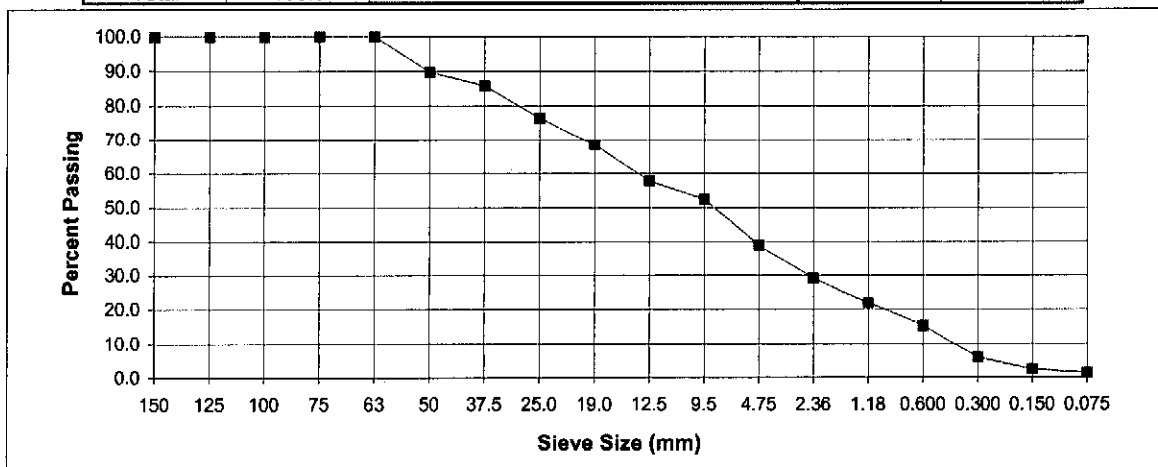
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|---------|------------------------|
| Sample: | TP 05-19 (Bag # 52881) |
|---------|------------------------|

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : | |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|--|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | | |
| | | | + 4.75 | - 4.75 | | |
| 150 | 0.0 | 100.0 | 0.0 | | | |
| 125 | 0.0 | 100.0 | 0.0 | | | |
| 100 | 0.0 | 100.0 | 0.0 | | | |
| 75 | 0.0 | 100.0 | 0.0 | | | |
| 63 | 0.0 | 100.0 | 0.0 | | | |
| 50 | 10.2 | 89.8 | 16.8 | | | |
| 37.5 | 4.0 | 85.7 | 6.6 | | | |
| 25.0 | 9.3 | 76.4 | 15.2 | | | |
| 19.0 | 8.0 | 68.4 | 13.2 | | | |
| 12.5 | 10.6 | 57.7 | 17.4 | | | |
| 9.5 | 5.4 | 52.3 | 8.8 | | | |
| 4.75 | 13.5 | 38.9 | 22.0 | | | |
| 2.36 | 9.7 | 29.1 | | 25.0 | | |
| 1.18 | 7.2 | 22.0 | | 18.5 | | |
| 0.600 | 6.7 | 15.2 | | 17.3 | | |
| 0.300 | 9.3 | 5.9 | | 24.0 | | |
| 0.150 | 3.5 | 2.4 | | 8.9 | | |
| 0.075 | 1.1 | 1.3 | | 2.9 | | |
| PAN | 1.3 | | | 3.4 | | |
| Total | 100.0 | | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 61.1%
Percent Sand (- 4.75 and finer) : 38.9%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P.Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

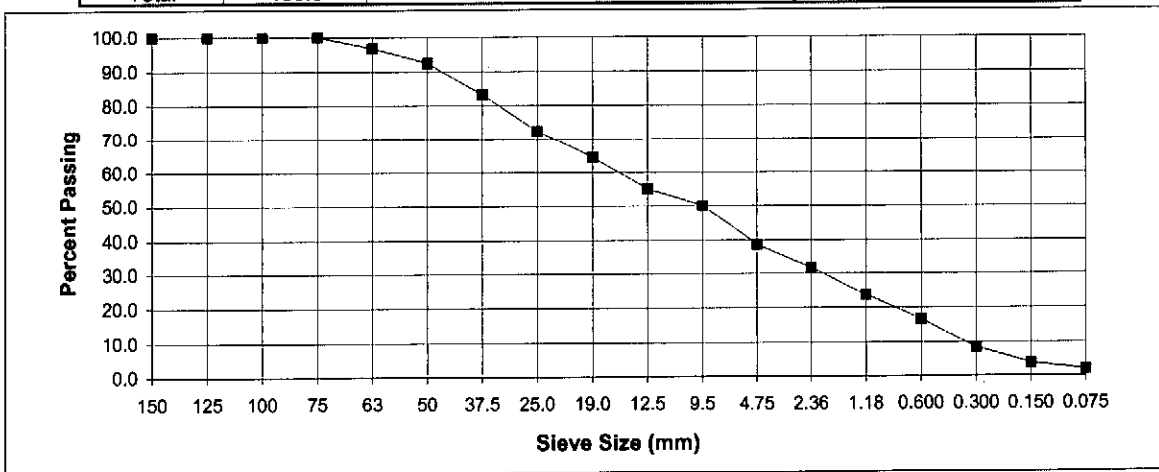
PROJECT: Aggregate Testing, Telegraph Pit

| | |
|---------|------------------------|
| Sample: | TP 05-20 (Bag # 52884) |
|---------|------------------------|

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | |
| | | | + 4.75 | - 4.75 | |
| 150 | 0.0 | 100.0 | 0.0 | | |
| 125 | 0.0 | 100.0 | 0.0 | | |
| 100 | 0.0 | 100.0 | 0.0 | | |
| 75 | 0.0 | 100.0 | 0.0 | | |
| 63 | 3.4 | 96.6 | 5.5 | | |
| 50 | 4.2 | 92.4 | 6.9 | | |
| 37.5 | 9.2 | 83.2 | 15.1 | | |
| 25.0 | 10.8 | 72.4 | 17.6 | | |
| 19.0 | 7.9 | 64.5 | 12.9 | | |
| 12.5 | 9.4 | 55.1 | 15.3 | | |
| 9.5 | 5.1 | 50.0 | 8.3 | | |
| 4.75 | 11.3 | 38.7 | 18.5 | | |
| 2.36 | 7.1 | 31.6 | | 18.4 | |
| 1.18 | 7.7 | 23.9 | | 19.9 | |
| 0.600 | 7.3 | 16.6 | | 18.8 | |
| 0.300 | 8.1 | 8.4 | | 21.1 | |
| 0.150 | 4.6 | 3.8 | | 12.0 | |
| 0.075 | 1.8 | 2.0 | | 4.5 | |
| PAN | 2.0 | | | 5.3 | |
| Total | 100.0 | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 61.3%
Percent Sand (- 4.75 and finer) : 38.7%

DRAFT

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P. Geo.

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE ASTM C136 & C117



October 28, 2005

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C. V3N 4N8

JOB NUMBER: 05-1416-172

ATTENTION: Mr. Joe Sam

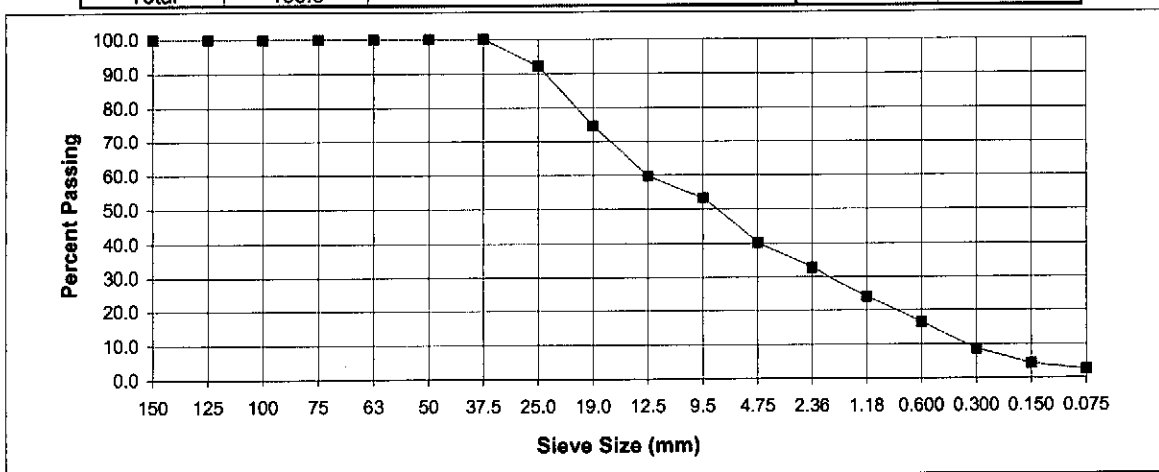
PROJECT: Aggregate Testing, Telegraph Pit

Sample: TP 05-20 (Bag # 52884) Crushed

DATE SAMPLED: October 13, 2005

SAMPLED BY: S.L.

| SIEVE ANALYSIS | | | | | MATERIAL SPECIFICATION : |
|-----------------|------------|-----------|--------------------------------------|--------|--------------------------|
| Sieve Size (mm) | % Retained | % Passing | Individual % Retained (Split values) | | |
| | | | + 4.75 | - 4.75 | |
| 150 | 0.0 | 100.0 | 0.0 | | |
| 125 | 0.0 | 100.0 | 0.0 | | |
| 100 | 0.0 | 100.0 | 0.0 | | |
| 75 | 0.0 | 100.0 | 0.0 | | |
| 63 | 0.0 | 100.0 | 0.0 | | |
| 50 | 0.0 | 100.0 | 0.0 | | |
| 37.5 | 0.0 | 100.0 | 0.0 | | |
| 25.0 | 7.8 | 92.2 | 13.1 | | |
| 19.0 | 17.5 | 74.7 | 29.3 | | |
| 12.5 | 15.0 | 59.7 | 25.1 | | |
| 9.5 | 6.3 | 53.3 | 10.6 | | |
| 4.75 | 13.1 | 40.2 | 22.0 | | |
| 2.36 | 7.5 | 32.7 | | 18.7 | |
| 1.18 | 8.6 | 24.0 | | 21.5 | |
| 0.600 | 7.5 | 16.5 | | 18.7 | |
| 0.300 | 7.9 | 8.6 | | 19.8 | |
| 0.150 | 4.3 | 4.3 | | 10.6 | |
| 0.075 | 1.7 | 2.6 | | 4.3 | |
| PAN | 2.6 | | | 6.5 | |
| Total | 100.0 | | | | |



Remarks: Percent Gravel (+ 4.75 and coarser) : 59.8%
Percent Sand (- 4.75 and finer) : 40.2%

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**SOUNDNESS OF AGGREGATE BY
USE OF MAGNESIUM SULFATE
ASTM C 88**



November 7, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C.
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

Date sampled: October 11/12, 2005

Sampled by: S. L.

| Sieve Fraction (mm) | Original Grading (%) | Mass per fraction before test (g) | Loss (%) | Weighted Loss (%) |
|-------------------------|----------------------|-----------------------------------|--------------|-------------------|
| 63 x 50 50 x 37.5 | -- | -- | -- | -- |
| 37.5 x 25 25 x 19 | 39.6 | 1511.6 | 0.9 | 0.4 |
| 19 x 12.5 12.5 x 9.5 | 37.9 | 999.7 | 3.1 | 1.2 |
| 9.5 x 4.75 | 22.5 | 300.9 | 4.1 | 0.9 |
| | 100.0 | | TOTAL | 2.5 |

Notes:

1. Used MgSO₄ solution and five cycles of immersion.

Reported by: 
R. Nurse

Reviewed by: _____
F. Shrimmer, P. Geo.

Date: _____

DRAFT

Notice: The test data given herein pertain to the sample provided, and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**SOUNDNESS OF AGGREGATE BY
USE OF MAGNESIUM SULFATE
ASTM C 88**



November 7, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C.
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

Date sampled: October 11/12, 2005

Sampled by: S. L.

| Sieve Fraction (mm) | Original Grading | Mass per fraction before test (g) | Loss (%) | Weighted Loss (%) |
|---------------------|------------------|-----------------------------------|--------------|-------------------|
| 9.5 × 4.75 | -- | - | -- | -- |
| 4.75 × 2.36 | 23.6 | 103.0 | 8.0 | 1.9 |
| 2.36 × 1.18 | 21.8 | 102.5 | 8.9 | 1.9 |
| 1.18 × 0.600 | 18.5 | 104.5 | 10.7 | 2.0 |
| 0.600 × 0.300 | 20.5 | 101.3 | 7.2 | 1.5 |
| 0.300 × 0.150 | 10.9 | -- | 0.0 | 0.0 |
| 0.150 × 0.075 | 1.9 | -- | 0.0 | 0.0 |
| < 0.075 | 2.8 | -- | 0.0 | 0.0 |
| | 100 | | TOTAL | 7.3 |

Notes:

- Used MgSO₄ solution and five cycles of immersion.

Reported by: 
R. Nurse

DRAFT

Reviewed by: _____ Date: _____
F. Shrimmer, P. Geo.

Notice: The test data given herein pertain to the sample provided, and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

RESISTANCE OF FINE AGGREGATE TO DEGRADATION BY ABRASION IN THE MICRO-DEVAL APPARATUS



November 2, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818-6th Street
BURNABY, BC
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

Date sampled: October 11/12, 2005

Sampled by: Client

| | |
|---|-------------|
| Source | -- |
| Grading | - 4.75mm |
| Mass of spheres (g) | 1251.2 |
| Mass of test sample (g) | 504.5 |
| Loss at conclusion of test (%) | 6.4 |
| Loss (%) for Control Sand, test completed October 26, 2005 | 16.0 |

Note:

Reported by: 
R. Nurse

Reviewed by: _____ DATE: _____
F. Shrimer, P. Geo.

DRAFT

**RESISTANCE OF COARSE AGGREGATE
TO DEGRADATION BY ABRASION IN THE
MICRO-DEVAL APPARATUS
ASTM D6928**



November 2, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818-6th Street
BURNABY, BC
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|


Date sampled: October 11/12, 2005

Sampled by: Client

| | |
|---------------------------------------|------------|
| Source | -- |
| Grading | 8.2 |
| Mass of spheres (g) | 5000.4 |
| Mass of test sample (g) | 1499.9 |
| Loss at conclusion of test (%) | 6.3 |

| | |
|--|-------------|
| Loss (%) for Control aggregate (Brechin Stone), test completed October 26, 2005 | 18.6 |
|--|-------------|

Note:

Reported by: 
R. Nurse

Reviewed by: _____
F. Shrimmer, P. Geo.

Date: _____

DRAFT

Notice: The test data given herein pertain to the sample provided, and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**FRACTURE COUNT
OF COARSE AGGREGATE
BCH-113**



November 2, 2005

JOB NUMBER: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C., V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-2, Lab Crushed |
|----------------|-----------------------------|

DATE SAMPLED: **October 11/12 2005**

SAMPLED BY: **Client**

METHOD A - FOR CRUSHED GRANULAR SURFACING AND BASE AGGREGATES
METHOD B - FOR CRUSHED PAVING AGGREGATES

METHOD A - COUNT (pcs)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURE a/(a+b) |
|----------------------|----------------|------------------|--------------|--------------------------|
| 37.5 x 25 | 23 | 26 | 49 | 46.9 % (25) |
| 25 x 19 | 131 | 89 | 220 | 59.5 % (19) |
| 19 x 12.5 | 89 | 126 | 215 | 41.4 % (12.5) |
| 12.5 x 9.5 | 83 | 123 | 206 | 40.3 % (9.5) |
| 9.5 x 4.75 | 140 | 191 | 331 | 42.3 % (4.75) |
| TOTAL | 466 | 555 | 1021 | 45.6 % FRACTURE A |

METHOD B - MASS (grams)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURED a/(a+b) |
|----------------------|----------------|------------------|--------------|------------------------|
| 19 X 13.2 | | | | % (13.2) |
| 13.2 X 9.5 | | | | % (9.5) |
| AVERAGE | | | | % FRACTURE B |

Notes:

Reported by: R. Nurse
R. Nurse

Reviewed by: F. Shrimmer, P. Geo.
F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**FRACTURE COUNT
OF COARSE AGGREGATE
BCH-I13**



November 2, 2005

JOB NUMBER: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C., V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

DATE SAMPLED: October 11/12 2005

SAMPLED BY: Client

METHOD A - FOR CRUSHED GRANULAR SURFACING AND BASE AGGREGATES
METHOD B - FOR CRUSHED PAVING AGGREGATES

METHOD A - COUNT (pcs)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURE a/(a+b) |
|----------------------|----------------|------------------|--------------|--------------------------|
| 37.5 x 25 | 23 | 6 | 29 | 79.3 % (25) |
| 25 x 19 | 79 | 37 | 116 | 68.1 % (19) |
| 19 x 12.5 | 60 | 101 | 161 | 37.3 % (12.5) |
| 12.5 x 9.5 | 60 | 149 | 209 | 28.7 % (9.5) |
| 9.5 x 4.75 | 247 | 707 | 954 | 25.9 % (4.75) |
| TOTAL | 469 | 1000 | 1469 | 31.9 % FRACTURE A |

METHOD B - MASS (grams)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURED a/(a+b) |
|----------------------|----------------|------------------|----------------|------------------------|
| 19 X 13.2 | | | | % (13.2) |
| 13.2 X 9.5 | | | | % (9.5) |
| | | | AVERAGE | % FRACTURE B |

Notes:

Reported by: R. Nurse

Reviewed by: F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**FRACTURE COUNT
OF COARSE AGGREGATE
BCH-I13**



November 2, 2005
JOB NUMBER: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C., V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|------------------------------|
| Sample: | TP 05-11, Lab Crushed |
|----------------|------------------------------|

DATE SAMPLED: **October 11/12 2005**

SAMPLED BY: **Client**

METHOD A - FOR CRUSHED GRANULAR SURFACING AND BASE AGGREGATES
METHOD B - FOR CRUSHED PAVING AGGREGATES

METHOD A - COUNT (pcs)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURE a/(a+b) |
|----------------------|----------------|------------------|--------------|--------------------------|
| 37.5 x 25 | 5 | 2 | 7 | 71.4 % (25) |
| 25 x 19 | 22 | 20 | 42 | 52.4 % (19) |
| 19 x 12.5 | 35 | 71 | 106 | 33.0 % (12.5) |
| 12.5 x 9.5 | 35 | 92 | 127 | 27.6 % (9.5) |
| 9.5 x 4.75 | 481 | 1010 | 1491 | 32.3 % (4.75) |
| TOTAL | 578 | 1195 | 1773 | 32.6 % FRACTURE A |

METHOD B - MASS (grams)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURED a/(a+b) |
|----------------------|----------------|------------------|----------------|------------------------|
| 19 X 13.2 | | | | % (13.2) |
| 13.2 X 9.5 | | | | % (9.5) |
| | | | AVERAGE | % FRACTURE B |

Notes:

Reported by: R. Nurse
R. Nurse

Reviewed by: F. Shrimmer, P. Geo.
F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**FRACTURE COUNT
OF COARSE AGGREGATE
BCH-I13**



November 2, 2005

JOB NUMBER: 05-1416-172

MINISTRY OF TRANSPORTATION
7818 Sixth Street
Burnaby, B.C., V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|------------------------------|
| Sample: | TP 05-20, Lab Crushed |
|----------------|------------------------------|

DATE SAMPLED: **October 11/12 2005**

SAMPLED BY: **Client**

METHOD A - FOR CRUSHED GRANULAR SURFACING AND BASE AGGREGATES
METHOD B - FOR CRUSHED PAVING AGGREGATES


METHOD A - COUNT (pcs)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURE a/(a+b) |
|----------------------|----------------|------------------|--------------|--------------------------|
| 37.5 x 25 | 12 | 5 | 17 | 70.6 % (25) |
| 25 x 19 | 49 | 16 | 65 | 75.4 % (19) |
| 19 x 12.5 | 73 | 76 | 149 | 49.0 % (12.5) |
| 12.5 x 9.5 | 53 | 90 | 143 | 37.1 % (9.5) |
| 9.5 x 4.75 | 604 | 879 | 1483 | 40.7 % (4.75) |
| TOTAL | 791 | 1066 | 1857 | 42.6 % FRACTURE A |

METHOD B - MASS (grams)

| AGGREGATE SIZE mm | FRACTURED a | UNFRACTURED b | TOTAL a+b | % FRACTURED a/(a+b) |
|----------------------|----------------|------------------|----------------|------------------------|
| 19 X 13.2 | | | | % (13.2) |
| 13.2 X 9.5 | | | | % (9.5) |
| | | | AVERAGE | % FRACTURE B |

Notes:

Reported by: 
R. Nurse

Reviewed by: _____
F. Shrimmer, P. Geo.

DRAFT

Notice: The test data given herein pertain to the sample provided and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**SPECIFIC GRAVITY AND ABSORPTION
OF COARSE AGGREGATE
ASTM C 127**



November 2, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818-6th Street
BURNABY, BC
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit


| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

Date sampled: October 11/12, 2005

Sampled by: Client

| Trial No. | Relative Density (dry basis) | Relative Density (SSD basis) | Apparent Relative Density | Absorption (%) |
|----------------|---------------------------------|---------------------------------|------------------------------|-------------------|
| 1 | 2.796 | 2.818 | 2.859 | 0.79 |
| 2 | 2.804 | 2.822 | 2.856 | 0.65 |
| 3 | 2.814 | 2.831 | 2.864 | 0.62 |
| AVERAGE | 2.804 | 2.824 | 2.860 | 0.69 |

Notes:

Reported by: 
R. Nurse

Reviewed by: _____

Date: _____

DRAFT

Notice: The test data given herein pertain to the sample provided, and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

**SPECIFIC GRAVITY AND ABSORPTION
OF FINE AGGREGATE
ASTM C 128**



November 2, 2005
Job Number: 05-1416-172

MINISTRY OF TRANSPORTATION
7818-6th Street
BURNABY, BC
V3N 4N8

ATTENTION: Mr. Joe Sam

PROJECT: Aggregate Testing, Telegraph Pit

| | |
|----------------|-----------------------------|
| Sample: | TP 05-6, Lab Crushed |
|----------------|-----------------------------|

Date sampled: October 11/12, 2005

Sampled by: Client

| Trial No. | Relative Density (dry basis) | Relative Density (SSD basis) | Apparent Relative Density | Absorption (%) |
|----------------|---------------------------------|---------------------------------|------------------------------|-------------------|
| 1 | 2.701 | 2.736 | 2.799 | 1.29 |
| 2 | 2.702 | 2.734 | 2.792 | 1.2 |
| 3 | 2.703 | 2.735 | 2.793 | 1.19 |
| AVERAGE | 2.702 | 2.735 | 2.795 | 1.23 |

Notes:

Reported by: 
R. Nurse

DRAFT

Reviewed by: _____

Date: _____

Notice: The test data given herein pertain to the sample provided, and may not be applicable to material from other production zones. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

GOLDER ASSOCIATES LTD., Unit B, 12330 - 88th Avenue, Surrey, B.C. Canada V3W 3J6 Tel: 604-591-6616 Fax: 604-591-6608