



MEMO

DATE: November 5, 2013
FROM: Brian Lutke
TO: James Hallisey
RE: Fitzsimmons Land Slip Survey Summary – October 2013 Survey

FILE: 521

R.B. Brown Land Surveying Ltd. completed the Fitzsimmons land slip survey on October 15th, 2013 (attached for your information). In 2005, the *Survey Period* was established as a one-year-reoccurring-window. In 2013 the elapsed time between surveys was 340 days, with the previous survey being completed on November 9th, 2012.

***Observations**

Over the *Survey Period* the average recorded movements of the slide mass are only very minor in scale. The largest documented movements for the northerly, easterly and elevation directions were all recorded at survey point IP4055, as follows:

- North Position : 30mm
- Easterly Position: 8mm
- Elevation Change: 71mm

The average movement across all eight survey points was recorded as follows:

- North Position: 12mm
- East Position: 13mm
- Elevation Change: 23mm

Conclusion

The 2013 survey results indicate that the study area has an average movement of less than 25mm across each of the 10 control points. The scale of this recorded movement is well below the historical average noted during the previous Survey Periods of 2005 thru 2011. Given the predictable movement recorded in this recent survey, it is reasonable to retain the Survey Period duration as one year. The next monitoring survey should be completed in September 2014.

In 2012, our surveyor recommended updating the extent of the slide boundary to better reflect the current state of the slump. The last time the slide boundary was surveyed was in 1991. Last year's assessment was there would be no value in commissioning that additional field work at that time and with no significant movement from these survey locations over the past year I see no current reasoning to alter that opinion.

Regards,
Brian

* The accumulated movement graphs for each control point are located at:
T:\Fitzsimmons Slip Photos & Data\Fitz Slip Survey Data - 2013.xlsx

SKETCH PLAN SHOWING LOCATION OF REBAR CONTROL ON FITZSIMMONS SLIDE, WHISTLER MOUNTAIN, WHISTLER, BC

SCALE 1 : 2500



OCTOBER 15, 2013 VALUES

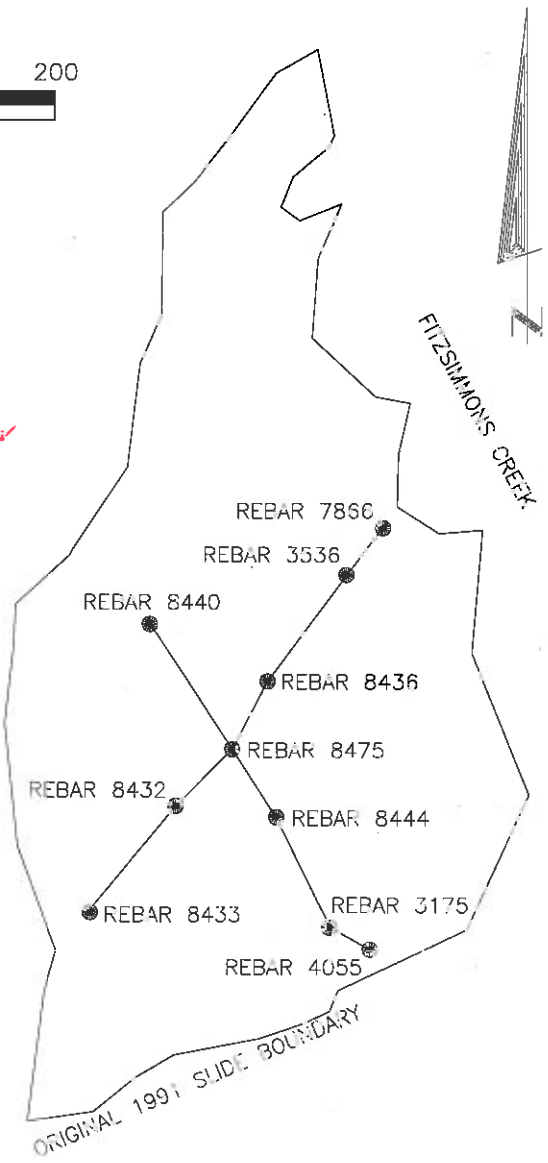
POINT	NORTHING	EASTING	ELEV	DESC
2013_01	48934.996	4512.813	958.024	IP 8440 ✓
2013_2	48892.044	4541.376	960.039	IP 8475 ✓
2013_3	48868.741	4556.502	961.194	IP 8444 ✓
2013_4	48830.940	4575.145	962.221	IP 3175 ✓
2013_5	48823.238	4539.096	962.656	IP 4055 ✓
2013_6	48838.169	4493.071	985.811	IP 8433 8443 ✓
2013_7	48872.491	4521.436	970.352	IP 8432 ✓
2013_8	48915.353	4553.594	951.288	IP 8436 ✓
2013_9	48950.263	4579.846	936.549	IP 3536 ✓
2013_10	48968.034	4593.391	933.446	IP 7866 ✓

2012-2013

NORTHING	EASTING	ELEV	HORIZONTAL DISTANCE	DESC
-0.030	-0.008	0.071	0.031	IP 4055 ✓
0.003	-0.012	0.021	0.013	IP 8444 ✓
0.001	-0.017	0.025	0.017	IP 8475 ✓
0.001	-0.038	0.043	0.038	IP 8440 ✓
-0.009	-0.012	0.019	0.015	IP 3175 ✓
-0.025	0.004	0.025	0.026	IP 8443 ✓
0.024	-0.010	-0.009	0.026	IP 8432 ✓
0.025	-0.024	-0.007	0.035	IP 8436 ✓
-0.001	-0.003	-0.001	0.003	IP 7866 ✓
-0.003	-0.005	-0.008	0.006	IP 3536 ✓

ORIGINAL-2013

NORTHING	EASTING	ELEV	HORIZONTAL DISTANCE	AVG. PER YEAR	DESC
-4.175	-4.795	6.330	6.358	0.289	IP 4055
-7.043	-6.539	6.408	9.610	0.437	IP 8444
-7.211	-6.860	5.982	9.353	0.452	IP 8475
-7.354	-3.880	5.855	10.071	0.458	IP 8440
-0.025	-0.023	-0.279	0.034	0.002	IP 3175
-14.807	-9.985	10.750	17.694	0.804	IP 8443
-7.128	-6.610	6.037	9.725	0.442	IP 8432
-7.542	-6.548	6.034	9.988	0.454	IP 8436
-2.016	-1.376	0.827	2.441	0.111	IP 7866
0.003	0.005	0.008	0.006	0.000	IP 3536



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THIS SKETCH PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE AND IS CERTIFIED CORRECT.

THIS PLAN WAS PREPARED FOR
Resort Municipality Of Whistler

This 15th Day of October, 2013.

R. B. Brown Land Surveying Ltd.
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THE INTENDED PLOT SIZE OF THIS PLAN IS 273mm IN HEIGHT BY 216mm IN WIDTH (ANSI A SIZE)