

Appendix E
**Manning's Roughness Coefficient
and Cross-Section Field Forms**

CREW _____

INITIALS: _____

DETERMINATION OF MANNING'S ROUGHNESS COEFFICIENT*

DATE: _____

TIME: _____

RAINFALL: Y N

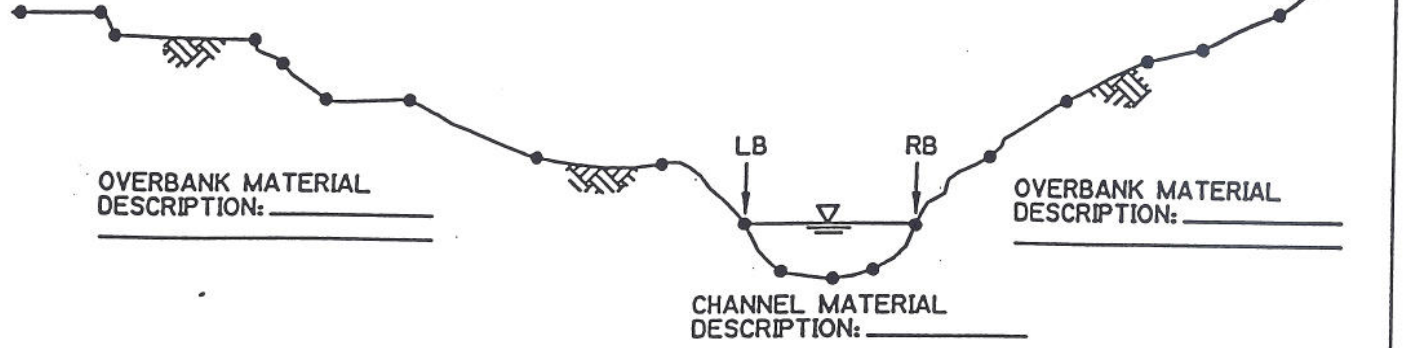
LOCATION & ID NUMBER: _____

RANGE/TOWNSHIP/SECTION: _____

START STATION (LEFT)

ORIENTATION LOOKING DOWNSTREAM

END STATION (RIGHT)



M. KUZEL, MMW-CHI

In...

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VEY

K11610811

CHANNEL CONDITIONS		VALUES	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK
MATERIAL INVOLVED	EARTH	N ₀	0.020		
	ROCK CUT		0.025		
	FINE GRAVEL		0.024		
	COARSE GRAVEL		0.028		
DEGREE OF IRREGULARITY	SMOOTH	N ₁	0.000		
	MINOR		0.005		
	MODERATE		0.010		
	SEVERE		0.020		
VARIATIONS OF CHANNEL CROSS SECTION	GRADUAL	N ₂	0.000		
	ALTERNATING OCCASIONALLY		0.005		
	ALTERNATING FREQUENTLY		0.010-0.015		
RELATIVE EFFECT OF OBSTRUCTIONS	NEGLECTIBLE	N ₃	0.000		
	MINOR		0.010-0.015		
	APPRECIABLE		0.020-0.030		
	SEVERE		0.040-0.060		
VEGETATION	LOW	N ₄	0.005-0.010		
	MEDIUM		0.010-0.025		
	HIGH		0.025-0.050		
	VERY HIGH		0.050-0.100		
DEGREE OF MEANDERING	MINOR	M ₅	1.000		
	APPRECIABLE		1.150		
	SEVERE		1.300		
$N = (N_0 + N_1 + N_2 + N_3 + N_4) M_5$					

* FROM: OPEN CHANNEL HYDRAULICS, VEN TE CHOW, MCGRAW HILL BOOK CO. 1959. BENCHMARK: _____

PHOTO# _____

SHEET ___ OF ___

CREW _____

TYPICAL CHANNEL CROSS-SECTIONS

DATE: _____

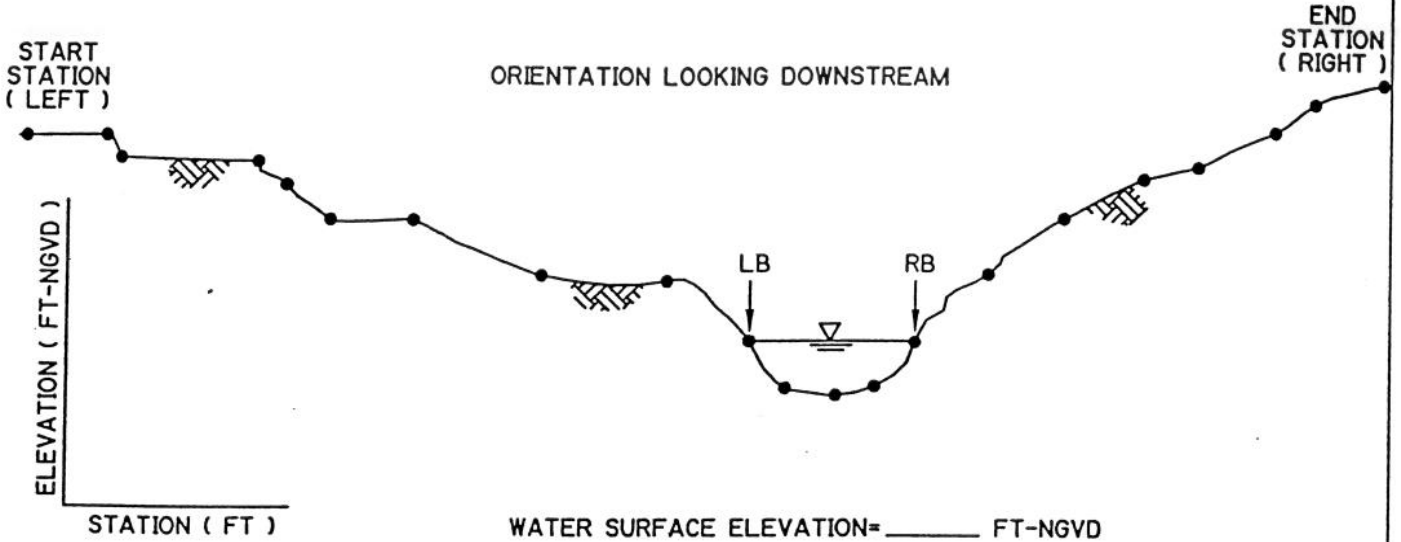
INITIALS: _____

TIME: _____

RAINFALL: Y N

LOCATION & ID NUMBER: _____

RANGE/TOWNSHIP/SECTION: _____



M. KUZEL, NMW-CHI

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STATION (FT)	ELEVATION (FT-NGVD)	• (LB/RB)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		

• (INDICATE LEFT BANK STATION WITH LB)
 (INDICATE RIGHT BANK STATION WITH RB)

HOUSE IN X-SECTION ? Y N
 (CIRCLE ONE)

FIRST FLOOR ELEVATION= _____ FT-NGVD

STATION OF HOUSE= _____

FLOODPLAIN VEGETATION/DESCRIPTION: _____

COMPASS DIRECTION OF FLOW: _____

ESTIMATED APPLICABLE LENGTH (FT): _____

GENERAL NOTES: _____

BENCHMARK: _____

PHOTO# _____

SHEET ____ OF ____