



**FOUNDATION INVESTIGATION REPORT
SWAMP AND HIGH FILL CROSSINGS**

for

**HIGHWAY 69 FOUR-LANING FOR 21.5 KM
FROM 4.5 KM NORTH OF HIGHWAY 64
TO 8.7 KM NORTH OF HIGHWAY 637
G.W.P. 5218-06-00
DISTRICT 54, SUDBURY, ONTARIO**

***PHASE 2: STA. 15+180 TO 22+346.5, TOWNSHIP OF SERVOS
STA. 10+000 TO 11+300, TOWNSHIP OF BURWASH***

VOLUME 4

PETO MacCALLUM LTD.
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Distribution:

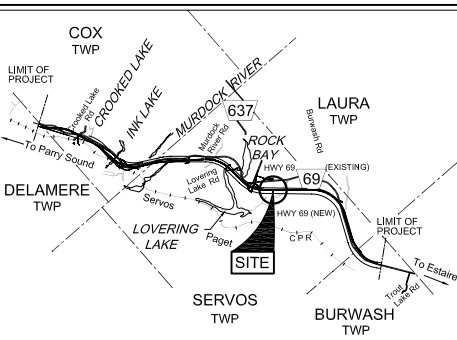
- 3 cc: AECOM for distribution to MTO, Project
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PML Ref.: 06TF053B
Index No.: 686FIR
Geocres No.: 41I-231
January 27, 2009



APPENDIX C

Drawings 501-1 to 512-1 – Borehole Locations and Soil Strata



LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Feb 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

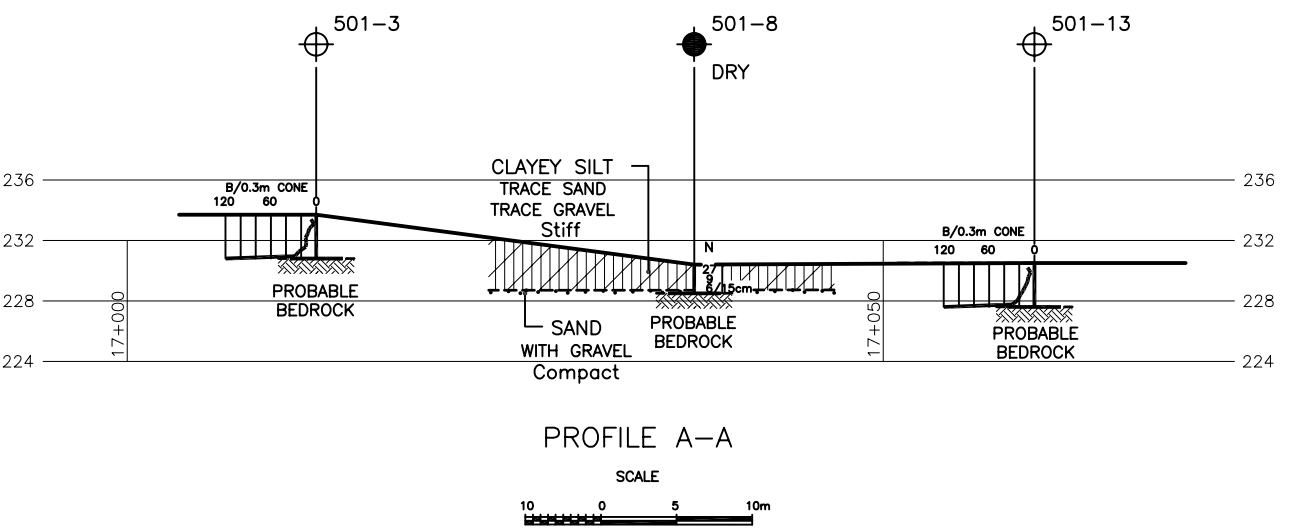
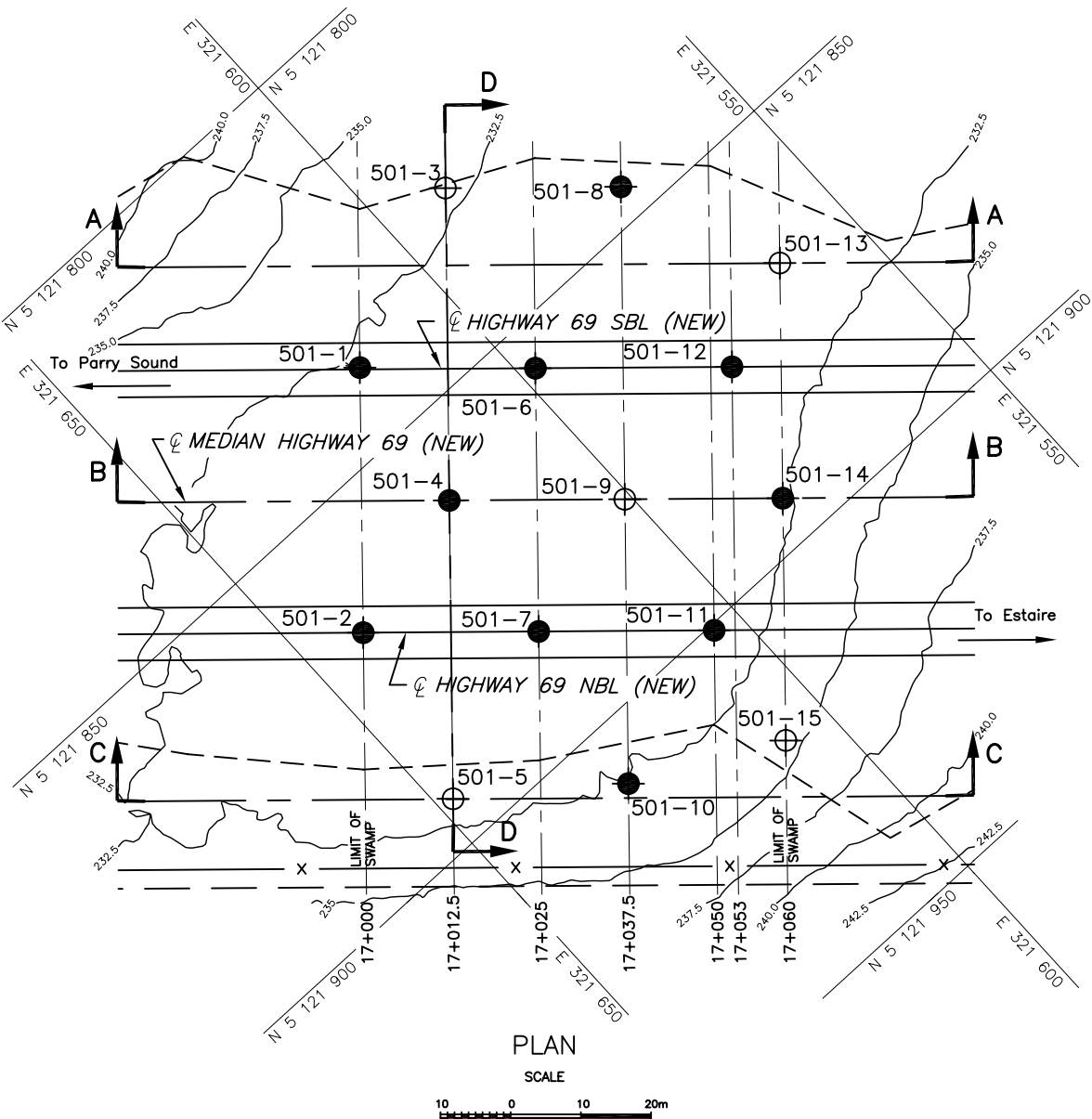
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
501-1	232.3	17+000	19.0m Lt.
501-2	231.5	17+000	18.8m Rt.
501-3	233.7	17+012.5	44.5m Lt.
501-4	231.4	17+012.5	CL
501-5	231.6	17+012.5	42.5m Rt.
501-6	230.9	17+025	18.8m Lt.
501-7	231.3	17+025	18.8m Rt.
501-8	230.4	17+037.5	44.5m Lt.
501-9	231.2	17+037.5	CL
501-10	232.3	17+037.5	40.5m Rt.
501-11	232.2	17+050	18.8m Rt.
501-12	231.5	17+053	18.8m Lt.
501-13	230.5	17+060	33.5m Lt.
501-14	233.2	17+060	CL
501-15	234.8	17+060	34.5m Rt.

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

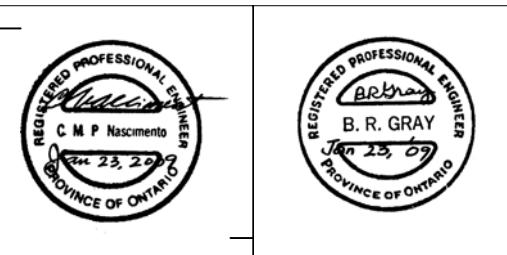
Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	501-1

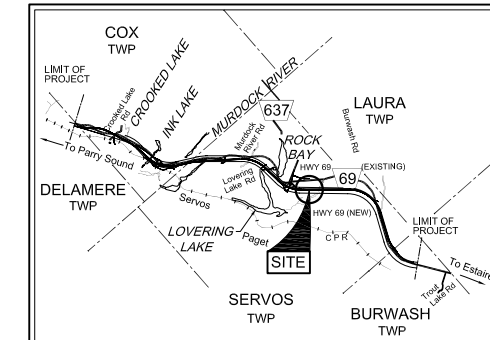


NOTES:

- REFER TO DRAWING 501-2 FOR SECTIONS B-B, C-C AND D-D.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



KEY PLAN
SCALE
2 0 2 4 6 km

LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Feb 2007
- Head
- ARTESIAN WATER
- Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 501-1 FOR DETAILS.			

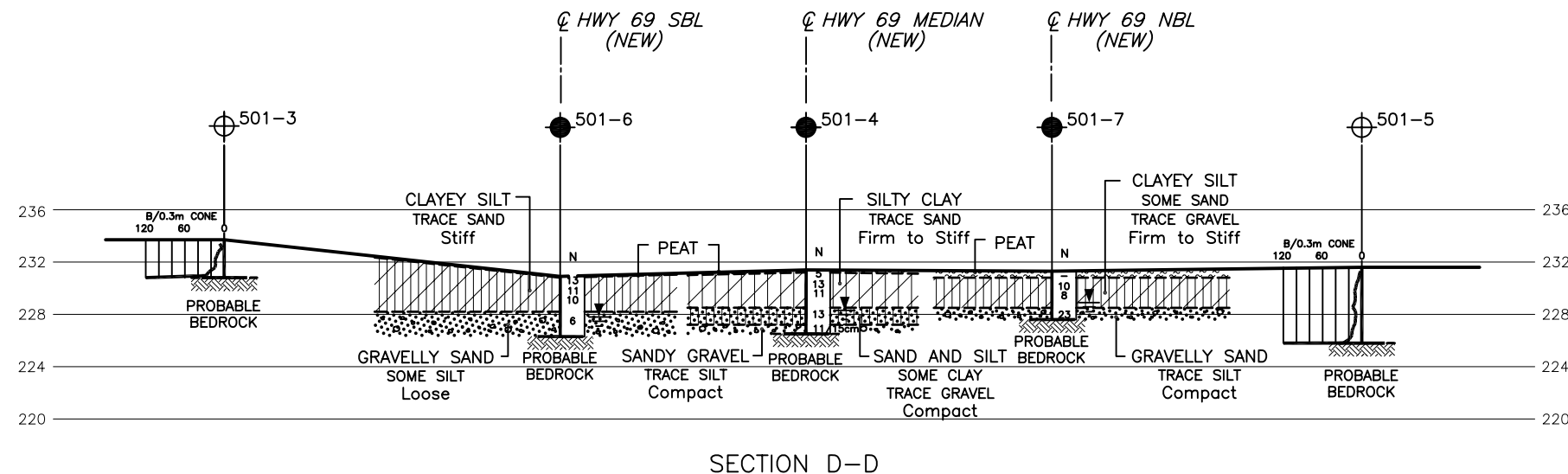
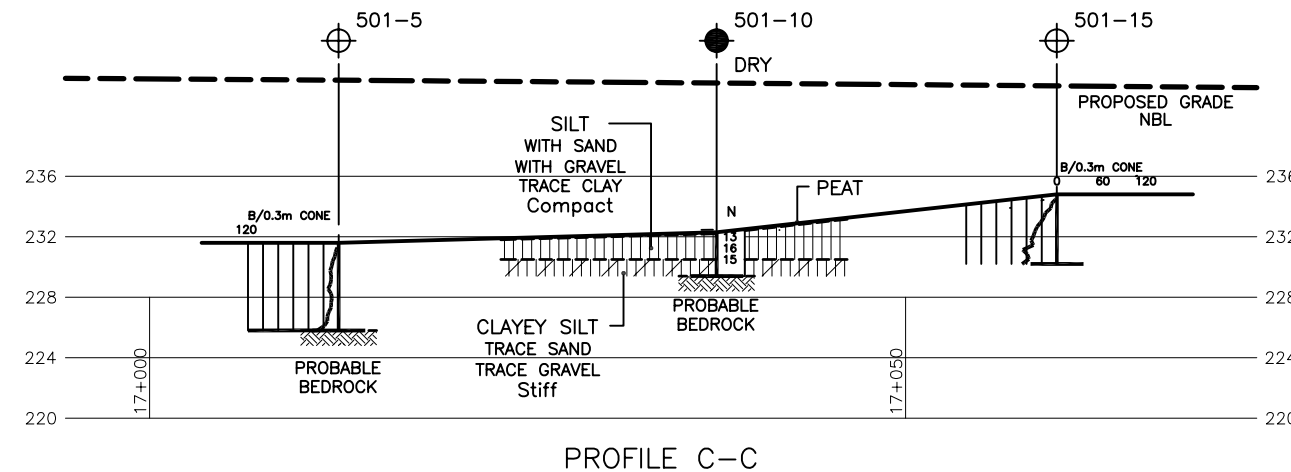
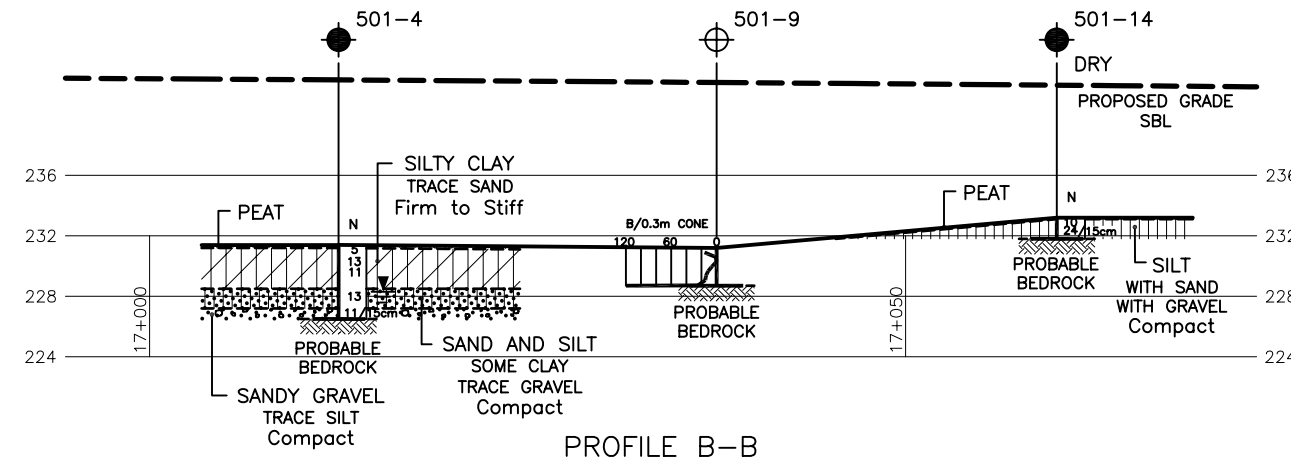
NOTE

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	CHECKED	GD	DATE	JAN. 23, 2009	SITE	---	DIST	54
SUBM'D	GD	CHECKED	CN	APPROVED	BRG	DWG	501-2		

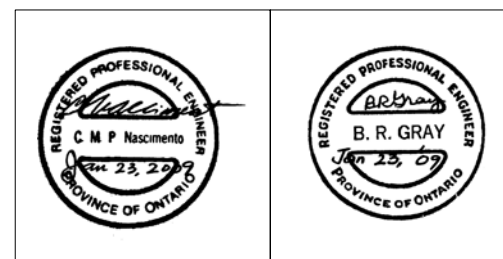


SECTION D-D

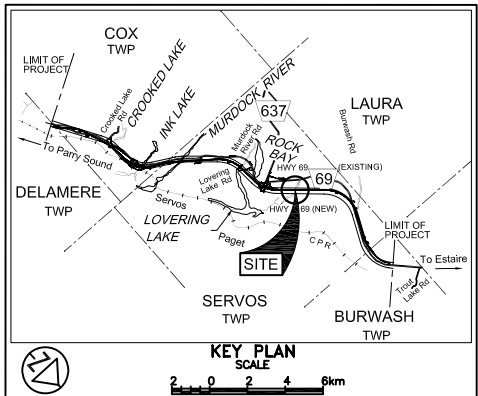
SCALE
5 0 5 10m

NOTES:

- REFER TO DRAWING 501-1 FOR BOREHOLE LOCATIONS PLAN AND SECTION A-A.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Prefered_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Feb 2007
- Head
- ARTESIAN WATER Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
502-1	233.7	17+440	32.5m Lt.
502-2	232.2	17+440	CL
502-3	227.6	17+440	42.5m Rt.
502-4	231.6	17+450	18.8m Lt.
502-5	231.6	17+450	18.8m Rt.
502-6	233.4	17+462.5	36.5m Lt.
502-7	227.5	17+462.5	CL
502-8	225.2	17+462.5	30.5m Rt.
502-9	232.2	17+475	18.8m Lt.
502-10	226.3	17+475	18.8m Rt.
502-11	233.2	17+487.5	40.5m Lt.
502-12	228.8	17+487.5	CL
502-13	224.3	17+487.5	36.5m Rt.
502-14	230.0	17+500	18.8m Lt.
502-15	225.0	17+500	18.8m Rt.

(Legend Continues)

— NOTE —

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

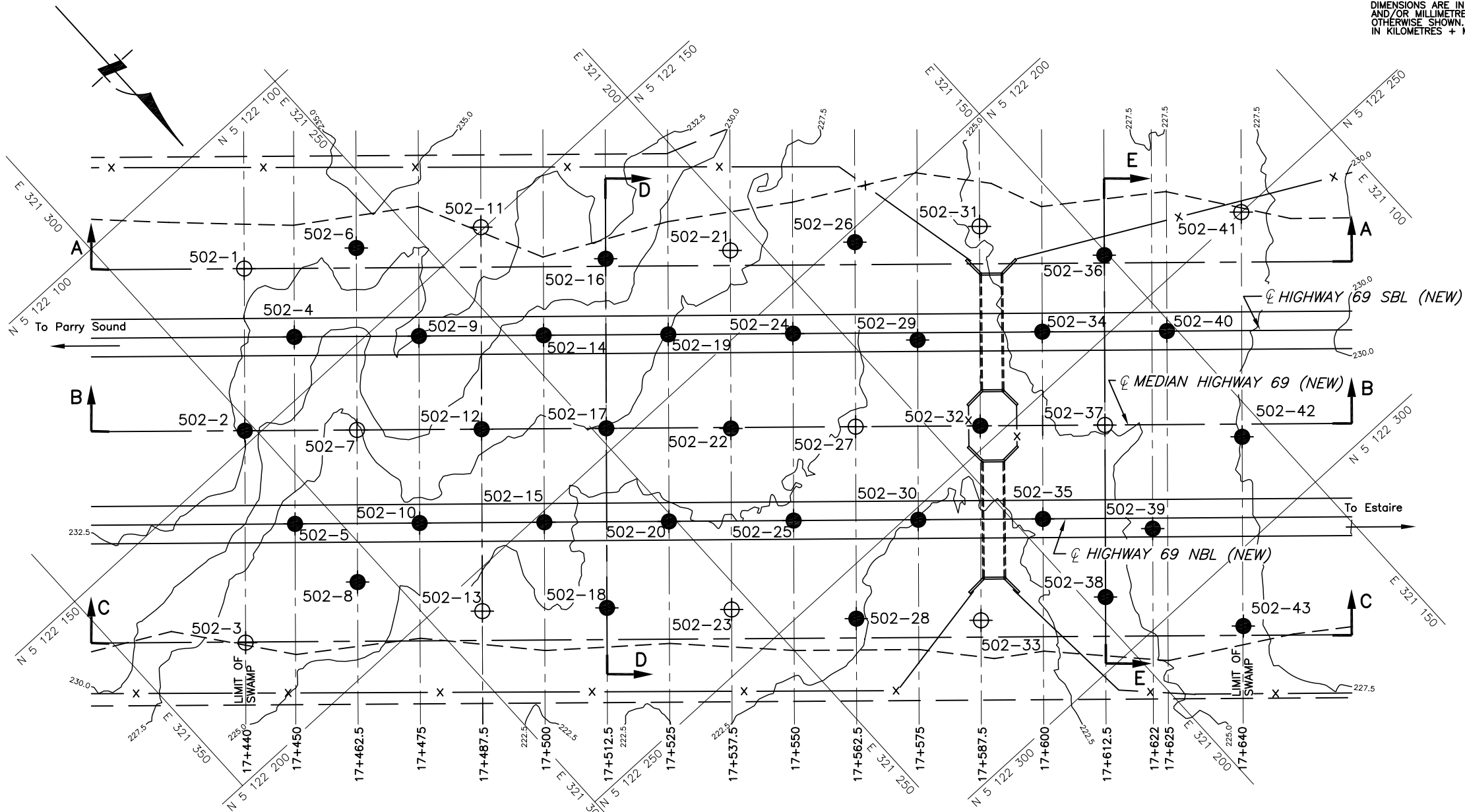
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	---
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	502-1



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
502-16	230.4	17+512.5	34.0m Lt.
502-17	227.1	17+512.5	CL
502-18	224.4	17+512.5	36.0m Rt.
502-19	227.7	17+525	18.8m Lt.
502-20	224.7	17+525	18.8m Rt.
502-21	228.4	17+537.5	35.5m Lt.
502-22	225.8	17+537.5	CL
502-23	223.8	17+537.5	36.5m Rt.
502-24	226.4	17+550	18.8m Lt.
502-25	224.3	17+550	18.8m Rt.
502-26	225.8	17+562.5	37.0m Lt.
502-27	224.8	17+562.5	CL
502-28	223.7	17+562.5	38.5m Rt.
502-29	224.7	17+575	17.3m Lt.

(Legend Continues)

(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
502-30	222.6	17+575	18.8m Rt.
502-31	226.1	17+587.5	40.0m Lt.
502-32	223.6	17+587.5	CL
502-33	221.9	17+587.5	39.0m Rt.
502-34	225.6	17+600	18.8m Lt.
502-35	223.3	17+600	18.8m Rt.
502-36	227.2	17+612.5	34.0m Lt.
502-37	225.3	17+612.5	CL
502-38	223.4	17+612.5	34.5m Rt.
502-39	225.4	17+622	20.8m Rt.
502-40	226.2	17+625	18.8m Lt.
502-41	228.9	17+640	42.5m Lt.
502-42	227.3	17+640	2.5m Rt.
502-43	227.7	17+640	40.5m Rt.

PLAN
SCALE



NOTES:

- REFER TO DRAWINGS 502-2 TO 502-3 FOR SECTIONS A-A, B-B, C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

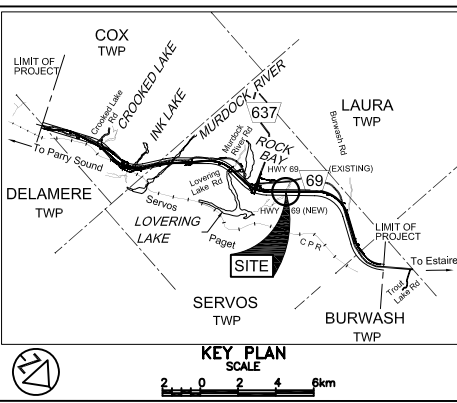
HIGHWAY 69

HIGHWAY 69 FOUR-LANING

SWAMP 502, STA. 17+440 TO 17+640 SERVOS TWP

SOIL STRATA

SHEET



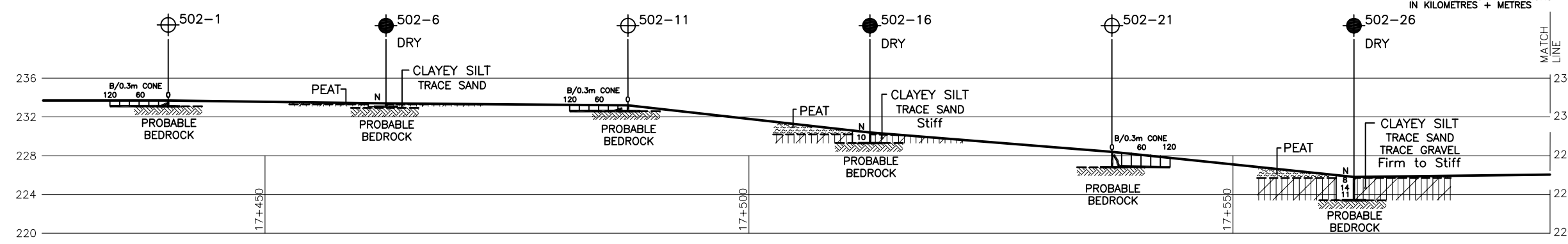
LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
	W L at time of investigation Feb 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA	o/s CL MED
		SERVOS TWP	
SEE DRAWING 502-1 FOR DETAILS.			

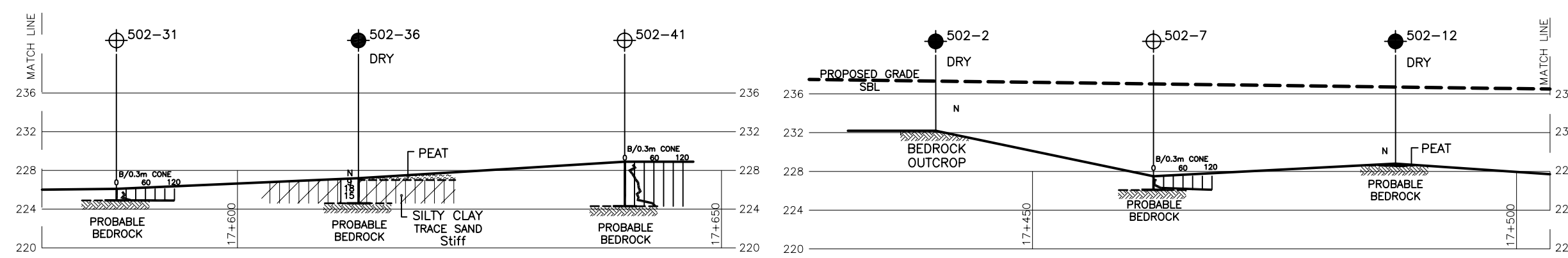
NOTE
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REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No 69	CHECKED NSB	DATE JAN. 23, 2009	DIST 54
SUBM'D NSB	CHECKED NSB	SITE ---	
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 502-2

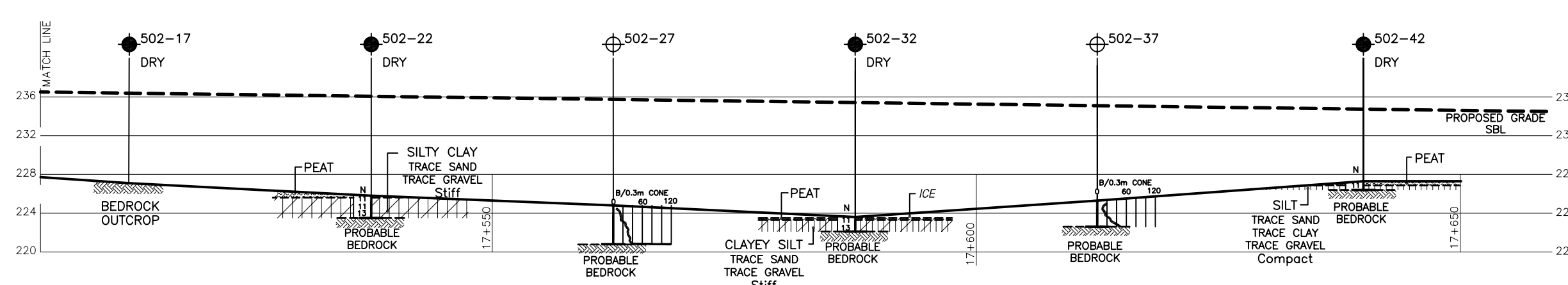


PROFILE A-A

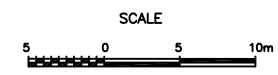


PROFILE A-A (Continued)

PROFILE B-B

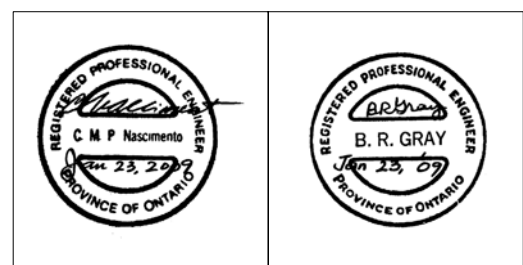


PROFILE B-B (Continued)

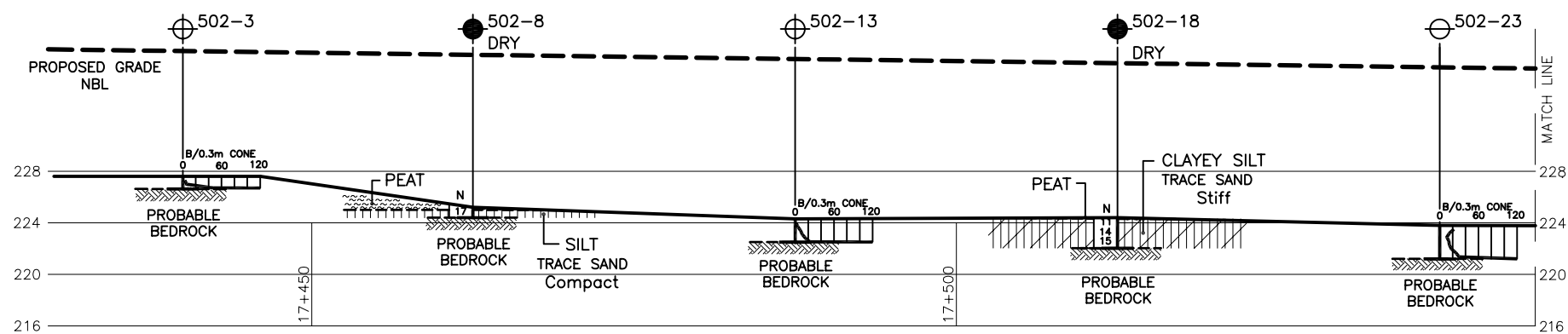


NOTES:

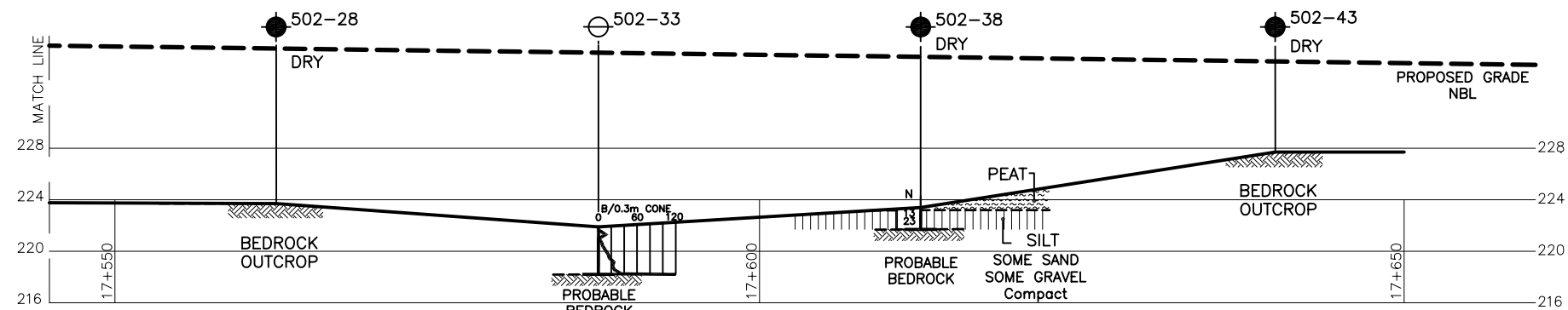
- REFER TO DRAWING 502-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWING 502-3 FOR SECTIONS C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



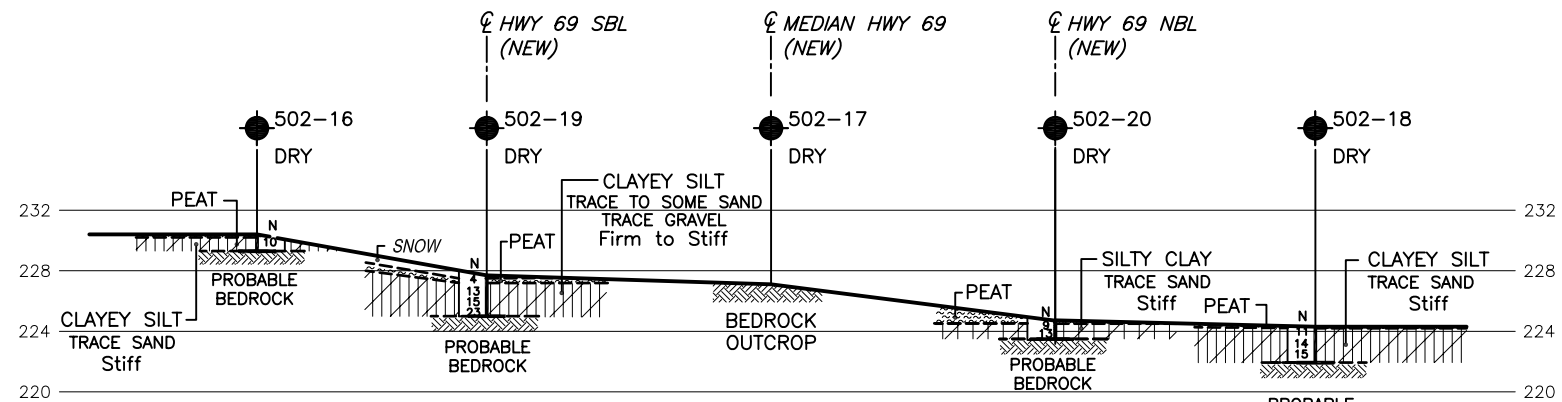
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



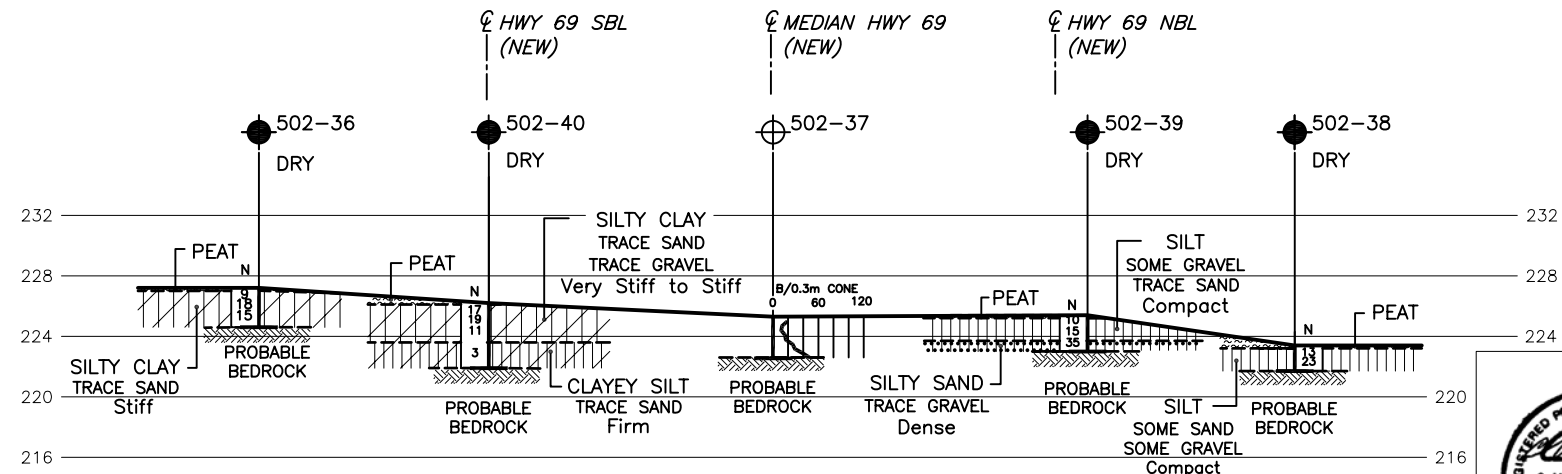
PROFILE C-C



PROFILE C-C (Continued)



SECTION D-D



SECTION E-E

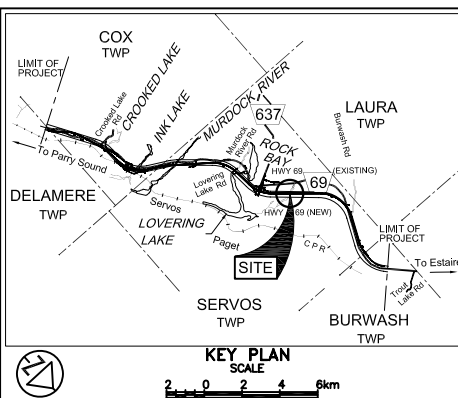


METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 502, STA. 17+440 TO 17+640 SERVOS TWP
SOIL STRATA

SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Feb 2007
- Head
- ARTESIAN WATER
- Encountered
- PIEZOMETER

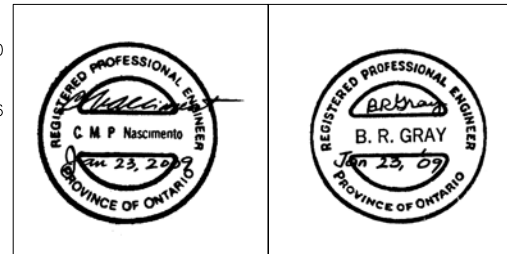
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 502-1 FOR DETAILS.			

NOTE:
The boundaries between soil strata have been established
only at Borehole locations. Between Boreholes the
boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No 69	CHECKED NSB	DATE JAN. 23, 2009	DIST 54
SUBM'D NSB	CHECKED CN	APPROVED BRG	SITE --
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 502-3



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

NOTES:

- REFER TO DRAWING 502-1 FOR BOREHOLE LOCATIONS PLAN AND
DRAWING 502-2 FOR SECTIONS A-A AND B-B.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE
DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

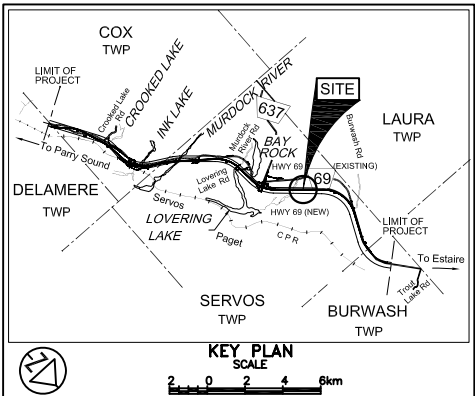
METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 503, STA. 18+020 TO 18+180 SERVOS TWP
BOREHOLE LOCATIONS AND SOIL STRATA



SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
503-16	223.4	18+087.5	37.5m Lt.
503-17	222.5	18+087.5	CL
503-18	217.3	18+087.5	36.0m Rt.
503-19	224.4	18+100	18.8m Lt.
503-20	218.5	18+100	18.8m Rt.
503-21	228.4	18+112.5	37.5m Lt.
503-22	224.3	18+112.5	CL
503-23	217.6	18+112.5	35.0m Rt.
503-24	227.4	18+125	18.8m Lt.
503-25	218.5	18+125	18.8m Rt.
503-26	228.7	18+137.5	37.5m Lt.
503-27	220.8	18+137.5	CL
503-28	215.8	18+137.5	37.5m Rt.
503-29	222.0	18+150	18.8m Lt.
503-30	217.9	18+150	18.8m Rt.
503-31	222.2	18+162.5	36.5m Lt.
503-32	220.5	18+162.5	CL
503-33	216.7	18+162.5	34.0m Rt.
503-34	222.4	18+175	18.8m Lt.
503-35	220.0	18+175	18.8m Rt.
503-36	224.9	18+180	34.0m Lt.
503-37	223.0	18+180	CL
503-38	218.1	18+180	34.0m Rt.

LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Dec 2006 and Apr 2007
	Head
	ARTESIAN WATER Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
503-1	222.5	18+020	38.5m Lt.
503-2	226.4	18+020	CL
503-3	227.0	18+020	34.5m Rt.
503-4	224.6	18+025	18.8m Lt.
503-5	225.5	18+025	18.8m Rt.
503-6	221.8	18+037.5	34.0m Lt.
503-7	224.1	18+037.5	CL
503-8	223.0	18+037.5	35.0m Rt.
503-9	222.2	18+050	18.8m Lt.
503-10	222.3	18+050	18.8m Rt.
503-11	221.7	18+062.5	37.5m Lt.
503-12	223.0	18+062.5	CL
503-13	219.5	18+062.5	37.5m Rt.
503-14	223.3	18+075	18.8m Lt.
503-15	220.8	18+075	19.0m Rt.

(Legend Continues)

— NOTE —

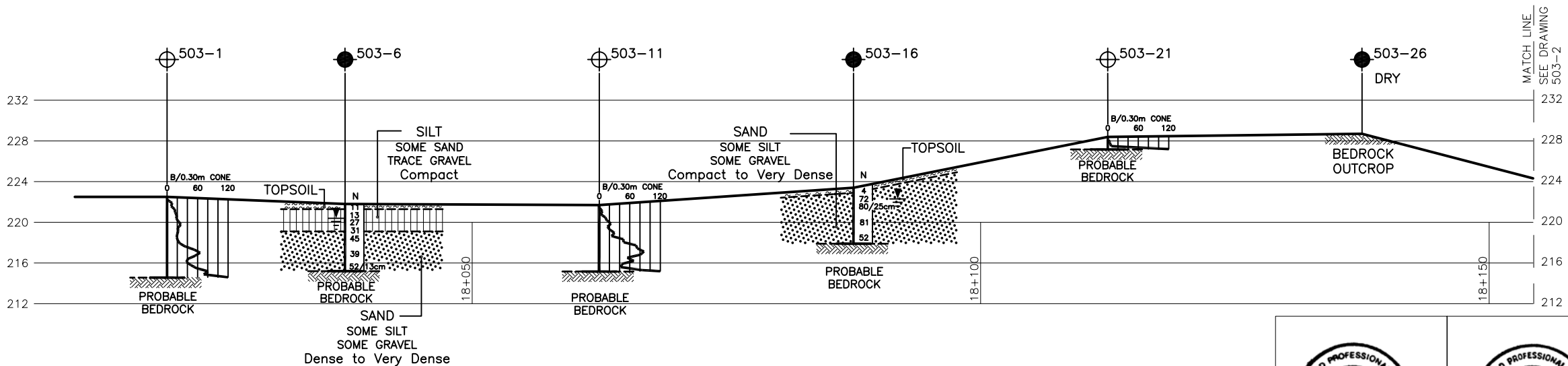
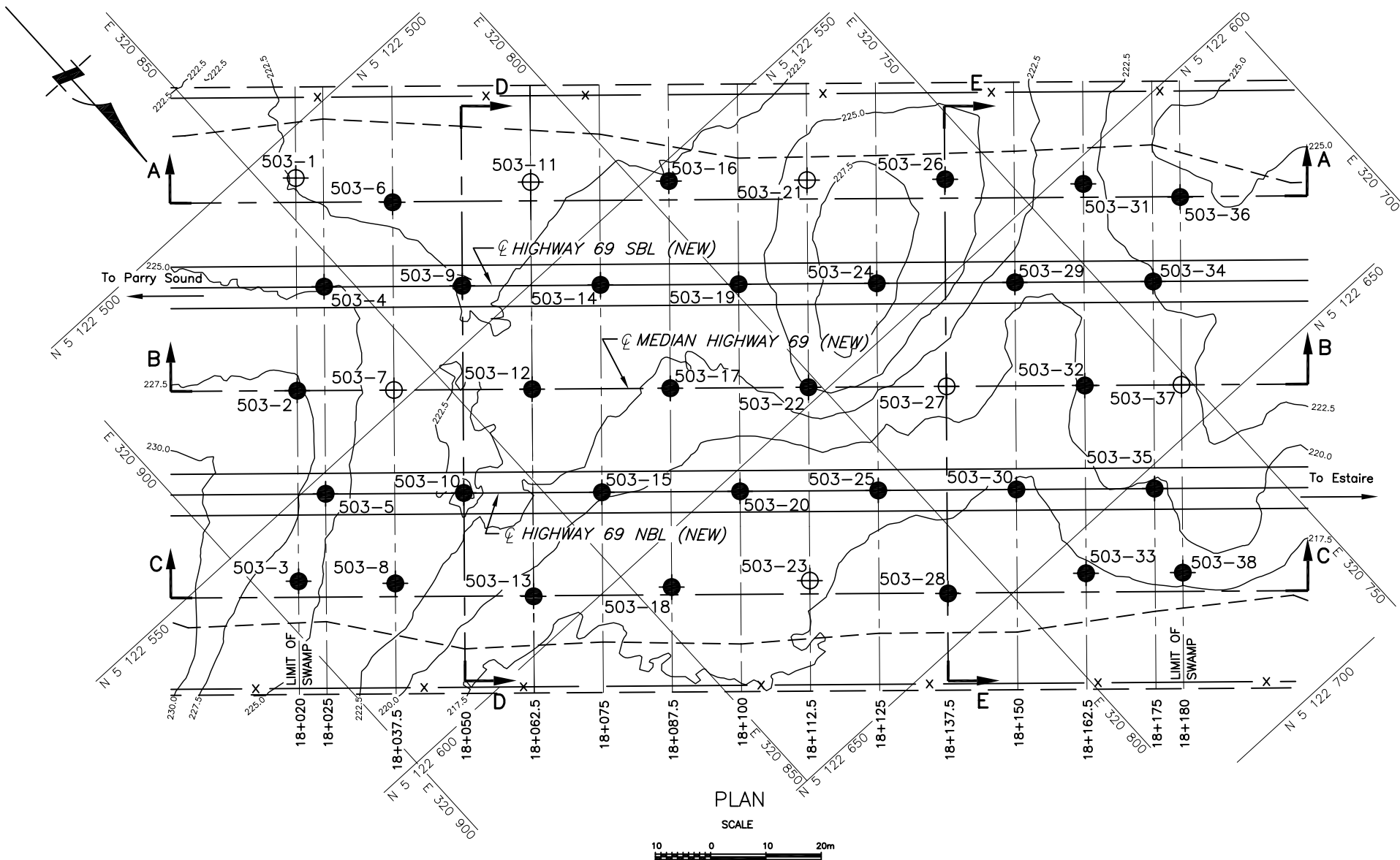
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REVISIONS	DATE	BY	DESCRIPTION

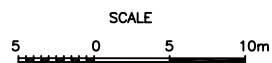
Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	503-1

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



PROFILE A-A



NOTES:

- REFER TO DRAWINGS 503-2 AND 503-3 FOR SECTIONS A-A (Continued), B-B, C-C, D-D AND E-E.
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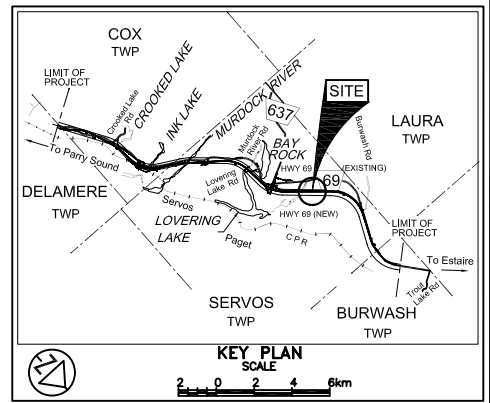
METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No

GWP No 5218-06-00

HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 503, STA. 18+020 TO 18+180 SERVOS TWP
SOIL STRATA

SHEET



LEGEND

Borehole

Dynamic Cone Penetration Test (Cone)

Borehole & Cone

N

Blows/0.3m (Std. Pen Test, 475 J/blow)

CONE

Blows/0.3m (60° Cone, 475 J/blow)

W L at time of investigation Dec 2006 and Apr 2007

Head

ARTESIAN WATER
Encountered

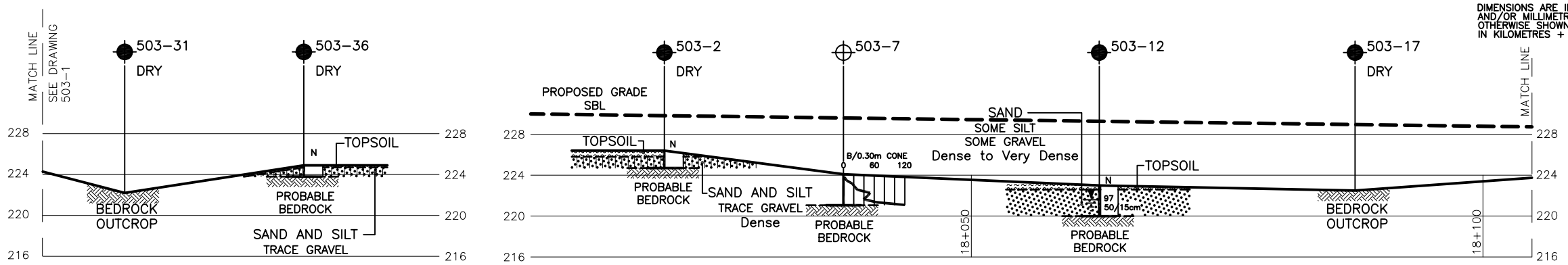
PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 503-1 FOR DETAILS.			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

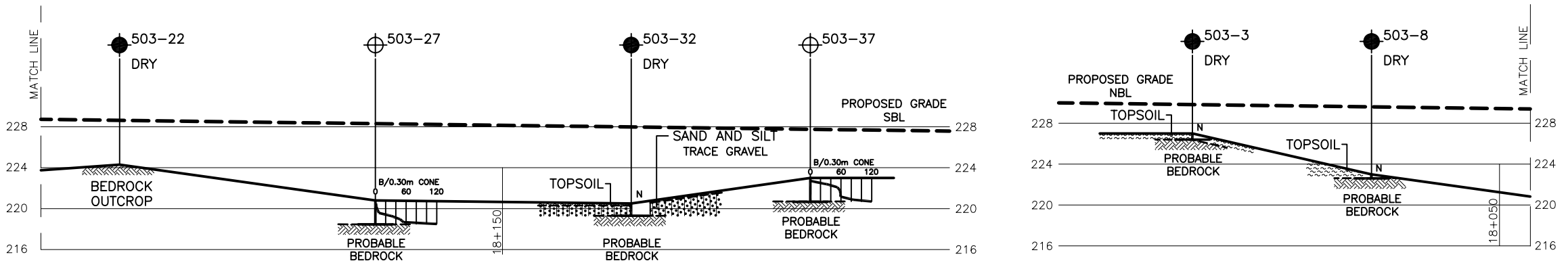
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No 69	SUBM'D NSB	CHECKED GD	DATE JAN. 23, 2009
DRAWN NA	CHECKED CN	APPROVED BRG	SITE ---
DIST 54			DWG 503-2



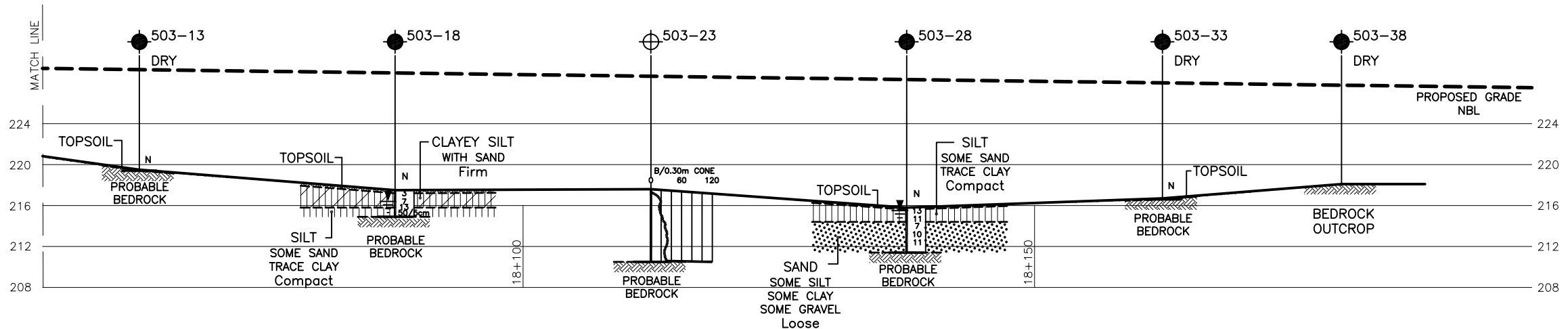
PROFILE A-A (Continued)

PROFILE B-B

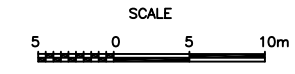


PROFILE B-B (Continued)

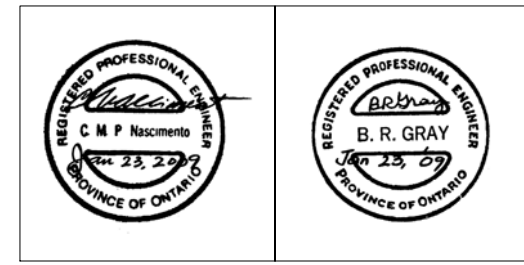
PROFILE C-C



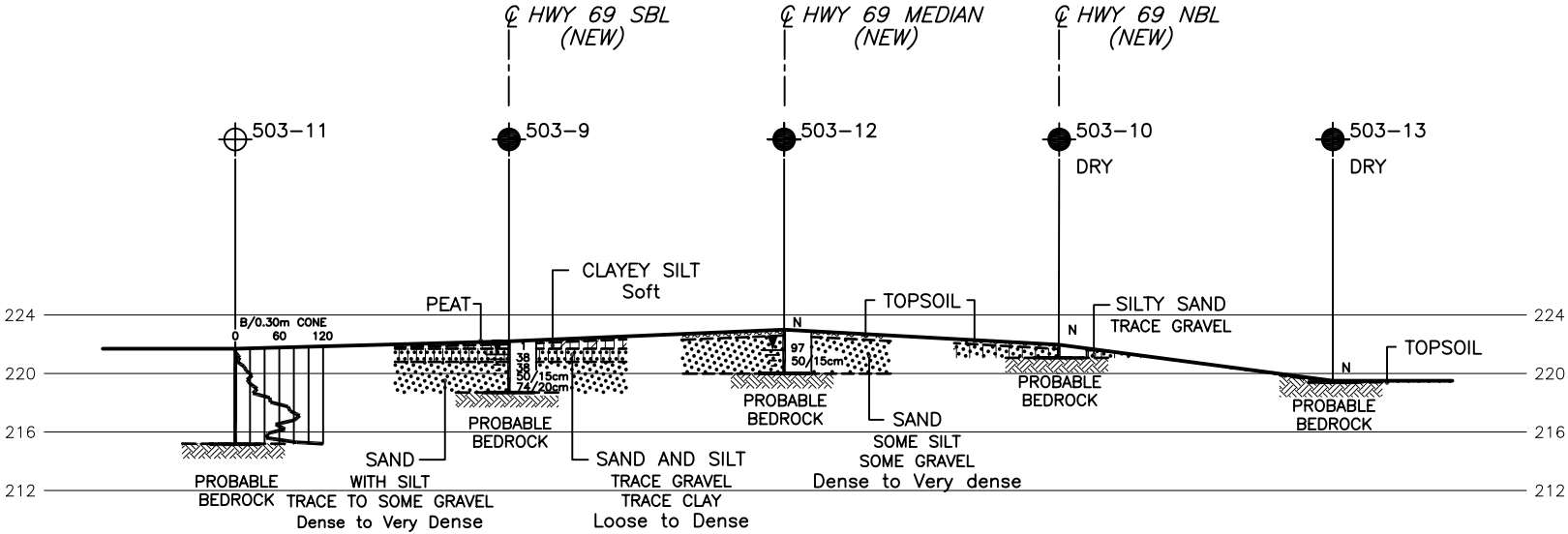
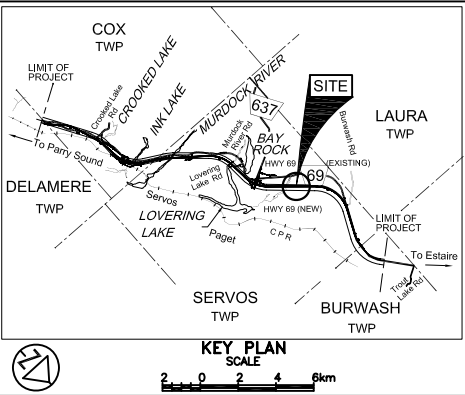
PROFILE C-C (Continued)



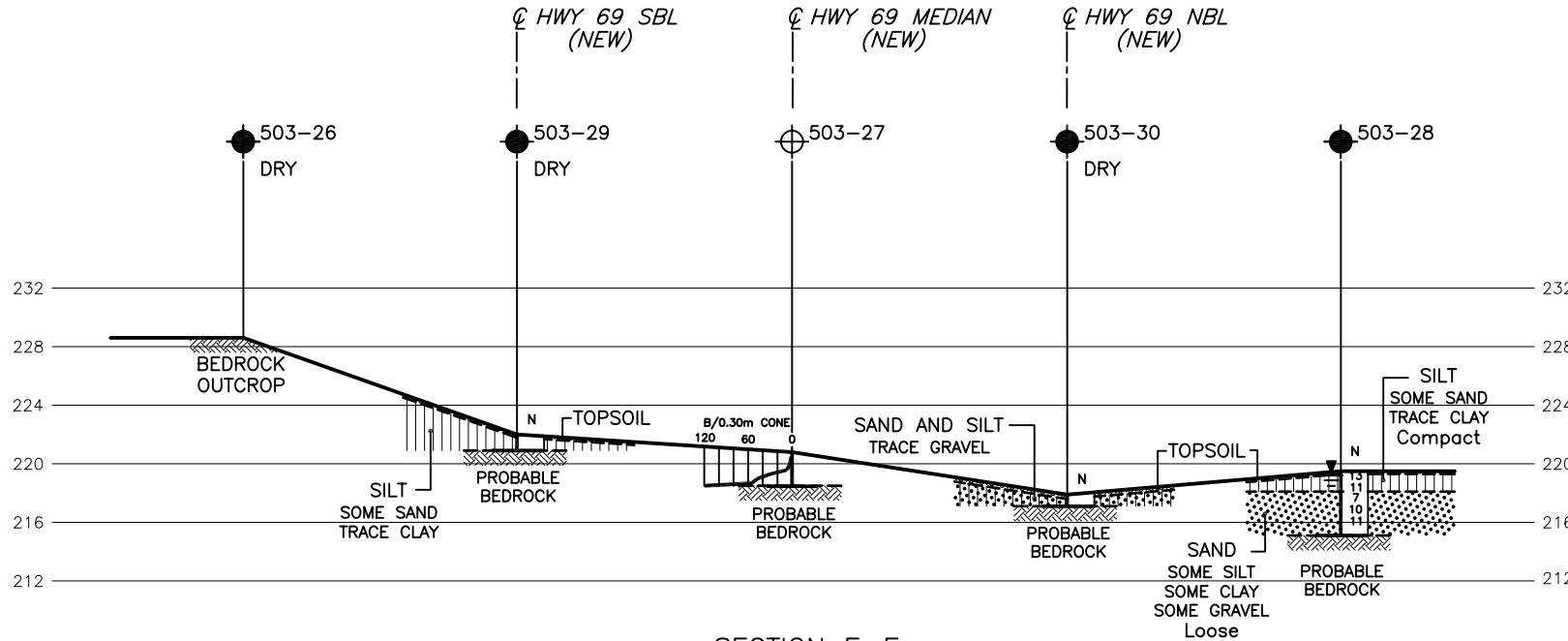
- NOTES:
- REFER TO DRAWING 503-1 FOR BOREHOLE LOCATIONS PLAN AND SECTION A-A AND DRAWING 503-3 FOR SECTIONS D-D AND E-E.
 - THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_PREFERRED_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



SECTION D-D



SECTION E-E



LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Dec 2006 and Apr 2007
	Head
	ARTESIAN WATER Encountered
	PIEZOMETER

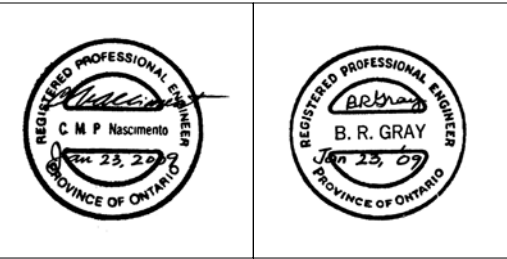
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 503-1 FOR DETAILS.			

NOTE
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231	
HWY No 69	DIST 54
SUBM'D NSB	CHECKED GD
DATE JAN. 23, 2009	SITE --
DRAWN NA	CHECKED CN
APPROVED BRG	DWG 503-3

NOTES:
1. REFER TO DRAWING 503-1 FOR BOREHOLE LOCATIONS PLAN AND SECTION A-A AND DRAWING 503-2 FOR SECTIONS A-A (Continued), B-B AND C-C.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

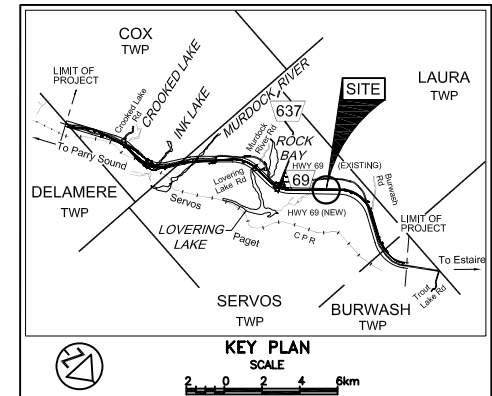
CONT No
GWP No 5218-06-00

HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 504, STA. 18+300 TO 18+510 SERVOS TWP
BOREHOLE LOCATIONS AND SOIL STRATA



SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Dec 2006
Feb-Apr 2007 and Mar 2008
- Head
- ARTESIAN WATER
Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
504-1	222.8	18+300	19.0m Lt.
504-2	214.1	18+300	19.0m Rt.
504-3	222.2	18+325	40.0m Lt.
504-4	213.9	18+325	CL
504-5	213.6	18+325	35.0m Rt.
504-6	214.2	18+350	18.8m Lt.
504-7	213.4	18+350	CL
504-8	213.4	18+350	18.8m Rt.
504-9	215.2	18+375	40.0m Lt.
504-10	213.5	18+375	CL
504-11	213.3	18+375	40.0m Rt.
504-12	214.0	18+400	18.8m Lt.
504-13	213.5	18+400	18.8m Rt.
504-14	216.7	18+425	37.5m Lt.
504-15	214.2	18+425	CL

(Legend Continues)

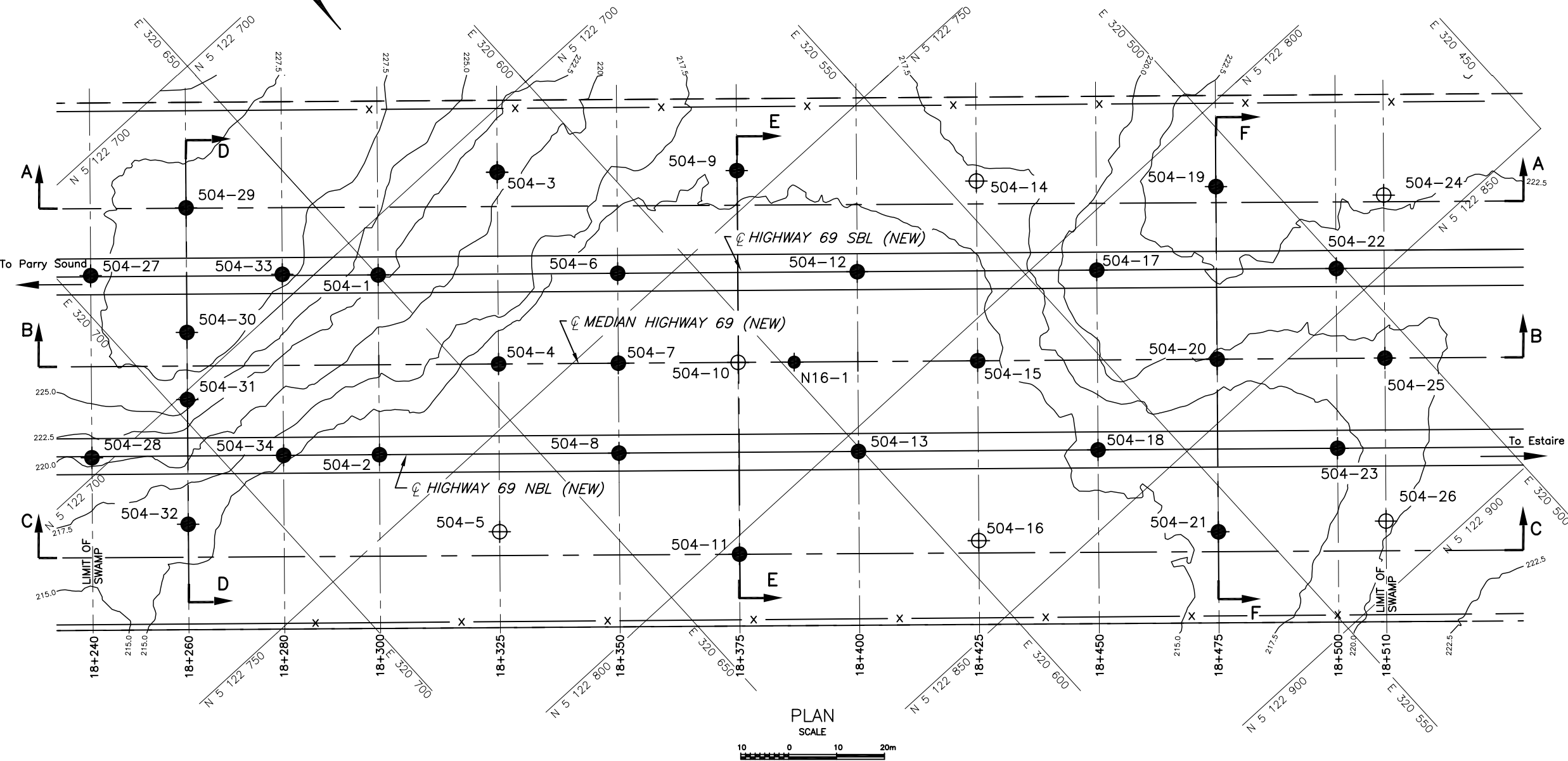
NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No. 69	DIST 54
SUBM'D NSB	CHECKED GD
DRAWN NA	CHECKED CN
APPROVED BRG	DWG 504-1



PLAN
SCALE

(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
504-27	227.1	18+240	19.0m Lt.
504-28	221.0	18+240	19.0m Rt.
504-29	228.3	18+260	33.0m Lt.
504-30	229.1	18+260	7.0m Lt.
504-31	226.0	18+260	7.0m Rt.
504-32	216.2	18+260	33.0m Rt.
504-33	228.2	18+280	19.0m Lt.
504-34	216.0	18+280	19.0m Rt.
BH No	ELEVATION	CO-ORDINATES	
		NORTHINGS	EASTINGS
N16-1	213.9	5 122 781	320 598

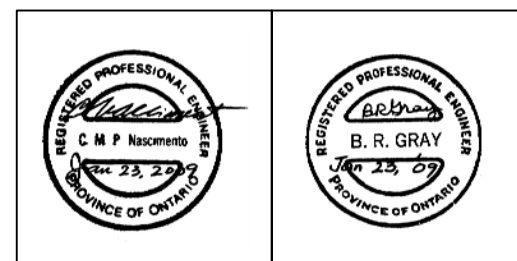
(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
504-16	213.7	18+425	37.5m Rt.
504-17	222.2	18+450	18.8m Lt.
504-18	215.6	18+450	18.8m Rt.
504-19	223.5	18+475	36.0m Lt.
504-20	219.5	18+475	CL
504-21	215.3	18+475	36.0m Rt.
504-22	221.7	18+500	18.8m Lt.
504-23	217.0	18+500	18.8m Rt.
504-24	222.6	18+510	34.0m Lt.
504-25	219.2	18+510	CL
504-26	219.5	18+510	34.0m Rt.

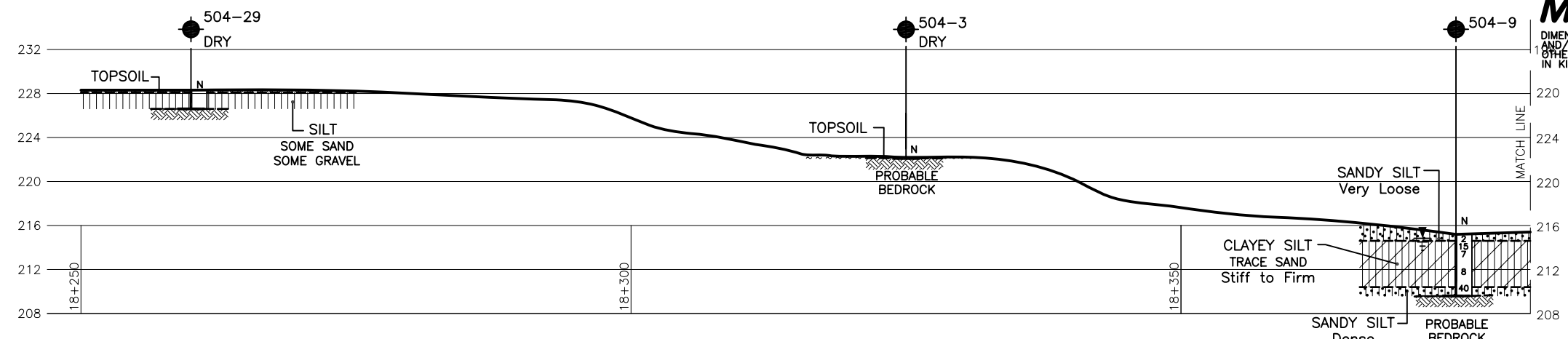
(Legend Continues)

NOTES:

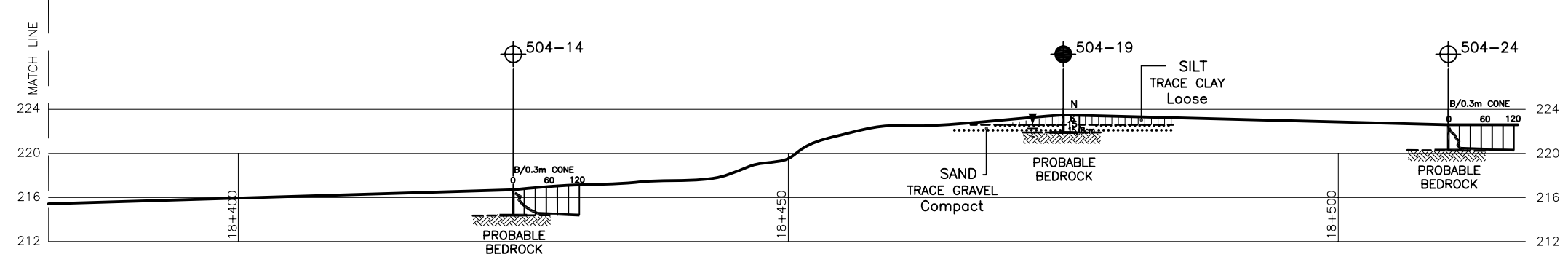
- REFER TO DRAWINGS 504-2 TO 504-4 FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



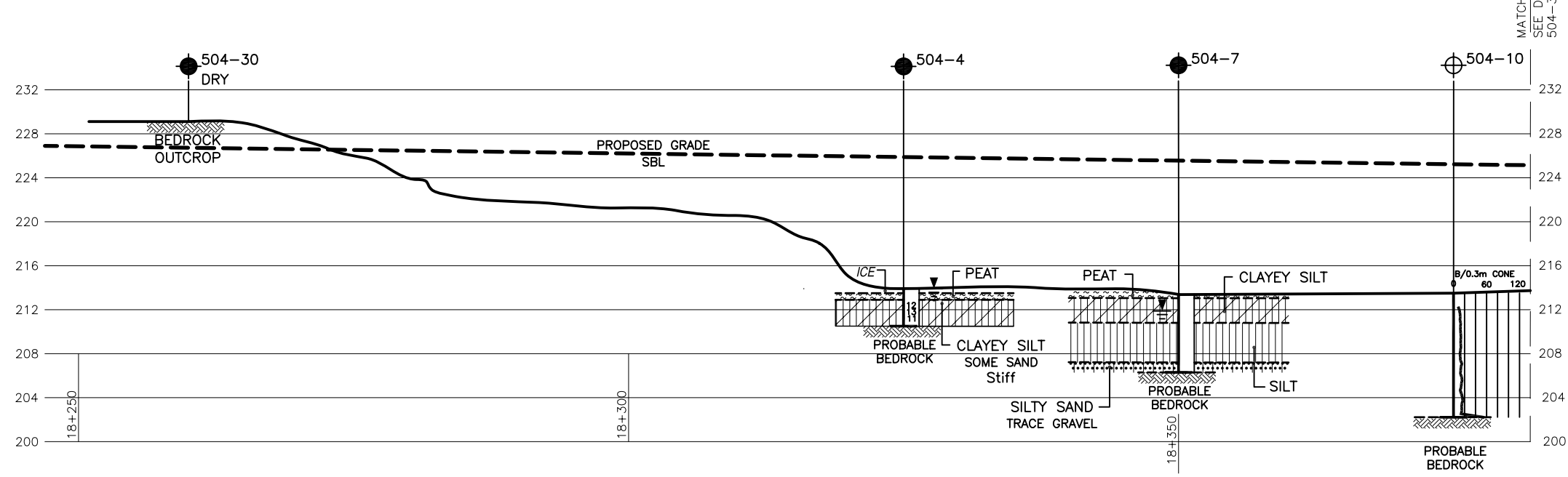
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



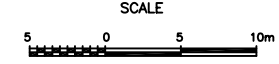
PROFILE A-A



PROFILE A-A (Continued)

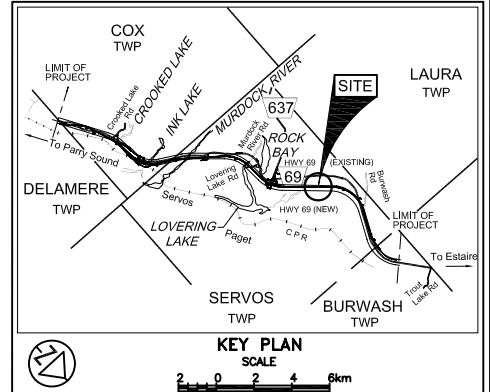


PROFILE B-B



METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 504, STA. 18+300 TO 18+510 SERVOS TWP
SOIL STRATA
SHEET



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
	W L at time of investigation Dec 2006 Feb-Apr 2007 and Mar 2008		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 504-1 FOR DETAILS			

NOTE
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	504-2

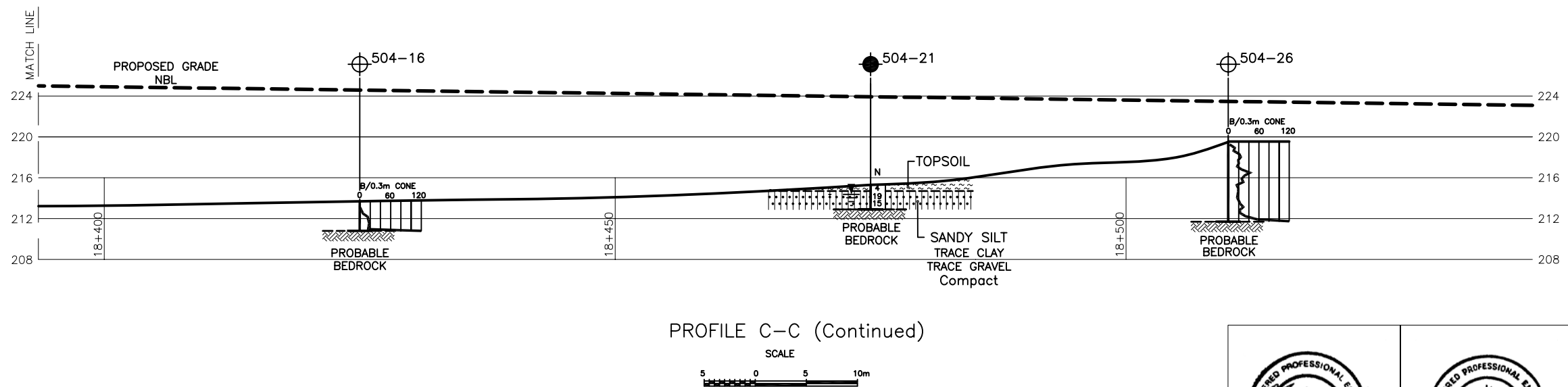
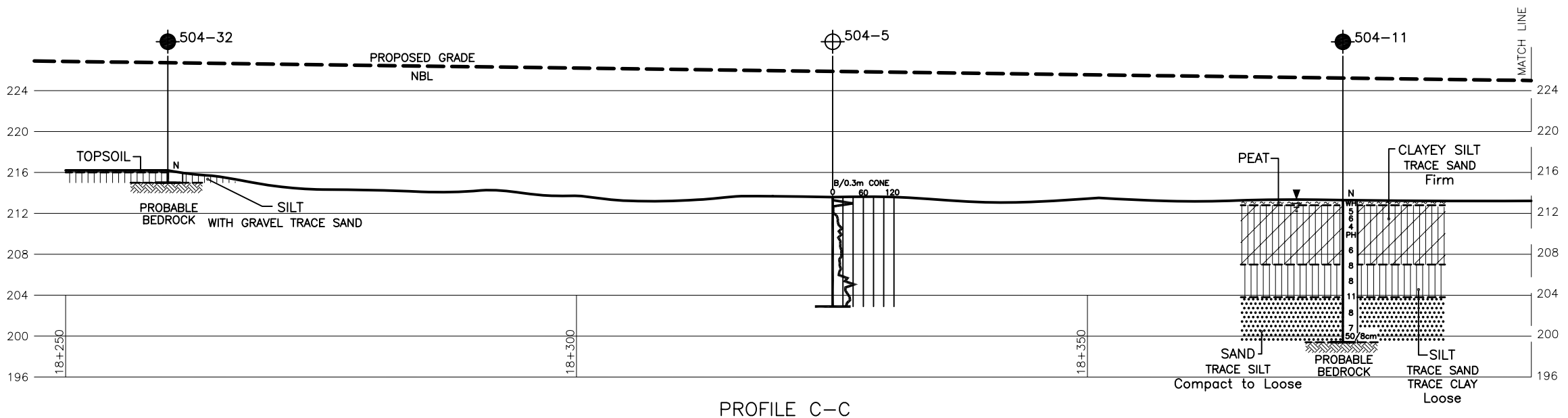
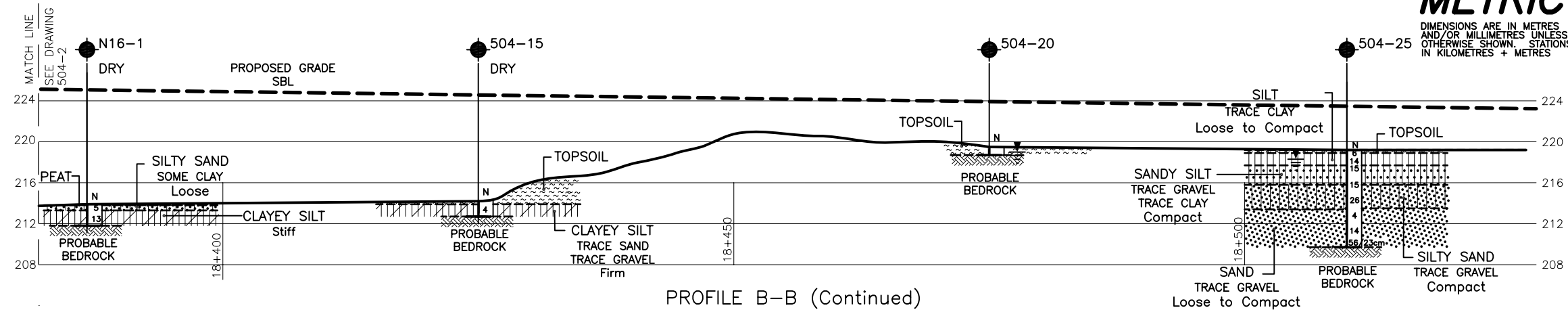
- NOTES:
- REFER TO DRAWING 504-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWING 504-3 AND 504-4 FOR SECTIONS B-B (Continued), D-D, E-E AND F-F.
 - THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES



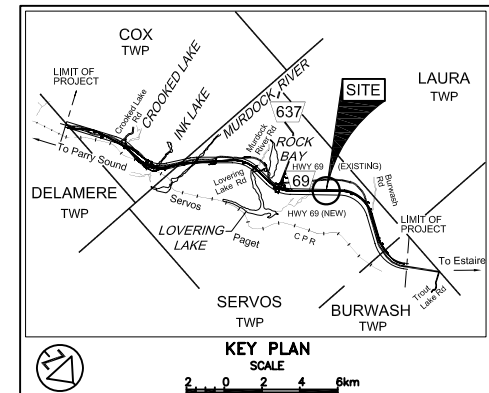
CONT No
GWP No 5218-06-00

HIGHWAY 69

HIGHWAY 69 FOUR-LANING
SWAMP 504, STA. 18+300 TO 18+510 SERVOS TWP
SOIL STRATA

SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- PH Thinwall Sample - Advanced Hydraulically
- W L at time of investigation Dec 2006
Feb-Apr 2007 and Mar 2008
- Head
- ARTESIAN WATER
Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	c/s CL MED
SEE DRAWING 504-1 FOR DETAILS			

NOTE

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

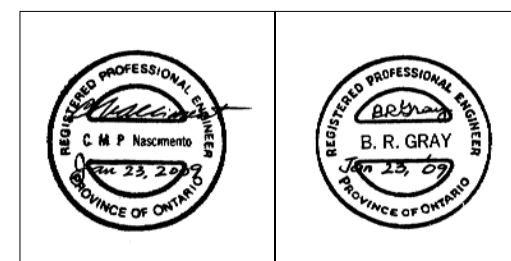
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

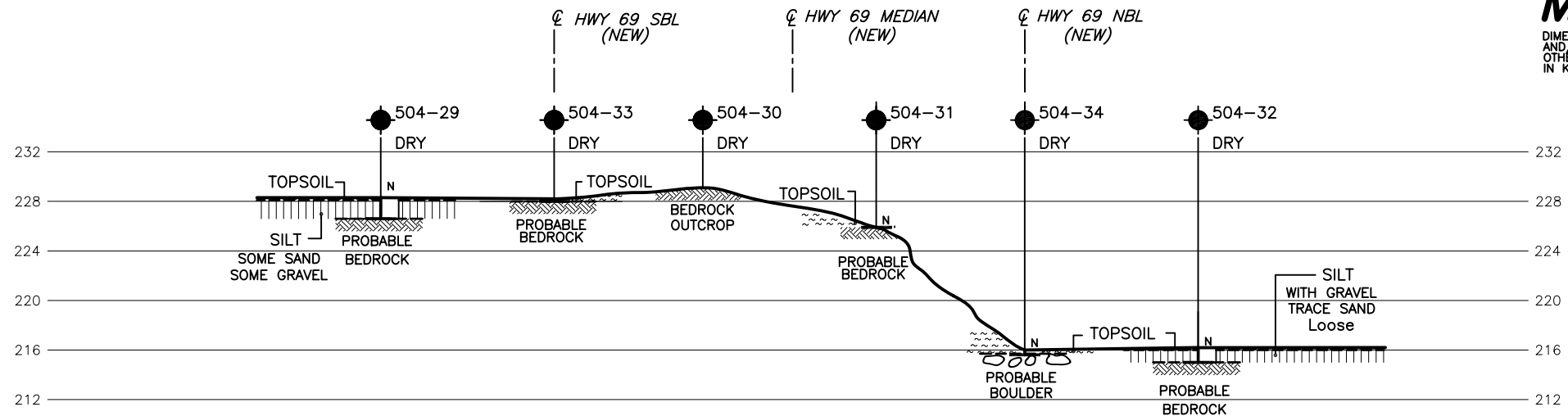
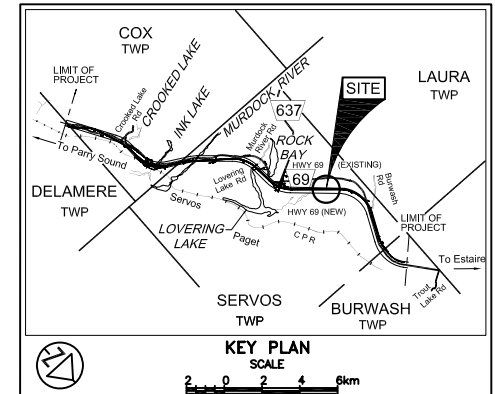
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	SITE	--
APPROVED	BRG	DWG	504-3

NOTES:

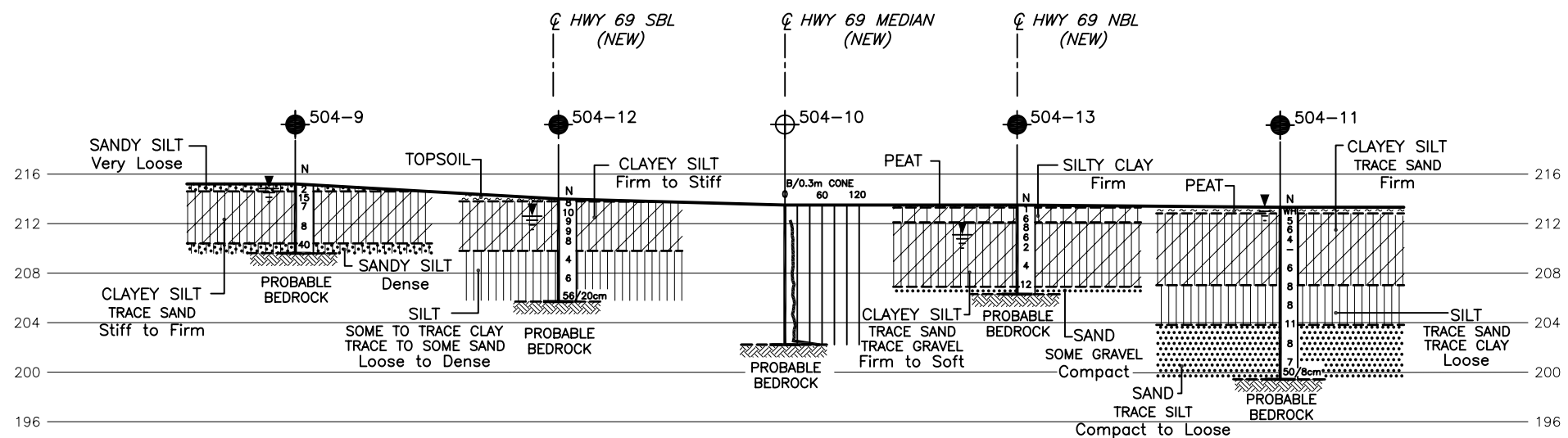
- REFER TO DRAWING 504-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWING 504-2 FOR SECTIONS A-A AND B-B AND DRAWING 504-4 FOR SECTIONS D-D E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



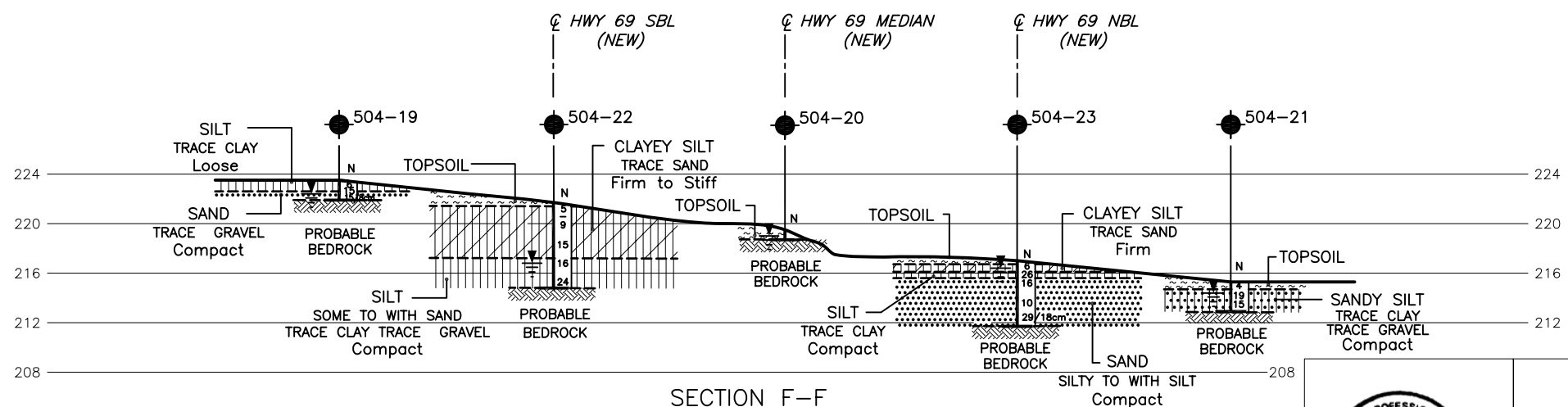
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



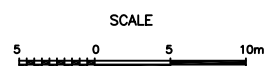
SECTION D-D



SECTION E-E



SECTION F-F



NOTES:

1. REFER TO DRAWING 504-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWING 504-2 AND 504-3 FOR SECTIONS A-A B-B AND C-C.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
	W.L. at time of investigation Dec 2006 Feb-Apr 2007 and Mar 2008		
	Head		
	ARTESIAN WATER Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	a/s CL MED
SEE DRAWING 504-1 FOR DETAILS			

- NOTE -
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.









REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No 69	NSB	CHECKED GD	DIST 54
SUBM'D	NSB	CHECKED CN	DATE JAN. 23, 2009
DRAWN	NA	CHECKED CN	APPROVED BRG
DWG 504-4			SITE --

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

SHEET

The map illustrates the proposed Rock Bay Water Treatment Plant site, marked with a circle and labeled 'SITE'. The site is located on the eastern shore of Rock Bay, which is situated between Inka Lake to the north and Lowering Lake to the south. The map shows the project's limits, the proposed road (Hwy 69), and the existing road (Hwy 69). The site is bordered by Cox TWP to the north, Laura TWP to the northeast, Delamere TWP to the west, Servos TWP to the south, and Burwash TWP to the southeast. The map also shows the limits of the project, the proposed road (Hwy 69), and the existing road (Hwy 69). A scale bar at the bottom indicates distances up to 6 km.

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Feb-Apr 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

(Legend Continues)

— NOTE —

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

Geocres No. 411-231

Geocres No. 411-231			
HWY No 69		DIST 54	
SUBM'D	NSB	CHECKED GD	DATE JAN. 23, 2009
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 505-1



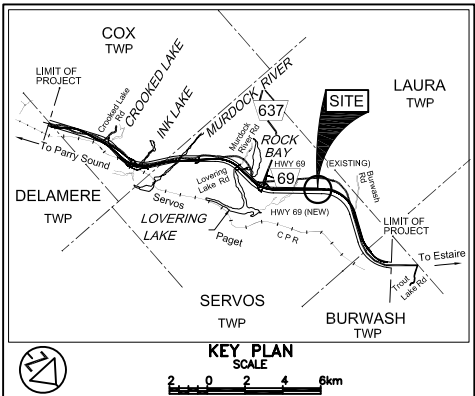
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
505-26	214.5	18+950	19.0m Lt.
505-27	210.5	18+950	18.8m Rt.
505-28	210.5	18+961	37.0m Rt.
505-29	218.2	18+975	40.5m Lt.
505-30	216.2	18+975	CL
505-31	220.8	19+000	19.0m Lt.
505-32	216.1	19+000	19.0m Rt.
CO-ORDINATES			
BH No	ELEVATION	NORTHINGS	EASTINGS
N17-2	209.9	5 123 108	320 235

BH No	ELEVATION	STA SERVOS TWP	o/s	CL	ME
505-16	210.4	18+850	18.8m	Lt.	
505-17	210.3	18+850	18.8m	Rt.	
505-18	210.2	18+875	38.5m	Lt.	
505-19	210.0	18+875		CL	
505-20	209.8	18+875	38.0m	Rt.	
505-21	210.0	18+900	18.8m	Lt.	
505-22	209.9	18+900	18.8m	Rt.	
505-23	210.5	18+925	38.0m	Lt.	
505-24	210.1	18+925		CL	
505-25	209.8	18+925	38.0m	Rt.	

1. REFER TO DRAWINGS 505-2 TO 505-4 FOR SECTIONS A-A, B-B, C-C, D-D AND E-E.

2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



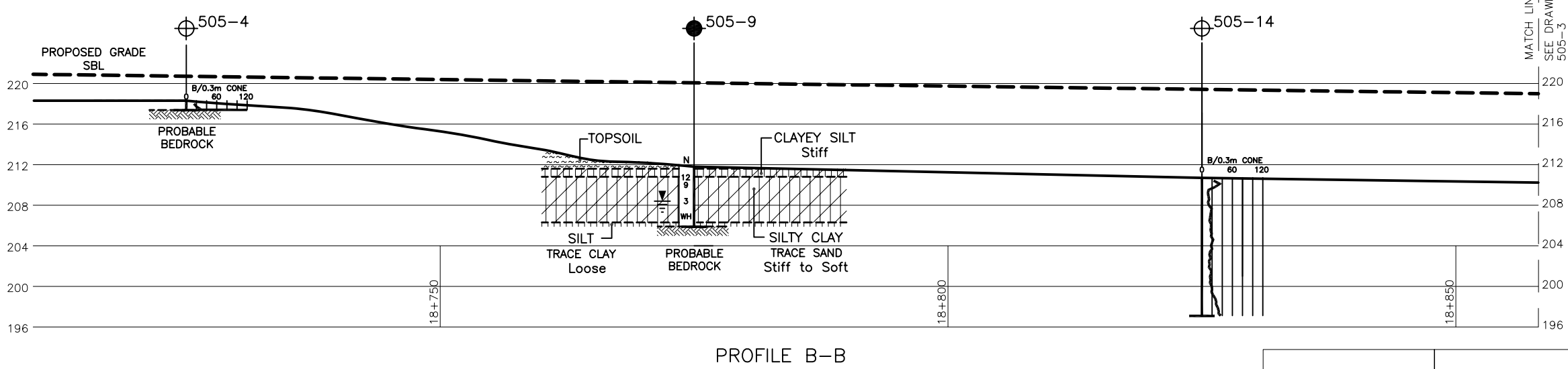
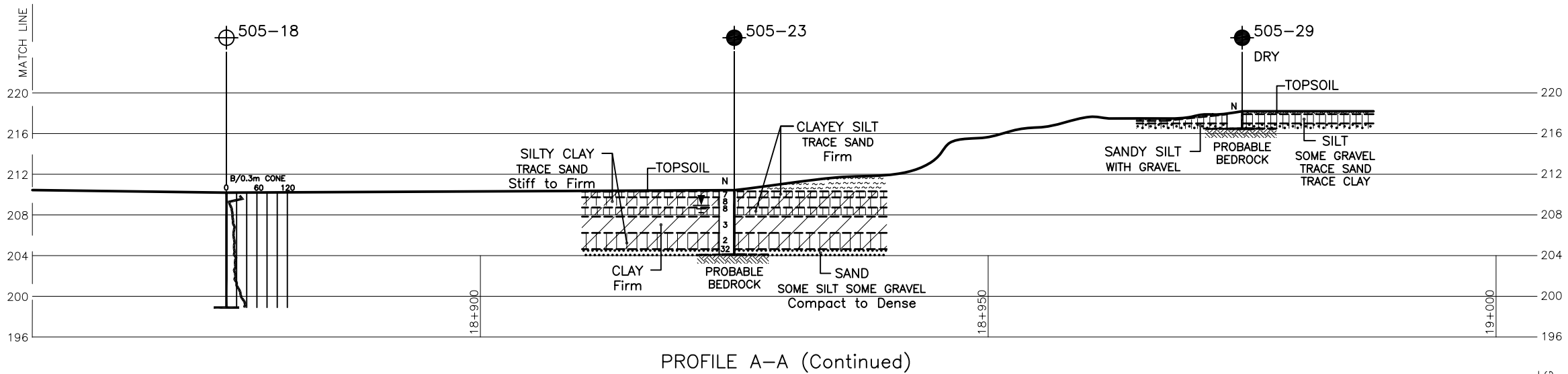
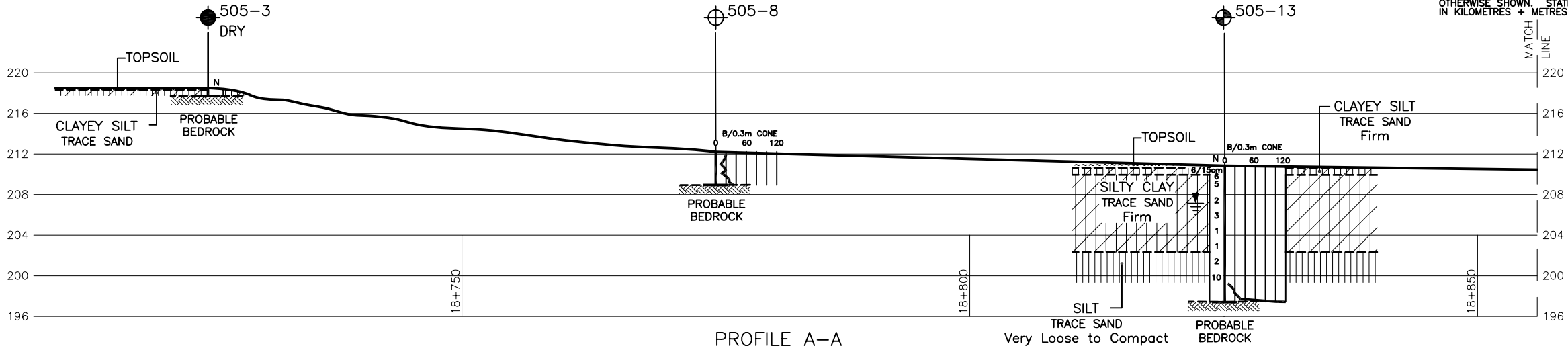
LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
W L	W L at time of investigation Feb-Apr 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 505-1 FOR DETAILS			

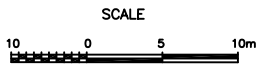
— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No 69	NSB	CHECKED GD	DATE JAN. 23, 2009
SUBM'D	NSB	CHECKED CN	APPROVED BRG
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 505-2



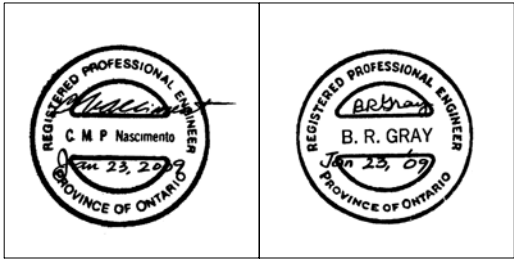
PROFILE B-B

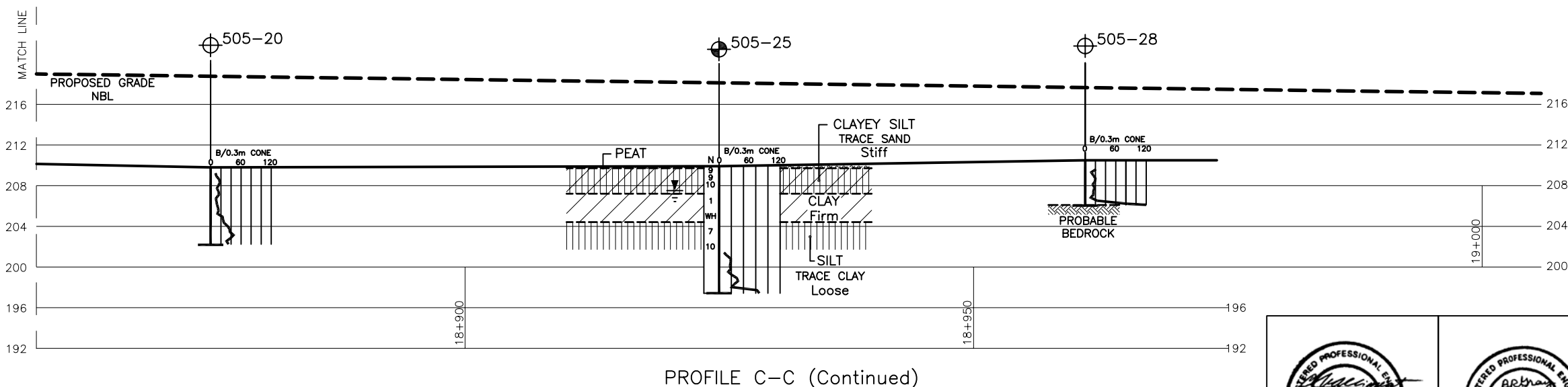
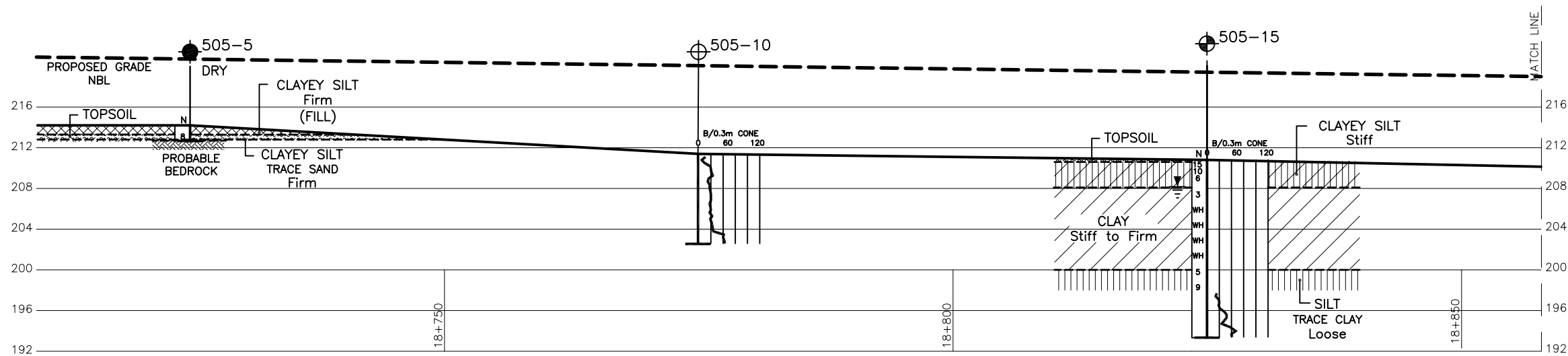
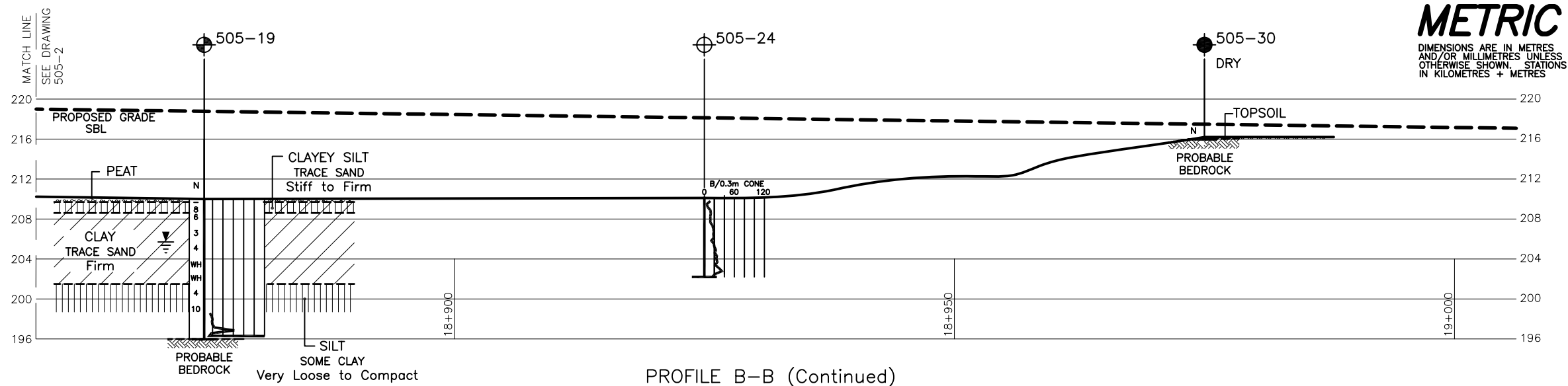


NOTES:

- REFER TO DRAWING 505-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 505-3 TO 505-4 FOR SECTIONS B-B (Continued), C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

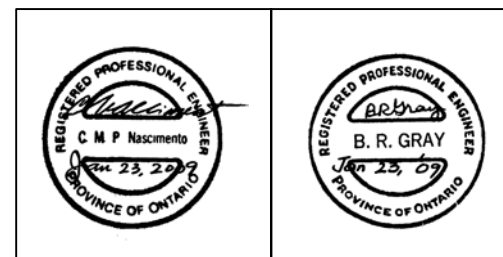
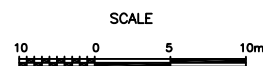
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;





NOTES:

1. REFER TO DRAWING 505-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 505-2 AND 505-4 FOR SECTIONS A-A, B-B (Continued), D-D AND E-E.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

CONT No
GWP No 5218-06-00

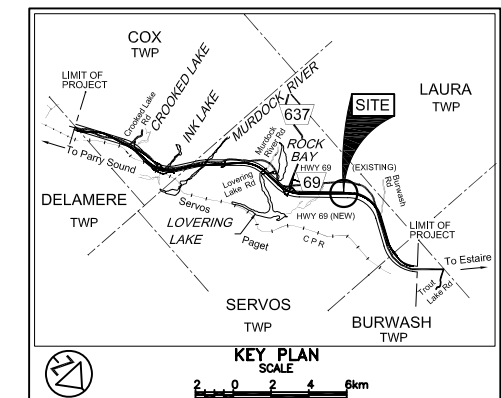
HIGHWAY 69

HIGHWAY 69 FOUR-LANING









STA. 18+720 TO 19+000 SERVOS TWP

SOIL STRATA

SHEET



LEGEND

- | | |
|---|--|
|  | Borehole |
|  | Dynamic Cone Penetration Test (Cone) |
|  | Borehole & Cone |
| N | Blows/0.3m (Std. Pen Test, 475 J/blow) |
| CONE | Blows/0.3m (60° Cone, 475 J/blow) |
| WH | Penetration due to weight of hammer and rods |
|  | W L at time of investigation Feb–Apr 2007 |
|  | Head |
|  | ARTESIAN WATER |
|  | Encountered |
|  | PIEZOMETER |

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 505-1 FOR DETAILS			

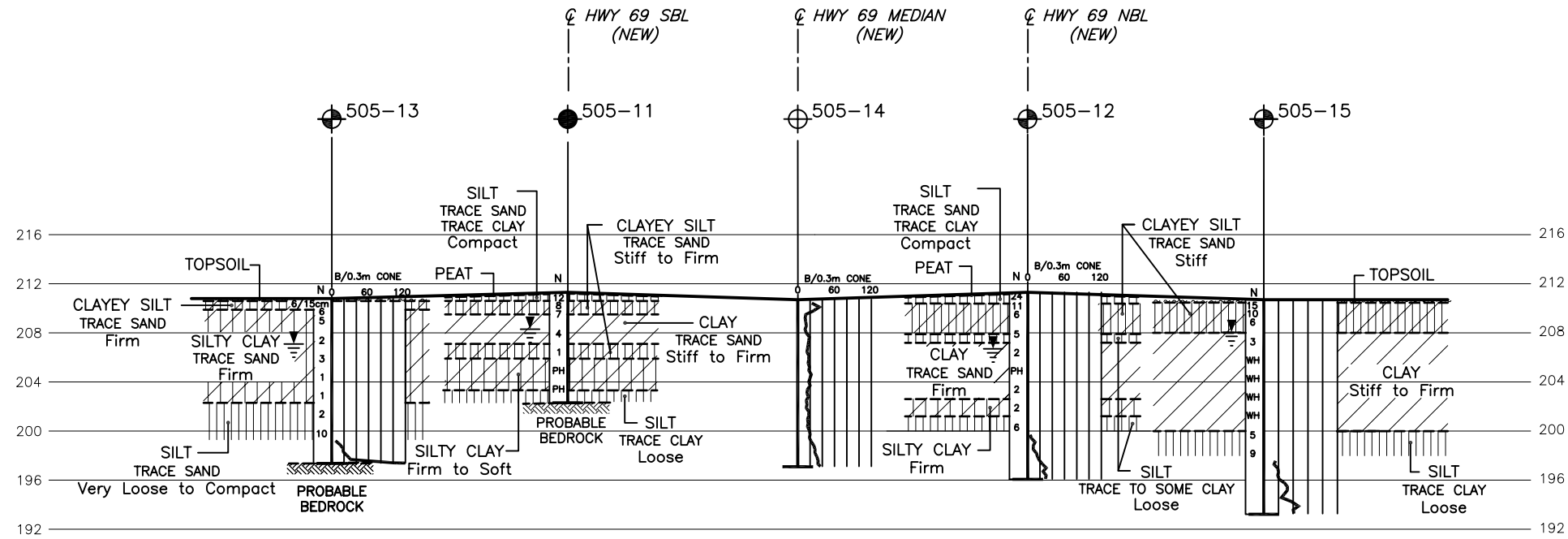
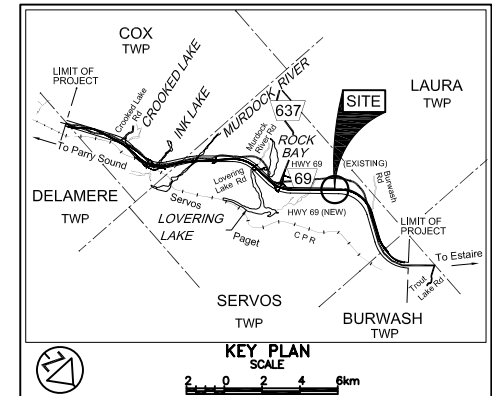
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

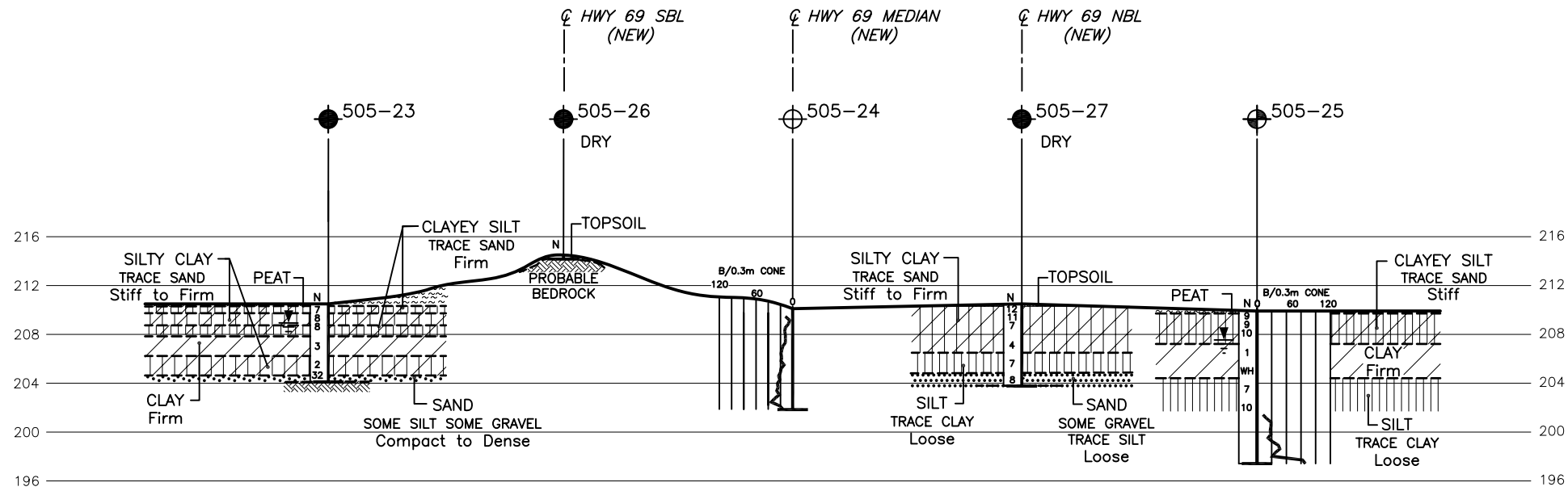
REVISIONS			
DATE	BY	DESCRIPTION	

Geocres No. 411-231

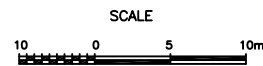
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED GD	DATE JAN. 23, 2009
DRAWN	NA	CHECKED CN	APPROVED BRG
			DWG 505-3



SECTION D-D



SECTION E-E



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
PH	Thinwall Sample - Advanced Hydraulically		
	W L at time of investigation Feb-Apr 2007		
	Head		
	ARTESIAN WATER Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 505-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

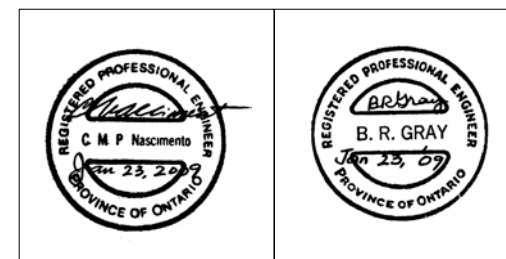
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

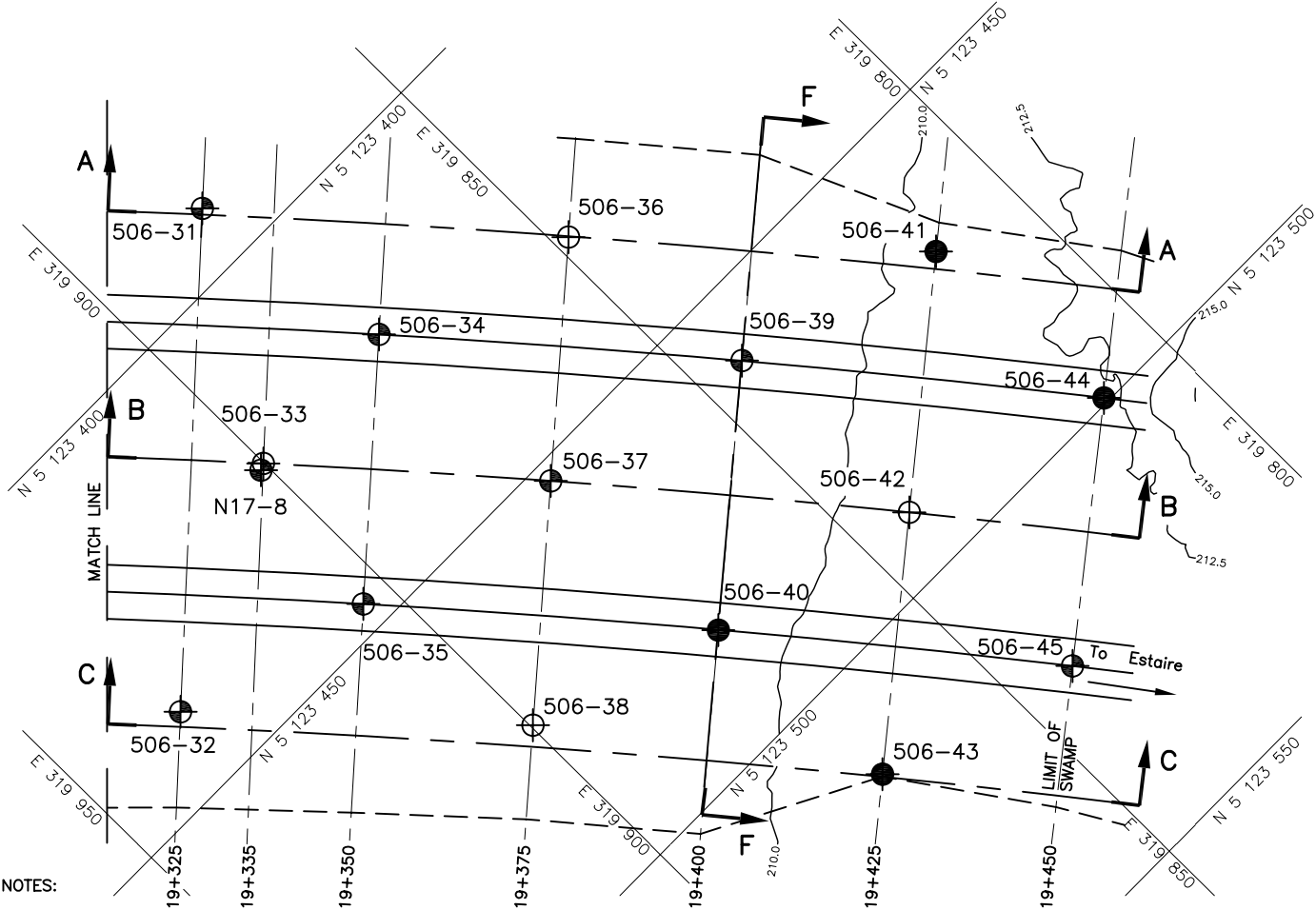
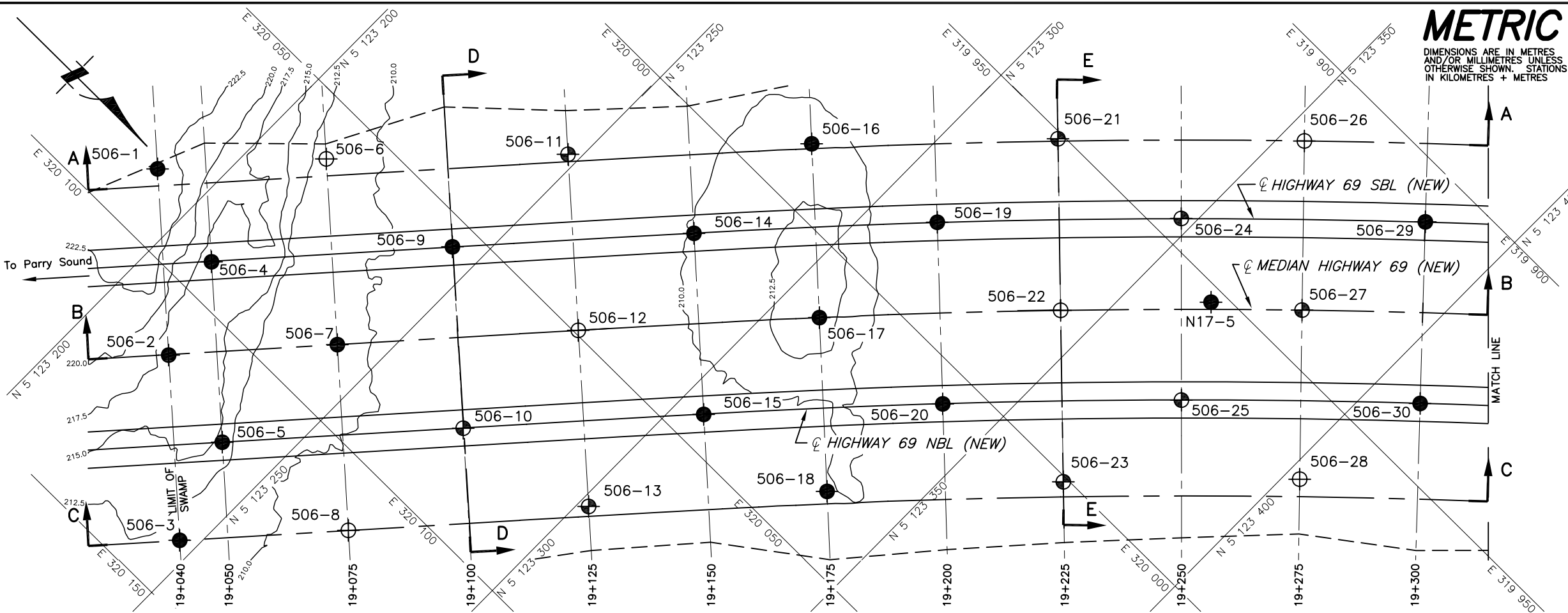
HWY No 69	NSB	CHECKED GD	DATE JAN. 23, 2009	SITE	54
SUBM'D	NA	CHECKED CN	APPROVED BRG	DWG	505-4

NOTES:

- REFER TO DRAWING 505-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 505-2 AND 505-3 FOR SECTIONS A-A, B-B AND C-C.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



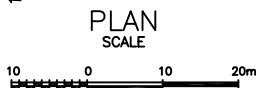
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



NOTES:

1. REFER TO DRAWINGS 506-2 TO 506-5 FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F.

2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
506-17	212.6	19+175	CL
506-18	209.1	19+175	36.0m Rt.
506-19	208.8	19+200	18.8m Lt.
506-20	208.8	19+200	18.8m Rt.
506-21	208.7	19+225	35.5m Lt.
506-22	208.7	19+225	CL
506-23	208.7	19+225	35.5m Rt.
506-24	208.7	19+250	18.8m Lt.
506-25	208.7	19+250	18.8m Rt.
506-26	208.7	19+275	35.0m Lt.
506-27	208.7	19+275	CL
506-28	208.7	19+275	35.0m Rt.
506-29	208.7	19+300	18.8m Lt.
506-30	208.7	19+300	18.8m Rt.
506-31	208.7	19+325	35.0m Lt.
506-32	208.7	19+325	35.0m Rt.

(Legend Continues)

(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
506-33	208.7	19+335	CL
506-34	208.7	19+350	18.8m Lt.
506-35	208.7	19+350	18.8m Rt.
506-36	208.7	19+375	34.0m Lt.
506-37	208.7	19+375	CL
506-38	208.7	19+375	34.0m Rt.
506-39	208.7	19+400	18.8m Lt.
506-40	208.9	19+400	18.8m Rt.
506-41	211.5	19+425	36.5m Lt.
506-42	211.5	19+425	CL
506-43	211.6	19+425	36.5m Rt.
506-44	212.4	19+450	19.0m Lt.
506-45	212.2	19+450	18.8m Rt.

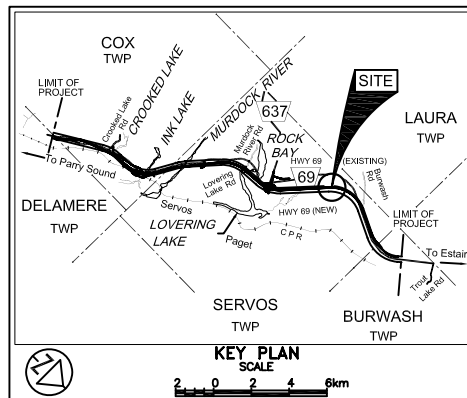
BH No	ELEVATION	CO-ORDINATES	
		NORTHINGS	EASTINGS
N17-8	208.6	5 123 423	319 901

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 506, STA. 19+040 TO 19+450 SERVOS TWP
BOREHOLE LOCATIONS



SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Feb-Apr 2007 and Jan 2008
	Head
	ARTESIAN WATER Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
506-1	221.0	19+040	38.5m Lt.
506-2	216.1	19+040	CL
506-3	210.8	19+040	38.5m Rt.
506-4	216.1	19+050	19.0m Lt.
506-5	213.1	19+050	18.8m Rt.
506-6	211.3	19+075	38.5m Lt.
506-7	210.5	19+075	CL
506-8	209.5	19+075	38.5m Rt.
506-9	209.4	19+100	18.8m Lt.
506-10	209.4	19+100	18.8m Rt.
506-11	209.4	19+125	36.5m Lt.
506-12	209.0	19+125	CL
506-13	208.9	19+125	36.5m Rt.
506-14	210.0	19+150	18.8m Lt.
506-15	209.7	19+150	18.8m Rt.
506-16	209.1	19+175	36.0m Lt.

(Legend Continues)

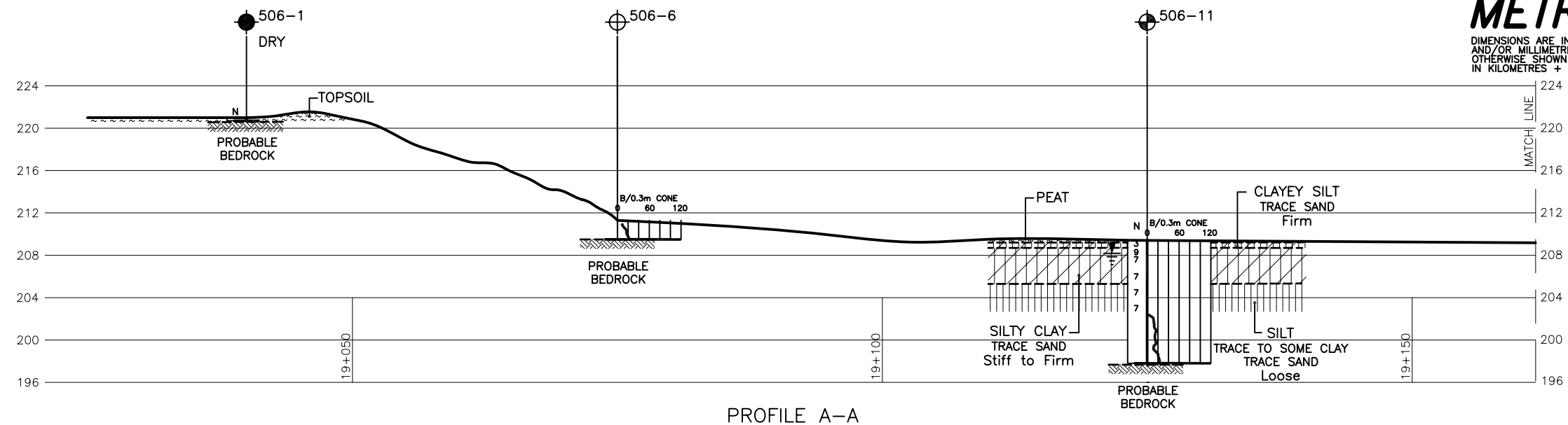
— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

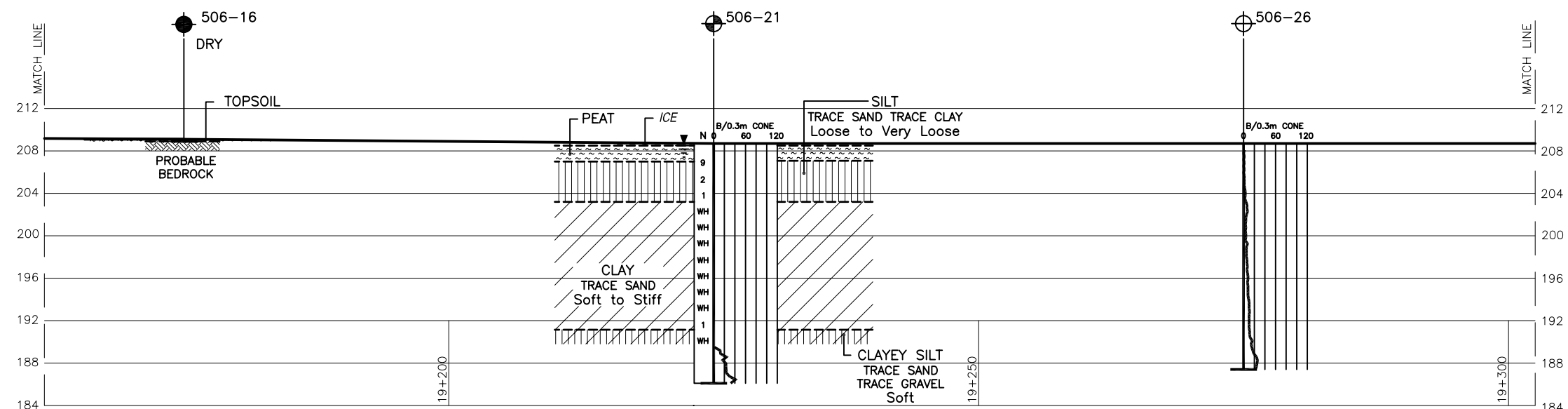
Geocres No. 411-231

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

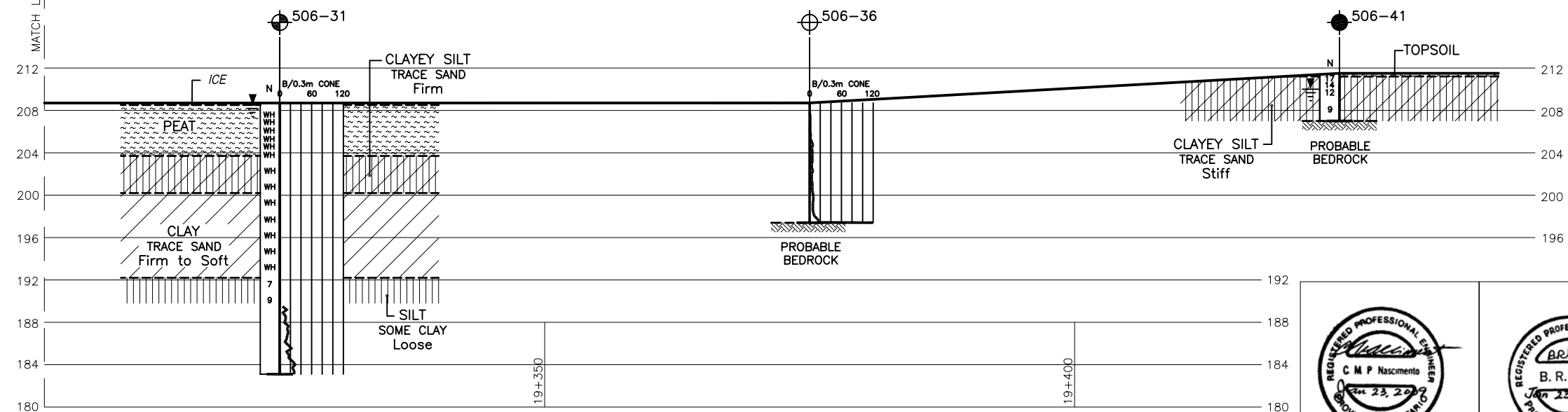
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	506-1



PROFILE A-A



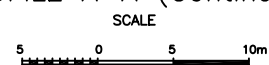
PROFILE A-A (Continued)



PROFILE A-A (Continued)

NOTES:

1. REFER TO DRAWING 506-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 506-3 TO 506-5 FOR SECTIONS B-B, C-C, D-D, E-E AND F-F.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

**METRIC**

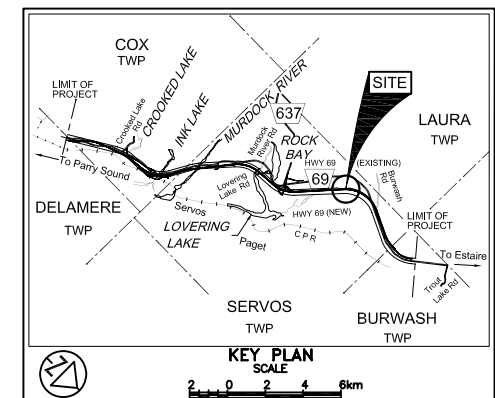
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 506, STA. 19+040 TO 19+450 SERVOS TWP

SOIL STRATA

SHEET



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
	W L at time of investigation Feb-Apr 2007 and Jan 2008		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 506-1 FOR DETAILS			

- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



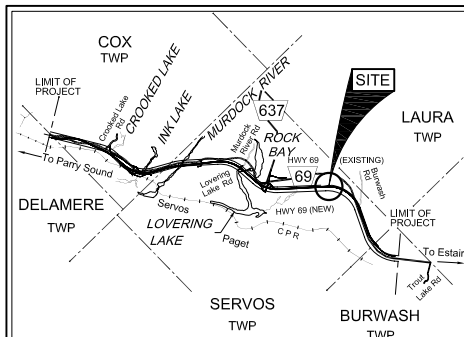
METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 506, STA. 19+040 TO 19+450 SERVOS TWP
SOIL STRATA

SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



KEY PLAN
SCALE
0 2 4 8km

- LEGEND**
- Borehole
 - Dynamic Cone Penetration Test (Cone)
 - Borehole & Cone
 - N Blows/0.3m (Std. Pen Test, 475 J/blow)
 - CONE Blows/0.3m (60° Cone, 475 J/blow)
 - WH Penetration due to weight of hammer and rods
 - W L at time of investigation Feb-Apr 2007 and Jan 2008
 - Head
 - ARTESIAN WATER Encountered
 - PIEZOMETER

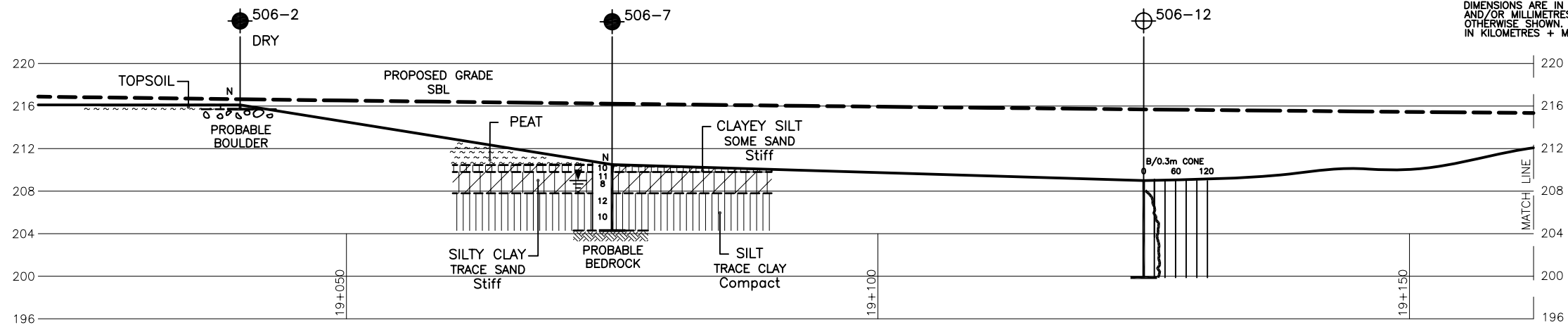
BH No	ELEVATION	STA SERVOS TWP	a/s CL MED
SEE DRAWING 506-1 FOR DETAILS			

NOTE
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

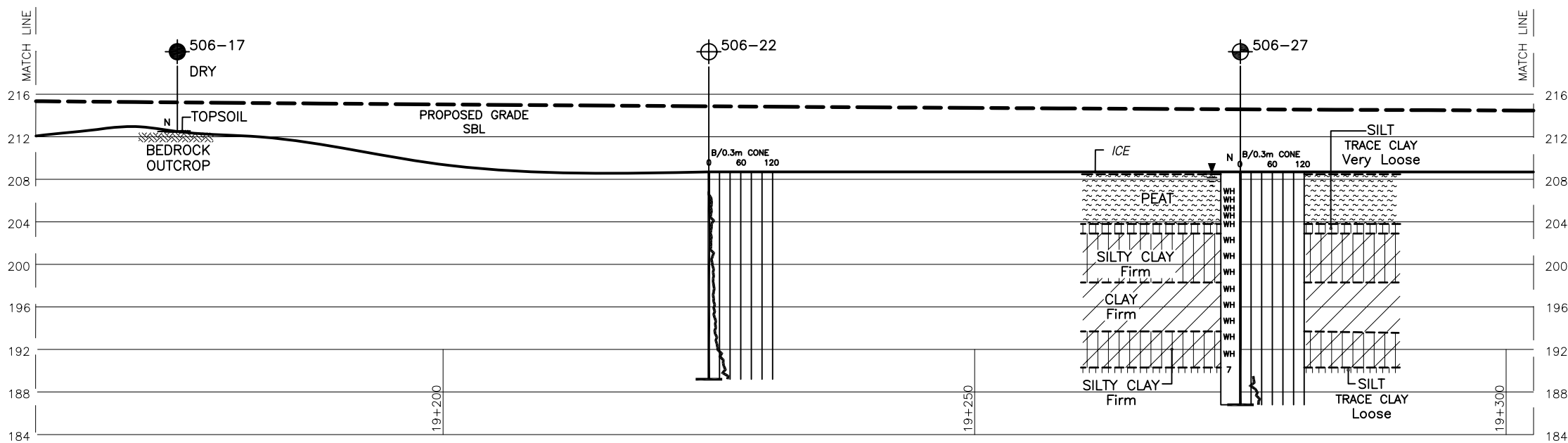
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

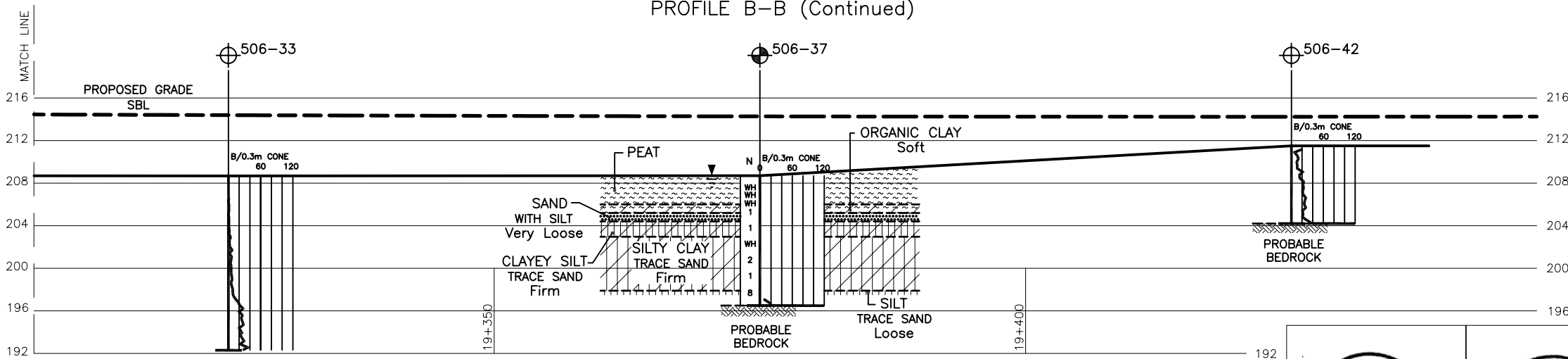
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	SITE	
APPROVED	BRG	DWG	506-3



PROFILE B-B



PROFILE B-B (Continued)



PROFILE B-B (Continued)

SCALE
0 5 10m

NOTES:

- REFER TO DRAWING 506-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 506-2 FOR SECTION A-A AND 506-4 TO 506-5 FOR SECTIONS C-C, D-D, E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69

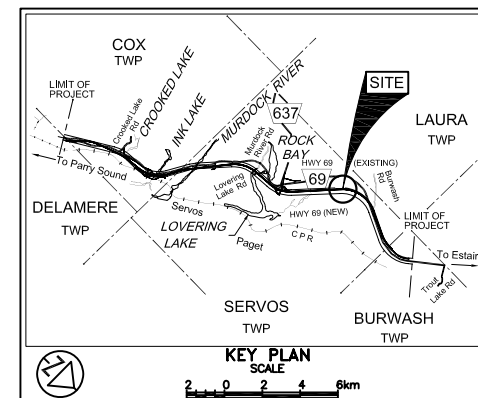
HIGHWAY 69 FOUR-LANING

SWAMP 506, STA. 19+040 TO 19+450 SERVOS TWP

SOIL STRATA

SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
	W L at time of investigation Feb-Apr 2007 and Jan 2008		
	Head		
	ARTESIAN WATER Encountered		
	PIEZOMETER		

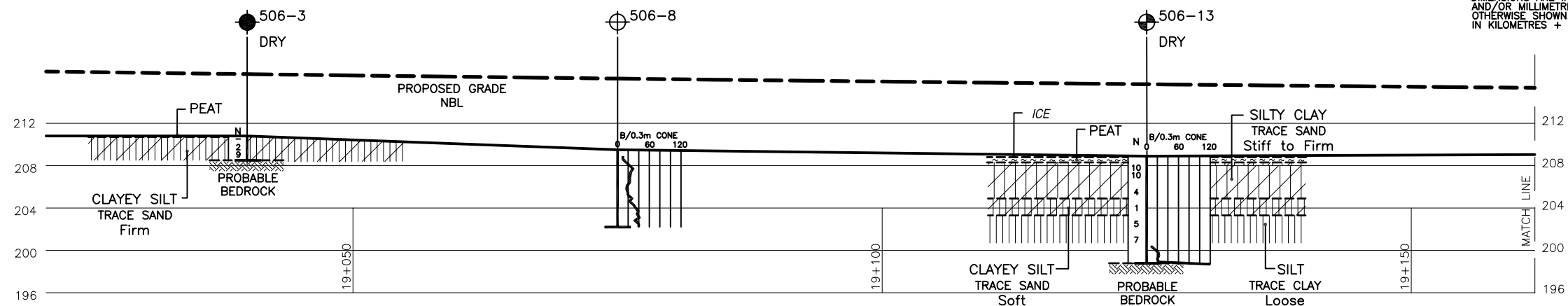
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 506-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

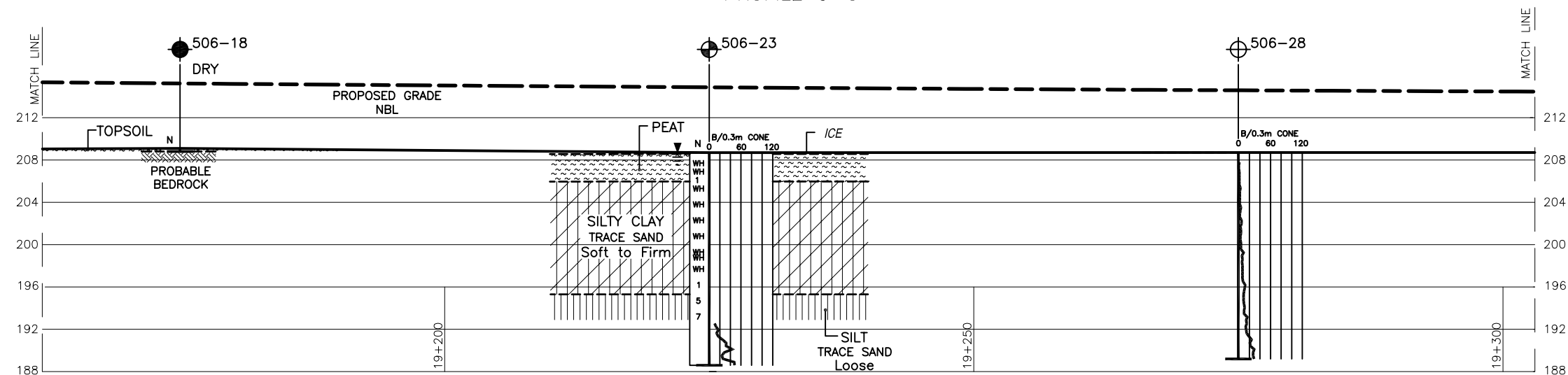
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

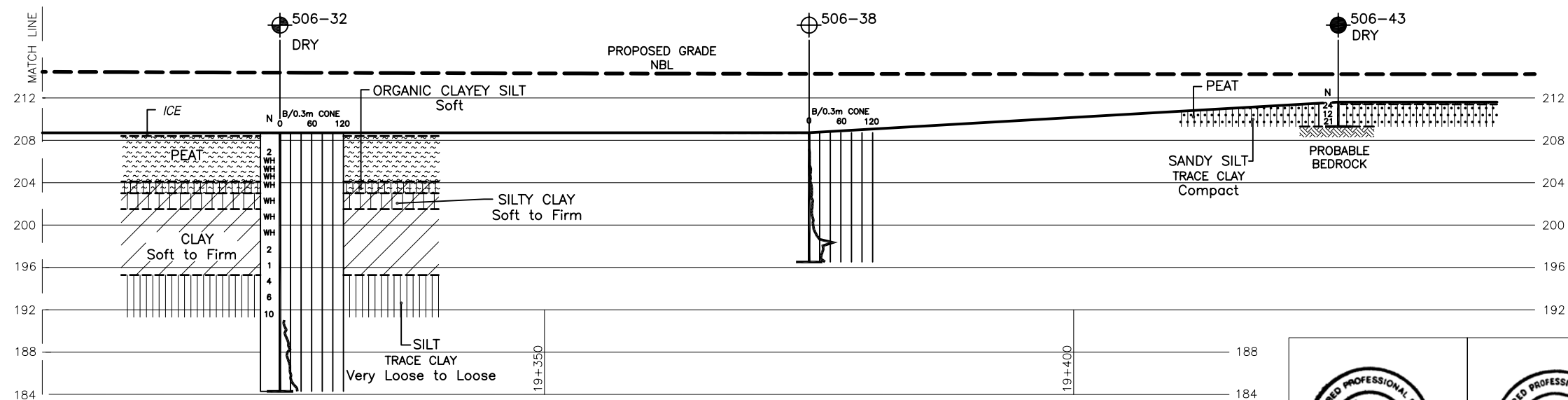
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	506-4



PROFILE C-C



PROFILE C-C (Continued)

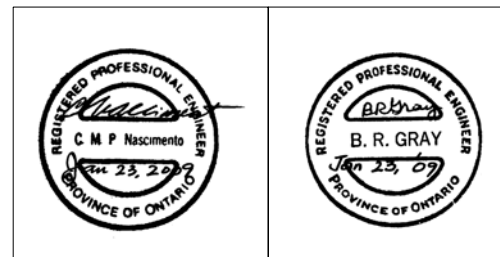


PROFILE C-C (Continued)

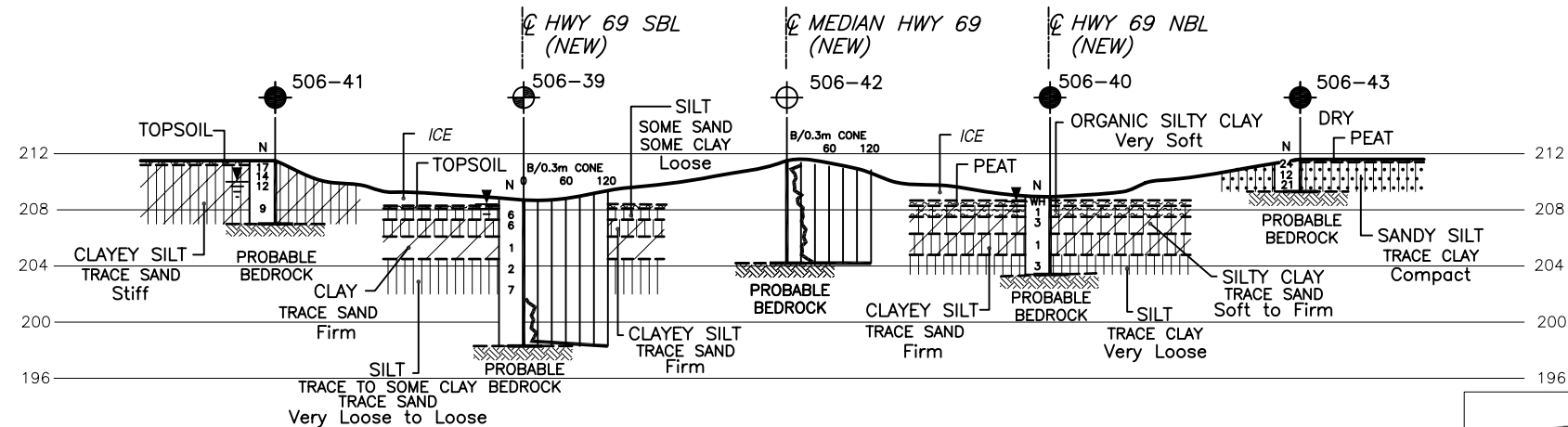
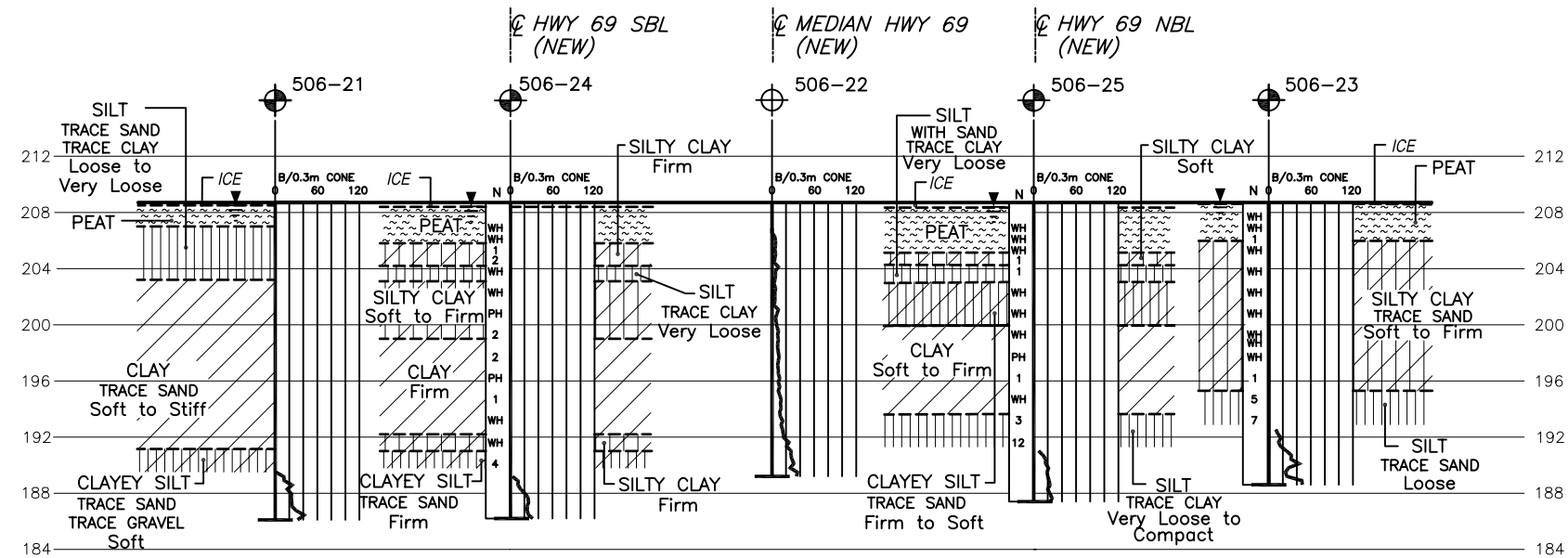
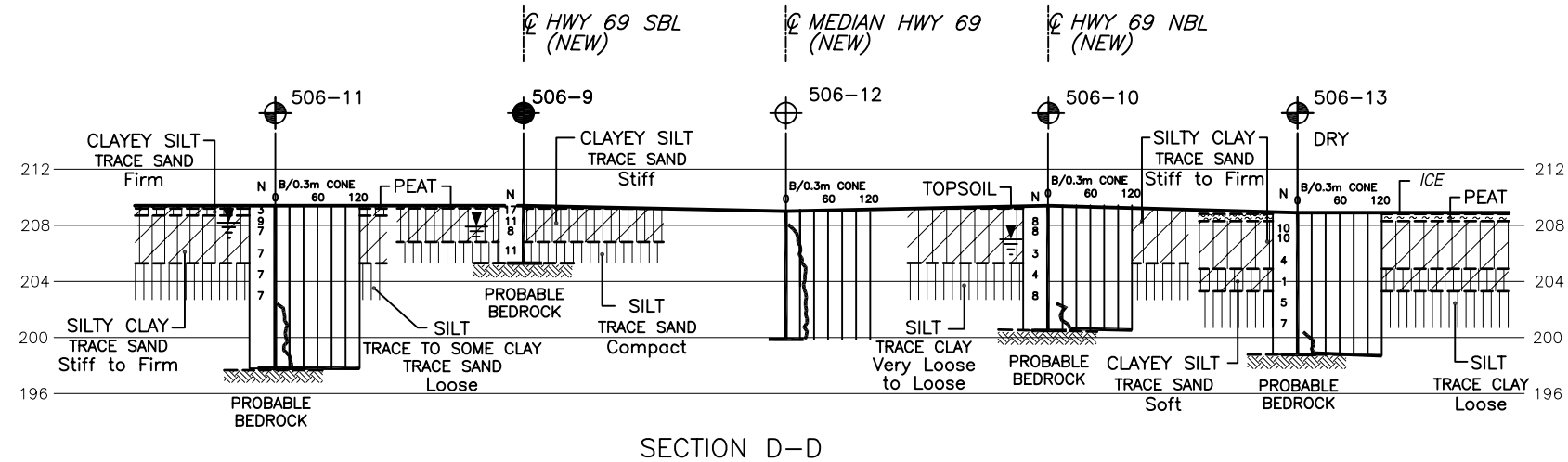
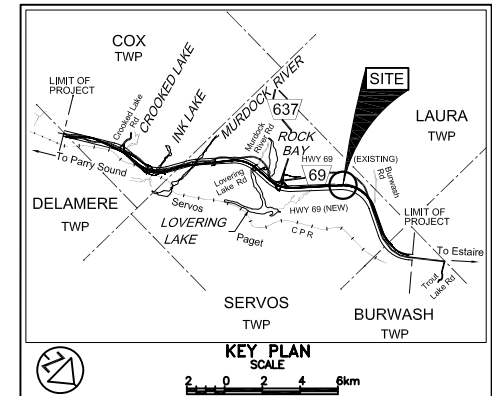


NOTES:

- REFER TO DRAWING 506-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 506-2 AND 506-3 FOR SECTIONS A-A AND B-B AND DRAWING 506-5 FOR SECTIONS D-D, E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



SECTION F-F



NOTES:

- REFER TO DRAWING 506-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 506-2 TO 506-4 FOR SECTION A-A, B-B AND C-C.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
PH	Thinwall Sample - Advanced Hydraulically		
	W L at time of investigation Feb-Apr 2007 and Jan 2008		
	Head		
	ARTESIAN WATER		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 506-1 FOR DETAILS			

NOTE:
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231			
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	--
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	506-5

METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69

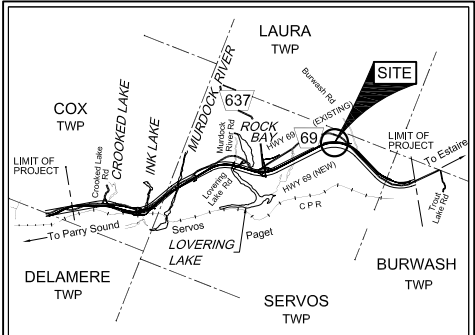
HIGHWAY 69 FOUR-LANING

SWAMP 507, STA. 19+840 TO 20+100 SERVOS TWP

BOREHOLE LOCATION



SHEET



LEGEND	
	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Jan-Feb 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
507-1	213.2	19+840	40.5m Lt.
507-2	213.5	19+840	CL
507-3	214.2	19+840	40.5m Rt.
507-4	213.3	19+850	18.8m Lt.
507-5	213.5	19+850	18.8m Rt.
507-6	212.9	19+875	40.5m Lt.
507-7	213.1	19+875	CL
507-8	213.4	19+875	40.5m Rt.
507-9	212.9	19+900	18.8m Lt.
507-10	213.2	19+900	18.8m Rt.
507-11	212.6	19+925	44.5m Lt.
507-12	212.8	19+925	CL
507-13	213.1	19+925	42.5m Rt.
507-14	212.3	19+950	18.8m Lt.
507-15	213.0	19+950	18.8m Rt.
507-16	212.2	19+975	44.5m Lt.

(Legend Continues)

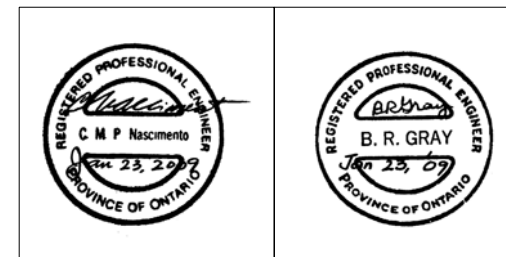
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

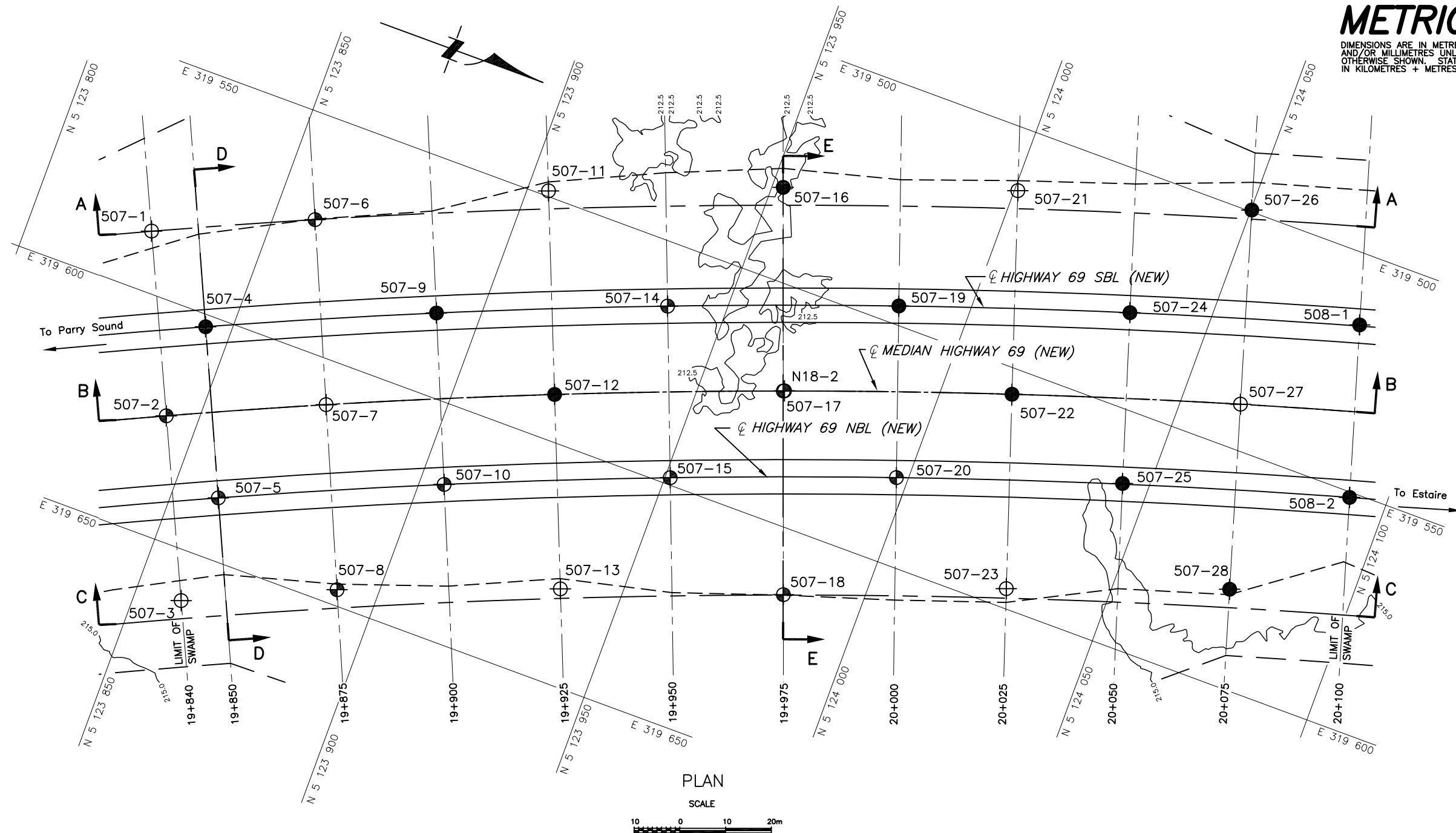
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	--
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	507-1



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



PLAN

SCALE



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
507-26	213.0	20+075	42.5m Lt.
507-27	213.3	20+075	CL
507-28	214.5	20+075	40.5m Rt.
508-1	213.4	20+100	19.0m Lt.
508-2	214.2	20+100	18.8m Rt.
BH No	ELEVATION	CO-ORDINATES	
		NORTHINGS	EASTINGS
N18-2	212.6	5 123 968	319 572

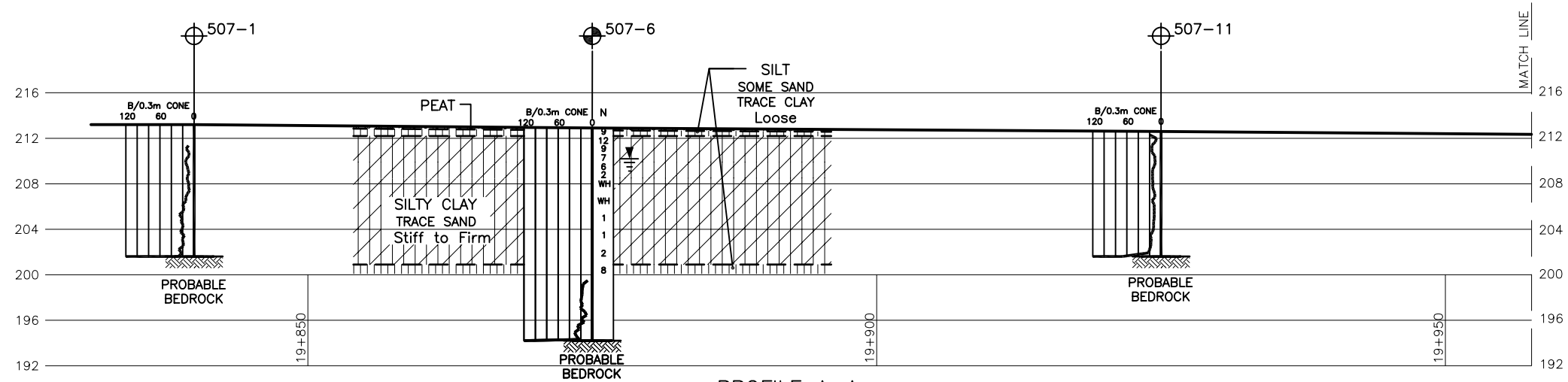
(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
507-17	212.4	19+975	CL
507-18	212.8	19+975	44.5m Rt.
507-19	212.6	20+000	18.8m Lt.
507-20	212.7	20+000	18.8m Rt.
507-21	213.0	20+025	44.5m Lt.
507-22	212.8	20+025	CL
507-23	213.2	20+025	42.5m Rt.
507-24	213.0	20+050	18.8m Lt.
507-25	214.0	20+050	18.8m Rt.

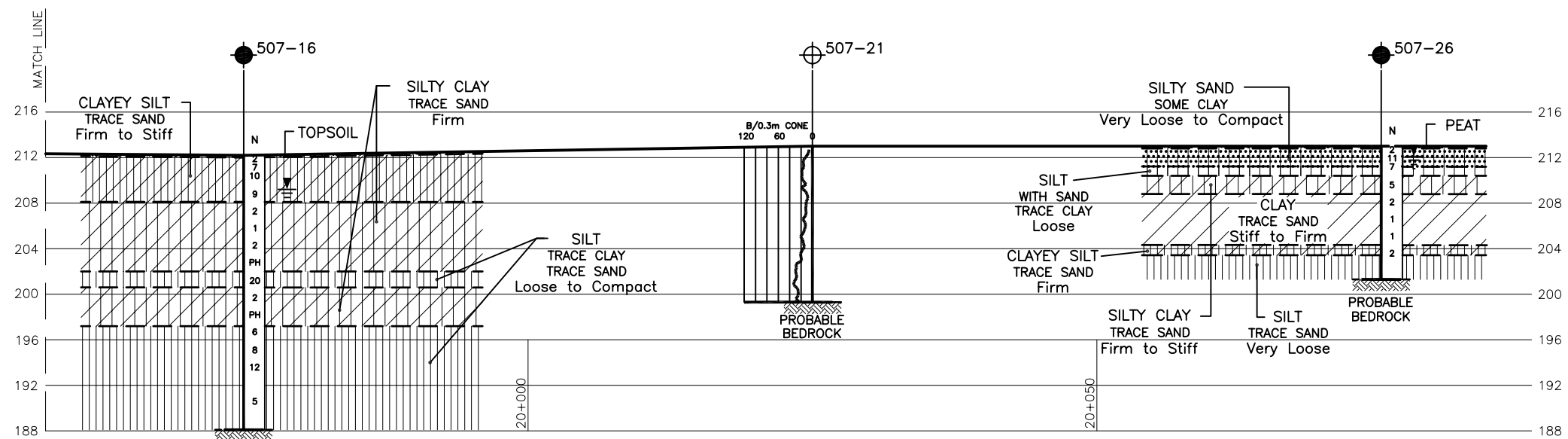
(Legend Continues)

NOTES:

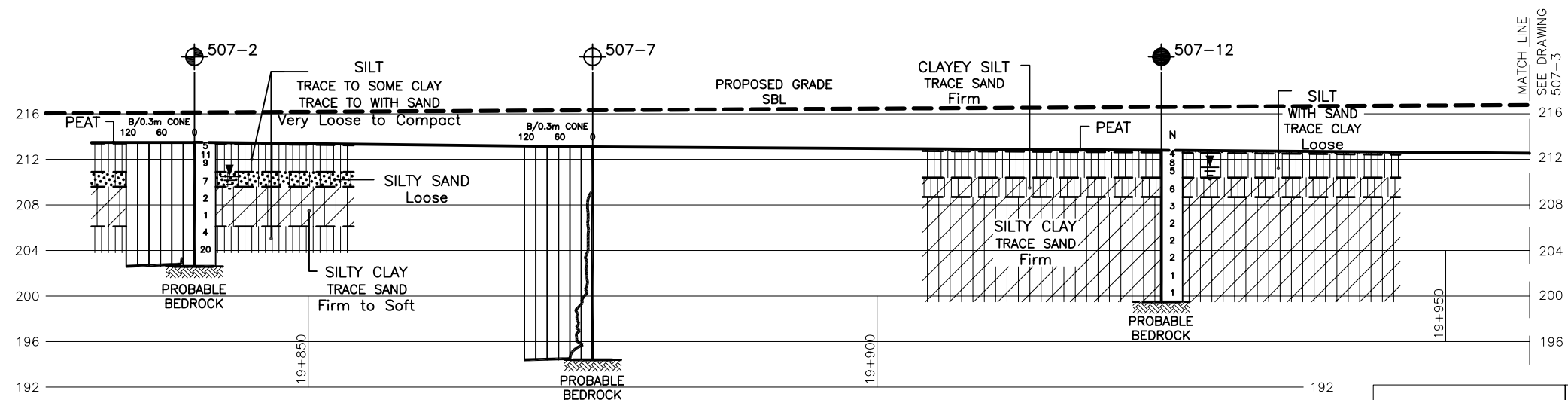
- REFER TO DRAWINGS 507-2 TO 507-4 FOR SECTIONS A-A, B-B, C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



PROFILE A-A



PROFILE A-A (Continued)



PROFILE B-B



NOTES:

1. REFER TO DRAWING 507-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 507-3 TO 507-5 FOR SECTIONS B-B (Continued), C-C, D-D AND E-E.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

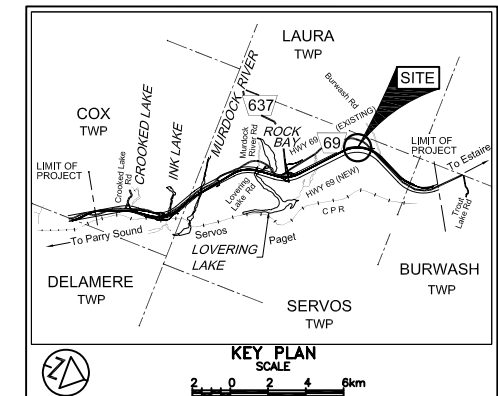
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 507, STA. 19+840 TO 20+100 SERVOS TWP
SOIL STRATA

SHEET



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
PH	Thinwall Sample - Advanced Hydraulically		
	W L at time of investigation Jan-Feb 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 507-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

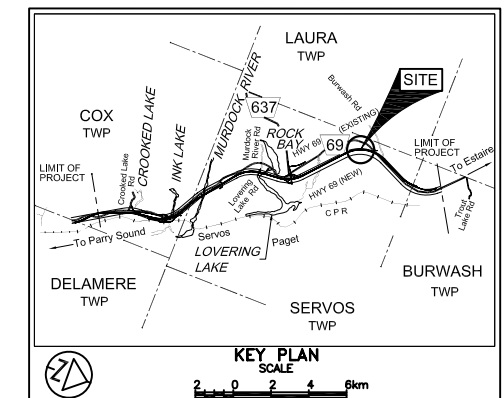
Geocres No. 411-231
HWY No 69
SUBM'D NSB CHECKED GD DATE JAN. 23, 2009 DIST 54
DRAWN NA CHECKED CN APPROVED BRG SITE ---
DWG 507-2









DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

SOIL STRATA



Peto MacCallum Ltd
CONSULTING ENGINEERS



	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Jan–Feb 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

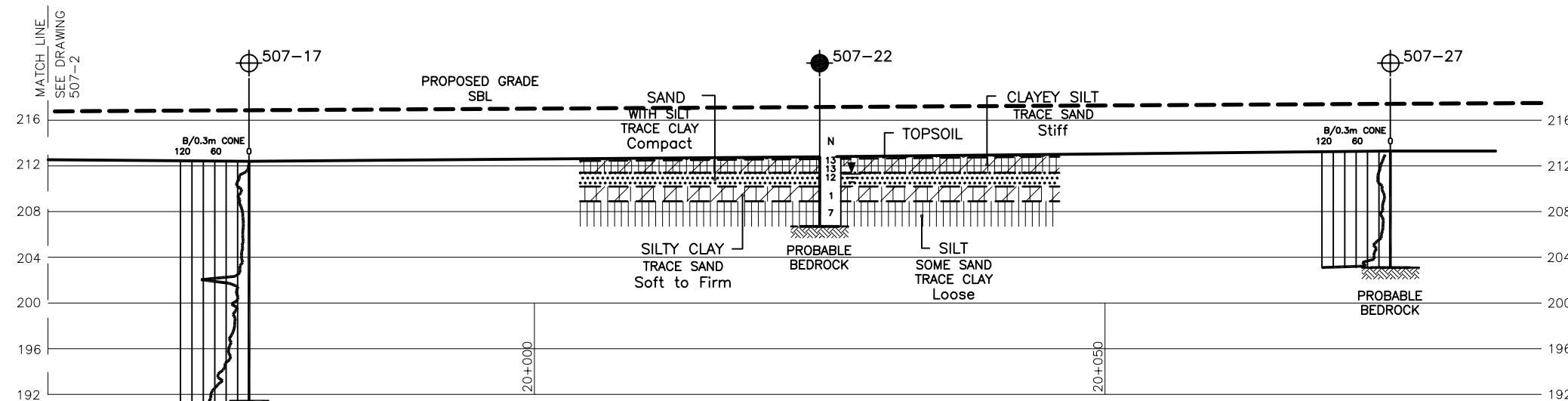
BH No	ELEVATION	STA SERVOS TWP	c/s CL MED
SEE DRAWING 507-1 FOR DETAILS			

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

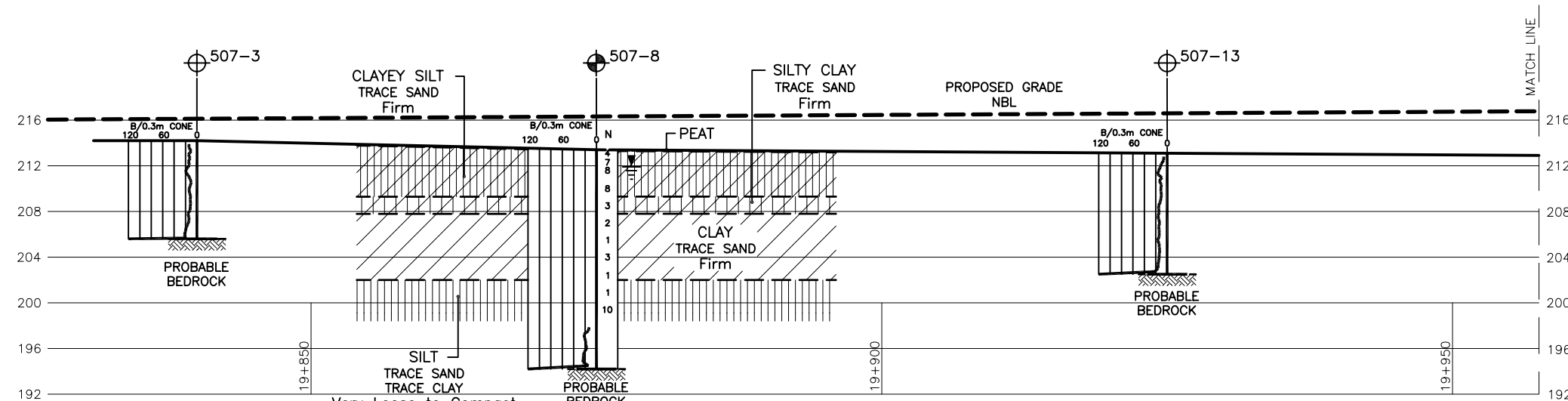
REVISIONS			
DATE	BY	DESCRIPTION	

Geocres No. 411-231

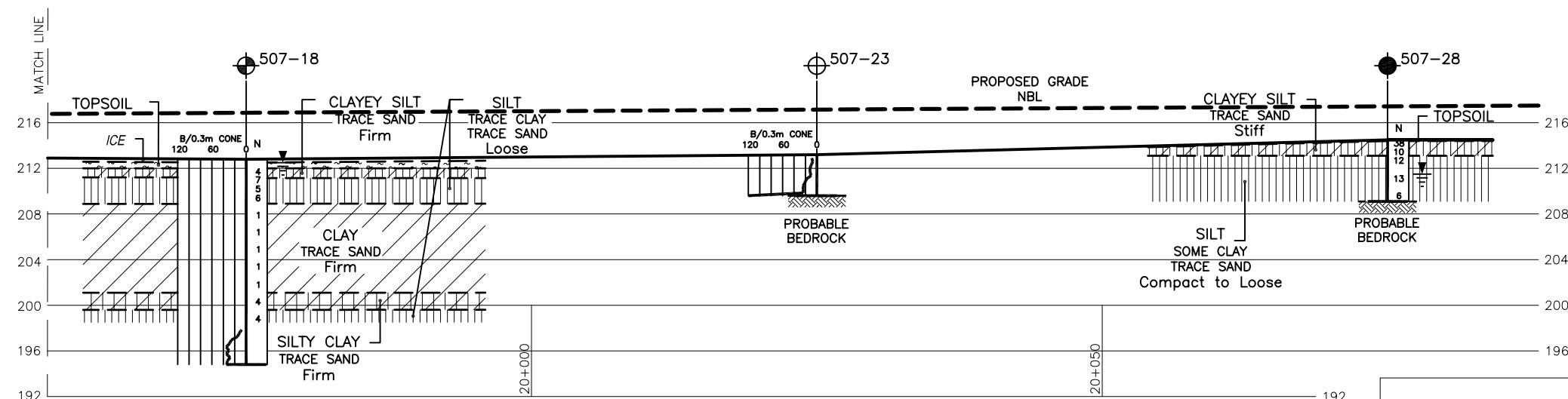
HWY No 69				DIST 54	
SUBM'D	NSB	CHECKED GD	DATE JAN. 23, 2009		SITE --
DRAWN	NA	CHECKED CN	APPROVED BRG		DWG 507-3



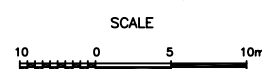
PROFILE B-B (Continued)



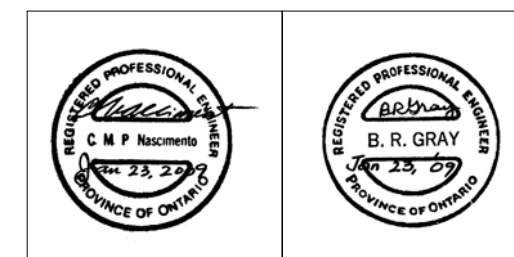
PROFILE C-C



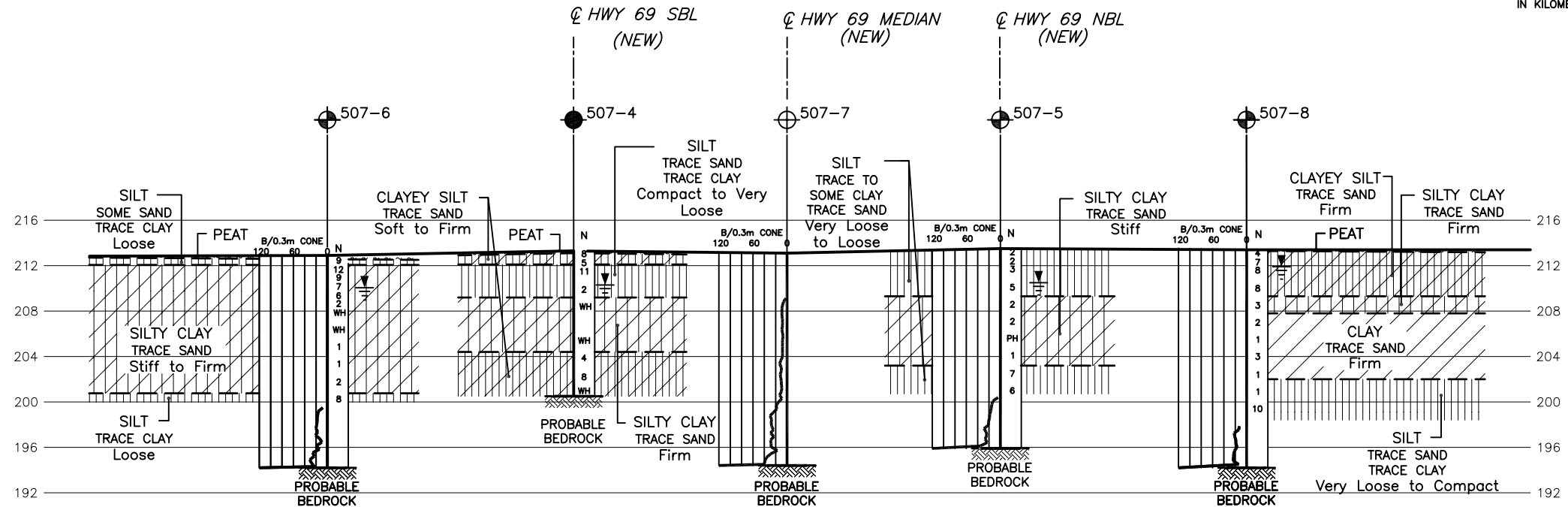
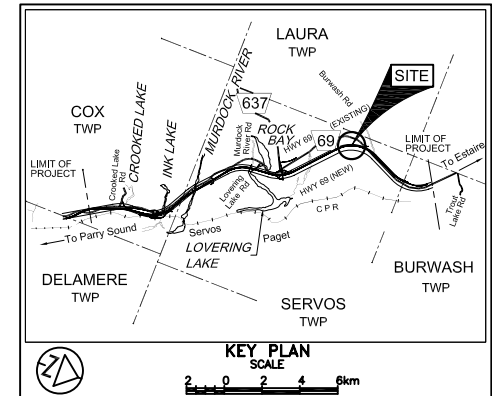
PROFILE C-C (Continued)



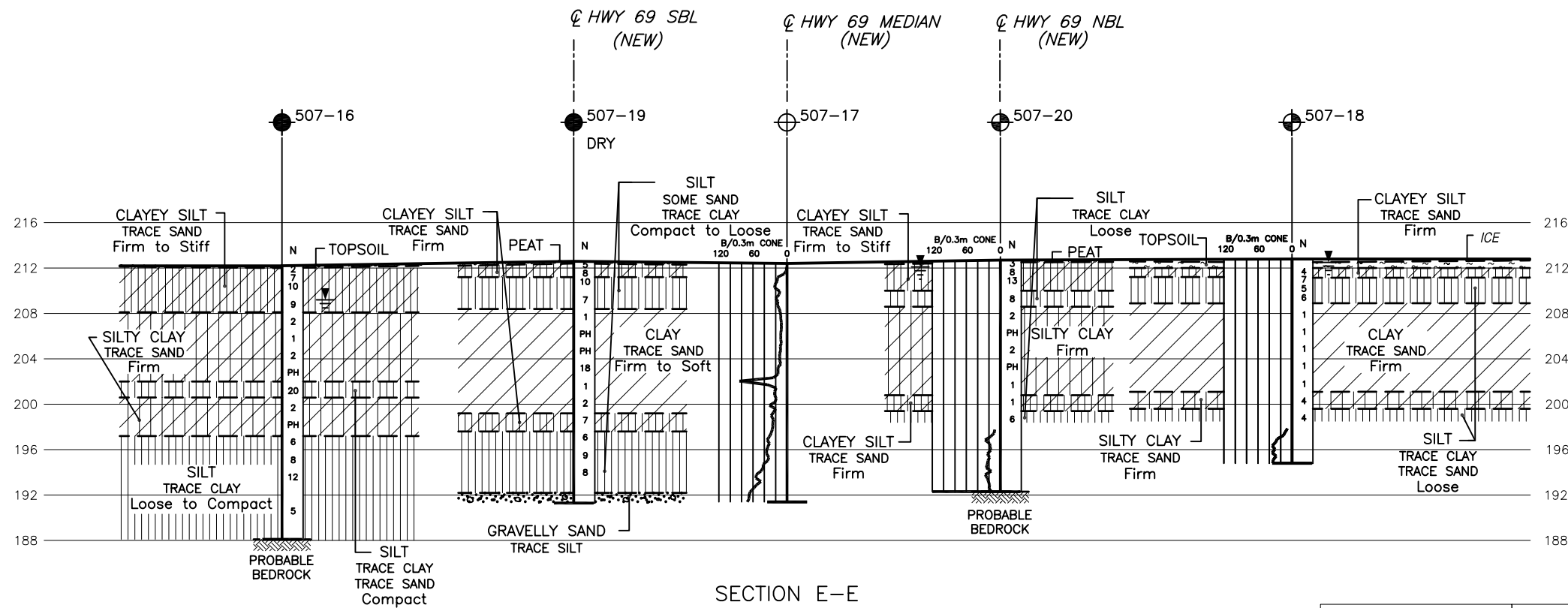
1. REFER TO DRAWINGS 507-1 AND 507-2 FOR BOREHOLE LOCATIONS PLAN AND SECTIONS A-A AND B-B AND DRAWINGS 507-4 FOR SECTIONS D-D AND E-E.
2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



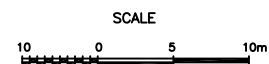
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



SECTION D-D



SECTION E-E



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
PH	Thinwall Sample - Advanced Hydraulically		
	W L at time of investigation Jan-Feb 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 507-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

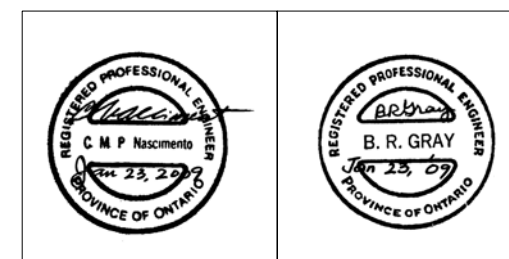
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No 69	SUBM'D NSB	CHECKED GD	DATE JAN. 23, 2009	SITE ---	DIST 54
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 507-4		

NOTES:

- REFER TO DRAWINGS 507-1 TO 507-3 FOR BOREHOLE LOCATIONS PLAN AND SECTIONS A-A AND B-B AND C-C.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRESCONT No
GWP No 5218-06-00

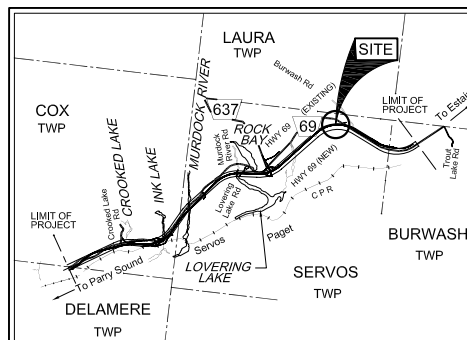
HIGHWAY 69

HIGHWAY 69 FOUR-LANING
SWAMP 508, STA. 20+100 TO 20+681.5 SERVOS TWP

BOREHOLE LOCATIONS



SHEET



LEGEND	
	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Dec 2006 and Jan 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
508-1	213.4	20+100	18.8m Lt.
508-2	214.2	20+100	18.8m Rt.
508-3	213.4	20+125	40.5m Lt.
508-4	216.2	20+125	CL
508-5	217.4	20+125	36.5m Rt.
508-6	213.2	20+150	18.8m Lt.
508-7	213.5	20+150	18.8m Rt.
508-8	212.8	20+175	34.5m Lt.
508-9	213.2	20+175	CL
508-10	213.8	20+175	34.5m Rt.
508-11	212.7	20+200	18.8m Lt.
508-12	213.0	20+200	18.8m Rt.
508-13	212.7	20+225	35.0m Lt.
508-14	212.7	20+225	CL
508-15	212.9	20+225	35.0m Rt.
508-16	212.7	20+250	18.8m Lt.

(Legend Continues)

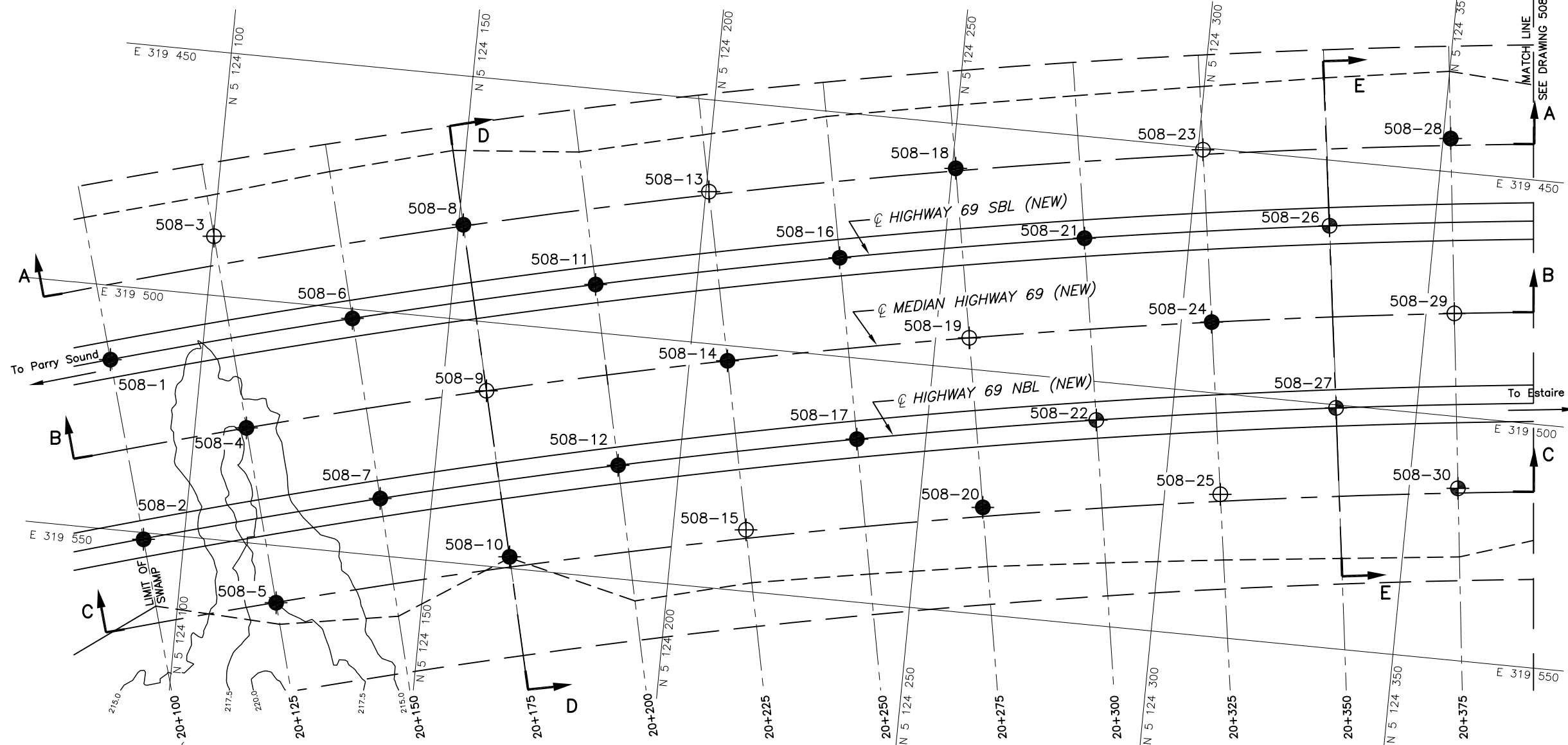
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	508-1



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
508-17	212.7	20+250	18.8m Rt.
508-18	212.6	20+275	35.0m Lt.
508-19	212.7	20+275	CL
508-20	212.8	20+275	35.0m Rt.
508-21	212.6	20+300	18.8m Lt.
508-22	212.7	20+300	18.8m Rt.
508-23	212.7	20+325	35.5m Lt.
508-24	212.7	20+325	CL
508-25	212.7	20+325	35.5m Rt.
508-26	212.7	20+350	18.8m Lt.
508-27	212.7	20+350	18.8m Rt.
508-28	212.8	20+375	36.0m Lt.
508-29	212.3	20+375	CL
508-30	212.5	20+375	36.0m Rt.

(Legend Continues on drawing 508-2)

PLAN
SCALE

NOTES:

- REFER TO DRAWING 508-2 FOR CONTINUATION OF NORTH SIDE BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-3 TO 508-7 FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69

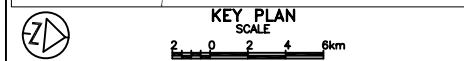
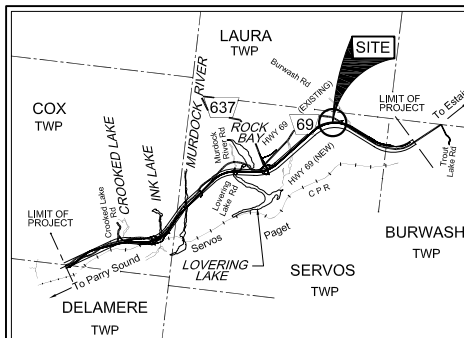
HIGHWAY 69 FOUR-LANING

SWAMP 508, STA. 20+100 TO 20+681.5 SERVOS TWP

BOREHOLE LOCATIONS



SHEET



LEGEND	
	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J/blow)
CONE	Blows/0.3m (60° Cone, 475 J/blow)
	W L at time of investigation Dec 2006 and Jan 2007
	Head
	ARTESIAN WATER Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
(Legend Continued)			
508-31	212.7	20+400	18.8m Lt.
508-32	212.8	20+400	18.8m Rt.
508-33	212.8	20+425	36.0m Lt.
508-34	212.8	20+425	CL
508-35	212.8	20+425	36.0m Rt.
508-36	212.9	20+450	18.8m Lt.
508-37	212.9	20+450	18.8m Rt.
508-38	213.1	20+475	36.0m Lt.
508-39	213.0	20+475	CL
508-40	213.5	20+475	36.0m Rt.
508-41	213.3	20+500	18.8m Lt.
508-42	213.3	20+500	18.8m Rt.
508-43	213.6	20+525	35.4m Lt.
508-44	213.7	20+525	CL
508-45	214.1	20+525	35.4m Rt.

(Legend Continues)

- NOTE -

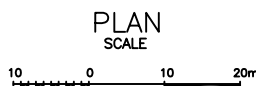
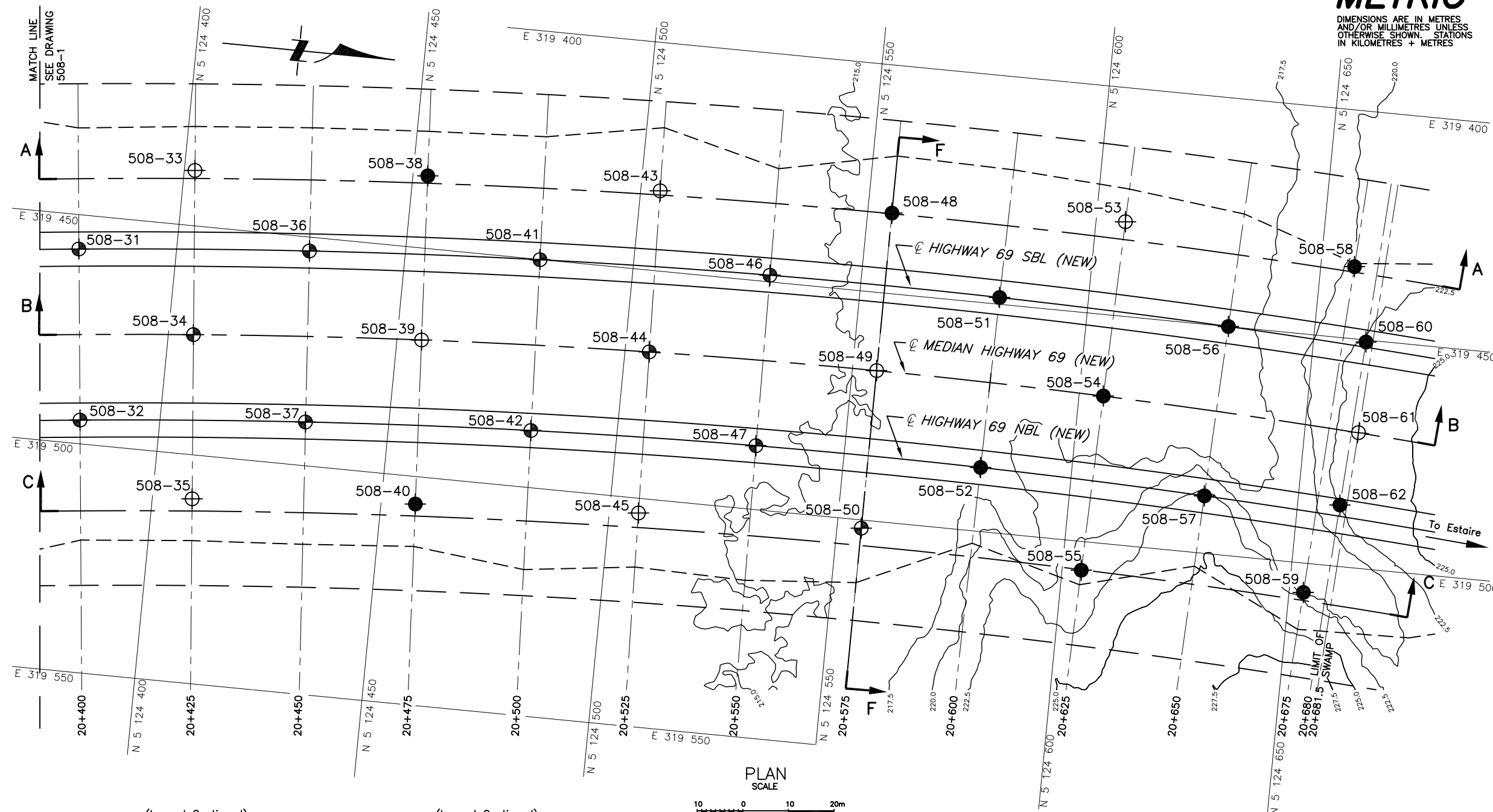
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	---
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	508-2



(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
508-46	214.3	20+550	18.8m Lt.
508-47	214.6	20+550	18.8m Rt.
508-48	214.9	20+575	34.7m Lt.
508-49	214.9	20+575	CL
508-50	214.9	20+575	34.7m Rt.
508-51	215.1	20+600	18.8m Lt.
508-52	215.7	20+600	18.8m Rt.
508-53	215.4	20+625	38.5m Lt.
508-54	215.7	20+625	CL

(Legend Continues)

(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
508-55	220.8	20+625	38.5m Rt.
508-56	216.8	20+650	18.8m Lt.
508-57	219.7	20+650	18.8m Rt.
508-58	220.3	20+675	36.0m Lt.
508-59	221.1	20+675	36.5m Rt.
508-60	222.4	20+680	19.9m Lt.
508-61	223.7	20+681.5	CL
508-62	221.8	20+680	16.3m Rt.

NOTES:

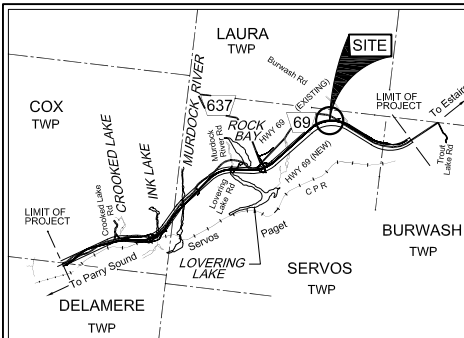
1. REFER TO DRAWING 508-1 FOR CONTINUATION OF SOUTH SIDE BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-3 TO 508-7 FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F.

2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00
HIGHWAY 69
HIGHWAY 69 FOUR-LANING
SWAMP 508, STA. 20+100 TO 20+681.5 SERVOS TWP
SOIL STRATA

SHEET



KEY PLAN
SCALE
2 0 2 4 6km

LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- WH Penetration due to weight of hammer and rods
- W L at time of investigation Dec 2006 and Jan 2007
- Head
- ARTESIAN WATER
- Encountered
- PIEZOMETER

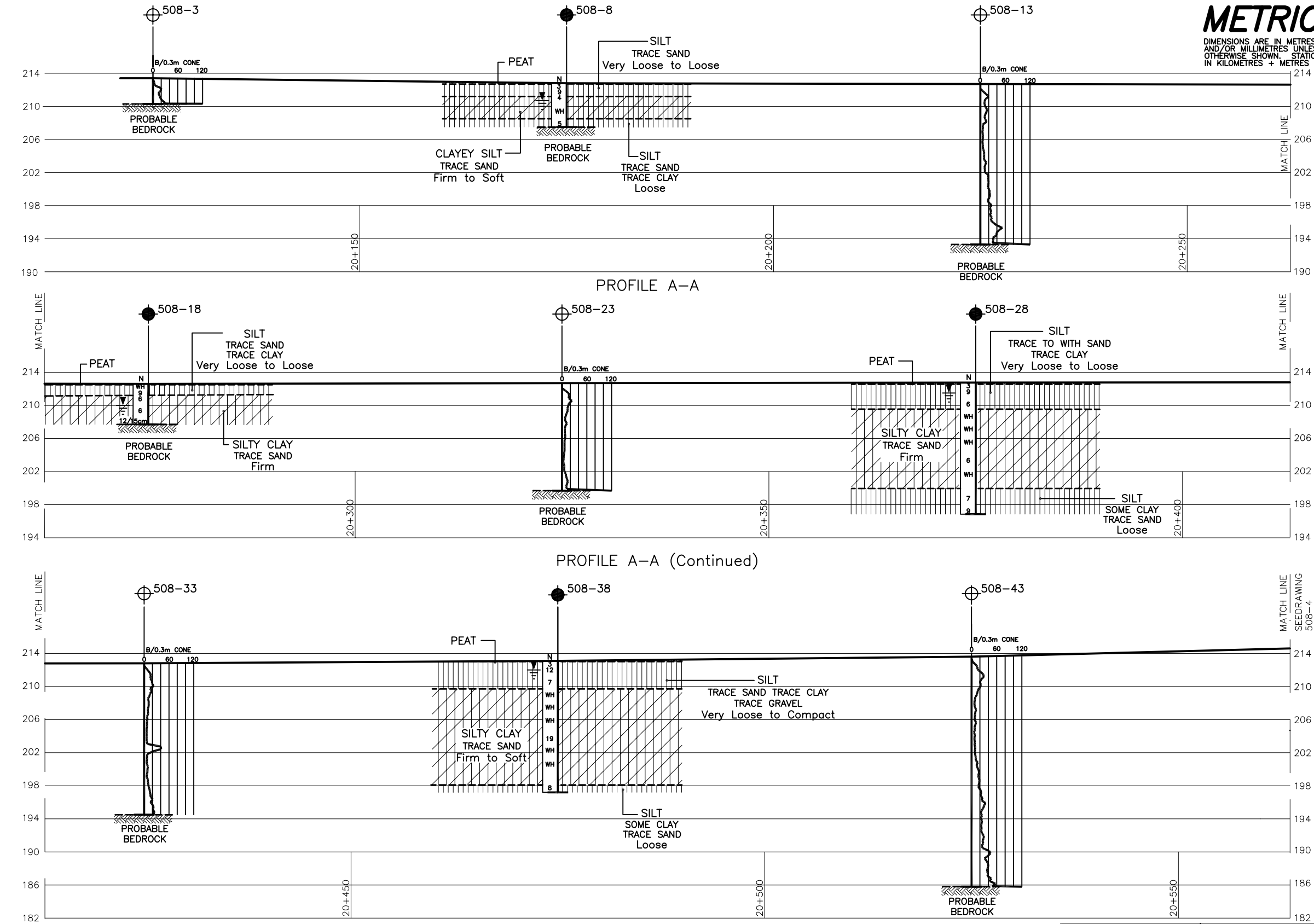
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWINGS 508-1 AND 508-2 FOR DETAILS			

NOTE -
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No 69	SUBM'D NSB	CHECKED GD	DATE JAN. 23, 2009	DIST 54
DRAWN NA	CHECKED CN	APPROVED BRG	SITE ---	DWG 508-3

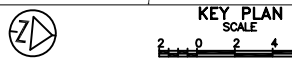
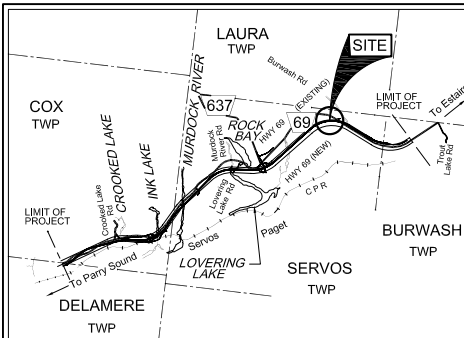


SCALE
5 0 5 10m

- NOTES:
- REFER TO DRAWINGS 508-1 AND 508-2 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-4 TO 508-7 FOR SECTIONS A-A (Continued), B-B, C-C, D-D, E-E AND F-F.
 - THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- WH Penetration due to weight of hammer and rods
- W L at time of investigation Dec 2006 and Jan 2007
- Head
- ARTESIAN WATER Encountered
- PIEZOMETER

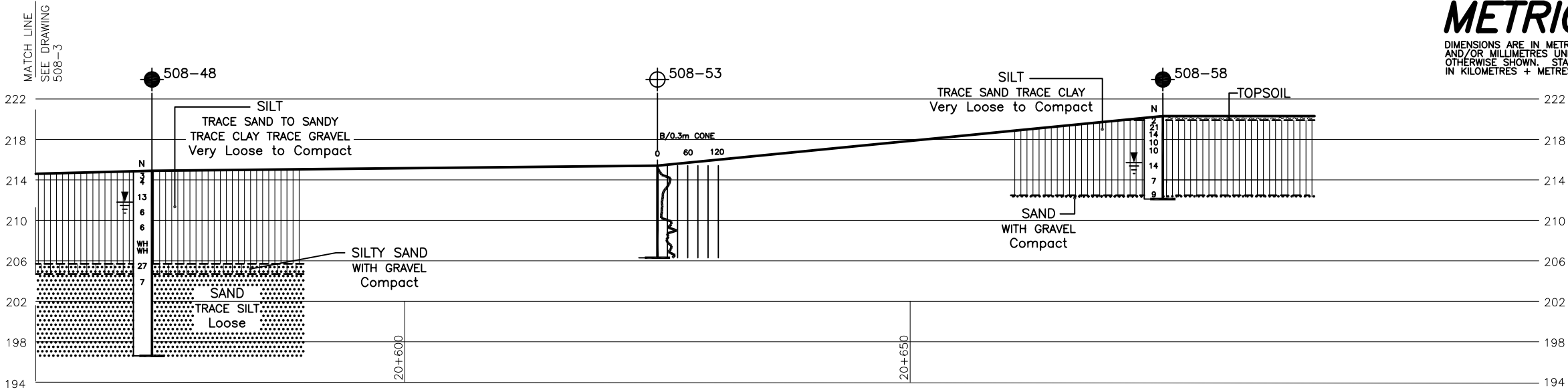
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWINGS 508-1 AND 508-2 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

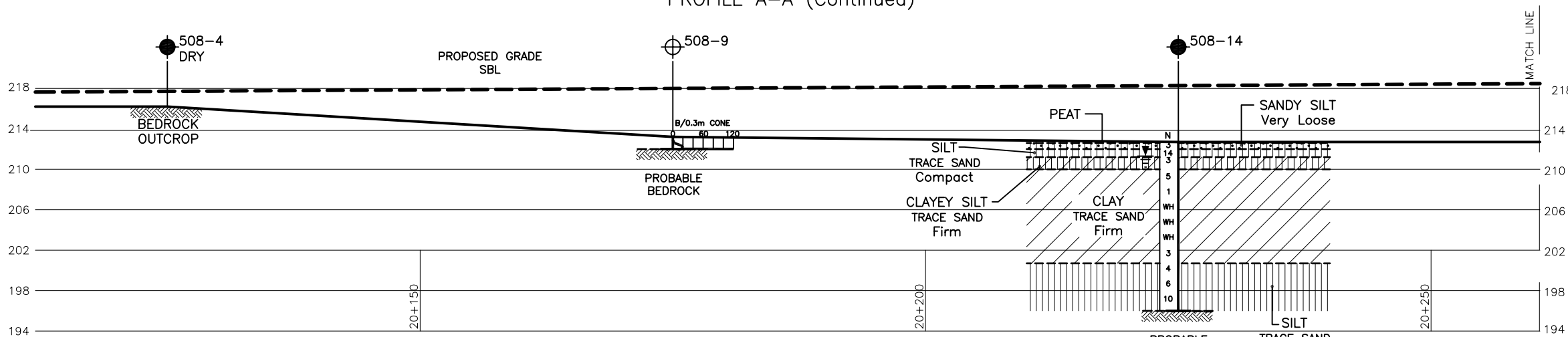
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

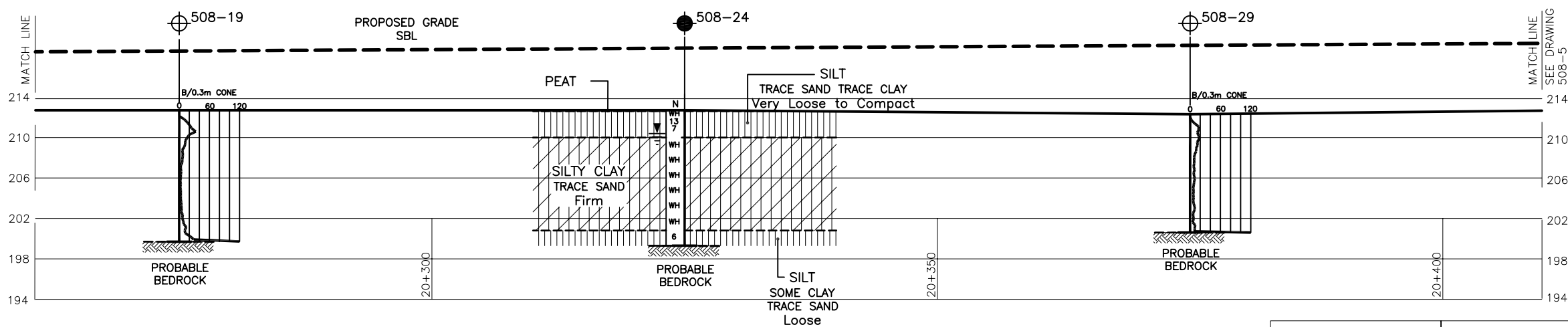
HWY No 69	SUBM'D NSB	CHECKED GD	DATE JAN. 23, 2009	SITE	DIST 54
DRAWN NA	CHECKED CN	APPROVED BRG	DWG 508-4		



PROFILE A-A (Continued)



PROFILE B-B

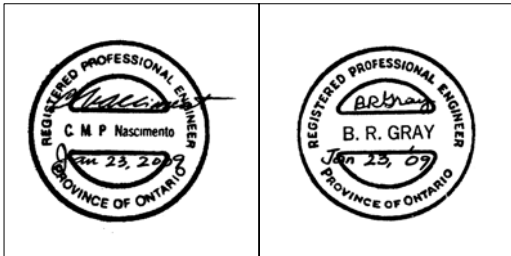


PROFILE B-B (Continued)



NOTES:

- REFER TO DRAWINGS 508-1 AND 508-2 FOR BOREHOLE LOCATIONS PLAN AND DRAWING 508-3 FOR SECTIONS A-A AND DRAWINGS 508-5 TO 508-7 FOR SECTIONS B-B (Continued), C-C, D-D, E-E AND F-F.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRESCONT No
GWP No 5218-06-00

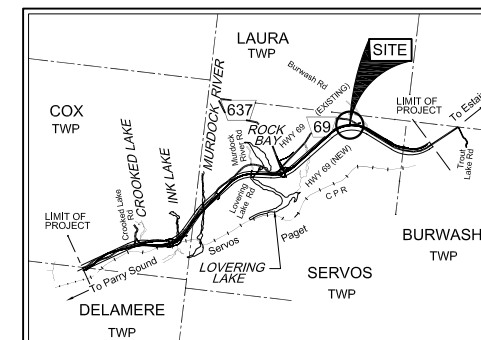
HIGHWAY 69

HIGHWAY 69 FOUR-LANING

SWAMP 508, STA. 20+100 TO 20+681.5 SERVOS TWP

SOIL STRATA

SHEET

KEY PLAN
SCALE
2 0 2 4 6 km

LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- WH Penetration due to weight of hammer and rods
- PH Thinwall Sample - Advanced Hydraulically
- W L at time of investigation Dec 2006 and Jan 2007
- Head
- ARTESIAN WATER
- Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWINGS 508-1 AND 508-2 FOR DETAILS			

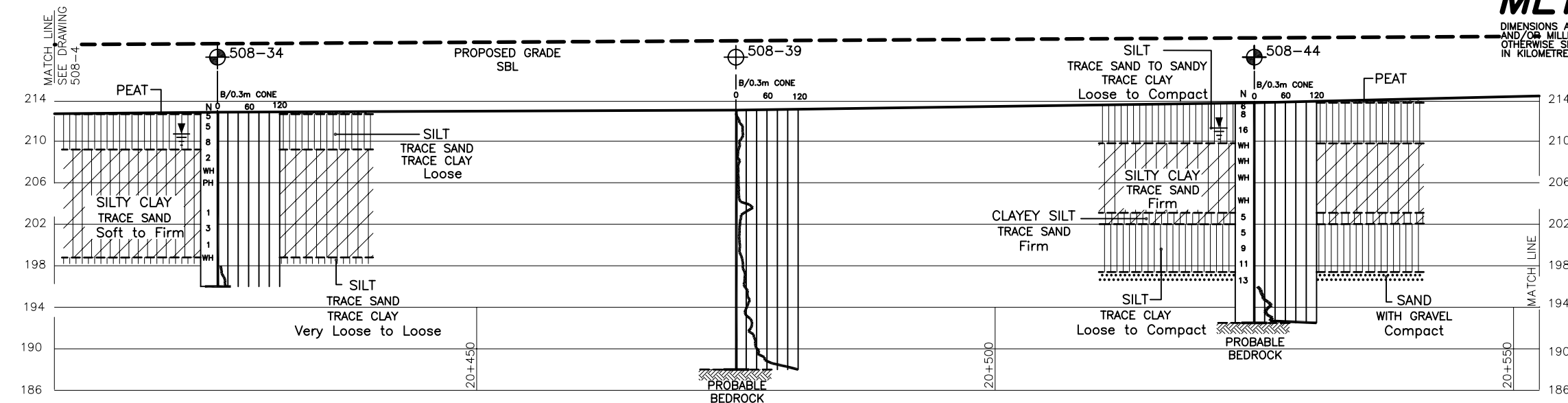
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

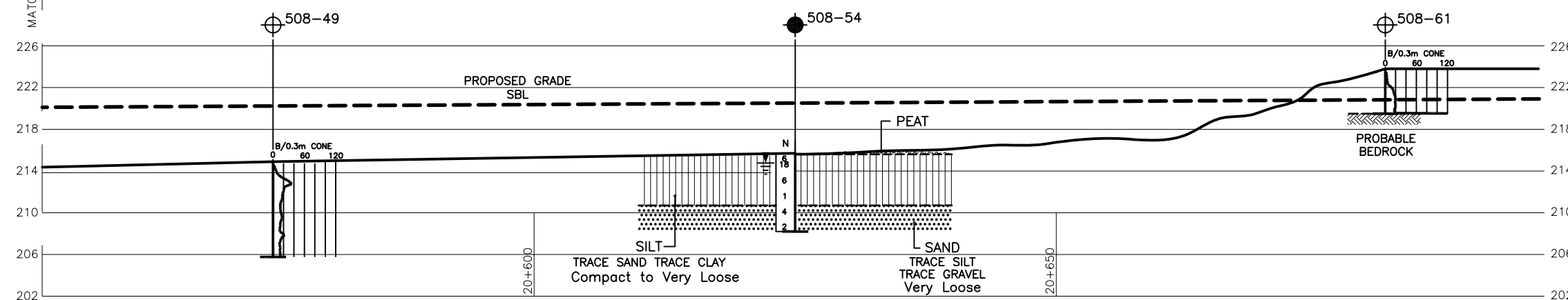
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

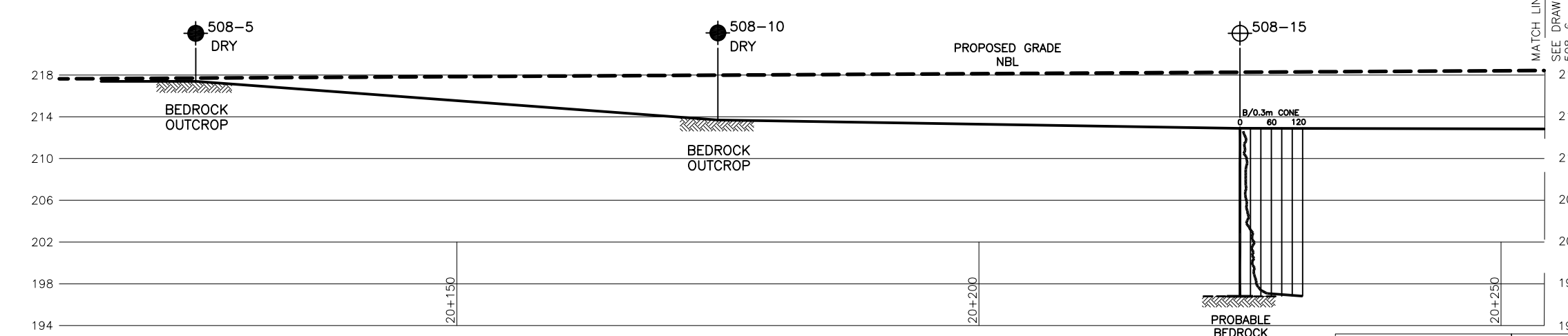
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	DATE	JAN. 23, 2009
SITE	---	SITE	---
DWG	508-5	DWG	508-5



PROFILE B-B (Continued)



PROFILE B-B (Continued)



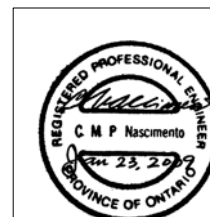
PROFILE C-C

SCALE
5 0 5 10m

NOTES:

1. REFER TO DRAWINGS 508-1 AND 508-2 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-3 AND 508-4 FOR SECTIONS A-A AND B-B (Continued) AND DRAWINGS 508-6 AND 508-7 FOR SECTIONS C-C (Continued), D-D, E-E AND F-F.

2. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

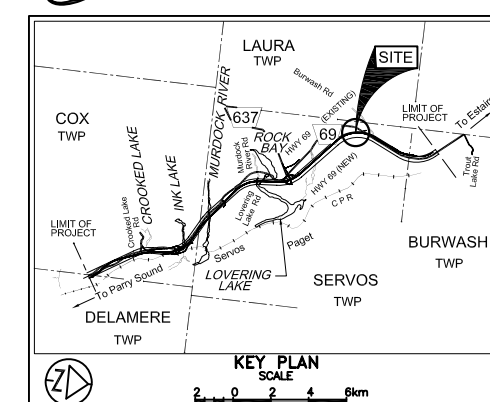


REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No	
GWP No 5218-06-00	
HIGHWAY 69	SHEET
HIGHWAY 69 FOUR-LANING	
SWAMP 508, STA. 20+100 TO 20+681.5 SERVOS TWP	
SOIL STRATA	



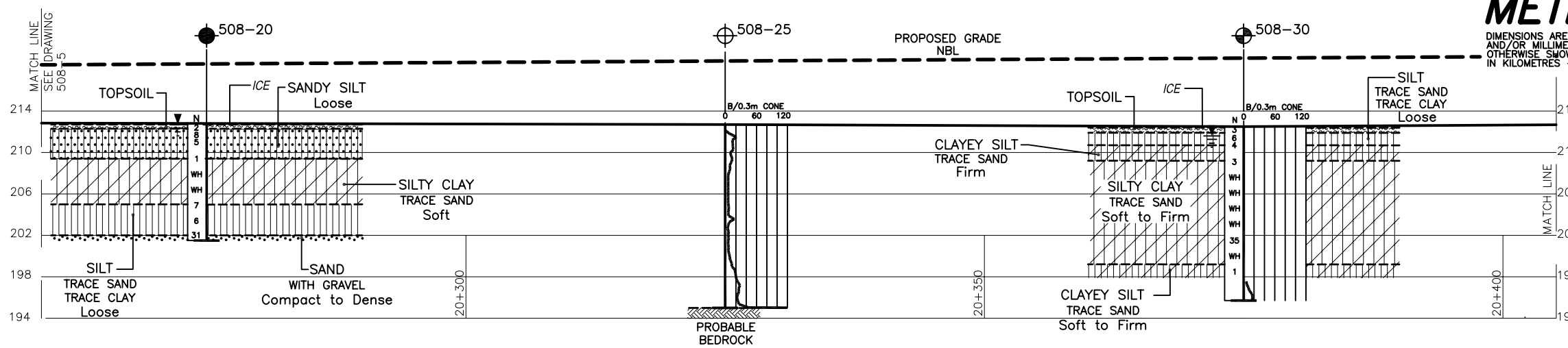
LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
W L	at time of investigation Dec 2006 and Jan 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWINGS 508-1 AND 508-2 FOR DETAILS			

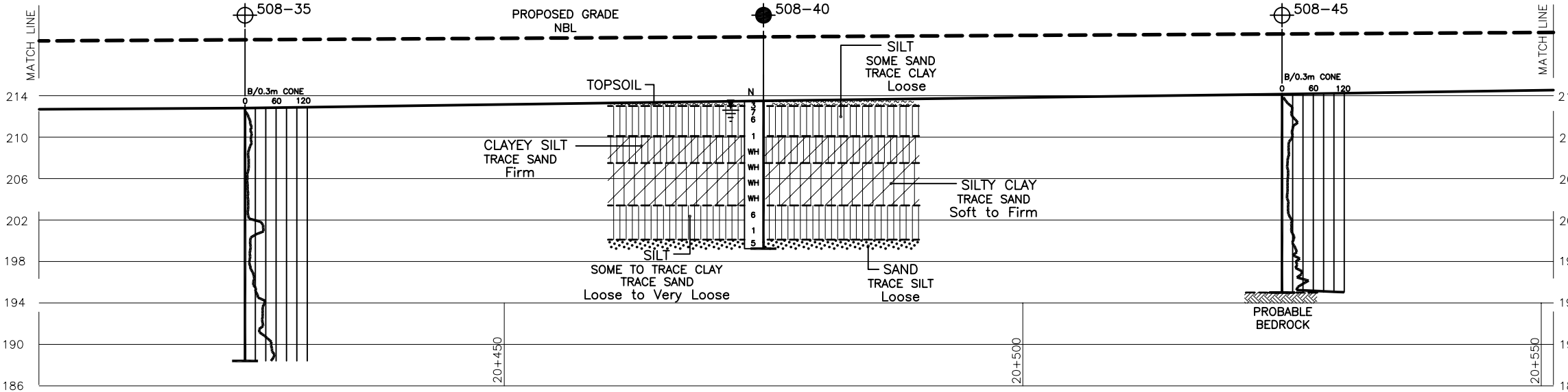
— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

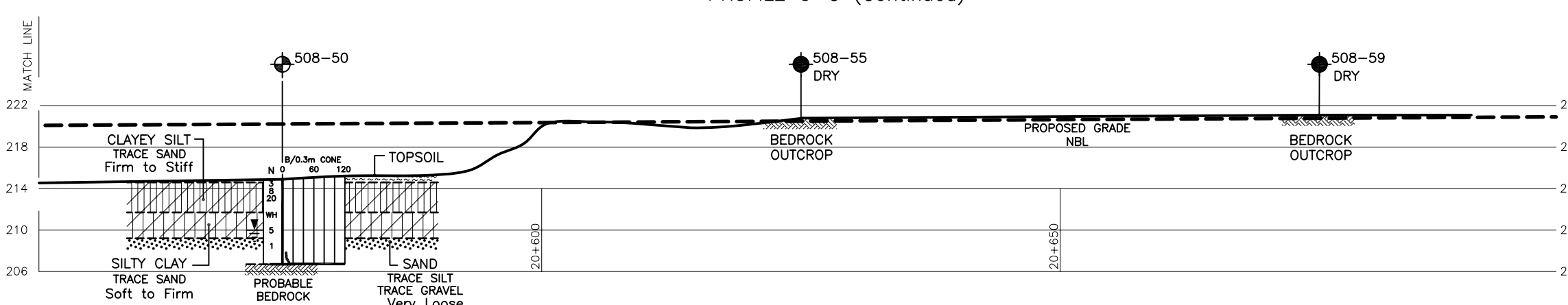
Geocres No. 411-231	
HWY No 69	DIST 54
SUBM'D NSB	CHECKED GD
DATE JAN. 23, 2009	SITE ---
DRAWN NA	CHECKED CN
APPROVED BRG	DWG 508-6



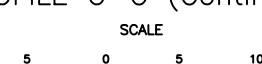
PROFILE C-C (Continued)



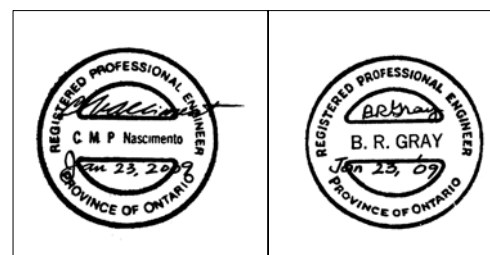
PROFILE C-C (Continued)



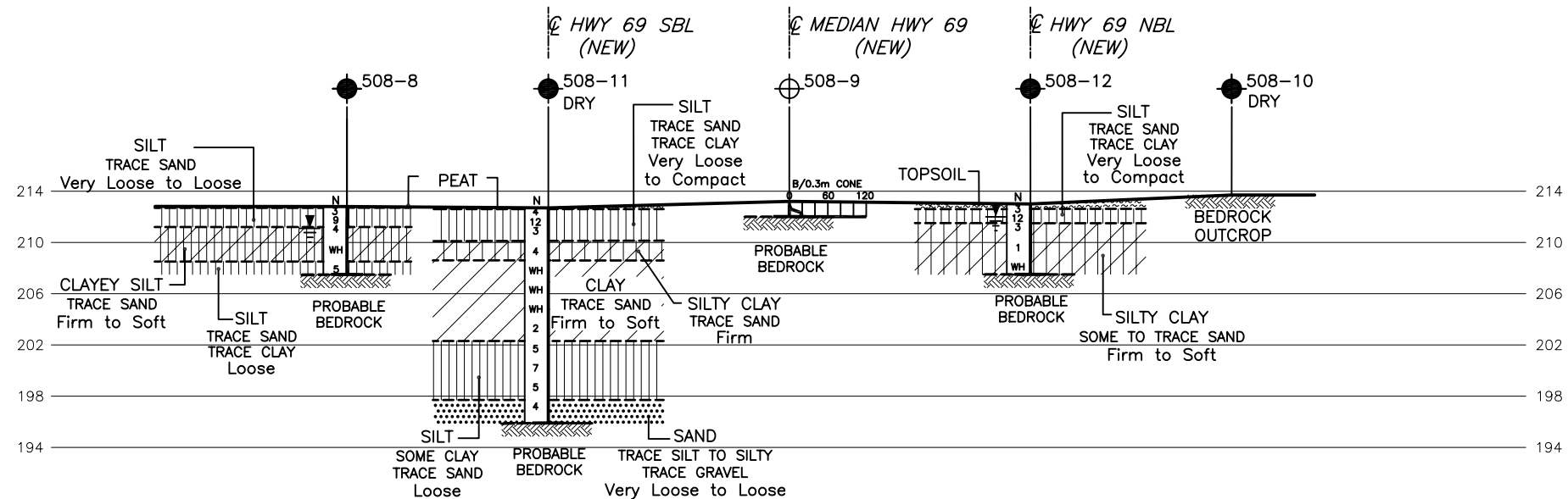
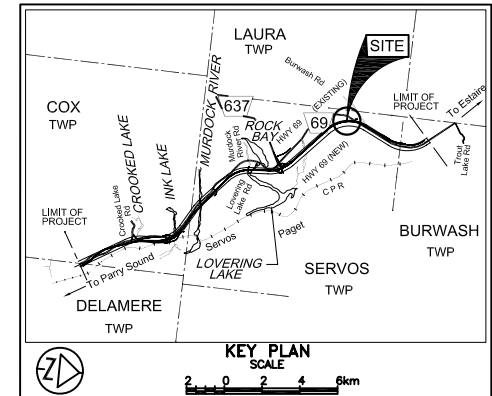
PROFILE C-C (Continued)



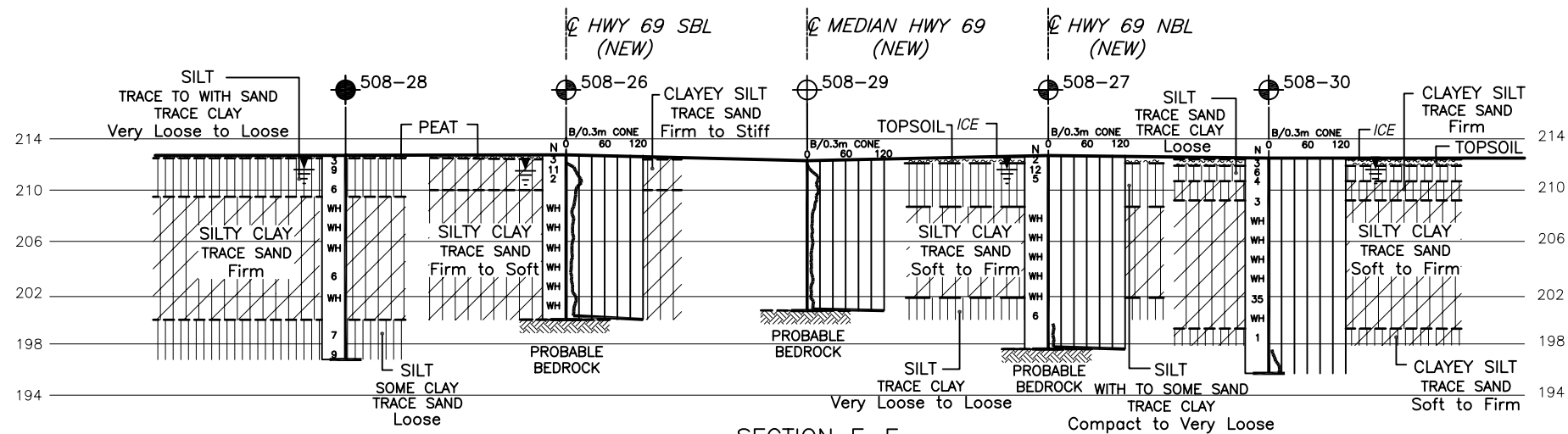
- NOTES:
- REFER TO DRAWINGS 508-1 AND 508-2 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-3 TO 508-5 FOR SECTIONS A-A, B-B, C-C AND DRAWING 508-7 FOR SECTIONS D-D, E-E AND F-F.
 - THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



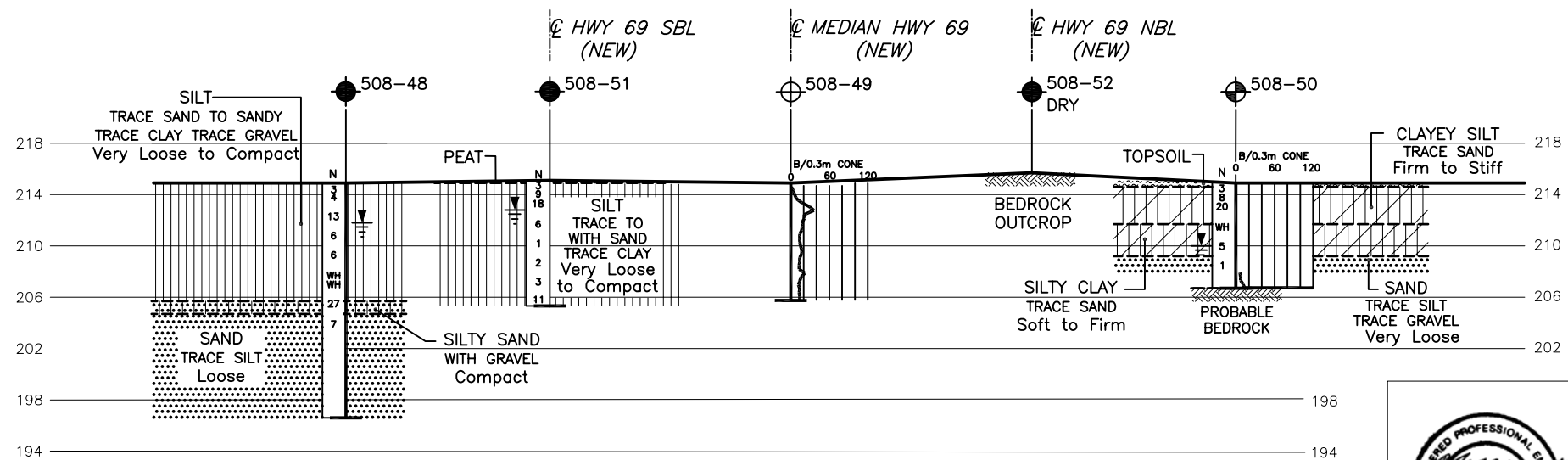
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



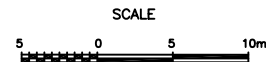
SECTION D-D



SECTION E-E



SECTION F-F



NOTES:

- REFER TO DRAWINGS 508-1 AND 508-2 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 508-3 TO 508-6 FOR SECTIONS A-A, B-B AND C-C.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
WH	Penetration due to weight of hammer and rods		
W L	W L at time of investigation Dec 2006 and Jan 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWINGS 508-1 AND 508-2 FOR DETAILS			

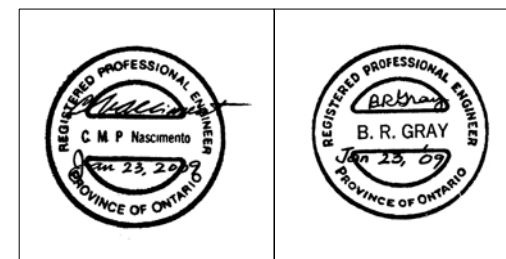
NOTE

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

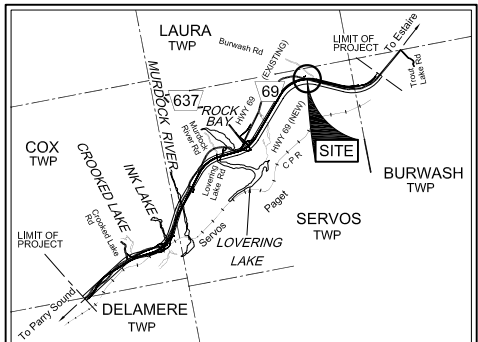
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	---
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	508-7



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



KEY PLAN
SCALE
0 2 4 6 km

LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J / blow)
CONE	Blows/0.3m (60° Cone, 475 J / blow)
	W L at time of investigation Jan-Feb 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
509-1	221.3	20+850	18.8m Lt.
509-2	222.8	20+850	18.8m Rt.
509-3	220.7	20+862.5	36.5m Lt.
509-4	218.7	20+862.5	CL
509-5	222.9	20+862.5	38.5m Rt.
509-6	218.4	20+875	18.8m Lt.
509-7	218.9	20+875	18.8m Rt.
509-8	219.1	20+887.5	40.5m Lt.
509-9	218.6	20+887.5	CL
509-10	219.7	20+887.5	40.5m Rt.
509-11	220.4	20+900	18.8m Lt.
509-12	218.6	20+900	18.8m Rt.
509-13	223.2	20+912.5	32.5m Lt.
509-14	221.9	20+912.5	CL
509-15	218.5	20+912.5	32.5m Rt.
509-16	223.4	20+925	18.8m Lt.

(Legend Continues)

NOTE
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

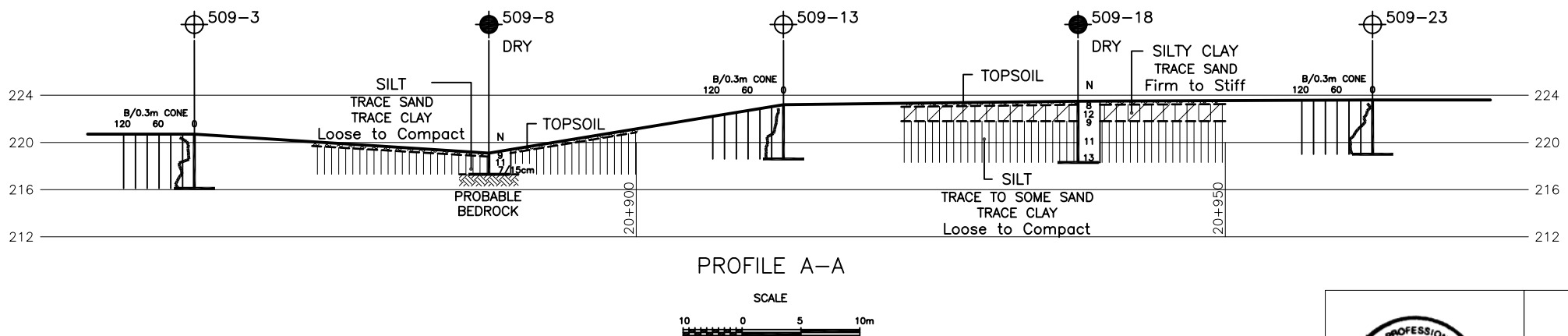
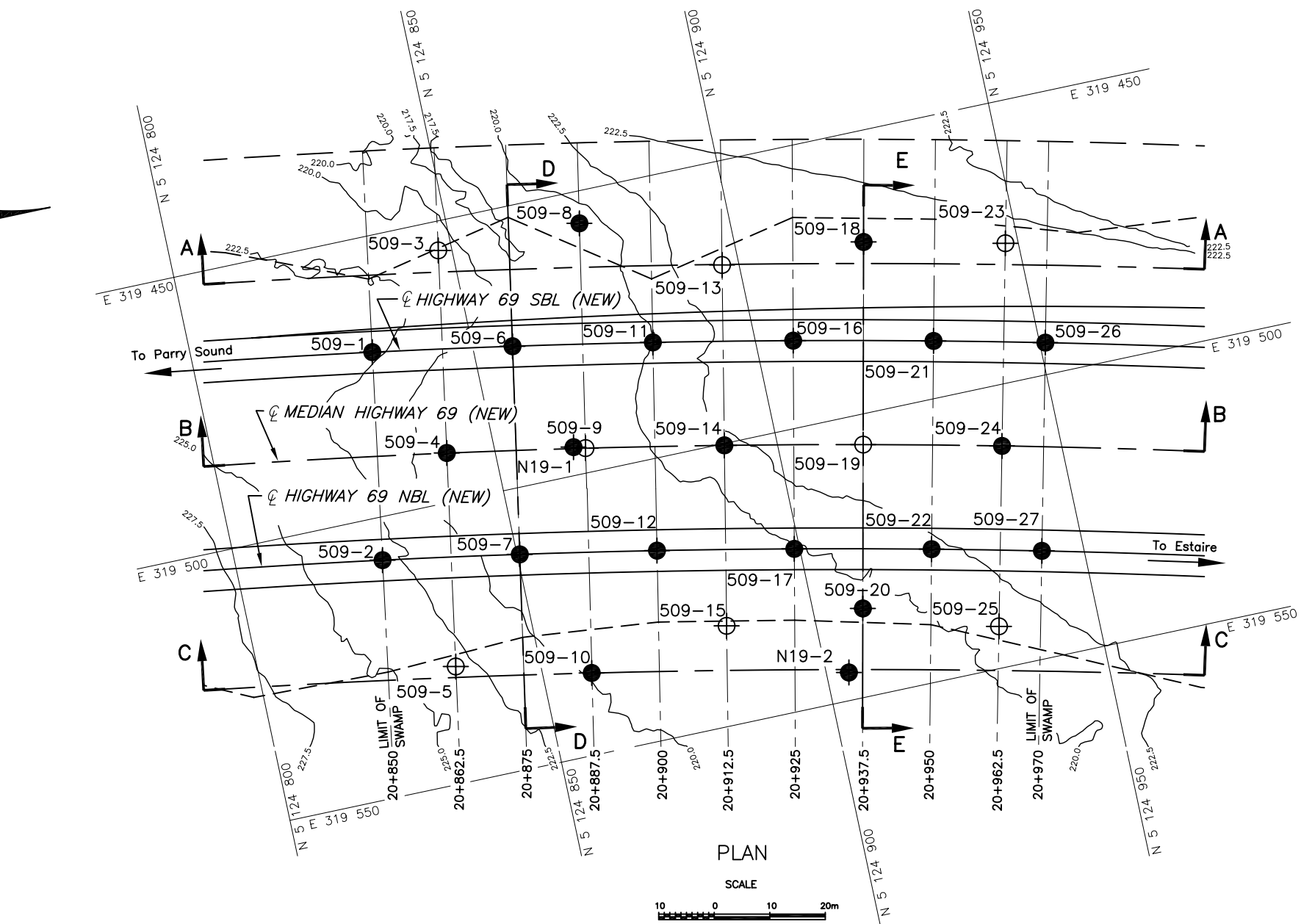
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	--
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	509-1

(Legend Continued)

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
509-17	220.0	20+925	18.8m Rt.
509-18	223.5	20+937.5	36.5m Lt.
509-19	223.3	20+937.5	CL
509-20	219.3	20+937.5	29.5m Rt.
509-21	223.4	20+950	18.8m Lt.
509-22	221.8	20+950	18.8m Rt.
509-23	223.6	20+962.5	36.5m Lt.
509-24	223.5	20+962.5	CL
509-25	220.6	20+962.5	32.5m Rt.
509-26	223.5	20+970	18.8m Lt.
509-27	223.3	20+970	18.8m Rt.
BH No	ELEVATION	CO-ORDINATES	
		NORTHINGS	EASTINGS
N19-1	218.4	5 124 864	319 495
N19-2	218.7	5 124 904	319 545

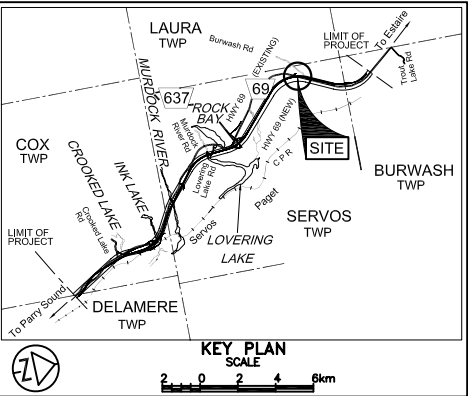


NOTES:

- REFER TO DRAWINGS 509-2 AND 509-3 FOR SECTIONS A-A (Continued), B-B, C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J / blow)		
CONE	Blows/0.3m (60° Cone, 475 J / blow)		
	W L at time of investigation Jan-Feb 2007		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

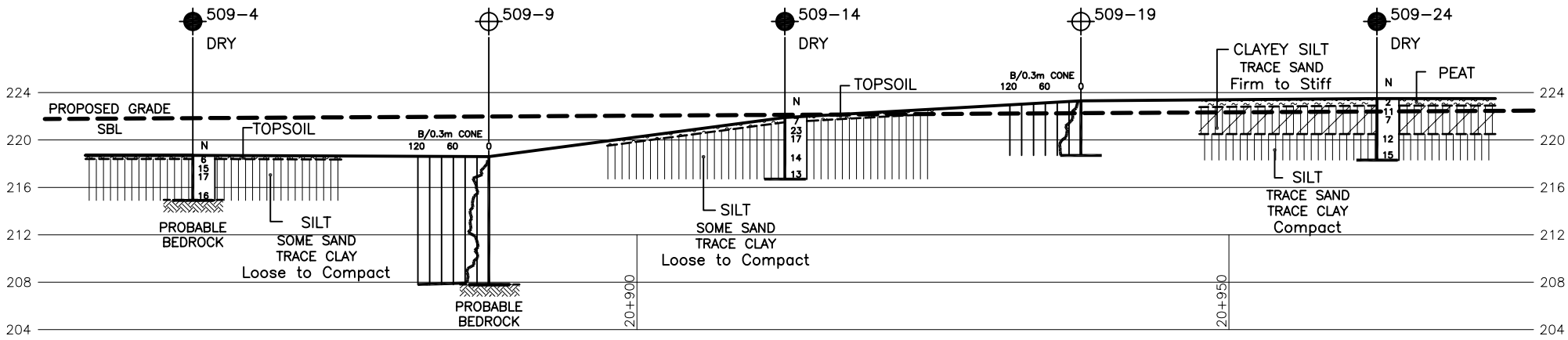
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 509-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

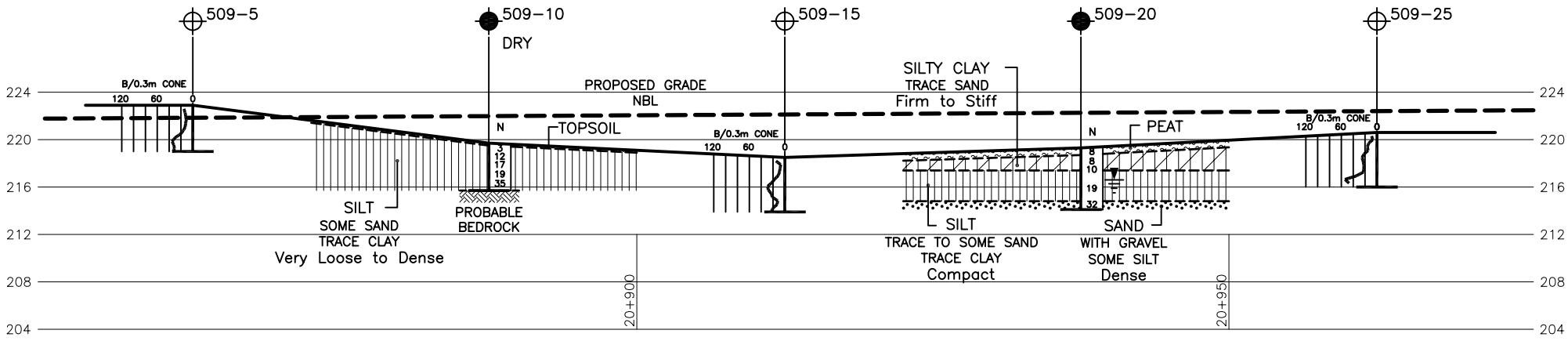
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

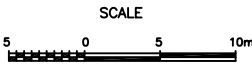
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	---
DRAWN	NA	CHECKED	CN
APPROVED	BRG	DWG	509-2



PROFILE B-B

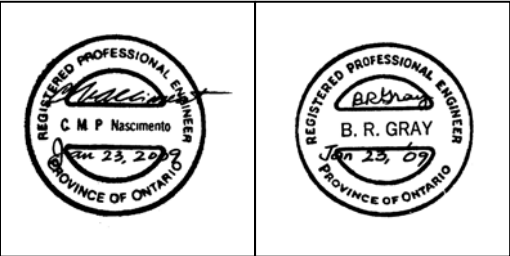


PROFILE C-C

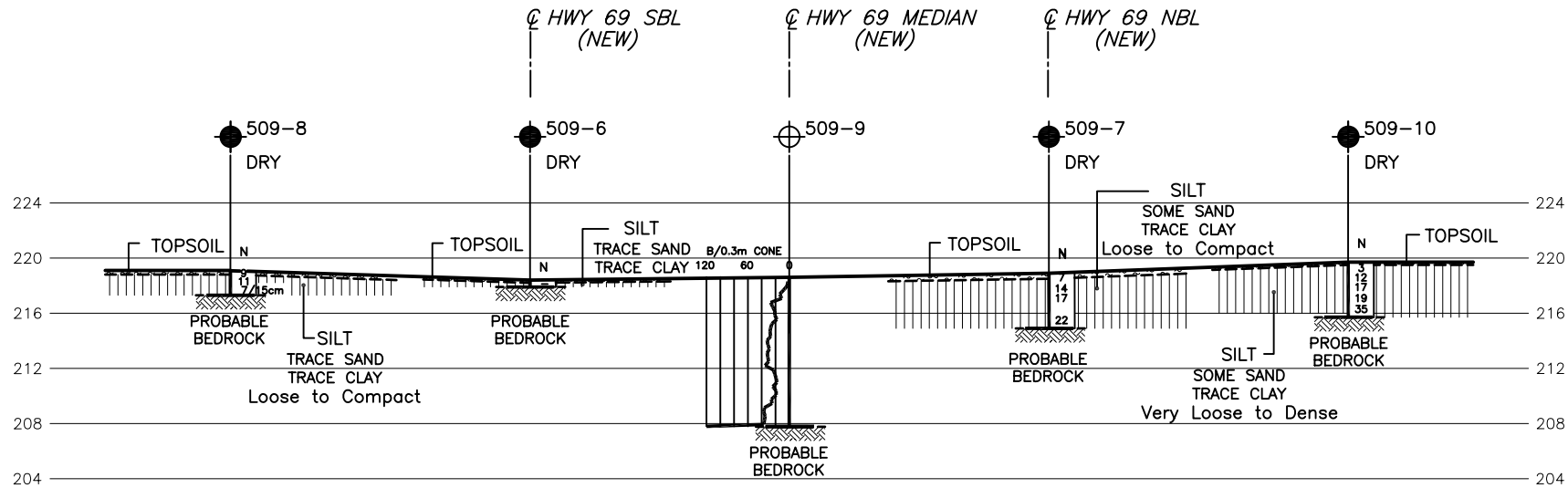
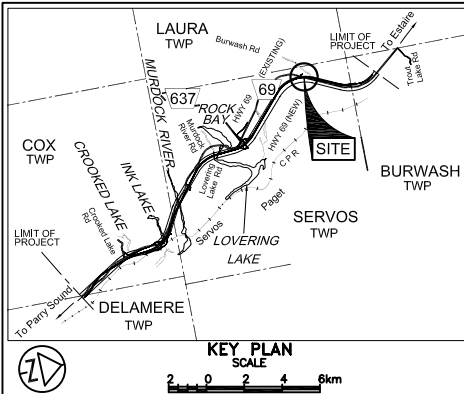


NOTES:

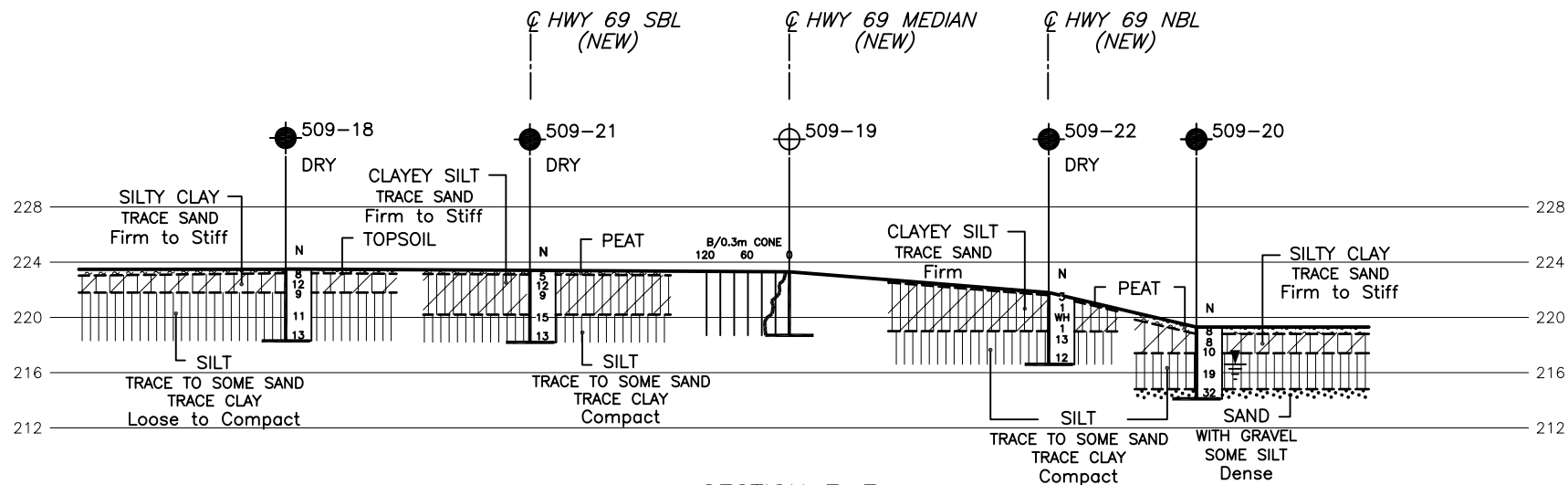
- REFER TO DRAWING 509-1 FOR BOREHOLE LOCATIONS PLAN AND SECTION A-A AND DRAWING 509-3 FOR SECTIONS D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



SECTION D-D



SECTION E-E



LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J / blow)
CONE	Blows/0.3m (60° Cone, 475 J / blow)
WH	Penetration due to weight of hammer and rods
	W L at time of investigation Jan-Feb 2007
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 509-1 FOR DETAILS			

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

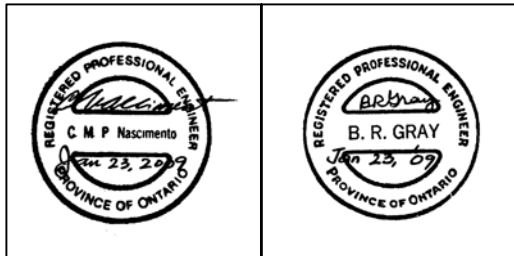
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

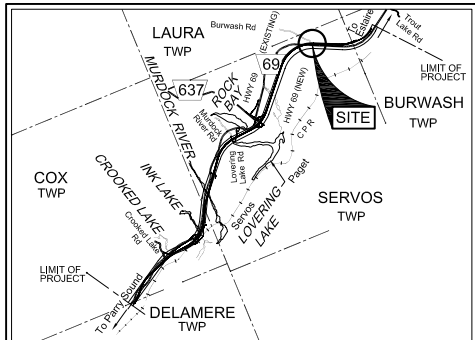
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	SITE	--
APPROVED	BRG	DWG	509-3

NOTES:

- REFER TO DRAWINGS 509-1 AND 509-2 FOR BOREHOLE LOCATIONS PLAN AND SECTIONS A-A, B-B, AND C-C.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



LEGEND	
	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J / blow)
CONE	Blows/0.3m (60° Cone, 475 J / blow)
	W L at time of investigation Feb and Sept 2007, N19 Series Mar 2004
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
510-1	224.4	21+175	18.8m Lt.
510-2	222.6	21+175	18.8m Rt.
510-3	221.8	21+187.5	CL
510-4	221.1	21+187.5	34.5m Rt.
510-5	224.3	21+200	17.0m Lt.
510-6	220.8	21+212.5	CL
510-7	221.6	21+212.5	30.5m Rt.
510-8	224.3	21+225	15.0m Lt.
510-9	222.9	21+225	18.8m Rt.
510-10	221.5	21+237.5	3.0m Rt.
510-11	223.3	21+237.5	28.0m Rt.
510-12	224.2	21+250	14.0m Lt.
510-13	221.8	21+250	18.8m Rt.
510-14	221.3	21+262.5	CL
510-15	222.5	21+262.5	40.5m Rt.

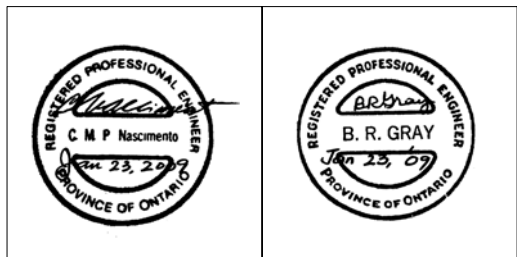
(Legend Continues)

— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

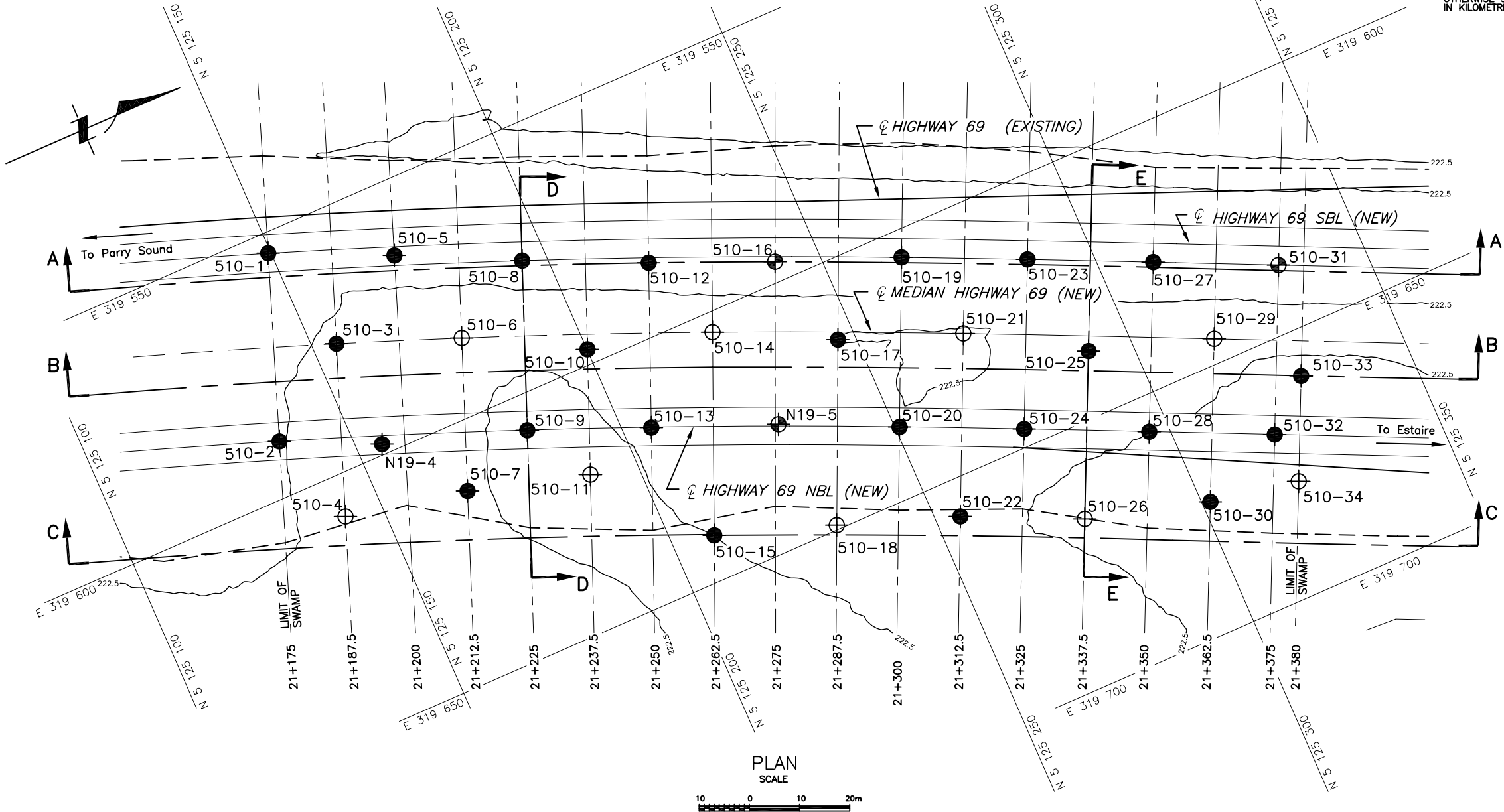
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No 69	DIST 54
SUBM'D NSB	CHECKED NSB
DATE JAN. 23, 2009	SITE ---
DRAWN NA	CHECKED CN
APPROVED BRG	DWG 510-1



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



(Legend Continued)			
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
510-16	224.2	21+275	14.0m Lt.
510-17	221.9	21+287.5	1.5m Rt.
510-18	221.2	21+287.5	38.5m Rt.
510-19	224.1	21+300	15.0m Lt.
510-20	221.7	21+300	18.8m Rt.
510-21	222.3	21+312.5	CL
510-22	221.5	21+312.5	36.5m Rt.
510-23	224.0	21+325	15.0m Lt.
510-24	222.1	21+325	18.8m Rt.
510-25	221.6	21+337.5	3.0m Rt.

(Legend Continues)

(Legend Continued)			
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
510-26	222.8	21+337.5	36.5m Rt.
510-27	223.9	21+350	15.0m Lt.
510-28	222.2	21+350	18.8m Rt.
510-29	221.7	21+362.5	CL
510-30	223.8	21+362.5	32.5m Rt.
510-31	223.8	21+375	15.0m Lt.
510-32	223.5	21+375	18.8m Rt.
510-33	223.0	21+380	7.0m Rt.
510-34	223.7	21+380	28.0m Rt.

(Legend Continues)

(Legend Continued)			
BH No	ELEVATION	CO-ORDINATES	
		NORTHINGS	EASTINGS
N19-4	220.6	5 125 155	319 598
N19-5	221.1	5 125 229	319 626

NOTES:

- REFER TO DRAWINGS 510-2 TO 510-4 FOR SECTIONS A-A, B-B, C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

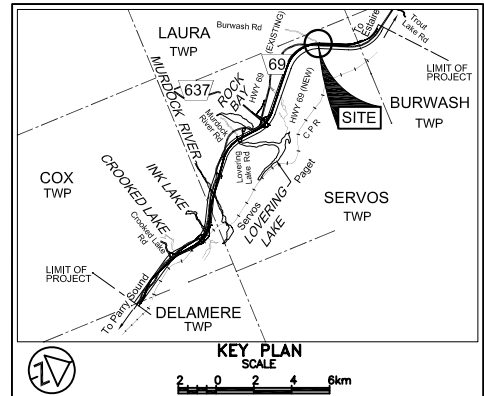
HIGHWAY 69

HIGHWAY 69 FOUR-LANING

SWAMP 510, STA. 21+175 TO 21+380 SERVOS TWP

SOIL STRATA

SHEET



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J / blow)
- CONE Blows/0.3m (60° Cone, 475 J / blow)
- W L at time of investigation Feb and Sept 2007, N19 Series Mar 2004
- Head
- ARTESIAN WATER
- Encountered
- PIEZOMETER

BH No	ELEVATION	STA	o/s	CL	MED
		SERVOS TWP			
SEE DRAWING 510-1 FOR DETAILS.					

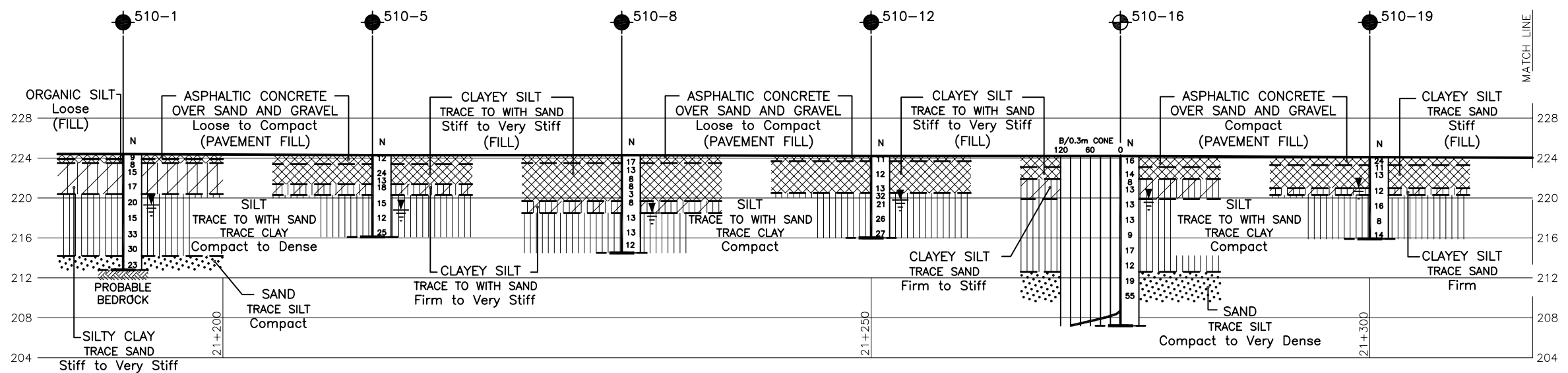
NOTE

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

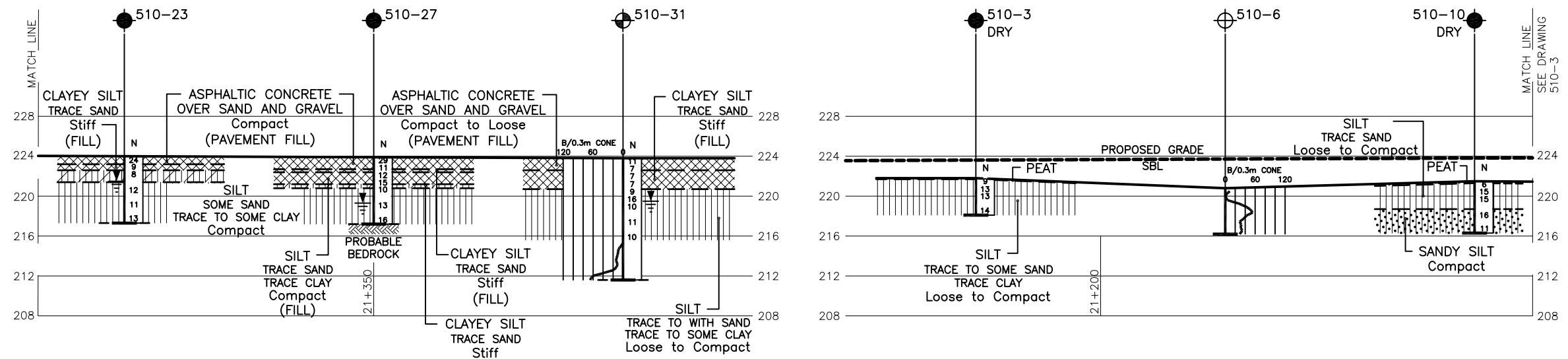
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	NSB
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	DATE	JAN. 23, 2009
SITE	---	SITE	---
APPROVED	BRG	APPROVED	BRG
DWG	510-2	DWG	510-2

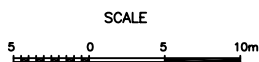


PROFILE A-A



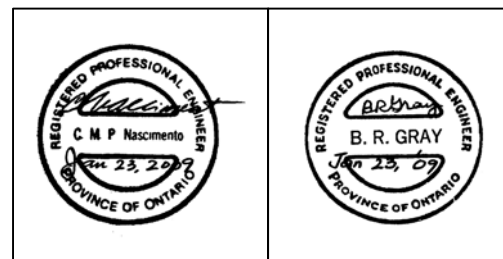
PROFILE A-A (Continued)

PROFILE B-B

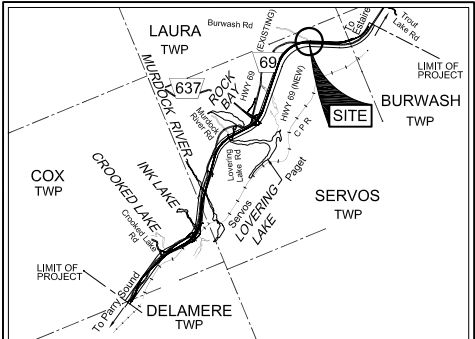


NOTES:

- REFER TO DRAWING 510-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 510-3 AND 510-4 FOR SECTIONS B-B (Continued), C-C, D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



KEY PLAN
SCALE
0 2 4 6 km

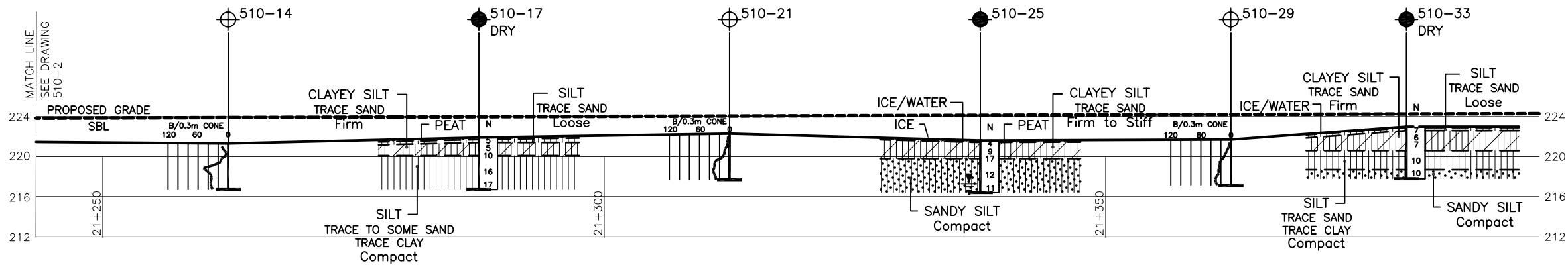
LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J / blow)		
CONE	Blows/0.3m (60° Cone, 475 J / blow)		
	W L at time of investigation Feb and Sept 2007, N19 Series Mar 2004		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 510-1 FOR DETAILS.			

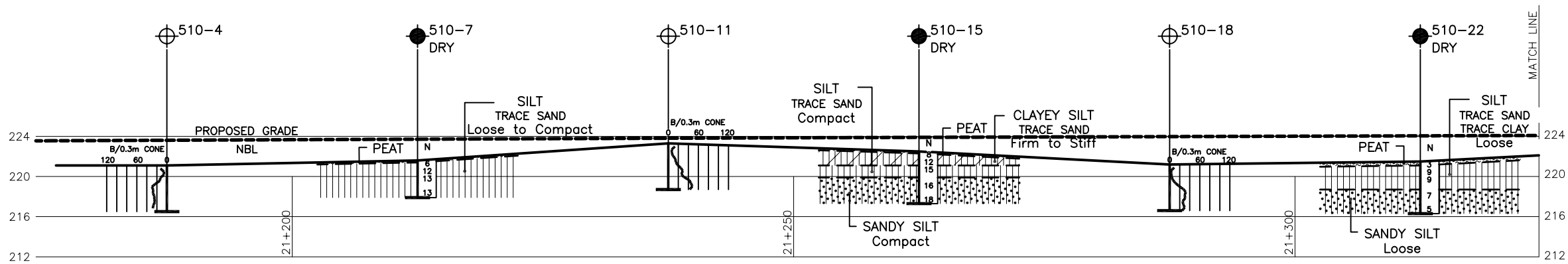
— NOTE —
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

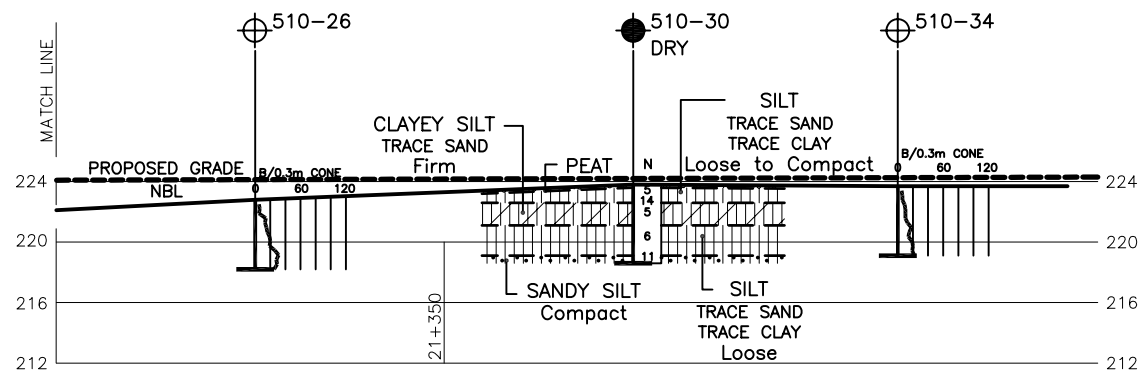
Geocres No. 411-231			
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	NSB
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	510-3



PROFILE B-B (Continued)



PROFILE C-C

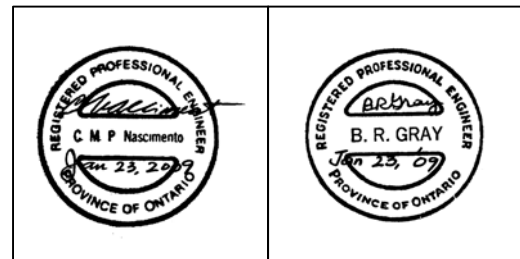


PROFILE C-C (Continued)

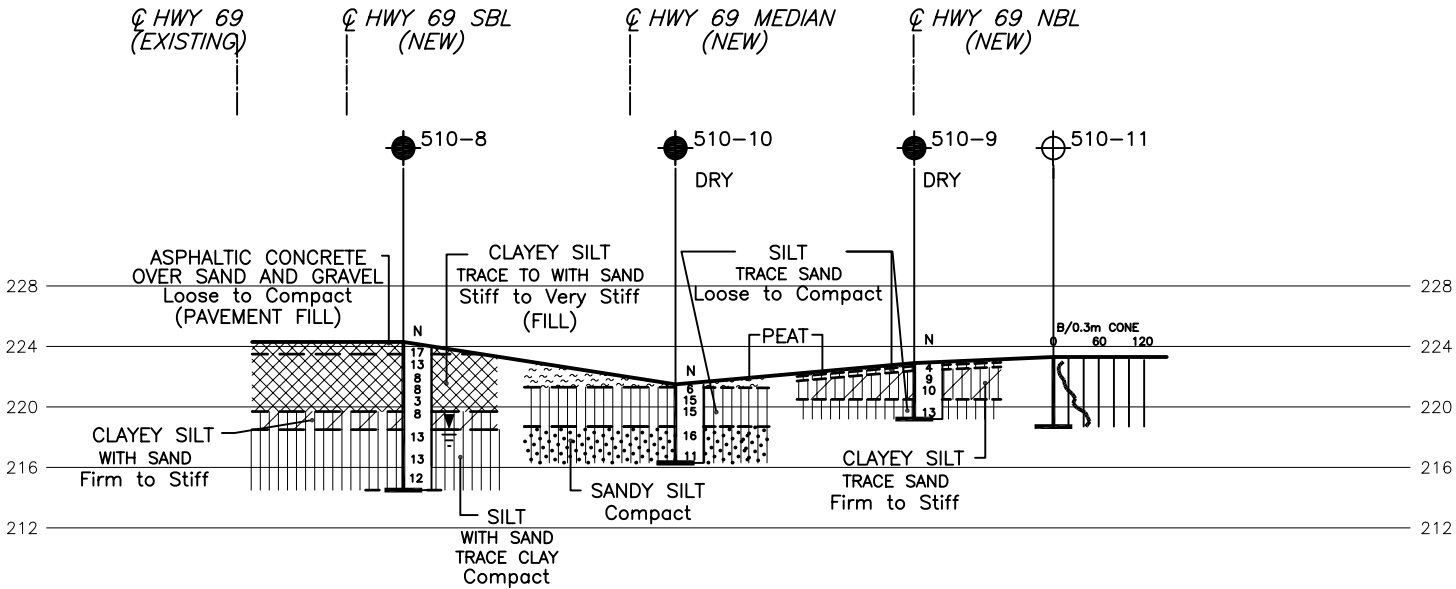
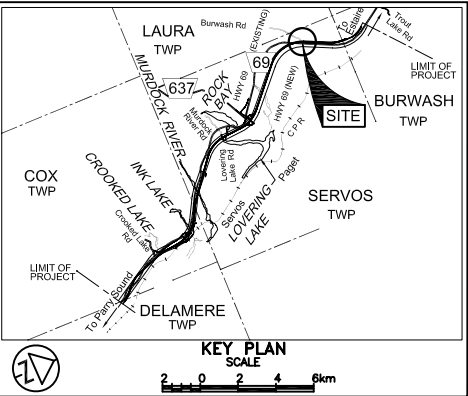


NOTES:

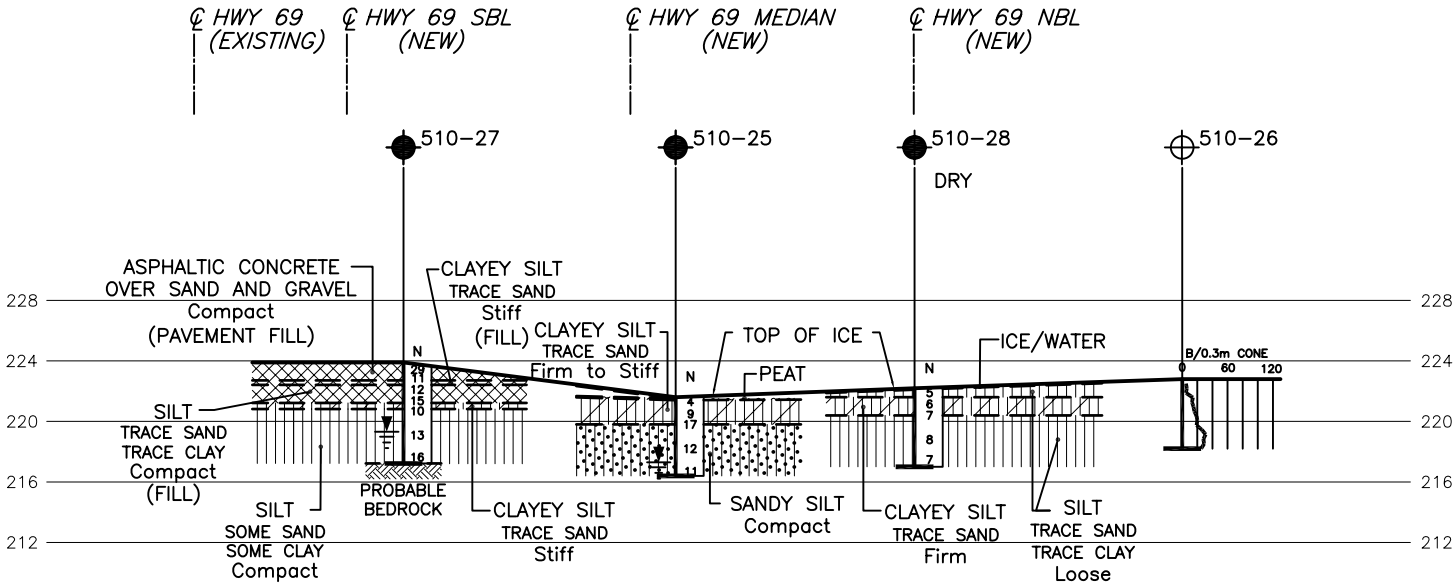
- REFER TO DRAWING 510-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 510-2 AND 510-4 FOR SECTIONS A-A, B-B (Continued), D-D AND E-E.
- THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



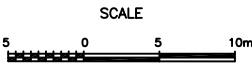
REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



SECTION D-D



SECTION E-E



LEGEND

	Borehole
	Dynamic Cone Penetration Test (Cone)
	Borehole & Cone
N	Blows/0.3m (Std. Pen Test, 475 J / blow)
CONE	Blows/0.3m (60° Cone, 475 J / blow)
	W L at time of investigation Feb and Sept 2007, N19 Series Mar 2004
	Head
	ARTESIAN WATER
	Encountered
	PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 510-1 FOR DETAILS.			

NOTE
The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	NSB
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DWG	510-4

NOTES:

- REFER TO DRAWING 510-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 510-2 AND 510-3 FOR SECTIONS A-A, B-B AND C-C.
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REF No. 470_Preferres_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN. STATIONS
IN KILOMETRES + METRES

CONT No
GWP No 5218-06-00

HIGHWAY 69 / HIGHWAY 637

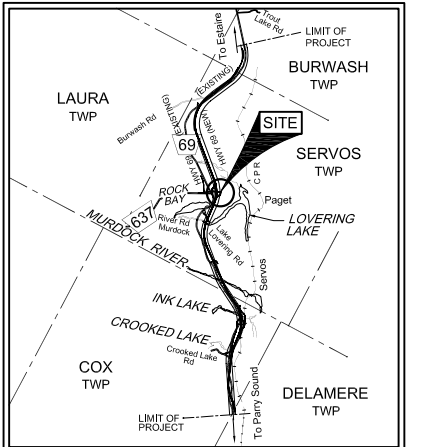
SWAMP 511, STA.10+040 TO 10+207 HWY 637
/STA.15+925 TO 15+990 RAMP S-W SERVOS TWP

BOREHOLE LOCATIONS



SHEET

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Nov 2007 and Jan-Feb 2008
- Head
- ARTESIAN WATER Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
511-1	231.9	10+040	23.4m Lt.
511-2	231.6	10+040	23.4m Rt.
511-3	231.4	10+050	CL
511-4	231.2	10+062.5	24.0m Lt.
511-5	231.1	10+062.5	24.0m Rt.
511-6	231.0	10+075	CL
511-7	231.1	10+087.5	24.0m Lt.
511-8	231.0	10+087.5	24.0m Rt.
511-9	230.9	10+100	CL
511-10	231.1	10+112.5	24.0m Lt.
511-11	230.8	10+112.5	24.0m Rt.
511-12	230.8	10+125	CL

(Legend Continues)

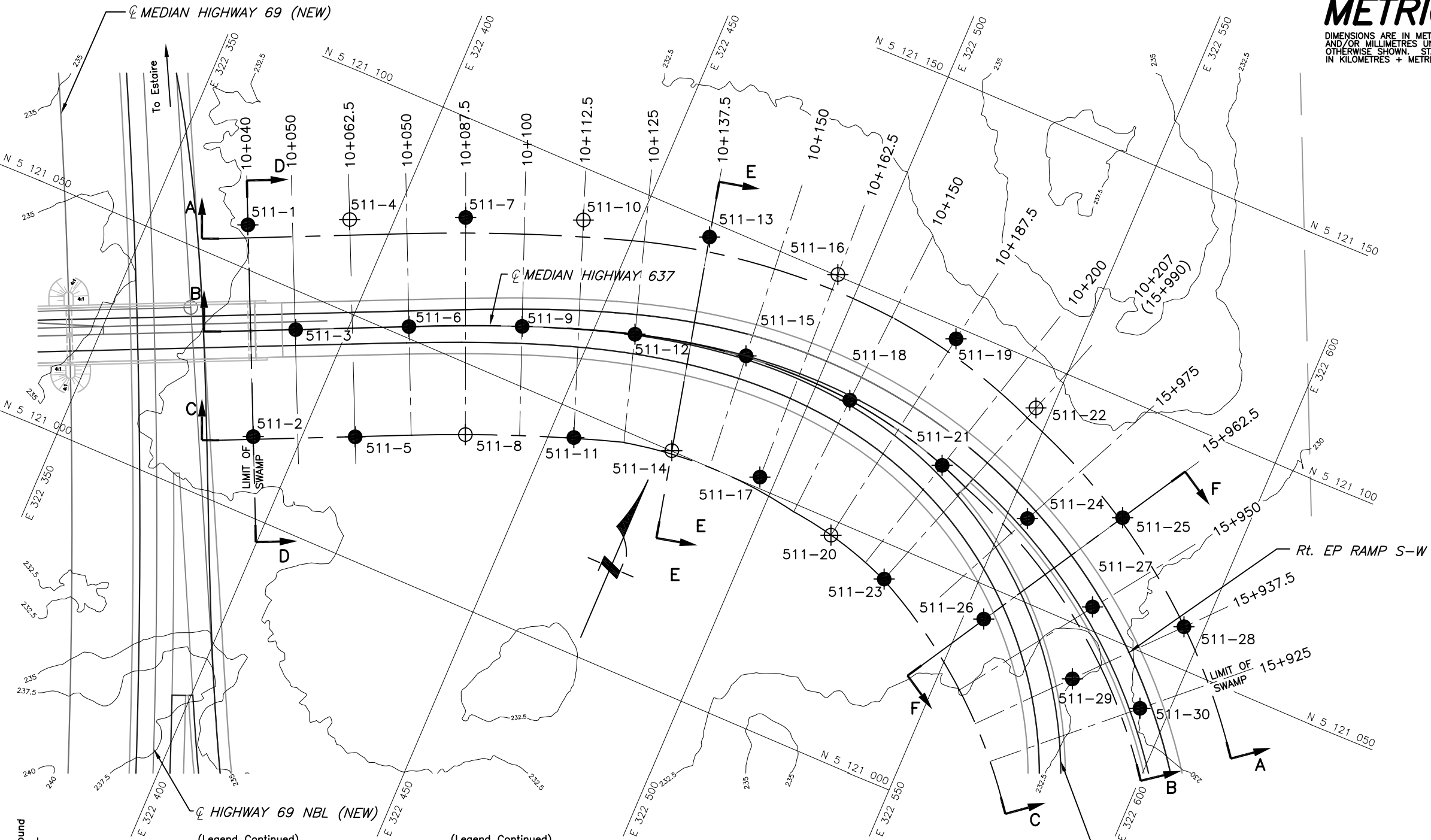
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No	69	DIST	54
SUBMIT	NSB	CHECKED	GD
DRAWN	NA	CHECKED	CN
DATE	JAN. 23, 2009	APPROVED	BRG
SITE	---	DATE	JAN. 23, 2009
LDWG	511-1	DATE	JAN. 23, 2009



PLAN

SCALE



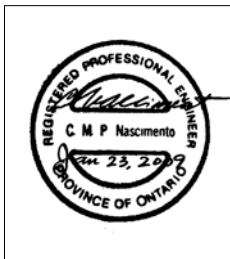
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
511-13	231.3	10+137.5	24.0m Lt.
511-14	230.7	10+137.5	24.0m Rt.
511-15	230.6	10+150	CL
511-16	231.0	10+162.5	24.0m Lt.
511-17	230.7	10+162.5	24.0m Rt.
511-18	230.5	10+175	CL
511-19	231.2	10+187.5	24.0m Lt.
511-20	230.6	10+187.5	27.5m Rt.
511-21	230.5	10+200	CL
511-22	230.9	10+207	23.4m Lt.
511-23	231.0	10+207	27.0m Rt.

(Legend Continues)

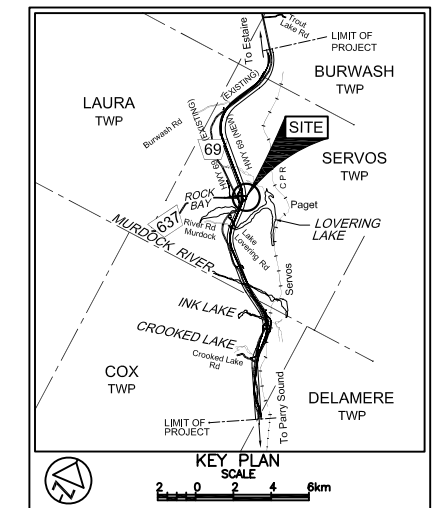
BH No	ELEVATION	STA SERVOS TWP	o/s Rt. EP
511-24	230.5	15+975	2.5m Lt.
511-25	230.9	15+962.5	14.0m Rt.
511-26	231.8	15+962.5	24.0m Lt.
511-27	230.5	15+950	2.5m Lt.
511-28	229.6	15+937.5	13.4m Rt.
511-29	232.7	15+937.5	14.0m Lt.
511-30	230.0	15+925	2.5m Lt.

NOTES:

- REFER TO DRAWINGS 511-2 AND 511-3 FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F.
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REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

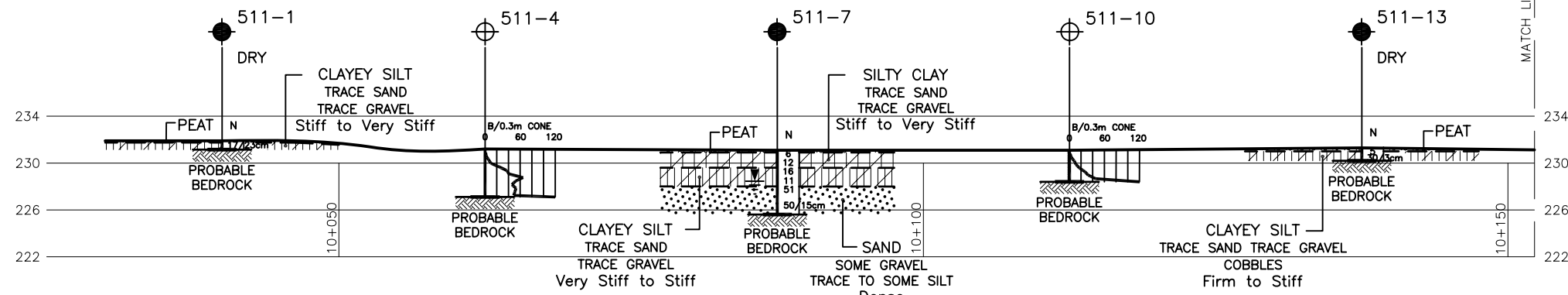


LEGEND			
	Borehole		
	Dynamic Cone Penetration Test (Cone)		
	Borehole & Cone		
N	Blows/0.3m (Std. Pen Test, 475 J/blow)		
CONE	Blows/0.3m (60° Cone, 475 J/blow)		
	W L at time of investigation Nov 2007 and Jan-Feb 2008		
	Head		
	ARTESIAN WATER		
	Encountered		
	PIEZOMETER		
BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 511-1 FOR DETAILS.			

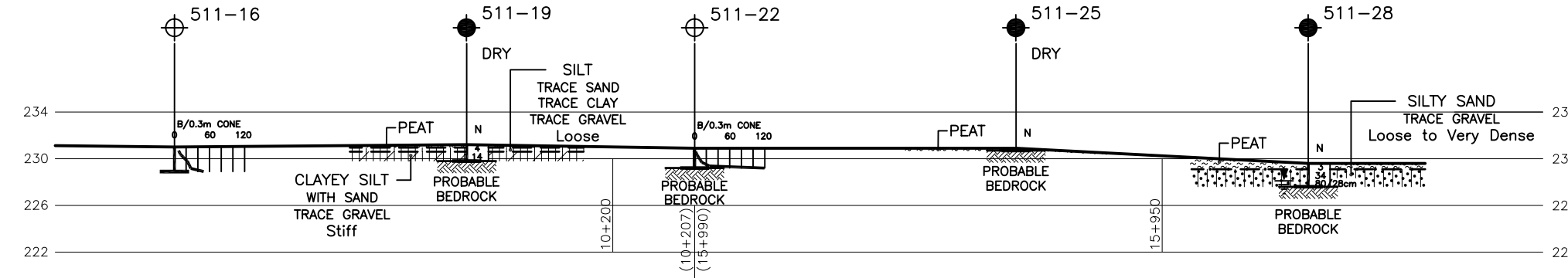
— NOTE —
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REVISIONS	DATE	BY	DESCRIPTION

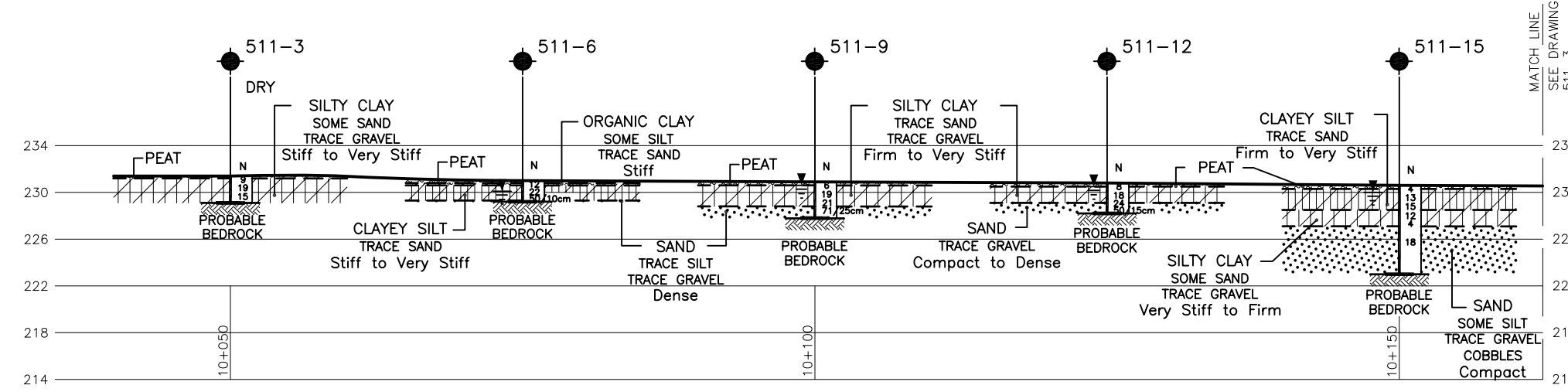
Geocres No. 411-231			
HWY No	69	DIST	54
SUBM'D	NSB	CHECKED	GD
DATE	JAN. 23, 2009	SITE	---
DRAWN	NA	CHECKED	CN
APPROVED	BRG	LDWG	511-2



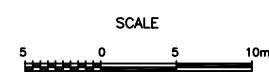
PROFILE A-A



PROFILE A-A (Continued)

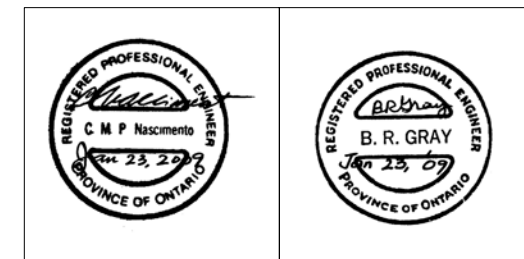


PROFILE B-B

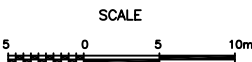
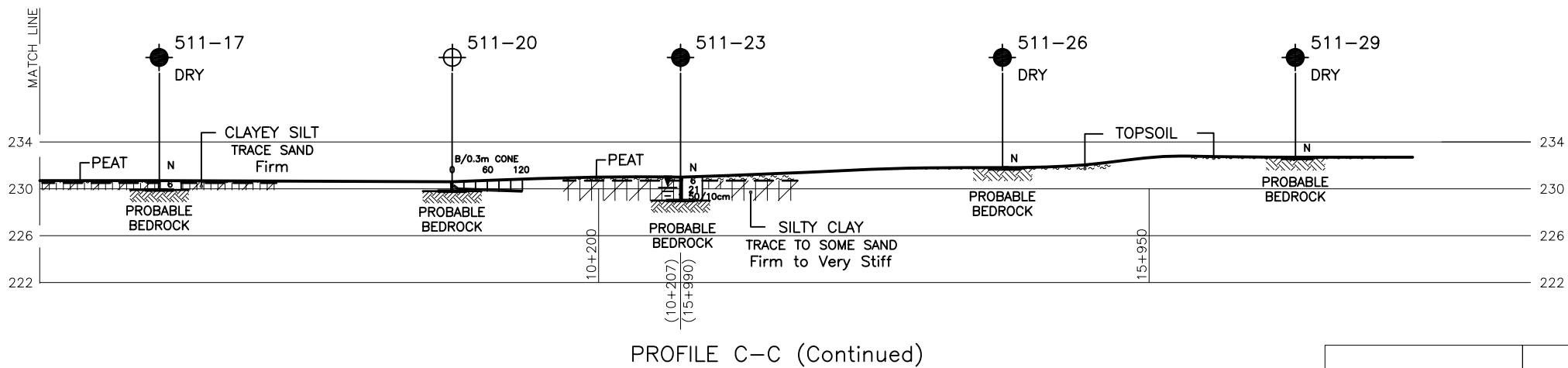
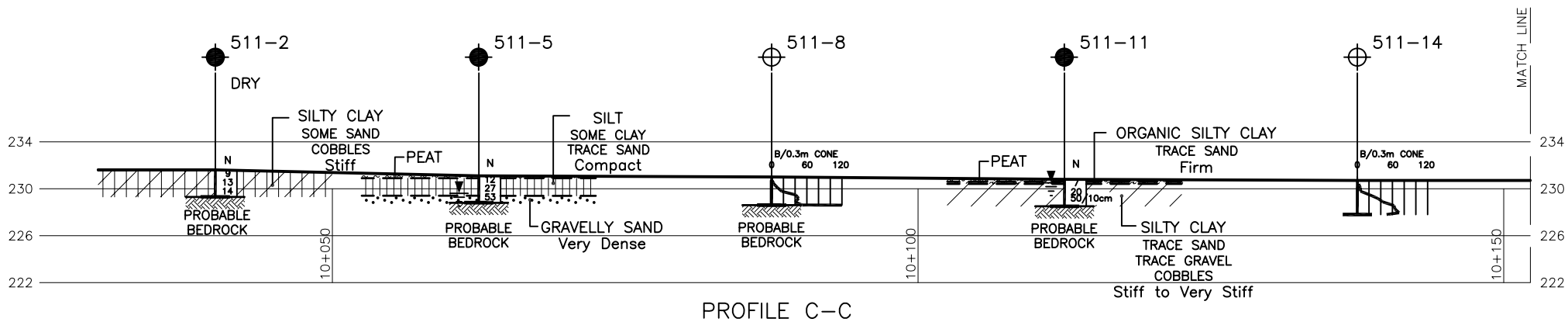
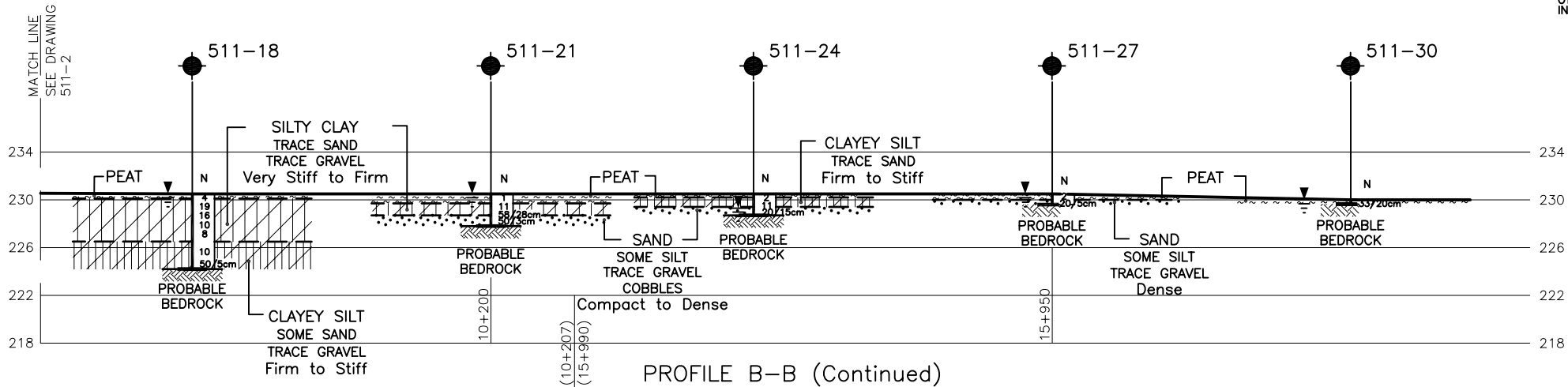
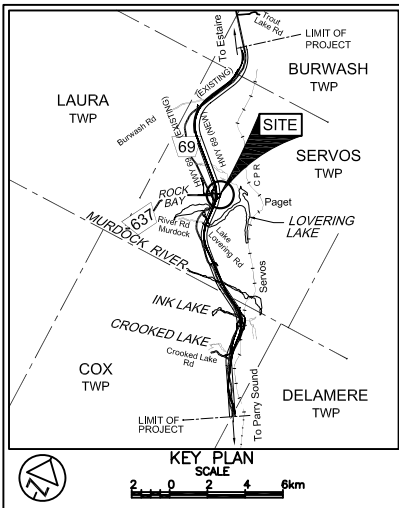


NOTES:

- REFER TO DRAWING 511-1 FOR BOREHOLE LOCATIONS PLAN AND DRAWINGS 511-3 AND 511-4 FOR SECTIONS B-B (Continued), C-C, D-D, E-E AND F-F.
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REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;



NOTES:

- REFER TO DRAWING 511-1 FOR BOREHOLE LOCATIONS PLAN, DRAWING 511-2 FOR SECTIONS A-A AND B-B (Continued) AND DRAWING 503-4 FOR SECTIONS D-D, E-E AND F-F.
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REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Nov 2007 and Jan-Feb 2008
- Head
- ARTESIAN WATER Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 511-1 FOR DETAILS.			

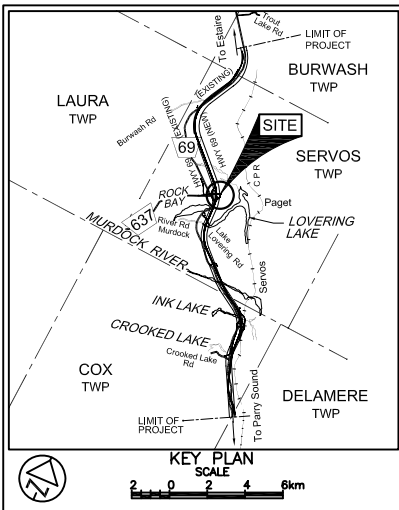
- NOTE -

The boundaries between soil strata have been established only at Borehole locations. Between Boreholes the boundaries are assumed from geological evidence.

REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

HWY No 69	DIST 54
SUBM'D NSB	CHECKED GD DATE JAN. 23, 2009
DRAWN NA	CHECKED CN APPROVED BRG SITE DWG 511-3



LEGEND

- Borehole
- Dynamic Cone Penetration Test (Cone)
- Borehole & Cone
- N Blows/0.3m (Std. Pen Test, 475 J/blow)
- CONE Blows/0.3m (60° Cone, 475 J/blow)
- W L at time of investigation Nov 2007 and Jan-Feb 2008
- Head
- ARTESIAN WATER Encountered
- PIEZOMETER

BH No	ELEVATION	STA SERVOS TWP	o/s CL MED
SEE DRAWING 511-1 FOR DETAILS.			

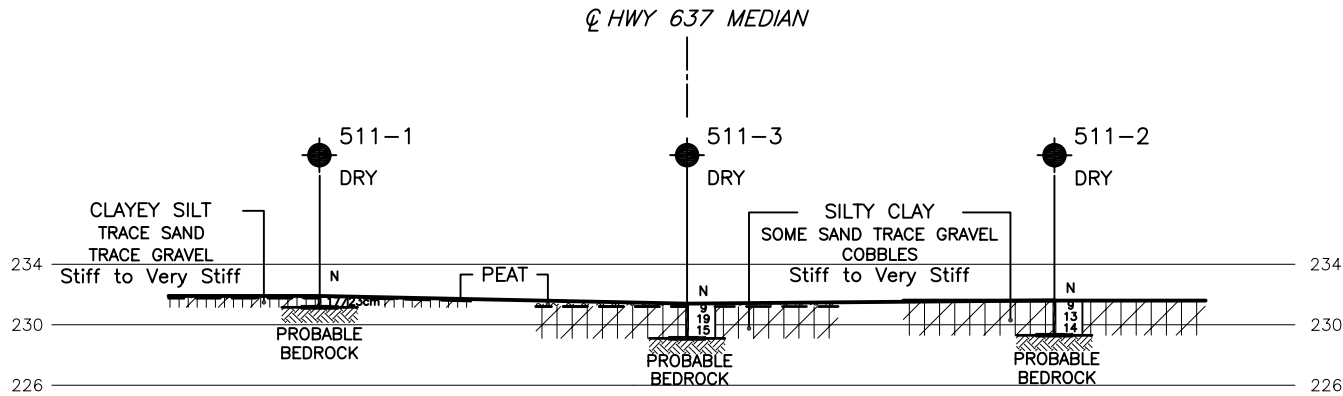
- NOTE -

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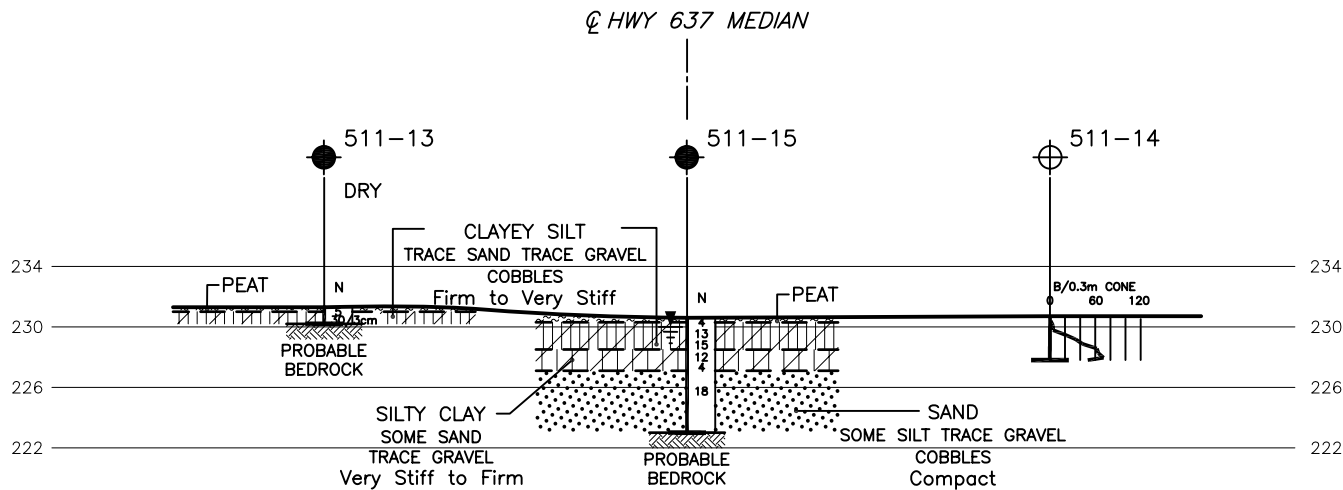
REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231

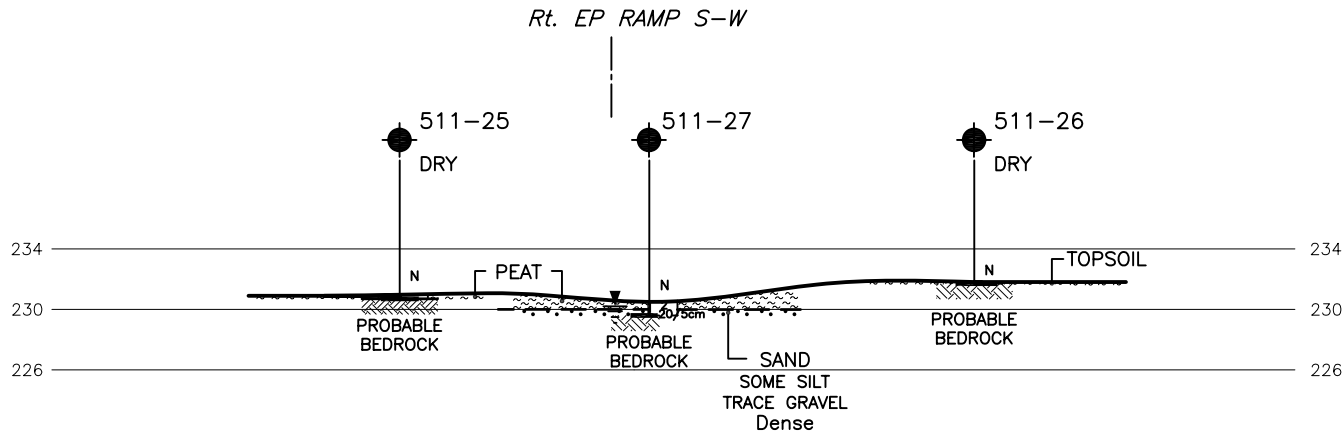
HWY No 69	DIST 54
SUBMIT NSB	CHECKED GD DATE JAN. 23, 2009
DRAWN NA	CHECKED CN APPROVED BRG
SITE	LDWG 511-4



SECTION D-D



SECTION E-E

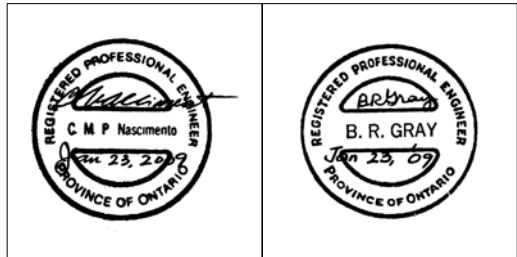


SECTION F-F

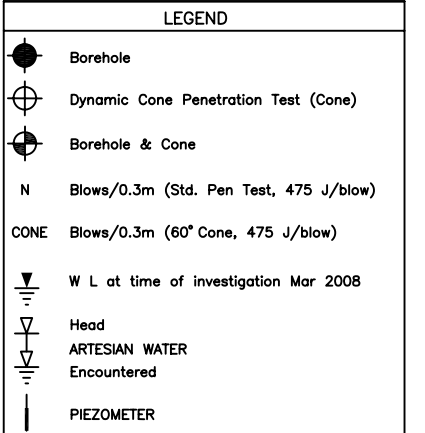
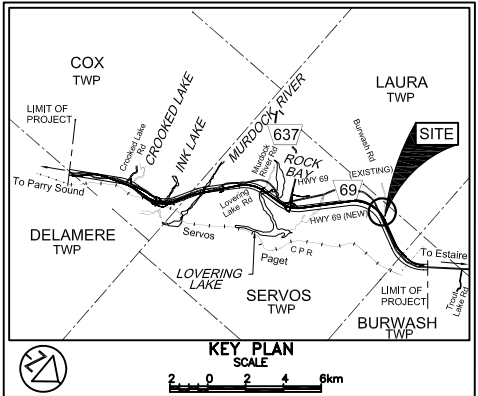


NOTES:

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REF No. 470_Preferred_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;

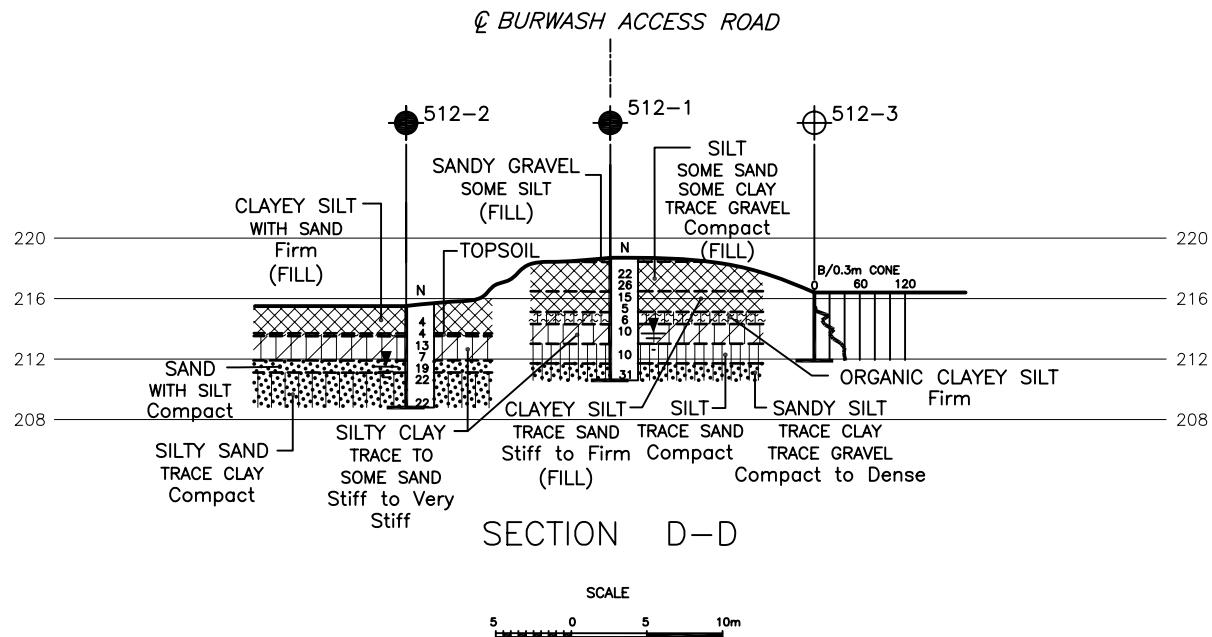
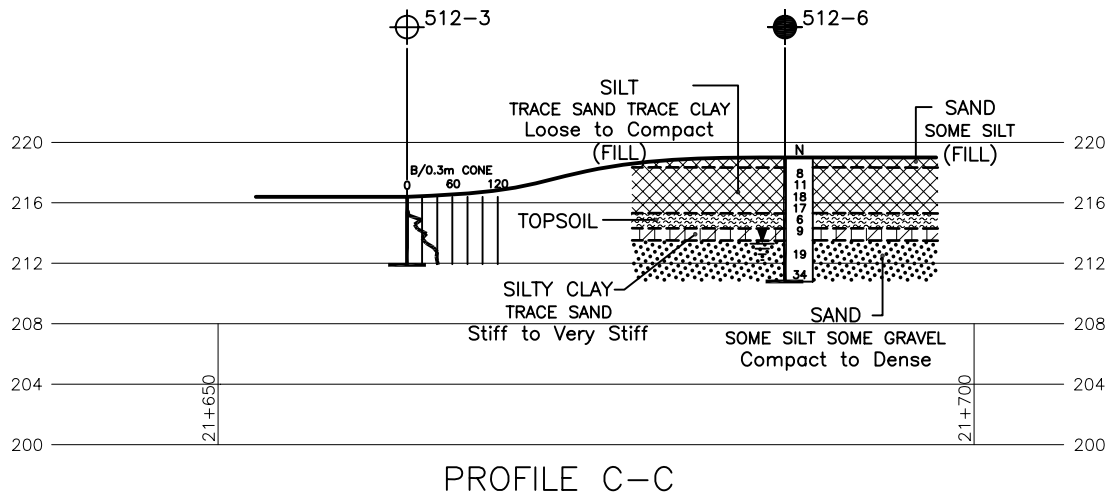
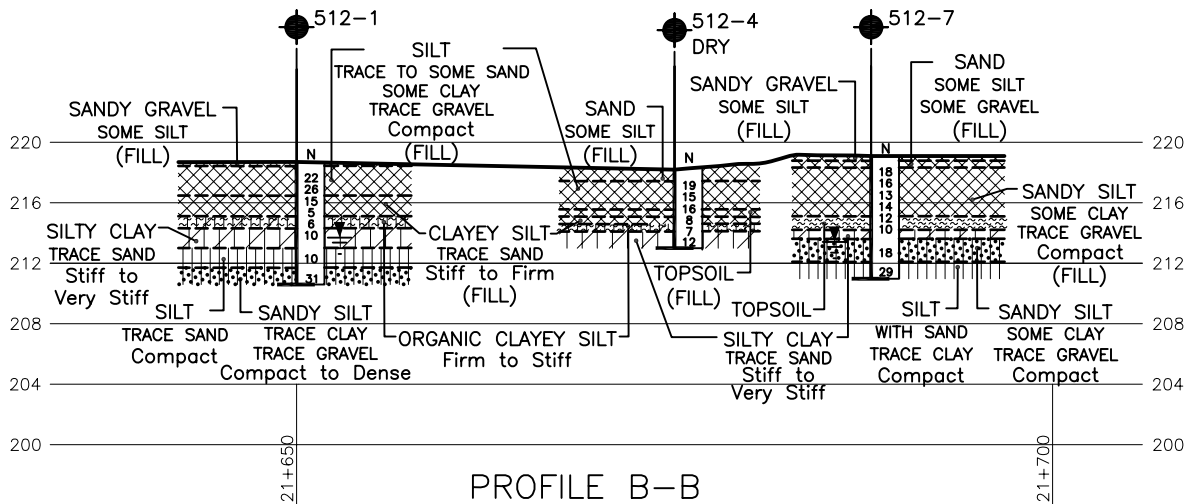
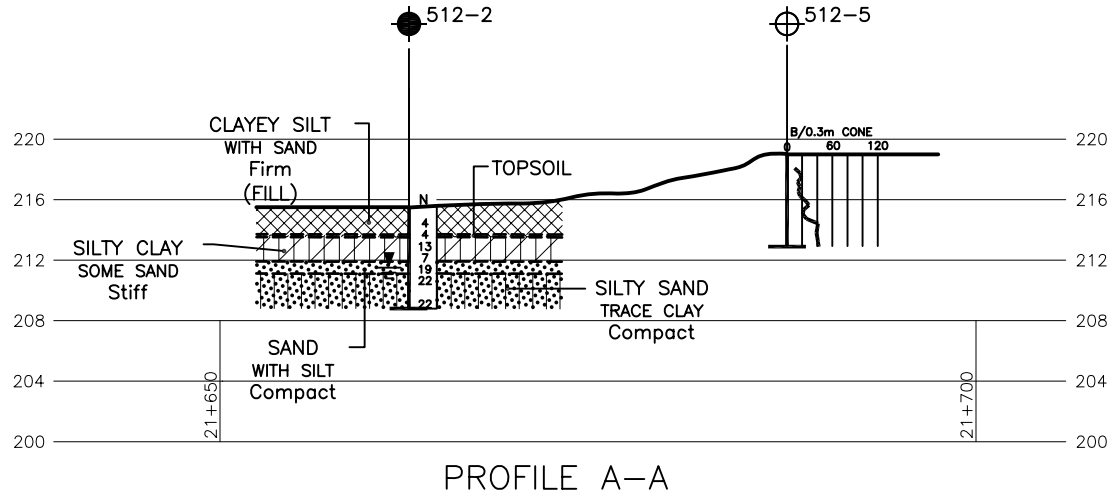
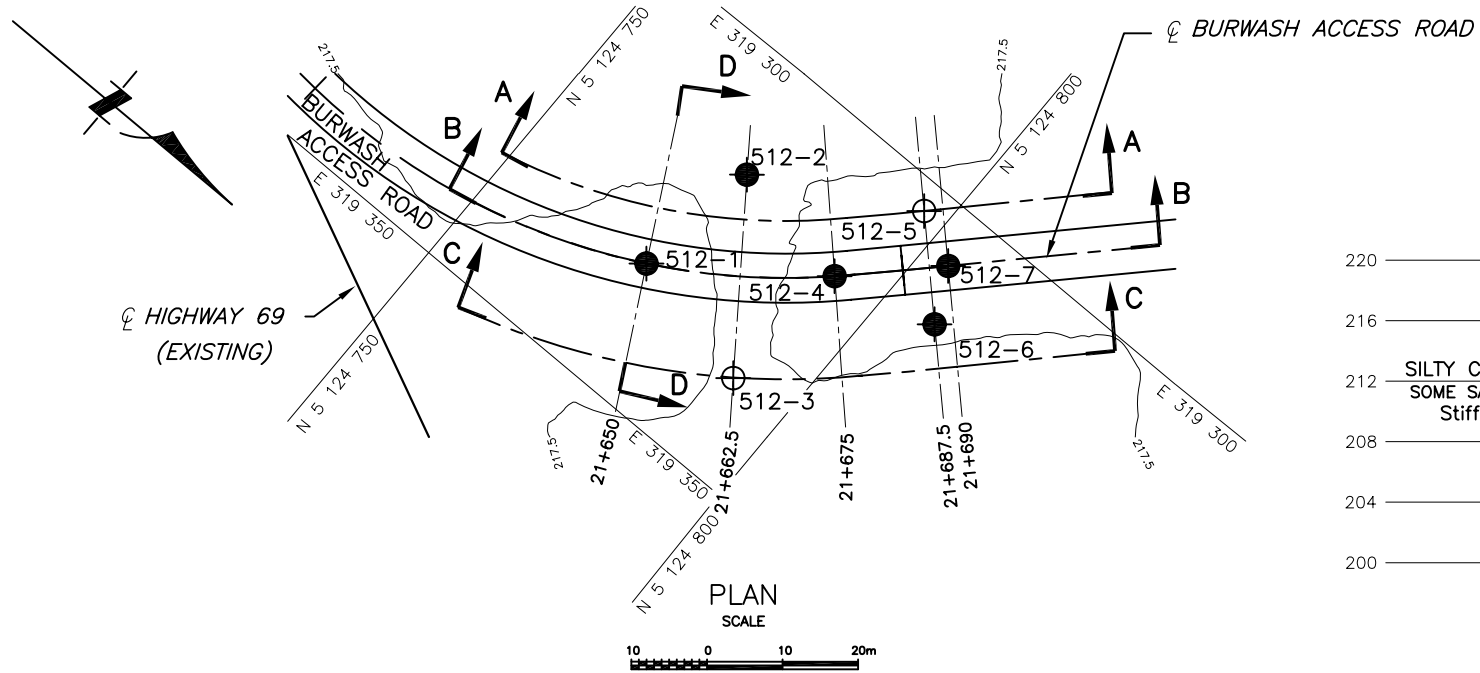


BH No	ELEVATION	STA BURWASH ACCESS ROAD	o/s CL
512-1	218.7	21+650	CL
512-2	215.5	21+662.5	13.5m Lt.
512-3	216.4	21+662.5	13.5m Rt.
512-4	218.2	21+675	CL
512-5	219.0	21+687.5	7.5m Lt.
512-6	219.0	21+687.5	7.5m Rt.
512-7	219.1	21+690	CL

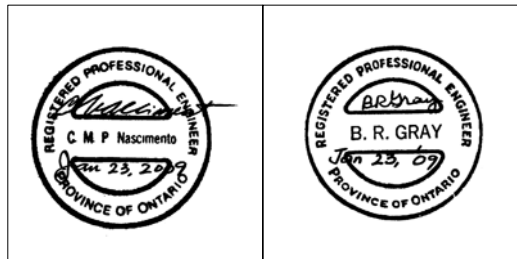
NOTE
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REVISIONS	DATE	BY	DESCRIPTION

Geocres No. 411-231	DIST 54
HWY No 69	SITE
SUBMITT GD	CHECKED GD
DATE JAN. 23, 2009	APPROVED BRG
DRAWN NA	CHECKED CN
DATE	DWG 512-1



NOTES:
1. THIS DRAWING IS FOR SUBSURFACE INFORMATION ONLY. SURFACE DETAILS AND FEATURES ARE FOR CONCEPTUAL ILLUSTRATION.



REF No. 470_Prefered_Plan_PDR_FINAL1.dwg;
Hwy 69 Servos Contract 2 Lidar Contours.dwg
dated December 19, 2007;