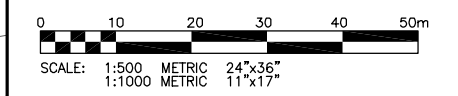


LEGEND

	GROUND CONTOUR
	BH03-01 TESTHOLE (KGS GROUP, JAN.9, 2004)



B	24/06/04	ISSUED WITH REPORT	
A	18/03/04	ISSUED FOR INFORMATION	JMC

REVISIONS / ISSUE	
A	A. SECTION LETTER OR DETAIL NUMBER IS DRAWN
B	B. DRAWING WHERE SECTION OR DETAIL WAS INDICATED
	OR DRAWING WHERE SECTION OR DETAIL WAS INDICATED
	SECTION OR DETAIL SHOWN ON SAME DRAWING

KGS GROUP CONSULTING ENGINEERS & PROJECT MANAGERS
 WINNIPEG (204) 896-1209
 THUNDER BAY (807) 345-2233

CLIENT: **CITY OF WINNIPEG**
 WATER AND WASTE DEPARTMENT
 Winnipeg

PROJECT: SEWER OUTFALL UPGRADE
 BISHOP GRANDIN FORT GARY BRIDGE
 WINNIPEG, MB

DWG. DESCRIPTION: SITE PLAN SHOWING TESTHOLE LOCATION

ENG. STAMP	DESIGNED BY: JMC	DRAWN BY: TE
	CHECKED BY: JMC	CHECKED:
APPROVED:		
SCALE: AS NOTED	DATE: MARCH 2004	
KGS DWG. NO. 04-107-01(3)		01
CLIENT DWG. NO.		REV: B

CLIENT CITY OF WINNIPEG
PROJECT SEWER OUTFALL UPGRADING
SITE BISHOP GRANDIN BLVD.
LOCATION
DRILLING METHOD 125 mm ø Solid Stem Auger, Track Mounted

JOB NO. 04-107-01
GROUND ELEV. 231.16 m
WATER ELEV. 223.07 m (13 Feb 04)
DATE DRILLED 07 Jan 04
UTM N 5520563.9
 E 633688.9

ELEVATION m (ft)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆							
	(m)	(ft)								20	40	60	80	PL	MC	LL	
231.0				TOPSOIL													
231.0	1	5		CLAY (FILL) (CH) - Grey, moist, stiff, high plasticity, silty. - Frozen to 0.46 m.			1										
228.1	3	10		CLAY (CH) - Brown, damp, stiff, high plasticity, silty.			2										
228.1	3	10					3	61	▲10								
227	4	15		- Moist at 4.27 m.			4										
225	6	20					5	100	▲10								
223	8	25					6										
222	9	30		- Grey, wet at 8.53 m. - Free water on spoon at 9.14 m.			7	100	▲8								
220	11	35		- Saturated, firm at 10.67 m.			8										
218.7	12	40				12.2	9	100	▲4								
218.7	12	40		CLAY (TILL) (CI) - Grey, saturated, firm, intermediate plasticity, silty, trace sand, trace fine grained gravel (-).		12.5											
217.4	13	45				12.8											
217	14	45		SILT (TILL) (ML) - Grey, damp, hard, low plasticity, some sand, trace gravel (+).													
216.2	15	50		AUGER REFUSAL AT 14.94 m		14.9	10										
216	15	50															
215	16	55		Notes: 1. Installed 25 mm PVC stand pipe with Casagrande tip. 2. Groundwater at 14.16 m below ground surface upon completion. 3. Groundwater depth at 8.09 m below ground surface on February 13, 2004.													
214	17	55															
213	18	60															
212	19	65															
211	20	65															
210	21	70															

SAMPLE TYPE  Auger Grab  Split Spoon

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **J. McKAY**


APPROVED _____

DATE 24-06-04

CLIENT CITY OF WINNIPEG
PROJECT SEWER OUTFALL UPGRADING
SITE KILKENNY AND RICE
LOCATION 4.88 m NORTH OF VALVE
DRILLING METHOD 125 mm ø Solid Stem Auger, RM 30 Track Mount

JOB NO. 04-107-01
GROUND ELEV.
WATER ELEV.
DATE DRILLED 08 Jan 04
UTM N
 E

ELEVATION m (ft)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆			
									20	40	60	80
									PL	MC	LL	
									%			
								20 40 60	20	40	60	80
0.3			TOPSOIL CLAY (FILL) (CI) - Black, damp, firm, intermediate plasticity, silty, trace sand, trace gravel, trace organics.		0.3							
1	5				1							
2	10		LEAN CLAY (ALLUVIUM) (CL) - Olive brown, damp, stiff, low plasticity, silty, trace to some sand.		2							
3	15				3							
4	20		- Moist.		4							
5	25				5							
6	30		- Wet, soft, hole squeezing below 7.92 m, saturated.		6							
7	35				7							
8	40		- Free water on outside of cuttings at 9.14 m.		8							
9	45		- Grey.		9							
10	50		CLAY (TILL) (CL) - Mottled grey and light grey, saturated, stiff, low plasticity, silty, trace angular gravel.		10							
11	55		CLAY-SILT (TILL) (CL-ML) - Tan, saturated, compact, low plasticity, trace sand, trace gravel.		11							
12	60				12							
13	65		- Very dense.		13							
14	70		AUGER REFUSAL AT 17.53 m		14							
15			Notes: 1. Test hole backfilled with soil cuttings and capped with bentonite.		15							

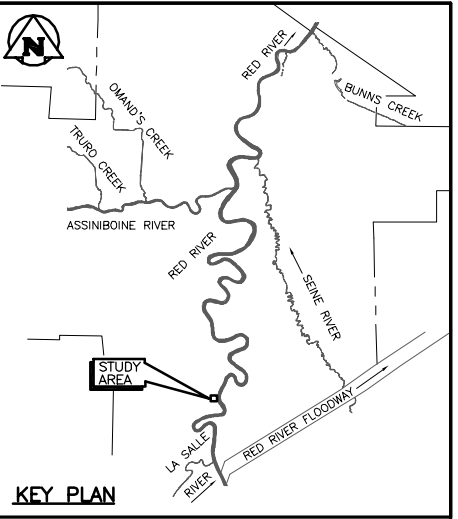
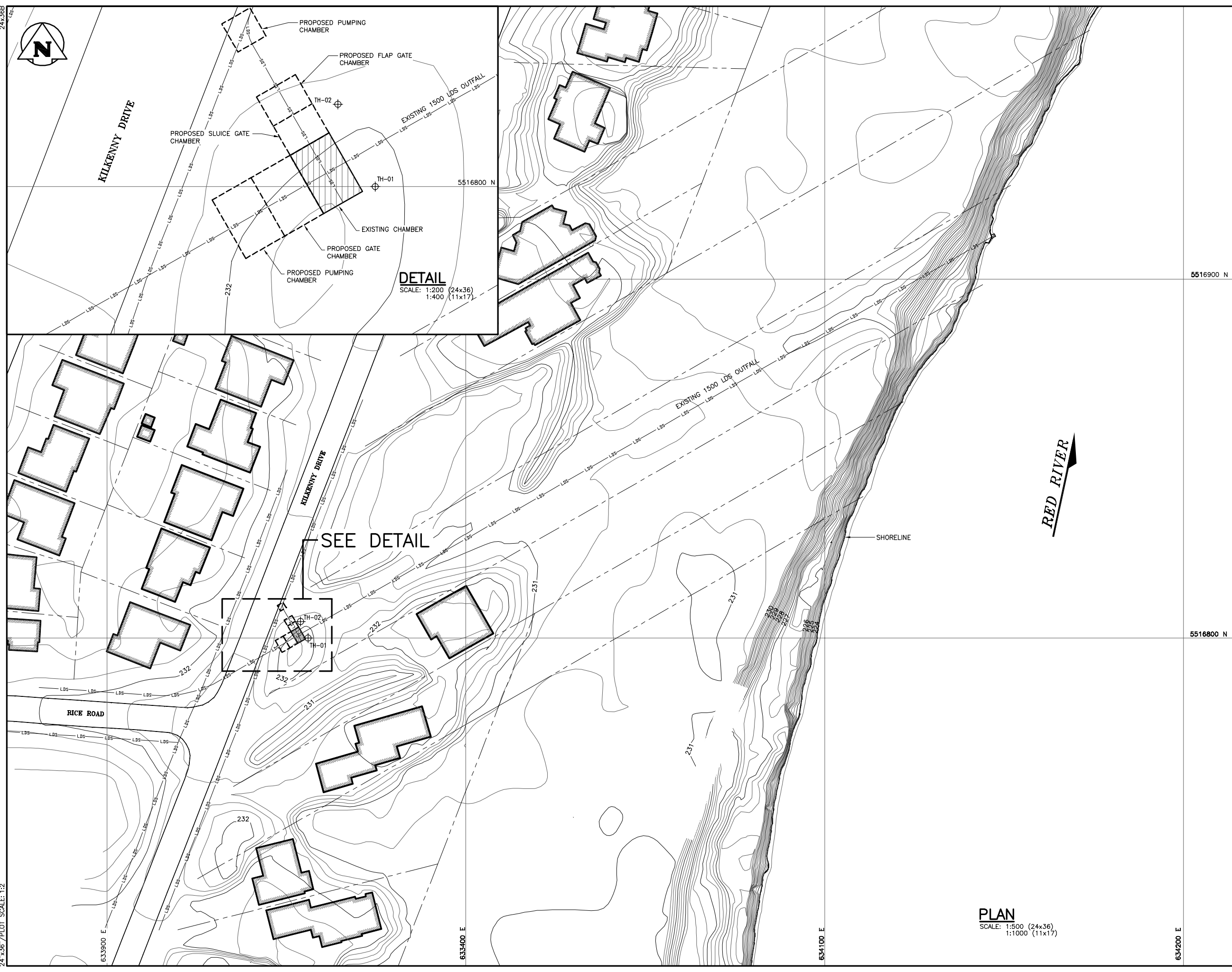
SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **N. PRIVAT**

APPROVED _____ DATE 24-06-04

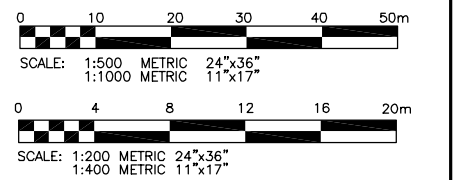
KGS FILE NO.: P:\Projects\2004\04-0107-01\Geo\Drawgs\LEMAP (5)\04-107-01(5)-06.dwg
 24"x36" PLOT SCALE: 1:2



LEGEND

	PROPERTY LINE
5516800 N	UTM GRID LINE (NAD 83)
	SEWER LINE
	GROUND CONTOUR (GEODETIC, m)
TH-01	TESTHOLE (KGS GROUP, JAN.9, 2004)
	EXISTING STRUCTURE

- REFERENCES**
1. ORTHO-DIGITAL BASE MAPPING, CITY OF WINNIPEG, 1999.
 2. COWMAP/VIEW/VIEWLib/PrintMap.asp.
 3. FLOOD MANUAL, KILKENNY DRIVE & RICE ROAD GATE CHAMBER, PLAN & SECTIONS, JOB NO. 02-D265-078-01, CITY OF WINNIPEG, JUNE 2003.



A 23/03/04 ISSUED FOR INFORMATION		
NO.	D / M / Y	DESCRIPTION

REVISIONS / ISSUE

	A. SECTION LETTER OR DETAIL NUMBER	
	B. DRAWING WHERE SECTION OR DETAIL WAS INDICATED	
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 THUNDER BAY (807) 345-2233

CLIENT: **CITY OF WINNIPEG**
 WATER AND WASTE DEPARTMENT
 Winnipeg

PROJECT: **SEWER OUTFALL UPGRADE
 KILKENNY AND RICE
 WINNIPEG, MB**

DWG. DESCRIPTION:

**SITE PLAN
 SHOWING LOCATION OF TESTHOLES**

ENG. STAMP	DESIGNED BY: JMC	DRAWN BY: TE
	CHECKED: RKe	CHECKED:
APPROVED:	SCALE: AS NOTED	DATE: MARCH 2004
	KGS DWG. NO. 04-107-01(5)	01
CLIENT DWG. NO.		REV: A

PLAN
 SCALE: 1:500 (24x36)
 1:1000 (11x17)

5516900 N

5516800 N

KILKENNY DRIVE

RED RIVER

SEE DETAIL

DETAIL
 SCALE: 1:200 (24x36)
 1:400 (11x17)

PROPOSED SLUICE GATE CHAMBER

PROPOSED GATE CHAMBER

PROPOSED PUMPING CHAMBER

PROPOSED FLAP GATE CHAMBER

PROPOSED PUMPING CHAMBER

EXISTING CHAMBER

EXISTING 1500 LDS OUTFALL

SHORELINE

RICE ROAD

232

231

232

231

TH-02

TH-01

5516800 N

633900 E

633400 E

634100 E

634200 E