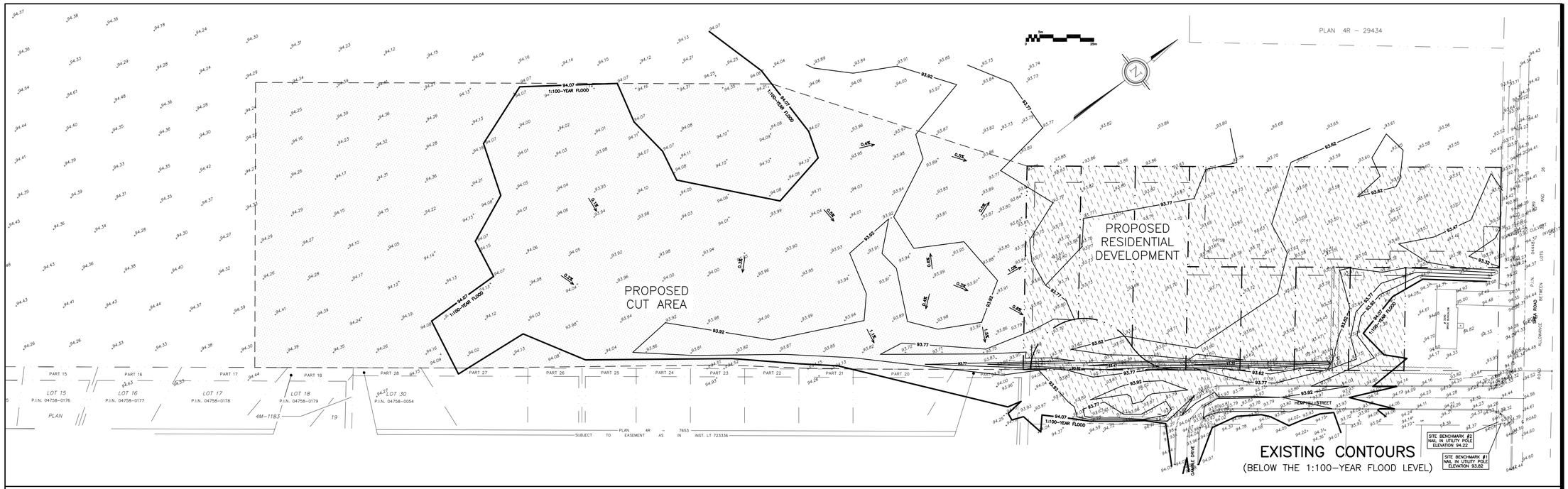


PROPOSED RESIDENTIAL DEVELOPMENT AREA

CONTOUR (m)	PRE–DEVLOPEMENT CONDITIONS					POST DEVELOPMENT CONDITIONS					LOSS OF STORAGE VOLUME	
	TOP AREA (sq.m)	BOTTOM AREA (sq.m)	DEPTH (m)	VOLUME (cu.m)	CUMULATIVE VOLUME (cu.m)	TOP AREA (sq.m)	BOTTOM AREA (sq.m)	DEPTH (m)	VOLUME (cu.m)	CUMULATIVE VOLUME (cu.m)	VOLUME (cu.m) (REFER TO SUMMARY)	CUMULATIVE VOLUME (cu.m)
93.62	4,679	563	0.15	343	343	624	0	0.15	31	31	312	312
93.77	9,438	4,679	0.15	1,038	1,381	1,746	624	0.15	171	202	867	1,179
93.92	12,465	9,438	0.15	1,637	3,019	2,015	1,746	0.15	282	484	1,356	2,535
94.07 (100–YEAR FLOOD)	12,819	12,465	0.15	1,896	4,915	2,637	2,015	0.15	348	832	1,548	4,083

PROPOSED CUT AREA

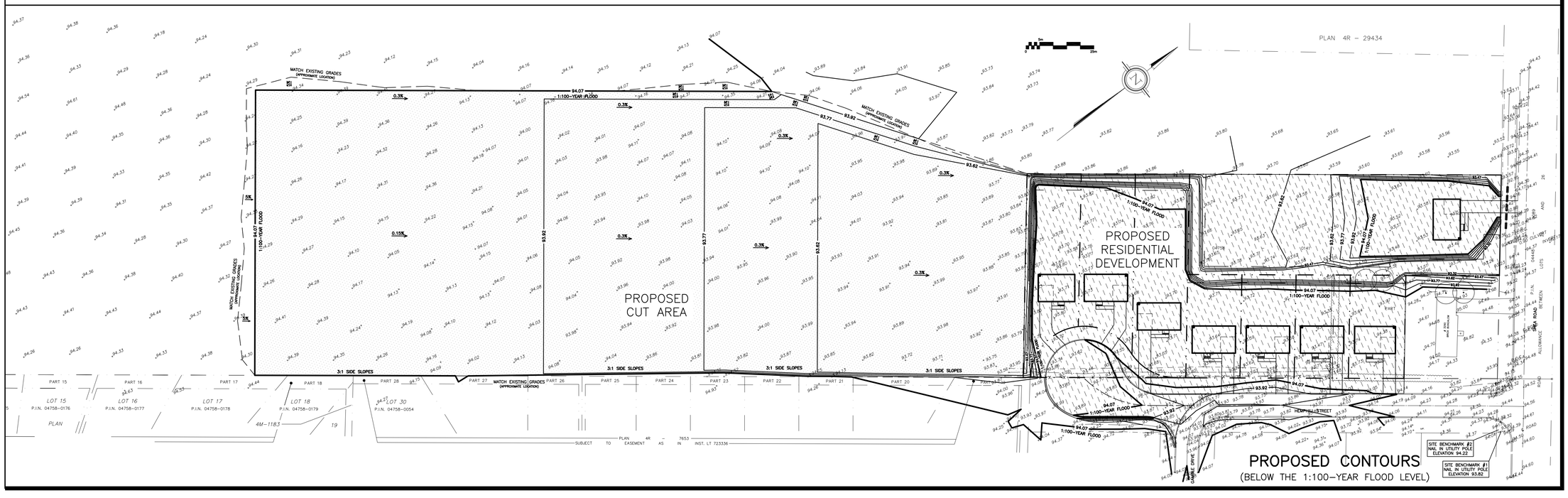
CONTOUR (m)	PRE–DEVLOPEMENT CONDITIONS					POST DEVELOPMENT CONDITIONS					GAIN IN STORAGE VOLUME	
	TOP AREA (sq.m)	BOTTOM AREA (sq.m)	DEPTH (m)	VOLUME (cu.m)	CUMULATIVE VOLUME (cu.m)	TOP AREA (sq.m)	BOTTOM AREA (sq.m)	DEPTH (m)	VOLUME (cu.m)	CUMULATIVE VOLUME (cu.m)	VOLUME (cu.m) (REFER TO SUMMARY)	CUMULATIVE VOLUME (cu.m)
93.62	5	0	0.15	0	0	6,238	0	0.15	312	312	312	312
93.77	205	5	0.15	12	12	10,525	6,238	0.15	1,243	1,555	1,231	1,543
93.92	4,058	205	0.15	259	271	16,860	10,525	0.15	2,035	3,590	1,777	3,319
94.07 (100–YEAR FLOOD)	16,902	4,058	0.15	1,462	1,733	28,380	16,860	0.15	3,356	6,946	1,894	5,213

SUMMARY

CONTOUR (m)	LOSS	GAIN
	VOLUME (cu.m)	VOLUME (cu.m)
93.62	312	312
93.77	867	1,231
93.92	1,356	1,777
94.07 (100–YEAR FLOOD)	1,548	1,894

VOLUMES CALCULATED USING PRISMOIDAL FORMULA:
$V = D \times (A_T + A_B) + (A_T \times A_B)^{0.5} \div 3$

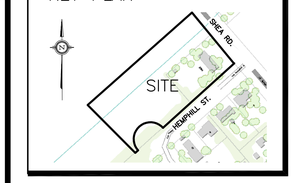
WHERE V = VOLUME
D = DEPTH (CONTOUR INTERVAL)
A_T = TOP AREA
A_B = BOTTOM AREA



DRAWING LEGEND

CB	CATCH BASIN
MH	MANHOLE
CB/MH	CATCH BASIN/MANHOLE
WS/WM	WATER SERVICE / WATERMAIN
SAN	SANITARY SEWER
ST	STORM SEWER
FH	FIRE HYDRANT
UP	UTILITY POLE
94.00–TG	EXISTING GRADE ELEVATION
+ 93.79	PROPOSED GRADE ELEVATION
0.5%	EXISTING SLOPE OF GRADE
0.5%	SLOPE OF GRADE
TOS	TOP OF SLOPE
BOS	BOTTOM OF SLOPE
	PROPERTY LINE
FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION ELEVATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING ELEVATION

KEY PLAN



No.	Date	REVISION
4	AUG 21–19	343 cu.m. STORAGE ADDED ABOVE 93.77 RE–ISSUED TO RVCA FOR APPROVAL
3	APR 18–19	RE–ISSUED TO RVCA FOR APPROVAL
2	FEB 20–19	ISSUED FOR APPROVAL
1	FEB 19–19	ISSUED FOR CLIENT REVIEW

D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains
700 Long Point Circle
Ottawa, Ontario K1T 4E9
Tel: 613-425-8044
dbgray@rogers.com

Project

PROPOSED 8–LOT RESIDENTIAL DEVELOPMENT HEMPHILL STREET/SHEA ROAD

RICHMOND, ONTARIO

Drawing Title

FLOODPLAIN CUT & FILL

Engineer's Seal

LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
AUG 21–19
PROVINCE OF ONTARIO

NOT VALID UNLESS SIGNED & DATED

Drawn	D.B.G.
Hor. Scale	1:750
Vert. Scale	
Date	NOV 29–17
Job No.	17037

Drawing No.

C–4
of 4