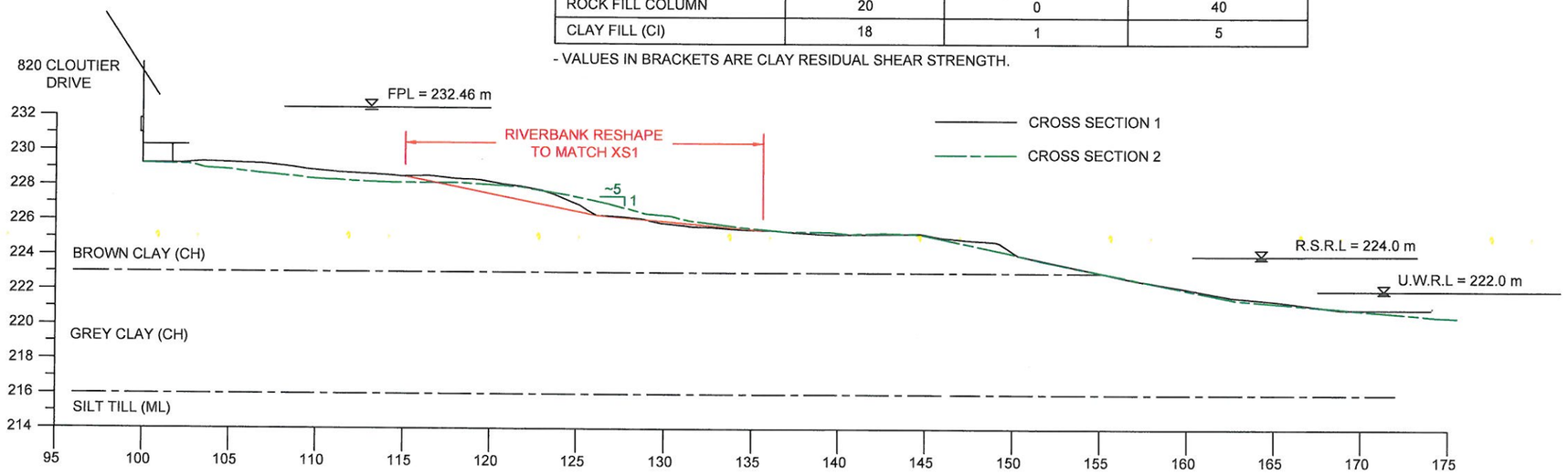
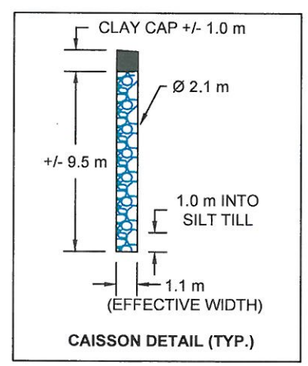
SOIL STRENGTH PARAMETER VALUES USED IN MODELLING			
SOIL TYPE & CLASSIFICATION	BULK DENSITY, γ (kN/m³)	EFFECTIVE COHESION, c' (kPa)	EFFECTIVE FRICTION ANGLE, ϕ' (°)
BROWN CLAY (CH)	18	5 (2)	14 (8)
GREY CLAY (CH)	18	5 (2)	14 (8)
SILT TILL (ML)	20	1	25
RIP-RAP	20	0	5
ROCK FILL COLUMN	20	0	40
CLAY FILL (CI)	18	1	5

- VALUES IN BRACKETS ARE CLAY RESIDUAL SHEAR STRENGTH.

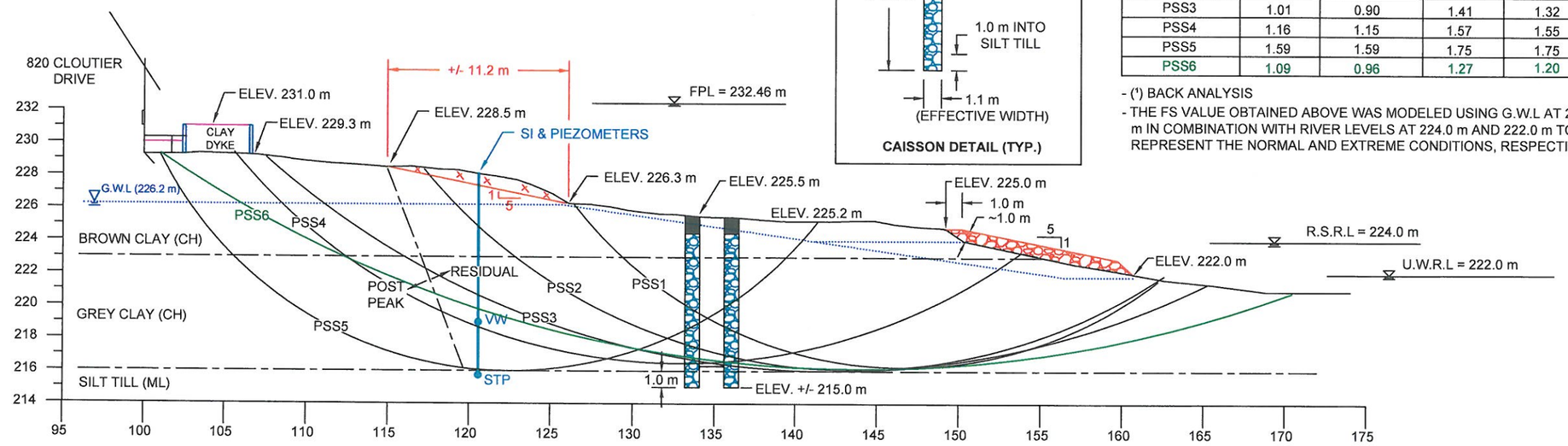


1/1|2 2/1|2 DISTANCE (m) SECTIONS OVERLAYS



FACTORS OF SAFETY (FS) - SECTION 1				
POTENTIAL SLIP SURFACE (PSS)	EXISTING RIVERBANK		PROPOSED CONSTRUCTION	
	NORMAL	EXTREME	NORMAL	EXTREME
PSS1(1)	1.25	0.99	1.81	1.55
PSS2	0.98	0.86	1.57	1.44
PSS3	1.01	0.90	1.41	1.32
PSS4	1.16	1.15	1.57	1.55
PSS5	1.59	1.59	1.75	1.75
PSS6	1.09	0.96	1.27	1.20

- (1) BACK ANALYSIS
- THE FS VALUE OBTAINED ABOVE WAS MODELED USING G.W.L AT 226.2 m IN COMBINATION WITH RIVER LEVELS AT 224.0 m AND 222.0 m TO REPRESENT THE NORMAL AND EXTREME CONDITIONS, RESPECTIVELY.



1/1|2 DISTANCE (m) SLOPE ANALYSIS ON SECTION 1

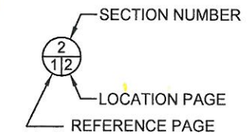
P:\2016\Projects\217(C.O.W)\04(Flood Protection Design Cloutier)\2019 Riverbank Works\Drawings\Final Drawings\Figure 2 – Sections Overlay and Slope Analysis.dwg

LEGEND

PROPOSED CAISSON

PROPOSED RIP-RAP

SOIL OFF-LOADING



NOTES

- ALL ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.
- ENG-TECH SURVEYED PROPERTY ON APRIL 9, 2019 USING TOTAL STATION AND GPS SURVEY EQUIPMENT.
- RIVER BOTTOM SOUNDINGS WERE OBTAINED FROM ENG-TECH FORMER REPORT CONDUCTED IN 2016.
- F.P.L. = FLOOD PROTECTION LEVEL (232.46 m).
- R.S.R.L = REGULATED SUMMER RIVER LEVEL (224.0 m).
- U.W.R.L = UNREGULATED WINTER RIVER LEVEL (222.0 m).

NO.	DATE	ISSUE / REVISION
1	Aug. /2020	Tender
0	Feb. /2020	Report

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ENG. STAMP:

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
ENG-TECH Consulting Limited
No.2475

CLIENT: CITY OF WINNIPEG

PROJECT: FLOOD PROTECTION DESIGN- 820 CLOUTIER DRIVE, WINNIPEG, MANITOBA

DWG DESCRIPTION: SECTIONS OVERLAYS AND SLOPE STABILITY ANALYSIS ON SECTION 1

SCALE: 1:300

DRAWN BY: WG

DATE: AUGUST 2020

FILE No.: 16-217-04

CLIENT DWG/FIG. No.:

ENG-TECH DWG/FIG. No.: 2

NO.: