

WATER SURFACE PROFILES  
VERSION OF NOVEMBER 1976  
UPDATED MARCH 1982

RUN DATE 09/14/82. TIME 09.54.05.

U.S. ARMY CORPS OF ENGINEERS  
THE HYDROLOGIC ENGINEERING CENTER  
609 SECOND STREET, SUITE D  
DAVIS, CALIFORNIA 95616  
(916) 440-2105 (FTS) 448-2105

9	X	X	XXXXXXXXXX	XXXXXX	XXXXXX			
10	X	X	X	X	X	X	X	X
11	X	X	X	X	X	X	X	X
12	XXXXXXX	XXXXXX			XXXXXX			
13	X	X	X	X	X	X	X	X
14	X	X	X	X	X	X	X	X
15	X	X	XXXXXXXXXX					

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 HEC2 RELEASE DATED NOV 76 UPDATED MARC 1982  
 ERROR CORR - 01,02,03,04,05  
 MODIFICATION - 50,51,52,53,54,55  
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T1 BRUNSWICK CO FIS  
 T2 10 YEAR FLOW  
 T3 STURGEON CREEK

J1 ICHECK INO NINV IDIR STRT METRIC HVINS Q WSEL FQ  
 0. 2. 0. 0.000100 0.00 0.0 0.0 99.000 0.000

J2 NPROF I PLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE  
 1.000 0.000 -1.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT  
 38.000 39.000 40.000 41.000 43.000 42.000 1.000 2.000 26.000 53.000

54.000 25.000 50.000 0.000 201.000 0.000 0.000 0.000 0.000 0.000

NC .045 .045 .035 .100 .300 0.000 0.000 0.000 0.000 0.000  
 QT 9.000 940.000 1300.000 1930.000 2480.000 2480.000 2480.000 2900.000 3760.000 4400.000  
 X1 1950.000 14.000 100.000 225.000 0.000 0.000 0.000 0.000 100.000 0.000  
 GR 20.000 -2300.000 15.000 -2200.000 10.000 -1600.000 7.940 0.000 7.840 100.000  
 GR 7.540 101.000 2.940 113.000 -12.460 161.000 7.540 223.000 7.940 225.000  
 GR 8.140 300.000 10.000 1100.000 15.000 1230.000 20.000 1360.000 0.000 0.000

X1 2050.000 0.000 0.000 0.000 100.000 100.000 100.000 0.000 0.000 0.000

NC 0.000 0.000 0.000 .300 .500 0.000 0.000 0.000 0.000 0.000  
 X1 2800.000 17.000 256.000 428.000 650.000 700.000 750.000 0.000 100.000 0.000  
 GR 20.000 -2600.000 9.300 -1300.000 7.360 0.000 5.260 100.000 4.260 200.000  
 GR 3.710 256.000 3.660 261.000 2.160 273.000 -17.840 342.000 2.160 412.000  
 GR 3.460 424.000 3.480 428.000 3.760 473.000 5.660 479.000 5.660 500.000  
 GR 4.560 600.000 20.000 1900.000 0.000 0.000 0.000 0.000 0.000 0.000

X1 2900.000 0.000 0.000 0.000 100.000 100.000 100.000 0.000 0.000 0.000  
 X3 10.000 0.000 0.000 0.000 0.000 0.000 0.000 107.500 107.500 0.000

SB 1.250 1.560 3.000 0.000 106.000 7.000 2484.000 0.000 0.000 0.000  
 X1 2928.000 0.000 0.000 0.000 28.000 28.000 28.000 0.000 0.000 0.000  
 X2 0.000 0.000 1.000 107.110 107.960 0.000 0.000 0.000 0.000 0.000  
 X3 10.000 0.000 0.000 0.000 0.000 0.000 0.000 107.960 107.960 0.000  
 BT 13.000 -58.000 110.460 0.000 42.000 109.860 0.000 142.000 108.560 0.000  
 BT 242.000 108.560 0.000 256.000 108.850 0.000 256.000 111.210 107.110 342.000  
 BT 111.120 106.990 428.000 111.200 107.070 428.000 108.840 0.000 442.000 108.560

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1	BT	0.000	542.000	107.960	0.000	642.000	108.360	0.000	742.000	108.260	0.000
2	X1	3000.000	0.000	0.000	0.000	72.000	72.000	72.000	0.000	0.000	0.000
3	NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
4	X1	3100.000	0.000	0.000	0.000	100.000	100.000	100.000	0.000	0.000	0.000
5	NC	.115	.115	.040	.300	.500	0.000	0.000	0.000	0.000	0.000
6	QT	9.000	640.000	900.000	1350.000	1760.000	1760.000	2100.000	2760.000	3350.000	0.000
7	X1	8275.000	20.000	736.000	791.000	4750.000	4350.000	5175.000	0.000	0.000	0.000
8	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
9	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
10	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
11	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
12	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	X1	8400.000	41.000	715.000	824.000	125.000	125.000	125.000	0.000	99.930	0.000
14	X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	107.600	107.600	0.000
15	GR	13.760	0.000	13.310	15.000	10.760	100.000	10.700	115.000	10.360	200.000
16	GR	10.060	215.000	8.360	300.000	7.360	315.000	1.660	400.000	2.080	415.000
17	GR	4.470	500.000	4.470	515.000	4.470	600.000	4.540	615.000	4.970	700.000
18	GR	5.250	713.000	5.300	715.000	5.300	717.000	3.100	735.000	1.840	739.000
19	GR	1.370	740.500	-3.200	755.000	-4.500	766.500	-4.700	768.000	-5.400	775.000
20	GR	-1.980	793.500	-1.700	795.000	3.400	810.000	4.020	815.000	4.900	822.000
21	GR	4.900	824.000	2.860	900.000	2.680	915.000	1.660	1000.000	1.880	1015.000
22	GR	3.160	1100.000	3.780	1115.000	7.260	1200.000	8.560	1215.000	13.760	1275.000
23	GR	13.760	1314.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	NC	0.000	0.000	0.36	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	X1	8410.000	0.000	0.000	0.000	10.000	10.000	10.000	0.000	.070	0.000
26	BT	31.000	0.000	113.760	0.000	15.000	113.760	0.000	115.000	111.740	0.000
27	BT	215.000	110.100	0.000	315.000	109.150	0.000	415.000	109.070	0.000	515.000
28	BT	108.980	0.000	615.000	108.980	0.000	713.000	109.070	0.000	715.000	109.070
29	BT	0.000	715.000	109.070	106.820	739.000	109.100	106.820	739.000	109.100	0.000
30	BT	740.500	109.100	0.000	740.500	109.100	106.820	766.500	109.130	106.820	766.500
31	BT	109.130	0.000	768.000	109.130	0.000	768.000	109.130	106.820	793.500	109.140
32	BT	106.820	793.500	109.140	0.000	795.000	109.140	0.000	795.000	109.140	106.820
33	BT	815.000	109.150	106.820	824.000	108.970	106.820	824.000	108.970	0.000	915.000
34	BT	108.440	0.000	1015.000	108.410	0.000	1115.000	109.270	0.000	1215.000	110.860
35	BT	0.000	1314.000	113.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	X1	8448.000	0.000	0.000	0.000	38.000	38.000	38.000	0.000	.260	0.000
37	X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
38	NC	0.000	0.000	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	X1	8458.000	0.000	0.000	0.000	10.000	10.000	10.000	0.000	.060	0.000
40	X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	108.400	108.400	0.000
41	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
43	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
44	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
45	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
46	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
47	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
49	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
50	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
51	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
52	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
53	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
55	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
56	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
57	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
58	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
59	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
61	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
62	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
63	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
64	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
65	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
67	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
68	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
69	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
70	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000
71	NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72	X1	8550.000	20.000	736.000	791.000	92.000	92.000	92.000	0.000	100.960	0.000
73	GR	13.760	0.000	10.760	100.000	10.360	200.000	8.360	300.000	1.660	400.000
74	GR	1.760	500.000	1.760	600.000	2.260	700.000	3.060	736.000	-4.440	745.000
75	GR	-5.440	757.000	-5.740	768.000	-1.240	778.000	2.660	791.000	4.260	800.000
76	GR	2.860	900.000	1.660	1000.000	3.160	1100.000	7.260	1200.000	13.760	1275.000









1/8	SECCNO	DEPTH	CMSEL	CRIMS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
1	TIME	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
2	SLOPE	XLQBL	XLCH	XLOBR	XNL	XNCH	XNR	WTN	ELMIN	SSTA
3					ITRIAL	IDC	ICONT	CORAR	TOPMID	ENDST

CLASS A LOW FLOW

3420 BRIDGE W.S.= 101.74 BRIDGE VELOCITY= .48 CALCULATED CHANNEL AREA= 1938.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD
0.00	101.75	.00	0.	940.	2484.	2470.	107.11	107.96

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 107.96 ELREA= 107.96

2928.00	19.58	101.74	0.00	0.00	101.75	1332.	.01	.00	0.00	103.71
940.	0.	940.	0.	0.	1333.	22.	0.	24.	3.	103.48
.36	0.00	.71	0.00	.045	.035	0.000	.045	0.000	82.16	274.44
.000014	28.	28.	28.	0	0	0.00	0	0.00	136.09	410.54

\*SECCNO 3000.000

3000.00	19.58	101.74	0.00	0.00	101.75	1333.	.01	.00	.00	103.71
940.	0.	940.	0.	0.	1333.	24.	0.	24.	3.	103.48
.39	0.00	.71	0.00	.045	.035	0.000	.045	0.000	82.16	274.44
.000014	72.	72.	72.	0	0	0.00	0	0.00	136.10	410.54

CCHV= .100 CEHV= .300

*SECCNO 3100.000	3100.00	19.58	101.74	0.00	0.00	101.75	.01	.00	.00	103.71
940.	0.	940.	0.	0.	1333.	27.	0.	27.	3.	103.48
.43	0.00	.71	0.00	.045	.035	0.000	.045	0.000	82.16	274.44
.000014	100.	100.	100.	0	0	0.00	0	0.00	136.11	410.54

CCHV= .300 CEHV= .500

\*SECCNO 8275.000

8275.00	8.55	101.88	0.00	0.00	101.92	307.	.05	.15	.02	102.13
640.	64.	562.	14.	310.	307.	147.	99.	147.	42.	101.73
1.31	.21	1.83	.15	.115	.040	0.000	.115	0.000	93.33	382.89
.000268	4750.	5175.	4350.	2	0	0.00	0	0.00	569.18	1076.43

3265 DIVIDED FLOW

49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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1/6	SECCNO	DEPTH	QLOB	QCH	CRIBS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
1	TIME	VLOB	VCH	VRIB	ALOB	ACH	AROB	WTN	ELMIN	LEFT	RIGHT	SSTA
2	SLOPE	XL0BL	XLCH	XL0BR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST		

\*SECNO 8400.000

7	3495	OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=	107.60	ELREA=	107.60							
9	8400.00	7.38	101.91	0.00	0.00	101.98	.07	.04	.01	105.23		
10	640.	0.	640.	0.	0.	299.	0.	148.	43.	104.83		
11	1.33	0.00	2.14	0.00	.115	.040	.115	0.000	94.53	738.59		
12	.000473	125.	125.	125.	1	0	0	0.00	67.21	805.80		

\*SECNO 8410.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 106.82

22	8410.00	7.31	101.91	0.00	0.00	101.99	.08	.01	.01	105.30		
23	640.	0.	640.	0.	0.	279.	0.	148.	43.	104.90		
24	1.33	0.00	2.30	0.00	.115	.036	.115	0.000	94.60	396.26		
25	.000637	10.	10.	10.	0	0	0	-22.21	117.50	1017.05		

\*SECNO 8448.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

34	8448.00	7.07	101.93	0.00	0.00	102.02	.09	.03	.00	105.56		
35	640.	0.	640.	0.	0.	264.	0.	148.	43.	105.16		
36	1.33	0.00	2.43	0.00	.115	.036	.115	0.000	94.86	399.87		
37	.000739	38.	38.	38.	0	0	0	-14.81	67.07	1000.58		

\*SECNO 8458.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 108.40 ELREA= 108.40

43	8458.00	7.02	101.94	0.00	0.00	102.03	.08	.01	.00	105.62		
44	640.	0.	640.	0.	0.	275.	0.	149.	43.	105.22		
45	1.33	0.00	2.33	0.00	.115	.040	.115	0.000	94.92	739.72		
46	.000594	10.	10.	10.	0	0	0	0.00	65.03	804.75		

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SECCNO	DEPTH	CWSEL	CRIMS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
TIME	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
SLOPE	VLOB	VLCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPMID	ENDST

\*SECCNO 8550.000  
 8550.00 6.77 101.99 0.00 0.00 102.12 .14 .07 .03 104.02  
 640. 0. 640. 0. 0. 216. 0. 149. 43. 103.62  
 1.34 0.00 2.96 0.00 .115 .040 .115 0.000 95.22 738.44  
 .000915 92. 92. 92. 2 .115 0 0.00 47.11 785.55

CCHV= .100 CEHV= .300  
 \*SECCNO 8650.000  
 8650.00 6.16 102.06 0.00 0.00 102.24 .18 .11 .01 104.70  
 640. 0. 640. 0. 0. 188. 0. 149. 43. 104.30  
 1.35 0.00 3.40 0.00 .115 .040 .115 0.000 95.90 739.17  
 .001329 100. 100. 100. 0 .120 0 0.00 44.37 783.54

CCHV= .300 CEHV= .500  
 \*SECCNO 14700.000  
 14700.00 6.38 107.08 0.00 0.00 107.12 .04 4.83 .04 102.40  
 640. 105. 432. 103. 266. 223. 277. 213. 81. 104.30  
 2.51 .39 1.94 .37 .120 .055 .120 0.000 100.70 471.49  
 .000544 5650. 6050. 5500. 4 0 0.00 551.07 1022.56

\*SECCNO 14800.000  
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA= 110.20 ELREA= 110.20  
 14800.00 8.03 107.05 0.00 0.00 107.33 .29 .09 .12 100.80  
 640. 0. 640. 0. 0. 149. 0. 214. 82. 101.75  
 2.51 0.00 4.30 0.00 .120 .055 .120 0.000 99.02 739.00  
 .001937 100. 100. 100. 2 .120 0 0.00 21.00 760.00

\*SECCNO 14810.000  
 3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02  
 14810.00 7.96 106.98 103.16 0.00 107.42 .44 .01 .08 100.80  
 640. 0. 640. 0. 0. 120. 0. 214. 82. 101.75  
 2.51 0.00 5.33 0.00 .120 .014 .120 0.000 99.02 478.27  
 .001090 10. 10. 10. 4 .120 0 -634.86 537.00 1015.27

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1/8	SECNO	DEPTH	CWSEL	CRIMS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
1	Q	QLOB	OCH	QROB	ALOB	ACH	AROB	VOI	TWA	LEFT	RIGHT
2	TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	TOP	ST A
3	SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	ELPWID	ENDST	

\*SECNO 15035.000

3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02

9	15035.00	8.21	107.23	103.16	0.00	107.67	.44	.25	0.00	100.80
10	640.	0.	640.	0.	0.	120.	0.	215.	85.	101.75
11	2.52	0.00	5.33	0.00	.120	.014	.120	0.000	99.02	459.45
12	.001090	225.	225.	225.	4	26	0	-771.38	576.21	1035.66

\*SECNO 15045.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 114.37 ELREA= 114.37

19	15045.00	8.46	107.48	0.00	0.00	107.74	.26	.01	.06	100.80
20	640.	0.	640.	0.	0.	158.	0.	215.	85.	101.75
21	2.53	0.00	4.05	0.00	.120	.055	.120	0.000	99.02	739.00
22	.001586	10.	10.	10.	2	0	0	0.00	21.00	760.00

\*SECNO 15125.000

25	15125.00	7.13	107.83	0.00	0.00	107.85	.02	.04	.07	102.40
26	640.	145.	350.	145.	486.	253.	493.	216.	86.	104.30
27	2.55	.30	1.38	.29	.120	.055	.120	0.000	100.70	412.90
28	.000232	80.	80.	80.	2	0	0	0.00	673.12	1086.02

CCHV= .100 CEHV= .300

\*SECNO 15200.000

34	15200.00	7.15	107.85	0.00	0.00	107.87	.02	.02	.00	102.40
35	640.	146.	348.	146.	492.	254.	499.	218.	87.	104.30
36	2.57	.30	1.37	.29	.120	.055	.120	0.000	100.70	411.56
37	.000228	75.	75.	75.	2	0	0	0.00	675.92	1087.48

CCHV= .300 CEHV= .500

\*SECNO 15825.000

40	15825.00	7.03	108.04	0.00	0.00	108.06	.02	.19	.00	104.81
41	500.	70.	197.	233.	171.	118.	591.	231.	95.	104.81
42	2.75	.41	1.67	.39	.125	.065	.125	0.000	101.01	697.69
43	.000644	550.	625.	500.	2	0	0	0.00	675.31	1373.00

44 500. 70. 197. 233. 171. 118. 591. 231. 95. 104.81

45 2.75 .41 1.67 .39 .125 .065 .125 0.000 101.01 697.69

46 .000644 550. 625. 500. 2 0 0 0.00 675.31 1373.00

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1/8	SECCNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
1	TIME	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT	RIGHT
2	SLOPE	XL0BL	XLCH	XL0BR	XNL	XNCH	XNR	WTN	ELMIN	TOP	ENDST
3				XL0BR	ITRIAL	IDC	ICONT	CORAR	TOPWID		

\*SECCNO 15925.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 112.40 ELREA= 112.40

9	15925.00	5.50	108.10	0.00	0.00	108.26	.17	.13	.07	106.24
10	500.	0.	500.	0.	0.	153.	0.	232.	96.	103.51
11	2.76	0.00	3.27	0.00	.125	.065	.125	0.000	102.60	871.00
12	.004097	100.	100.	100.	1	0	0	0.00	44.00	915.00

\*SECCNO 15935.000

3370 NORMAL BRIDGE, NRD= 32 MIN ELTRD= 112.65 MAX ELLC= 112.16

19	15935.00	5.48	108.14	106.31	0.00	108.33	.19	.05	.01	106.30
20	500.	0.	500.	0.	0.	144.	0.	232.	96.	103.57
21	2.76	0.00	3.47	0.00	.125	.062	.125	0.000	102.66	813.70
22	.007404	10.	10.	10.	2	19	0	-428.30	502.45	1316.16

\*SECCNO 15960.000

3370 NORMAL BRIDGE, NRD= 32 MIN ELTRD= 112.65 MAX ELLC= 112.31

29	15960.00	5.52	108.33	106.46	0.00	108.51	.18	.18	.00	106.45
30	500.	0.	500.	0.	0.	146.	0.	232.	96.	103.72
31	2.76	0.00	3.43	0.00	.125	.062	.125	0.000	102.81	812.20
32	.007109	25.	25.	25.	4	19	0	-450.58	508.76	1320.96

\*SECCNO 15970.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 112.65 ELREA= 112.65

39	15970.00	5.54	108.41	0.00	0.00	108.57	.16	.05	.01	106.51
40	500.	0.	500.	0.	0.	155.	0.	232.	96.	103.78
41	2.76	0.00	3.23	0.00	.125	.065	.125	0.000	102.87	871.00
42	.003938	10.	10.	10.	0	0	0	0.00	44.00	915.00

\*SECCNO 16035.000

46	16035.00	6.44	108.71	0.00	0.00	108.77	.05	.16	.03	106.07
47	500.	65.	263.	172.	109.	104.	342.	233.	97.	106.07
48	2.77	.60	2.52	.50	.125	.065	.125	0.000	102.27	814.36
49	.001736	65.	65.	65.	2	0	0	0.00	499.76	1314.12

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SECN0	DEPTH	CWSEL	CRI WS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	OCH	QROB	ALOB	ACH	AROB	VOI	TMA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPMID	ENDST

5 CCHV= .100 CEHV= .300  
 6 \*SECNO 19325.000  
 7 19325.00 5.16 112.72 0.00 0.00 112.73 .01 3.96 .00 110.36  
 8 400. 84. 86. 230. 208. 55. 324. 2.73. 125. 107.56  
 9 3.81 .40 1.58 .71 .130 .070 .130 0.000 107.56 1147.43  
 10 .000924 2890. 3290. 3015. 5 0 0 0.00 323.69 1471.12  
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 12  
 13 CCHV= .300 CEHV= .500  
 14 \*SECNO 23625.000

3301 HV CHANGED MORE THAN HVINS

18 3685 20 TRIALS ATTEMPTED WSEL,CWSEL  
 19 3693 PROBABLE MINIMUM SPECIFIC ENERGY  
 20 3720 CRITICAL DEPTH ASSUMED  
 21 23625.00 3.80 123.13 123.13 0.00 123.84 .71 7.71 .35 121.32  
 22 200. 48. 152. 0. 18. 20. 0. 301. 141. 124.52  
 23 3.99 2.69 7.58 0.00 .135 .075 .135 0.000 119.33 279.29  
 24 .068297 4050. 4300. 3975. 20 11 0 0.00 28.63 307.93  
 25  
 26  
 27 \*SECNO 23725.000

3301 HV CHANGED MORE THAN HVINS

31 23725.00 5.59 124.92 0.00 0.00 124.97 .05 .93 .20 121.32  
 32 200. 68. 96. 36. 71. 41. 73. 302. 142. 124.52  
 33 4.00 .96 2.34 .50 .135 .075 .135 0.000 119.33 259.83  
 34 .003502 100. 100. 100. 6 0 0 0.00 162.28 422.11  
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 38 SPECIAL BRIDGE  
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40 5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED  
 41 SB XK XKOR COFO RDLEN BWC BWP BAREA SS ELCHU ELCHD  
 42 1.25 1.56 3.00 0.00 12.03 2.97 31.81 0.00 119.33 119.33  
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 44 \*SECNO 23766.000  
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3235 SLOPE TOO STEEP, EXCEEDS .10



1 \*\*\*\*\*  
 2 HEC2 RELEASE DATED NOV 76 UPDATED MARC 1982  
 3 ERROR CORR - 01,02,03,04,05  
 4 MODIFICATION - 50,51,52,53,54,55  
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7 T1 BRUNSWICK CO FIS  
 8 50 YEAR FLOW  
 9 T2  
 10 T3 STURGEON CREEK

	J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
13		-10.	4.	0.	0.	.000100	0.00	0.0	0.	100.000	0.000
14											
15	J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
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18		2.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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SECN0	DEPTH	CWSEL	CRI MS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
TIME	QLOB	OCH	OROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
SLOPE	XLOBL	VCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	ELMIN	SSTA
		XLCH						TOPMID	ENDST

\*PROF 2

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

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1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

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1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

CCHV= .100 CEHV= .300

\*SECNO 1950.000

1950.00 18.46 106.00 0.00 100.00 106.06 .05 0.00 0.00 107.84

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK 1.25 XKOR 1.56 COFO 3.00 RDLEN 0.00 BWC 106.00 BWP 7.00 BARPA 2484.00 SS 0.00 ELCHU 82.16 ELCHD 82.16

\*SECNO 2928.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA=

107.50 ELREA= 107.50

\*SECNO 2900.000

2900.00 23.93 106.09 0.00 0.00 0.00 0.01 .00 .00 103.71

1930. 1930. 1826. 54. 0. 266. 2035. 323. 34. 7. 103.48

.26 .19 .90 .17 .045 .035 .045 0 0.000 82.16 60.74

.000017 650. 750. 700. 0 0 0 0 0.00 667.63 728.36

\*SECNO 2900.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA= 107.50

2900.00 23.93 106.09 0.00 0.00 0.00 0.01 .00 .00 103.71

1930. 1930. 1826. 54. 0. 266. 2035. 323. 34. 7. 103.48

.26 .19 .90 .17 .045 .035 .045 0 0.000 82.16 60.74

.000019 100. 100. 100. 0 0 0 0 0.00 667.63 728.36

\*SECNO 2900.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA= 107.50

2900.00 23.93 106.09 0.00 0.00 0.00 0.01 .00 .00 103.71

1930. 1930. 1826. 54. 0. 266. 2035. 323. 34. 7. 103.48

.26 .19 .90 .17 .045 .035 .045 0 0.000 82.16 60.74

.000019 100. 100. 100. 0 0 0 0 0.00 667.63 728.36

\*SECNO 2900.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA= 107.50

2900.00 23.93 106.09 0.00 0.00 0.00 0.01 .00 .00 103.71

1930. 1930. 1826. 54. 0. 266. 2035. 323. 34. 7. 103.48

.26 .19 .90 .17 .045 .035 .045 0 0.000 82.16 60.74

.000019 100. 100. 100. 0 0 0 0 0.00 667.63 728.36

\*SECNO 2900.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELREA= 107.50





| 1/8 | SECCNO | DEPTH | CWSEL | CRI WS | WSELK  | EG   | HV    | HL    | OLOSS  | BANK ELEV  |
|-----|--------|-------|-------|--------|--------|------|-------|-------|--------|------------|
| 1   | TIME   | QLOB  | QCH   | OROB   | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| 2   | SLOPE  | VLOB  | VCH   | VROB   | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| 3   |        | XLOBL | XLCH  | XLOBR  | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST      |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 107.60 ELREA= 107.60

|    |         |       |        |      |      |        |      |       |        |        |
|----|---------|-------|--------|------|------|--------|------|-------|--------|--------|
| 8  | 8400.00 | 11.68 | 106.21 | 0.00 | 0.00 | 106.27 | .06  | .01   | .03    | 105.23 |
| 9  | 1350.   | 0.    | 1350.  | 0.   | 0.   | 684.   | 0.   | 427.  | 94.    | 104.83 |
| 10 | 2.86    | 0.00  | 1.97   | 0.00 | .115 | .040   | .115 | 0.000 | 94.53  | 715.00 |
| 11 | .000251 | 125.  | 125.   | 125. | 2    | 0      | 0    | 0.00  | 109.00 | 824.00 |

\*SECCNO 8410.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 106.82

|    |         |       |        |      |      |        |      |          |        |         |
|----|---------|-------|--------|------|------|--------|------|----------|--------|---------|
| 18 | 8410.00 | 11.60 | 106.20 | 0.00 | 0.00 | 106.27 | .07  | .00      | .00    | 105.30  |
| 19 | 1350.   | 0.    | 1350.  | 0.   | 0.   | 641.   | 0.   | 427.     | 94.    | 104.90  |
| 20 | 2.86    | 0.00  | 2.10   | 0.00 | .115 | .036   | .115 | 0.000    | 94.60  | 332.20  |
| 21 | .000395 | 10.   | 10.    | 10.  | 0    | 0      | 0    | -1906.70 | 842.08 | 1174.27 |

\*SECCNO 8448.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

|    |         |       |        |      |      |        |      |          |        |         |
|----|---------|-------|--------|------|------|--------|------|----------|--------|---------|
| 28 | 8448.00 | 11.36 | 106.22 | 0.00 | 0.00 | 106.29 | .07  | .02      | .00    | 105.56  |
| 29 | 1350.   | 0.    | 1350.  | 0.   | 0.   | 615.   | 0.   | 428.     | 94.    | 105.16  |
| 30 | 2.86    | 0.00  | 2.19   | 0.00 | .115 | .036   | .115 | 0.000    | 94.86  | 335.93  |
| 31 | .000446 | 38.   | 38.    | 38.  | 0    | 0      | 0    | -1723.37 | 832.23 | 1168.16 |

\*SECCNO 8458.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 108.40 ELREA= 108.40

|    |         |       |        |      |      |        |      |       |        |        |
|----|---------|-------|--------|------|------|--------|------|-------|--------|--------|
| 38 | 8458.00 | 11.31 | 106.23 | 0.00 | 0.00 | 106.30 | .07  | .00   | .00    | 105.62 |
| 39 | 1350.   | 0.    | 1350.  | 0.   | 0.   | 643.   | 0.   | 428.  | 95.    | 105.22 |
| 40 | 2.86    | 0.00  | 2.10   | 0.00 | .115 | .040   | .115 | 0.000 | 94.92  | 715.00 |
| 41 | .000308 | 10.   | 10.    | 10.  | 0    | 0      | 0    | 0.00  | 109.00 | 824.00 |

\*SECCNO 8550.000

|    |         |       |        |      |       |        |      |       |        |         |
|----|---------|-------|--------|------|-------|--------|------|-------|--------|---------|
| 44 | 8550.00 | 11.09 | 106.31 | 0.00 | 0.00  | 106.33 | .02  | .02   | .01    | 104.02  |
| 45 | 1350.   | 403.  | 714.   | 233. | 1254. | 447.   | 856. | 431.  | 96.    | 103.62  |
| 46 | 2.89    | .32   | 1.60   | .27  | .115  | .040   | .115 | 0.000 | 95.22  | 344.97  |
| 47 | .000125 | 92.   | 92.    | 92.  | 2     | 0      | 0    | 0.00  | 808.38 | 1153.34 |

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| SECTNO | DEPTH | QLOB | VLOB | XLOBL | QCH | VCH | XLCH | CRI WS | OROB | VR OB | XLOBR | WSELK | ALOB | XNL | ITRIAL | EG | ACH | XNCH | IDC | HV | AROB | XNR | ICONIT | HL | VOL | WTN | CORAR | OLOSS | TWA | ELMIN | TOPWID | BANK | ELEV | LEFT | RIGHT | SSTA | ENDST |
|--------|-------|------|------|-------|-----|-----|------|--------|------|-------|-------|-------|------|-----|--------|----|-----|------|-----|----|------|-----|--------|----|-----|-----|-------|-------|-----|-------|--------|------|------|------|-------|------|-------|
|--------|-------|------|------|-------|-----|-----|------|--------|------|-------|-------|-------|------|-----|--------|----|-----|------|-----|----|------|-----|--------|----|-----|-----|-------|-------|-----|-------|--------|------|------|------|-------|------|-------|

CCHV= .100 CEHV= .300

\*SECTNO 8650.000

|    |         |       |  |  |        |  |  |      |  |  |  |      |  |  |   |        |  |  |  |      |     |  |  |       |      |  |        |     |  |         |  |        |        |  |  |  |  |
|----|---------|-------|--|--|--------|--|--|------|--|--|--|------|--|--|---|--------|--|--|--|------|-----|--|--|-------|------|--|--------|-----|--|---------|--|--------|--------|--|--|--|--|
| 7  | 8650.00 | 10.41 |  |  | 106.31 |  |  | 0.00 |  |  |  | 0.00 |  |  | 1 | 106.35 |  |  |  | 0    | .04 |  |  | 0     | 0.00 |  |        | .00 |  |         |  | 104.70 |        |  |  |  |  |
| 8  | 1350.   | 362.  |  |  | 803.   |  |  | 185. |  |  |  | 997. |  |  |   | 410.   |  |  |  | 620. |     |  |  | 437.  |      |  | 95.90  |     |  | 97.     |  |        | 104.30 |  |  |  |  |
| 9  | 2.91    | .36   |  |  | 1.96   |  |  | .30  |  |  |  | .115 |  |  |   | .040   |  |  |  | .115 |     |  |  | 0.000 |      |  |        |     |  | 354.91  |  |        |        |  |  |  |  |
| 10 | .000211 | 100.  |  |  | 100.   |  |  | 100. |  |  |  |      |  |  |   |        |  |  |  | 0    | 0   |  |  | 0.00  |      |  | 782.18 |     |  | 1137.10 |  |        |        |  |  |  |  |

CCHV= .300 CEHV= .500

\*SECTNO 14700.000

|    |          |       |  |  |        |  |  |       |  |  |  |      |  |  |   |        |  |  |  |      |      |  |  |       |  |  |        |  |  |         |  |  |  |  |  |  |  |
|----|----------|-------|--|--|--------|--|--|-------|--|--|--|------|--|--|---|--------|--|--|--|------|------|--|--|-------|--|--|--------|--|--|---------|--|--|--|--|--|--|--|
| 15 | 14700.00 | 7.59  |  |  | 108.29 |  |  | 0.00  |  |  |  | 0.00 |  |  | 2 | 108.34 |  |  |  | .05  | 647. |  |  | 1.98  |  |  | .00    |  |  | 102.40  |  |  |  |  |  |  |  |
| 16 | 1350.    | 348.  |  |  | 652.   |  |  | 350.  |  |  |  | 638. |  |  |   | 272.   |  |  |  | 620. |      |  |  | 670.  |  |  | 195.   |  |  | 104.30  |  |  |  |  |  |  |  |
| 17 | 4.04     | .55   |  |  | 2.40   |  |  | .54   |  |  |  | .120 |  |  |   | .055   |  |  |  | .120 |      |  |  | 0.000 |  |  | 100.70 |  |  | 388.81  |  |  |  |  |  |  |  |
| 18 | .000639  | 5650. |  |  | 6050.  |  |  | 5500. |  |  |  |      |  |  | 2 | 0      |  |  |  | 0    | 0    |  |  | 0.00  |  |  | 737.63 |  |  | 1126.44 |  |  |  |  |  |  |  |

\*SECTNO 14800.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 110.20 ELREA= 110.20

|    |          |      |  |  |        |  |  |      |  |  |  |      |  |  |   |        |  |  |  |      |   |  |  |       |  |  |       |  |  |        |  |  |  |  |  |  |  |
|----|----------|------|--|--|--------|--|--|------|--|--|--|------|--|--|---|--------|--|--|--|------|---|--|--|-------|--|--|-------|--|--|--------|--|--|--|--|--|--|--|
| 28 | 14800.00 | 8.94 |  |  | 107.96 |  |  | 0.00 |  |  |  | 0.00 |  |  | 2 | 108.96 |  |  |  | 1.00 |   |  |  | .14   |  |  | .48   |  |  | 100.80 |  |  |  |  |  |  |  |
| 29 | 1350.    | 0.   |  |  | 1350.  |  |  | 0.   |  |  |  | 0.   |  |  |   | 168.   |  |  |  | 0.   |   |  |  | 672.  |  |  | 196.  |  |  | 101.75 |  |  |  |  |  |  |  |
| 30 | 4.04     | 0.00 |  |  | 8.04   |  |  | 0.00 |  |  |  | .120 |  |  |   | .055   |  |  |  | .120 |   |  |  | 0.000 |  |  | 99.02 |  |  | 739.00 |  |  |  |  |  |  |  |
| 31 | .005754  | 100. |  |  | 100.   |  |  | 100. |  |  |  |      |  |  | 2 | 0      |  |  |  | 0    | 0 |  |  | 0.00  |  |  | 21.00 |  |  | 760.00 |  |  |  |  |  |  |  |

\*SECTNO 14810.000

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 106.020 EGLC= 107.981 EGC= 116.147 WSEL= 115.393

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02

|    |          |      |  |  |        |  |  |        |  |  |  |      |  |  |   |        |  |  |  |      |   |  |  |         |  |  |        |  |  |         |  |  |  |  |  |  |  |
|----|----------|------|--|--|--------|--|--|--------|--|--|--|------|--|--|---|--------|--|--|--|------|---|--|--|---------|--|--|--------|--|--|---------|--|--|--|--|--|--|--|
| 43 | 14810.00 | 8.51 |  |  | 107.53 |  |  | 105.20 |  |  |  | 0.00 |  |  | 4 | 109.49 |  |  |  | 1.96 |   |  |  | .05     |  |  | .48    |  |  | 100.80  |  |  |  |  |  |  |  |
| 44 | 1350.    | 0.   |  |  | 1350.  |  |  | 0.     |  |  |  | 0.   |  |  |   | 120.   |  |  |  | 0.   |   |  |  | 672.    |  |  | 196.   |  |  | 101.75  |  |  |  |  |  |  |  |
| 45 | 4.04     | 0.00 |  |  | 11.24  |  |  | 0.00   |  |  |  | .120 |  |  |   | .014   |  |  |  | .120 |   |  |  | 0.000   |  |  | 99.02  |  |  | 436.12  |  |  |  |  |  |  |  |
| 46 | .004850  | 10.  |  |  | 10.    |  |  | 10.    |  |  |  |      |  |  | 4 | 17     |  |  |  | 0    | 0 |  |  | -953.07 |  |  | 624.69 |  |  | 1060.81 |  |  |  |  |  |  |  |

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| 1/6 | SECN0 | DEPTH | CMSEL | CRIWS | WSELK  | EG   | HV    | HL    | OLOSS  | BANK ELEV  |
|-----|-------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| 0   | TIME  | QLOB  | QCH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| 2   | SLOPE | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| 3   |       | XLOBL | XLCH  | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST      |

\*SECNO 15035.000

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 106.020 EGLC= 107.981 EGC= 116.147 WSEL= 115.393

3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02

|    |          |      |        |        |      |        |      |          |        |         |
|----|----------|------|--------|--------|------|--------|------|----------|--------|---------|
| 11 | 15035.00 | 9.60 | 108.62 | 105.20 | 0.00 | 110.58 | 1.96 | 1.09     | 0.00   | 100.80  |
| 12 | 1350.    | 0.   | 1350.  | 0.     | 0.   | 120.   | 0.   | 673.     | 200.   | 101.75  |
| 13 | 4.05     | 0.00 | 11.24  | 0.00   | .120 | .014   | .120 | 0.000    | 99.02  | 376.14  |
| 14 | .004850  | 225. | 225.   | 225.   | 4    | 17     | 0    | -1724.52 | 780.81 | 1156.95 |

\*SECNO 15045.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 114.37 ELREA= 114.37

|    |          |       |        |      |      |        |      |       |       |        |
|----|----------|-------|--------|------|------|--------|------|-------|-------|--------|
| 24 | 15045.00 | 11.43 | 110.45 | 0.00 | 0.00 | 111.03 | .58  | .03   | .41   | 100.80 |
| 25 | 1350.    | 0.    | 1350.  | 0.   | 0.   | 220.   | 0.   | 673.  | 200.  | 101.75 |
| 26 | 4.05     | 0.00  | 6.14   | 0.00 | .120 | .055   | .120 | 0.000 | 99.02 | 739.00 |
| 27 | .002334  | 10.   | 10.    | 10.  | 3    | 0      | 0    | 0.00  | 21.00 | 760.00 |

\*SECNO 15125.000

3301 HV CHANGED MORE THAN HVINS

|    |          |       |        |      |       |        |       |       |        |         |
|----|----------|-------|--------|------|-------|--------|-------|-------|--------|---------|
| 34 | 15125.00 | 10.51 | 111.21 | 0.00 | 0.00  | 111.22 | .00   | .01   | .17    | 102.40  |
| 35 | 1350.    | 480.  | 364.   | 507. | 1802. | 389.   | 1925. | 677.  | 201.   | 104.30  |
| 36 | 4.10     | .27   | .94    | .26  | .120  | .055   | .120  | 0.000 | 100.70 | 279.55  |
| 37 | .000060  | 80.   | 80.    | 80.  | 2     | 0      | 0     | 0.00  | 972.00 | 1251.55 |

CCHV= .100 CEHV= .300

\*SECNO 15200.000

|    |          |       |        |      |       |        |       |       |        |         |
|----|----------|-------|--------|------|-------|--------|-------|-------|--------|---------|
| 42 | 15200.00 | 10.52 | 111.22 | 0.00 | 0.00  | 111.22 | .00   | .00   | .00    | 102.40  |
| 43 | 1350.    | 480.  | 364.   | 507. | 1804. | 389.   | 1928. | 684.  | 202.   | 104.30  |
| 44 | 4.14     | .27   | .93    | .26  | .120  | .055   | .120  | 0.000 | 100.70 | 279.39  |
| 45 | .000060  | 75.   | 75.    | 75.  | 2     | 0      | 0     | 0.00  | 972.27 | 1251.66 |

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| 1/6 | SECCNO | DEPTH | QLOB | CWSEL | CRIWS  | WSELK | EG   | HV  | HL    | OLOSS  | BANK  | ELEV |
|-----|--------|-------|------|-------|--------|-------|------|-----|-------|--------|-------|------|
| Q   | TIME   | VLOB  | QCH  | VROR  | ALOB   | XNCH  | AROB | VOL | TWA   | LEFT   | RIGHT | SSTA |
| 2   | SLOPE  | XL0BL | XLCH | XL0BR | ITRIAL | IDC   | XNR  | WTN | ELMIN | TOPMID | ENDST |      |

CCHV= .300 CEHV= .500

|    |                  |       |        |      |       |        |       |       |         |         |  |  |
|----|------------------|-------|--------|------|-------|--------|-------|-------|---------|---------|--|--|
| 6  | *SECNO 15825.000 |       |        |      |       |        |       |       |         |         |  |  |
| 7  | 15825.00         | 10.25 | 111.26 | 0.00 | 0.00  | 111.26 | .00   | .04   | .00     | 104.81  |  |  |
| 8  | 1080.            | 274.  | 149.   | 657. | 1168. | 192.   | 2508. | 732.  | 215.    | 104.81  |  |  |
| 9  | 4.60             | .23   | .78    | .26  | .125  | .065   | .125  | 0.000 | 101.01  | 492.90  |  |  |
| 10 | .000073          | 550.  | 625.   | 500. | 0     | 0      | 0     | 0.00  | 1089.09 | 1582.00 |  |  |

\*SECNO 15925.000

|    |  |      |        |      |      |        |      |       |        |        |  |  |
|----|--|------|--------|------|------|--------|------|-------|--------|--------|--|--|
| 15 | 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= |      |        |      |      |        |      |       |        |        |  |  |
| 16 |  |      |        |      |      |        |      |       | 112.40 | 112.40 |  |  |
| 17 | 15925.00   | 8.57 | 111.17 | 0.00 | 0.00 | 111.39 | .22  | .02   | .11    | 106.24 |  |  |
| 18 | 1080.  | 0.   | 1080.  | 0.   | 0.   | 288.   | 0.   | 737.  | 216.   | 103.51 |  |  |
| 19 | 4.61   | 0.00 | 3.75   | 0.00 | .125 | .065   | .125 | 0.000 | 102.60 | 871.00 |  |  |
| 20 | .002302  | 100. | 100.   | 100. | 2    | 0      | 0    | 0.00  | 44.00  | 915.00 |  |  |

\*SECNO 15935.000

|    |  |      |        |        |      |        |      |          |         |         |  |  |
|----|--|------|--------|--------|------|--------|------|----------|---------|---------|--|--|
| 25 | 3370 NORMAL BRIDGE, NRD= 32 MIN ELTRD= |      |        |        |      |        |      |          |         |         |  |  |
| 26 |  |      |        |        |      |        |      |          | 112.65  | 112.16  |  |  |
| 27 | 15935.00                               | 8.53 | 111.19 | 107.41 | 0.00 | 111.44 | .24  | .03      | .01     | 106.30  |  |  |
| 28 | 1080.                                  | 0.   | 1080.  | 0.     | 0.   | 272.   | 0.   | 737.     | 216.    | 103.57  |  |  |
| 29 | 4.61                                   | 0.00 | 3.97   | 0.00   | .125 | .062   | .125 | 0.000    | 102.66  | 532.69  |  |  |
| 30 | .005737                                | 10.  | 10.    | 10.    | 0    | 19     | 0    | -2829.31 | 1025.75 | 1558.44 |  |  |

\*SECNO 15960.000

|    |  |      |        |        |      |        |      |          |         |         |  |  |
|----|--|------|--------|--------|------|--------|------|----------|---------|---------|--|--|
| 34 | 3370 NORMAL BRIDGE, NRD= 32 MIN ELTRD= |      |        |        |      |        |      |          |         |         |  |  |
| 35 |  |      |        |        |      |        |      |          | 112.65  | 112.31  |  |  |
| 36 | 15960.00                               | 8.52 | 111.33 | 107.56 | 0.00 | 111.58 | .24  | .14      | .00     | 106.45  |  |  |
| 37 | 1080.                                  | 0.   | 1080.  | 0.     | 0.   | 272.   | 0.   | 737.     | 217.    | 103.72  |  |  |
| 38 | 4.61                                   | 0.00 | 3.97   | 0.00   | .125 | .062   | .125 | 0.000    | 102.81  | 532.54  |  |  |
| 39 | .005731                                | 25.  | 25.    | 25.    | 4    | 19     | 0    | -2831.96 | 1025.99 | 1558.53 |  |  |

\*SECNO 15970.000

|    |  |      |        |      |      |        |      |       |        |        |  |  |
|----|--|------|--------|------|------|--------|------|-------|--------|--------|--|--|
| 43 | 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= |      |        |      |      |        |      |       |        |        |  |  |
| 44 |  |      |        |      |      |        |      |       | 112.65 | 112.65 |  |  |
| 45 | 15970.00   | 8.53 | 111.40 | 0.00 | 0.00 | 111.62 | .22  | .04   | .01    | 106.51 |  |  |
| 46 | 1080.  | 0.   | 1080.  | 0.   | 0.   | 286.   | 0.   | 737.  | 217.   | 103.78 |  |  |
| 47 | 4.61   | 0.00 | 3.77   | 0.00 | .125 | .065   | .125 | 0.000 | 102.87 | 871.00 |  |  |
| 48 | .002360  | 10.  | 10.    | 10.  | 0    | 0      | 0    | 0.00  | 44.00  | 915.00 |  |  |

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| SECCNO | DEPTH | CWSEL | CRI WS | WSELK  | EG   | HV    | HL    | OLOSS  | BANK ELEV  |
|--------|-------|-------|--------|--------|------|-------|-------|--------|------------|
| TIME   | OLOB  | OCH   | OROB   | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| SLOPE  | VLOB  | VCH   | VROB   | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
|        | XL0BL | XLCH  | XL0BR  | ITRIAL | IDC  | ICONT | CORAR | TOPWID | ENDST      |

|                  |      |        |      |      |        |       |       |         |         |
|------------------|------|--------|------|------|--------|-------|-------|---------|---------|
| *SECNO 16035.000 | 9.44 | 111.71 | 0.00 | 0.00 | 111.71 | .00   | .02   | .07     | 106.07  |
| 16035.00         | 252. | 178.   | 650. | 860. | 173.   | 1985. | 740.  | 218.    | 106.07  |
| 1080.            | .29  | 1.03   | .33  | .125 | .065   | .125  | 0.000 | 102.27  | 536.85  |
| 4.66             | 65.  | 65.    | 65.  | 2    | 0      | 0     | 0.00  | 1019.17 | 1556.02 |
| .000146          |      |        |      |      |        |       |       |         |         |

|                  |       |        |       |      |        |      |       |        |         |
|------------------|-------|--------|-------|------|--------|------|-------|--------|---------|
| CCHV=            | .100  | CEHV=  | .300  |      |        |      |       |        |         |
| *SECNO 19325.000 | 5.21  | 112.77 | 0.00  | 0.00 | 112.83 | .06  | 1.10  | .02    | 110.36  |
| 19325.00         | 190.  | 187.   | 502.  | 218. | 55.    | 329. | 864.  | 264.   | 107.56  |
| 880.             | .87   | 3.38   | 1.53  | .130 | .070   | .130 | 0.000 | 107.56 | 1147.08 |
| 5.13             | 2890. | 3290.  | 3015. | 3    | 0      | 0    | 0.00  | 324.15 | 1471.23 |
| .004174          |       |        |       |      |        |      |       |        |         |

|                  |       |        |        |      |        |      |       |        |        |
|------------------|-------|--------|--------|------|--------|------|-------|--------|--------|
| CCHV=            | .300  | CEHV=  | .500   |      |        |      |       |        |        |
| *SECNO 23625.000 | 7.03  | 126.36 | 124.53 | 0.00 | 126.39 | .03  | 13.56 | .01    | 121.32 |
| 23625.00         | 470.  | 136.   | 209.   | 139. | 55.    | 257. | 913.  | 288.   | 124.52 |
| 470.             | .98   | 2.27   | .81    | .135 | .075   | .135 | 0.000 | 119.33 | 244.09 |
| 6.04             | 4050. | 4300.  | 3975.  | 11   | 6      | 0    | 0.00  | 210.20 | 454.29 |
| .002312          |       |        |        |      |        |      |       |        |        |

|                  |      |        |      |      |        |      |       |        |        |
|------------------|------|--------|------|------|--------|------|-------|--------|--------|
| *SECNO 23725.000 | 7.24 | 126.57 | 0.00 | 0.00 | 126.59 | .03  | .20   | .00    | 121.32 |
| 23725.00         | 470. | 130.   | 211. | 150. | 61.    | 286. | 914.  | 289.   | 124.52 |
| 470.             | .87  | 2.13   | .74  | .135 | .075   | .135 | 0.000 | 119.33 | 241.97 |
| 6.06             | 100. | 100.   | 100. | 2    | 0      | 0    | 0.00  | 216.64 | 458.62 |
| .001728          |      |        |      |      |        |      |       |        |        |

SPECIAL BRIDGE

|  |      |      |       |       |      |       |      |        |        |
|--|------|------|-------|-------|------|-------|------|--------|--------|
| 5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED |      |      |       |       |      |       |      |        |        |
| SB XK  | KKOR | COFG | RDLEN | BWC   | BWP  | BAREA | SS   | ELCHU  | ELCHD  |
| 1.25   | 1.56 | 3.00 | 0.00  | 12.03 | 2.97 | 31.81 | 0.00 | 119.33 | 119.33 |
| *SECNO 23766.000                                       |      |      |       |       |      |       |      |        |        |

|   |         |       |         |      |         |       |         |
|---|---------|-------|---------|------|---------|-------|---------|
| 4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF | 123.560 | EGLC= | 128.837 | EGC= | 130.069 | WSEL= | 129.733 |
|---|---------|-------|---------|------|---------|-------|---------|

|   |         |       |         |      |         |       |         |
|---|---------|-------|---------|------|---------|-------|---------|
| 4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF | 123.560 | EGLC= | 128.837 | EGC= | 128.842 | WSEL= | 123.558 |
| 3235 SLOPE TOO STEEP, EXCEEDS             | .10     |       |         |      |         |       |         |

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|
| 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|

| 1/8 | SECCNO  | DEPTH | CWSEL  | CRIWS  | WSELK  | EG     | HV    | HL     | OLOSS  | BANK   | ELEV  |
|-----|---|-------|--------|--------|--------|--------|-------|--------|--------|--------|-------|
| 1   | Q   | QLOB  | QCH    | QROB   | ALOB   | ACH    | AROB  | VOL    | TWA    | LEFI   | RIGHT |
| 2   | TIME  | VLOB  | VCH    | VROB   | XNL    | XNCH   | XNR   | WTN    | ELMIN  | SSTA   | ENDST |
| 3   | SLOPE   | XLDBL | XLCH   | XLOBR  | ITRIAL | IDC    | ICONT | CORAR  | TOPWID |        |       |
| 4   | 3301 HV CHANGED MORE THAN HVINS                                       |       |        |        |        |        |       |        |        |        |       |
| 5   | 3370 NORMAL BRIDGE, NRD= 17 MIN ELTRD= 128.80 MAX ELLC= 123.56        |       |        |        |        |        |       |        |        |        |       |
| 6   | 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 129.25 ELREA= 129.25 |       |        |        |        |        |       |        |        |        |       |
| 7   | 23766.00  | 4.87  | 124.20 | 123.56 | 0.00   | 129.48 | 5.28  | .26    | 2.63   | 121.32 |       |
| 8   | 470.  | 0.    | 470.   | 0.     | 0.     | 25.    | 0.    | 914.   | 289.   | 124.52 |       |
| 9   | 6.06  | 0.00  | 18.43  | 0.00   | .135   | .075   | .135  | 0.000  | 119.33 | 299.00 |       |
| 10  | .823909   | 41.   | 41.    | 41.    | 4      | 19     | 0     | -12.41 | 11.34  | 310.34 |       |
| 11  | *SECNO 23825.000  |       |        |        |        |        |       |        |        |        |       |
| 12  | 3301 HV CHANGED MORE THAN HVINS                                       |       |        |        |        |        |       |        |        |        |       |
| 13  | 23825.00  | 11.74 | 131.07 | 0.00   | 0.00   | 131.07 | .00   | .01    | 1.58   | 121.32 |       |
| 14  | 470.  | 120.  | 63.    | 287.   | 529.   | 115.   | 1182. | 916.   | 289.   | 124.52 |       |
| 15  | 6.12  | .23   | .55    | .24    | .135   | .075   | .135  | 0.000  | 119.33 | 151.40 |       |
| 16  | .000050   | 59.   | 59.    | 59.    | 2      | 0      | 0     | 0.00   | 413.25 | 564.64 |       |
| 17  |   |       |        |        |        |        |       |        |        |        |       |
| 18  |   |       |        |        |        |        |       |        |        |        |       |
| 19  |   |       |        |        |        |        |       |        |        |        |       |
| 20  |   |       |        |        |        |        |       |        |        |        |       |
| 21  |   |       |        |        |        |        |       |        |        |        |       |
| 22  |   |       |        |        |        |        |       |        |        |        |       |
| 23  |   |       |        |        |        |        |       |        |        |        |       |
| 24  |   |       |        |        |        |        |       |        |        |        |       |
| 25  |   |       |        |        |        |        |       |        |        |        |       |
| 26  |   |       |        |        |        |        |       |        |        |        |       |
| 27  |   |       |        |        |        |        |       |        |        |        |       |
| 28  |   |       |        |        |        |        |       |        |        |        |       |
| 29  |   |       |        |        |        |        |       |        |        |        |       |
| 30  |   |       |        |        |        |        |       |        |        |        |       |
| 31  |   |       |        |        |        |        |       |        |        |        |       |
| 32  |   |       |        |        |        |        |       |        |        |        |       |
| 33  |   |       |        |        |        |        |       |        |        |        |       |
| 34  |   |       |        |        |        |        |       |        |        |        |       |
| 35  |   |       |        |        |        |        |       |        |        |        |       |
| 36  |   |       |        |        |        |        |       |        |        |        |       |
| 37  |   |       |        |        |        |        |       |        |        |        |       |
| 38  |   |       |        |        |        |        |       |        |        |        |       |
| 39  |   |       |        |        |        |        |       |        |        |        |       |
| 40  |   |       |        |        |        |        |       |        |        |        |       |
| 41  |   |       |        |        |        |        |       |        |        |        |       |
| 42  |   |       |        |        |        |        |       |        |        |        |       |
| 43  |   |       |        |        |        |        |       |        |        |        |       |
| 44  |   |       |        |        |        |        |       |        |        |        |       |
| 45  |   |       |        |        |        |        |       |        |        |        |       |
| 46  |   |       |        |        |        |        |       |        |        |        |       |
| 47  |   |       |        |        |        |        |       |        |        |        |       |
| 48  |   |       |        |        |        |        |       |        |        |        |       |
| 49  |   |       |        |        |        |        |       |        |        |        |       |
| 50  |   |       |        |        |        |        |       |        |        |        |       |
| 51  |   |       |        |        |        |        |       |        |        |        |       |
| 52  |   |       |        |        |        |        |       |        |        |        |       |
| 53  |   |       |        |        |        |        |       |        |        |        |       |
| 54  |   |       |        |        |        |        |       |        |        |        |       |
| 55  |   |       |        |        |        |        |       |        |        |        |       |
| 56  |   |       |        |        |        |        |       |        |        |        |       |
| 57  |   |       |        |        |        |        |       |        |        |        |       |





| SECN0 | DEPTH | CWSEL | CRIWS | WSELK  | EG   | HV    | HL    | OLOSS  | BANK ELEV  |
|-------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| Q     | QLOB  | QCH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE | XL0BL | XLCH  | XL0BR | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST      |

\*PROF 3

CCHV= .100 CEHV= .300  
 \*SECNO 1950.000

|    |         |       |        |      |        |        |       |        |        |        |
|----|---------|-------|--------|------|--------|--------|-------|--------|--------|--------|
| 9  | 1950.00 | 20.39 | 107.93 | 0.00 | 101.00 | 107.99 | 0.06  | 0.00   | 0.00   | 107.84 |
| 10 | 2480.   | 0.    | 2480.  | 4.   | 1287.  | 0.     | 0.    | 0.     | 107.94 |        |
| 11 | 0.00    | .04   | 1.93   | .045 | .035   | .045   | 0.000 | 87.54  | 6.90   |        |
| 12 | .000098 | 0.    | 0.     | 0    | 0      | 6      | 0.00  | 218.07 | 224.97 |        |

\*SECNO 2050.000

|    |         |       |        |      |       |        |       |        |        |        |
|----|---------|-------|--------|------|-------|--------|-------|--------|--------|--------|
| 16 | 2050.00 | 20.40 | 107.94 | 0.00 | 0.00  | 108.00 | .06   | .01    | .00    | 107.84 |
| 17 | 2480.   | 0.    | 2480.  | 5.   | 1288. | 0.     | 0.    | 3.     | 1.     | 107.94 |
| 18 | .01     | .05   | 1.93   | .045 | .035  | .045   | 0.000 | 87.54  | -2.29  |        |
| 19 | .000098 | 100.  | 100.   | 0    | 0     | 0      | 0.00  | 228.39 | 226.10 |        |

CCHV= .300 CEHV= .500  
 \*SECNO 2800.000

|    |         |       |        |      |      |        |       |         |        |         |
|----|---------|-------|--------|------|------|--------|-------|---------|--------|---------|
| 24 | 2800.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .02     | .01    | 103.71  |
| 25 | 2480.   | 192.  | 2051.  | 237. | 868. | 2368.  | 1062. | 49.     | 13.    | 103.48  |
| 26 | .29     | .22   | .87    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -441.62 |
| 27 | .000013 | 650.  | 750.   | 700. | 1    | 0      | 0     | 1332.86 | 891.24 |         |

\*SECNO 2900.000

|    |         |       |        |      |      |        |       |         |        |         |
|----|---------|-------|--------|------|------|--------|-------|---------|--------|---------|
| 31 | 2900.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 32 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 33 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 34 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED  
 SB XK XKOR COFQ RDLEN BWC BWP BAREA SS ELCHU ELCHD  
 1.25 1.56 3.00 0.00 106.00 7.00 2484.00 0.00 82.16 82.16

\*SECNO 2928.000  
 PRESSURE AND WEIR FLOW

|    |         |       |        |      |      |        |       |         |        |         |
|----|---------|-------|--------|------|------|--------|-------|---------|--------|---------|
| 40 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 41 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 42 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 43 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 44 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 45 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 46 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 47 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 48 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 49 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 50 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 51 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 52 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 53 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 54 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 55 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 56 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 57 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 58 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 59 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 60 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 61 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 62 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 63 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 64 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 65 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 66 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 67 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 68 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 69 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 70 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 71 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 72 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |
| 73 | 2480.   | 193.  | 2048.  | 239. | 877. | 2370.  | 1068. | 59.     | 16.    | 103.48  |
| 74 | .33     | .22   | .86    | .22  | .045 | .035   | .045  | 0.000   | 82.16  | -450.15 |
| 75 | .000013 | 100.  | 100.   | 100. | 0    | 0      | 0     | 1342.46 | 892.31 |         |
| 76 | 2928.00 | 25.87 | 108.03 | 0.00 | 0.00 | 108.04 | .01   | .00     | .00    | 103.71  |





| SECONO | DEPTH | CMSSEL | CRIWS | WSELK  | EG   | HV    | HL    | GLOSS  | BANK ELEV  |
|--------|-------|--------|-------|--------|------|-------|-------|--------|------------|
| Q      | QLOB  | QGH    | QROB  | ALOB   | AGH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME   | VLOB  | VCH    | VROB  | XNL    | XNCH | XNR   | WTN   | EL MIN | SSTA       |
| SLOPE  | XLOBL | XLCH   | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST      |

5 CCHV= .300 CEHV= .500  
 6 \*SECNO 14700.000

|    |          |       |        |       |      |        |       |       |        |         |
|----|----------|-------|--------|-------|------|--------|-------|-------|--------|---------|
| 7  | 14700.00 | 8.55  | 109.25 | 0.00  | 0.00 | 109.28 | .03   | .99   | .01    | 102.40  |
| 8  | 1760.    | 537.  | 676.   | 548.  | 983. | 310.   | 1027. | 1047. | 262.   | 104.30  |
| 9  | 4.83     | .55   | 2.18   | .53   | .120 | .055   | .120  | 0.000 | 100.70 | 352.11  |
| 10 | .000443  | 5650. | 6050.  | 5500. | 2    | 0      | 0     | 0.00  | 851.43 | 1203.54 |

13 \*SECNO 14800.000

15 3301 HV CHANGED MORE THAN HVINS

18 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 110.20 ELREA= 110.20

|    |          |      |        |      |      |        |      |       |       |        |
|----|----------|------|--------|------|------|--------|------|-------|-------|--------|
| 19 | 14800.00 | 9.63 | 108.65 | 0.00 | 0.00 | 110.10 | 1.44 | .11   | .71   | 100.80 |
| 20 | 1760.    | 0.   | 1760.  | 0.   | 0.   | 183.   | 0.   | 1050. | 263.  | 101.75 |
| 21 | 4.83     | 0.00 | 9.64   | 0.00 | .120 | .055   | .120 | 0.000 | 99.02 | 739.00 |
| 22 | .007392  | 100. | 100.   | 100. | 2    | 0      | 0    | 0.00  | 21.00 | 760.00 |

25 \*SECNO 14810.000

28 4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 106.020 EGLC= 109.354 EGC= 116.426 WSEL= 115.884

30 4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 106.020 EGLC= 109.354 EGC= 109.357 WSEL= 105.992

31 3301 HV CHANGED MORE THAN HVINS

34 3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02

|    |          |      |        |        |      |        |      |          |        |         |
|----|----------|------|--------|--------|------|--------|------|----------|--------|---------|
| 36 | 14810.00 | 8.77 | 107.79 | 106.02 | 0.00 | 111.12 | 3.33 | .08      | .95    | 100.80  |
| 37 | 1760.    | 0.   | 1760.  | 0.     | 0.   | 120.   | 0.   | 1050.    | 263.   | 101.75  |
| 38 | 4.83     | 0.00 | 14.65  | 0.00   | .120 | .014   | .120 | 0.000    | 99.02  | 416.45  |
| 39 | .008244  | 10.  | 10.    | 10.    | 4    | 20     | 0    | -1117.66 | 665.70 | 1082.14 |

43 \*SECNO 15035.000

45 4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 106.020 EGLC= 109.354 EGC= 116.426 WSEL= 115.884

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| 1/6 | SECNO | DEPTH | QLOB | QCH   | CRIBS  | WSELK | EG    | HV    | HL     | OLOSS      | BANK ELEV |
|-----|-------|-------|------|-------|--------|-------|-------|-------|--------|------------|-----------|
| 1   | TIME  | VLOB  | VCH  | VROB  | XNL    | ACH   | AROB  | WTN   | ELMIN  | LEFT/RIGHT | SSTA      |
| 2   | SLOPE | XLOB  | XLCH | XLOBR | ITRIAL | IDC   | ICONT | CORAR | TOPWID | ENDST      |           |

4575 CRITICAL DEPTH ASSUMED BELOW FILLC OF 106.020 EGLC= 109.354 EGC= 109.357 WSEL= 105.992

3370 NORMAL BRIDGE, NRD= 27 MIN ELTRD= 114.37 MAX ELLC= 106.02

|    |          |       |        |        |      |        |      |          |        |         |
|----|----------|-------|--------|--------|------|--------|------|----------|--------|---------|
| 10 | 15035.00 | 10.62 | 109.64 | 106.02 | 0.00 | 112.98 | 3.33 | 1.85     | 0.00   | 100.80  |
| 11 | 1760.    | 0.    | 1760.  | 0.     | 0.   | 120.   | 0.   | 1051.    | 267.   | 101.75  |
| 12 | 4.83     | 0.00  | 14.65  | 0.00   | .120 | .014   | .120 | 0.000    | 99.02  | 336.95  |
| 13 | .008244  | 225.  | 225.   | 225.   | 4    | 20     | 0    | -2577.02 | 876.38 | 1213.33 |

\*SECNO 15045.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 114.37 ELREA= 114.37

|    |          |       |        |      |      |        |      |       |       |        |
|----|----------|-------|--------|------|------|--------|------|-------|-------|--------|
| 23 | 15045.00 | 14.18 | 113.20 | 0.00 | 0.00 | 113.82 | .62  | .03   | .81   | 100.80 |
| 24 | 1760.    | 0.    | 1760.  | 0.   | 0.   | 278.   | 0.   | 1051. | 267.  | 101.75 |
| 25 | 4.83     | 0.00  | 6.34   | 0.00 | .120 | .055   | .120 | 0.000 | 99.02 | 739.00 |
| 26 | .001826  | 10.   | 10.    | 10.  | 3    | 0      | 0    | 0.00  | 21.00 | 760.00 |

\*SECNO 15125.000

3301 HV CHANGED MORE THAN HVINS

|    |          |       |        |      |       |        |       |       |         |         |
|----|----------|-------|--------|------|-------|--------|-------|-------|---------|---------|
| 33 | 15125.00 | 13.31 | 114.01 | 0.00 | 0.00  | 114.01 | .00   | .01   | .19     | 102.40  |
| 34 | 1760.    | 688.  | 344.   | 727. | 3197. | 501.   | 3367. | 1058. | 268.    | 104.30  |
| 35 | 4.90     | .22   | .69    | .22  | .120  | .055   | .120  | 0.000 | 100.70  | 182.07  |
| 36 | .000023  | 80.   | 80.    | 80.  | 2     | 0      | 0     | 0.00  | 1141.82 | 1323.89 |

CCHV= .100 CEHV= .300

|    |                  |       |        |      |       |        |       |       |         |         |
|----|------------------|-------|--------|------|-------|--------|-------|-------|---------|---------|
| 40 | *SECNO 15200.000 | 13.31 | 114.01 | 0.00 | 0.00  | 114.02 | .00   | .00   | .00     | 102.40  |
| 41 | 15200.00         | 688.  | 344.   | 727. | 3198. | 501.   | 3368. | 1070. | 270.    | 104.30  |
| 42 | 1760.            | .22   | .69    | .22  | .120  | .055   | .120  | 0.000 | 100.70  | 182.00  |
| 43 | 4.97             | 75.   | 75.    | 75.  | 2     | 0      | 0     | 0.00  | 1141.95 | 1323.94 |
| 44 | .000023          |       |        |      |       |        |       |       |         |         |

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| SECN0 | DEPTH  | QLOB | QLOB   | QCH    | QROB | QROB  | ALOB  | ACH    | AROB  | HL    | OLOSS | BANK  | ELEV |
|-------|--------|------|--------|--------|------|-------|-------|--------|-------|-------|-------|-------|------|
| Q     | QLOB   | QLOB | QCH    | QROB   | QROB | ALOB  | ACH   | AROB   | HL    | OLOSS | BANK  | ELEV  |      |
| TIME  | VLOB   | VLOB | VCH    | VROB   | VROB | XNL   | XNCH  | XNR    | WTN   | ELMIN | LEFT  | RIGHT |      |
| SLOPE | XL0 BL | XLCH | XL0 BR | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST | SSTA  |       |       |      |

\*SECNO 16035.000

|   |          |       |        |      |      |        |      |       |       |         |         |  |
|---|----------|-------|--------|------|------|--------|------|-------|-------|---------|---------|--|
| 1 | 1420.    | 405.  | 114.20 | 0.00 | 0.00 | 1920.  | 231. | 3708. | 1184. | 292.    | 106.07  |  |
| 2 | 5.87     | .21   | .64    | .23  | .125 | .125   | .065 | .125  | 0.000 | 102.27  | 408.62  |  |
| 3 | .000039  | 65.   | 65.    | 65.  | 2    | 2      | 0    | 0     | 0.00  | 1296.21 | 1704.83 |  |
| 4 | 16035.00 | 11.93 | 114.20 | 0.00 | 0.00 | 114.20 | 231. | 3708. | 1184. | 292.    | 106.07  |  |

CCHV= .100 CEHV= .300

\*SECNO 19325.000

|   |          |       |        |       |      |      |      |      |       |        |         |        |
|---|----------|-------|--------|-------|------|------|------|------|-------|--------|---------|--------|
| 1 | 19325.00 | 6.92  | 114.48 | 0.00  | 0.00 | 559. | 79.  | 533. | 1425. | .30    | .01     | 110.36 |
| 2 | 1180.    | 434.  | 178.   | 568.  | .130 | .070 | .130 | 0    | 0.000 | 107.56 | 1134.75 |        |
| 3 | 6.61     | .78   | 2.25   | 1.06  | 2    | 2    | 0    | 0    | 0.00  | 340.20 | 1474.96 |        |
| 4 | .001140  | 2890. | 3290.  | 3015. | 2    | 2    | 0    | 0    | 0.00  | 340.20 | 1474.96 |        |

CCHV= .300 CEHV= .500

\*SECNO 23625.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

|   |          |       |        |        |      |        |      |       |        |        |  |  |
|---|----------|-------|--------|--------|------|--------|------|-------|--------|--------|--|--|
| 1 | 23625.00 | 5.44  | 124.77 | 124.77 | 0.00 | 125.38 | .61  | 9.59  | .29    | 121.32 |  |  |
| 2 | 640.     | 241.  | 303.   | 95.    | 65.  | 36.    | 56.  | 1487. | 371.   | 124.52 |  |  |
| 3 | 6.81     | 3.73  | 8.39   | 1.70   | .135 | .075   | .135 | 0.000 | 119.33 | 261.51 |  |  |
| 4 | .055853  | 4050. | 4300.  | 3975.  | 20   | 13     | 0    | 0.00  | 157.14 | 418.66 |  |  |

\*SECNO 23725.000

3301 HV CHANGED MORE THAN HVINS

|   |          |      |        |      |      |      |      |       |        |        |        |  |
|---|----------|------|--------|------|------|------|------|-------|--------|--------|--------|--|
| 1 | 23725.00 | 7.10 | 126.43 | 0.00 | 0.00 | 142. | 59.  | 266.  | 1487.  | .16    | 121.32 |  |
| 2 | 640.     | 179. | 182.   | 279. | 142. | 59.  | 266. | 1487. | 371.   | 124.52 |        |  |
| 3 | 6.83     | 1.26 | 3.09   | 1.05 | .135 | .075 | .135 | 0.000 | 119.33 | 243.45 |        |  |
| 4 | .003761  | 100. | 100.   | 100. | 5    | 0    | 0    | 0.00  | 212.13 | 455.58 |        |  |

49 50 51 52 53 54 55 56 57

| 1/8    | 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    | 27    | 28    | 29   | 30     | 31  | 32    | 33    | 34     | 35   | 36    | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |  |  |  |  |
|--------|-------|------|-------|-------|-------|----|----|----|-------|-----------|-------|-------|------|------|-----|-------|-----|-----|------|-----|-----|------|-------|----|-------|-------|-------|-------|------|--------|-----|-------|-------|--------|------|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|
| SECCNO | DEPTH | QLOB | CWSEL | CRIMS | WSELK | EG | HW | HL | OLOSS | BANK ELEV | ELCHU | ELCHD | TIME | VLOB | VCH | XLOBR | XNL | AGH | AROB | VOL | TWA | LEFT | ELMIN | SS | ELCHU | ELCHD | SLOPE | XLOBL | XLCH | ITRIAL | IDC | ICONT | CORAR | TOPMID | SSTA | ENDST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED  
 5227, DOWNSTREAM ELEV IS 122.35, NOT 126.43 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

|    |    |      |      |      |      |      |       |      |     |       |     |      |       |       |    |      |       |        |       |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----|----|------|------|------|------|------|-------|------|-----|-------|-----|------|-------|-------|----|------|-------|--------|-------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SB | XK | 1.25 | KKOR | 1.56 | COFG | 3.00 | RDLEN | 0.00 | BWC | 12.03 | BWP | 2.97 | BAREA | 31.81 | SS | 0.00 | ELCHU | 119.33 | ELCHD | 119.33 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----|----|------|------|------|------|------|-------|------|-----|-------|-----|------|-------|-------|----|------|-------|--------|-------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

\*SECCNO 23766.000

3235 SLOPE TOO STEEP, EXCEEDS .10

3370 NORMAL BRIDGE, NRD= 17 MIN ELTRD= 128.80 MAX ELLC= 123.56

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

|          |       |        |        |      |        |     |     |     |        |        |      |    |      |      |    |     |      |       |      |        |      |      |      |      |      |      |      |       |        |        |         |     |     |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|-------|--------|--------|------|--------|-----|-----|-----|--------|--------|------|----|------|------|----|-----|------|-------|------|--------|------|------|------|------|------|------|------|-------|--------|--------|---------|-----|-----|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 23766.00 | 10.49 | 129.82 | 129.82 | 0.00 | 130.28 | .46 | .47 | .20 | 121.32 | 124.52 | 640. | 8. | 236. | 397. | 5. | 31. | 109. | 1488. | 372. | 124.52 | 6.83 | 1.60 | 7.66 | 3.63 | .135 | .075 | .135 | 0.000 | 119.33 | 206.65 | .187782 | 41. | 41. | 534.09 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|-------|--------|--------|------|--------|-----|-----|-----|--------|--------|------|----|------|------|----|-----|------|-------|------|--------|------|------|------|------|------|------|------|-------|--------|--------|---------|-----|-----|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

\*SECCNO 23825.000

|          |       |        |        |      |        |     |     |     |        |        |      |      |     |      |      |      |       |       |      |        |      |     |     |     |      |      |      |       |        |        |         |     |     |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|-------|--------|--------|------|--------|-----|-----|-----|--------|--------|------|------|-----|------|------|------|-------|-------|------|--------|------|-----|-----|-----|------|------|------|-------|--------|--------|---------|-----|-----|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 23825.00 | 11.11 | 130.44 | 130.44 | 0.00 | 130.45 | .00 | .03 | .14 | 121.32 | 124.52 | 640. | 159. | 93. | 388. | 452. | 107. | 1030. | 1489. | 372. | 124.52 | 6.86 | .35 | .87 | .38 | .135 | .075 | .135 | 0.000 | 119.33 | 198.85 | .000134 | 59. | 59. | 549.49 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|-------|--------|--------|------|--------|-----|-----|-----|--------|--------|------|------|-----|------|------|------|-------|-------|------|--------|------|-----|-----|-----|------|------|------|-------|--------|--------|---------|-----|-----|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|





| SECCNO | DEPTH | CWSEL | CRIMS | WSELK  | EG   | HV    | HL    | GLOSS  | BANK ELEV  |
|--------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| TIME   | QLOB  | QCH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| SLOPE  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
|        | XLOBL | XLCH  | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPMID | ENDST      |

\*PROF 4

CCHV= .100 CEHV= .300  
 \*SECNO 1950.000  
 1950.00 22.04 109.58 0.00 102.00 109.64 0.06 0.00 0.00 107.84

376.0 383. 3207. 170. 1216. 1493. 563. 0. 0. 107.94  
 0.00 .32 2.15 .30 .045 .035 .045 0.000 87.54 -1275.42  
 .000100 0. 0. 0. 0 0 14 0.00 2195.68 920.26

\*SECNO 2050.000

2050.00 22.05 109.59 0.00 0.00 109.65 .06 .01 .00 107.84  
 376.0 388. 3200. 172. 1230. 1494. 570. 8. 5. 107.94  
 .01 .32 2.14 .30 .045 .035 .045 0.000 87.54 -1283.21  
 .000100 100. 100. 100. 0 0 0 0.00 2207.78 924.57

CCHV= .300 CEHV= .500

\*SECNO 2800.000  
 2800.00 27.52 109.68 0.00 0.00 109.69 .01 .02 .02 103.71  
 376.0 655. 2549. 556. 2898. 2652. 1942. 94. 40. 103.48  
 .29 .23 .96 .29 .045 .035 .045 0.000 82.16 -1345.13  
 .000014 650. 750. 700. 1 0 0 0.00 2375.50 1030.37

\*SECNO 2900.000

2900.00 27.52 109.68 0.00 0.00 109.69 .01 .00 .00 103.71  
 376.0 659. 2543. 558. 2921. 2655. 1951. 111. 46. 103.48  
 .33 .23 .96 .29 .045 .035 .045 0.000 82.16 -1346.89  
 .000014 100. 100. 100. 0 0 0 0.00 2378.49 1031.59

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED  
 SB XK XKOR COFO RDLN BWC BWP BAREA SS ELCHU ELCHD  
 1.25 1.56 3.00 0.00 106.00 7.00 2484.00 0.00 82.16 82.16

\*SECNO 2928.000  
PRESSURE AND WEIR FLOW

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| 1/6 | SECCNO | DEPTH | CWSEL | CRIWS | WSELK  | EG   | HV    | HL    | OLOSS  | BANK | ELEV  |
|-----|--------|-------|-------|-------|--------|------|-------|-------|--------|------|-------|
| 0   | TIME   | QLOB  | OCH   | QROB  | ALOB   | ACH  | AROB  | VOI   | TWA    | LEFT | RIGHT |
| 1   | SLOPE  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA | ENDST |
| 2   |        | XL0BL | XLCH  | XL0BR | ITRIAL | IDC  | ICONT | CORAR | TOPWID |      |       |

\*SECCNO 8410.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 106.82

|    |         |       |        |      |      |        |      |          |        |         |
|----|---------|-------|--------|------|------|--------|------|----------|--------|---------|
| 9  | 8410.00 | 15.15 | 109.75 | 0.00 | 0.00 | 109.89 | .13  | .00      | .06    | 105.30  |
| 10 | 2760.   | 1.44. | 2406.  | 210. | 307. | 775.   | 327. | 984.     | 248.   | 104.90  |
| 11 | 2.96    | .47   | 3.10   | .64  | .115 | .036   | .115 | 0.000    | 94.60  | 230.27  |
| 12 | .002143 | 10.   | 10.    | 10.  | 2    | 0      | 0    | -4367.85 | 998.52 | 1228.78 |

\*SECCNO 8448.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

|    |         |       |        |      |      |        |      |          |        |         |
|----|---------|-------|--------|------|------|--------|------|----------|--------|---------|
| 18 | 8448.00 | 14.99 | 109.85 | 0.00 | 0.00 | 109.97 | .12  | .08      | .00    | 105.56  |
| 19 | 2760.   | 170.  | 2360.  | 230. | 350. | 785.   | 357. | 986.     | 249.   | 105.16  |
| 20 | 2.96    | .49   | 3.01   | .64  | .115 | .036   | .115 | 0.000    | 94.86  | 238.68  |
| 21 | .001974 | 38.   | 38.    | 38.  | 2    | 0      | 0    | -4117.98 | 988.16 | 1226.84 |

\*SECCNO 8458.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

|    |         |       |        |      |       |        |       |       |        |         |
|----|---------|-------|--------|------|-------|--------|-------|-------|--------|---------|
| 25 | 8458.00 | 15.07 | 109.99 | 0.00 | 0.00  | 110.00 | .01   | .00   | .03    | 105.62  |
| 26 | 2760.   | 664.  | 1304.  | 792. | 2252. | 1054.  | 2386. | 986.  | 249.   | 105.22  |
| 27 | 2.96    | .29   | 1.24   | .33  | .115  | .040   | .115  | 0.000 | 94.92  | 234.55  |
| 28 | .000055 | 10.   | 10.    | 10.  | 2     | 0      | 0     | 0.000 | 993.25 | 1227.80 |

\*SECCNO 8550.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

|    |         |       |        |      |       |        |       |       |        |         |
|----|---------|-------|--------|------|-------|--------|-------|-------|--------|---------|
| 32 | 8550.00 | 14.77 | 109.99 | 0.00 | 0.00  | 110.01 | .01   | .01   | .00    | 104.02  |
| 33 | 2760.   | 1023. | 954.   | 784. | 2806. | 650.   | 2338. | 999.  | 251.   | 103.62  |
| 34 | 3.00    | .36   | 1.47   | .34  | .115  | .040   | .115  | 0.000 | 95.22  | 266.29  |
| 35 | .000064 | 92.   | 92.    | 92.  | 2     | 0      | 0     | 0.000 | 954.18 | 1220.47 |

\*SECCNO 8650.000

3370 NORMAL BRIDGE, NRD= 31 MIN ELTRD= 108.41 MAX ELLC= 107.08

|    |         |       |        |      |       |        |       |       |        |         |
|----|---------|-------|--------|------|-------|--------|-------|-------|--------|---------|
| 39 | 8650.00 | 14.10 | 110.00 | 0.00 | 0.00  | 110.02 | .02   | .01   | .00    | 104.70  |
| 40 | 2760.   | 1001. | 1012.  | 747. | 2500. | 612.   | 2051. | 1011. | 254.   | 104.30  |
| 41 | 3.03    | .40   | 1.65   | .36  | .115  | .040   | .115  | 0.000 | 95.90  | 299.99  |
| 42 | .000088 | 100.  | 100.   | 100. | 0     | 0      | 0     | 0.000 | 912.70 | 1212.69 |

CCHV= .100 CEHV= .300

43 3.03 .40 1.65 .36 .115 .040 .115 0 0.000 95.90 299.99

44 .000088 100. 100. 100. 0 0 0 0 0.000 912.70 1212.69

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| 1/8 | 1/6 | Q | TIME | SLOPE | DEPTH | QLOB | VLOB | XL0BL | QCH | VCH | XLCH | CRIMS | QROB | VR0B | XL0BR | WSELK | ALOB | XLNL | ITRIAL | EG | ACH | XNCH | IDC | HV | AROB | XNR | ICONT | HL | VOL | WTN | CORAR | OLOSS | TWA | ELMIN | TOPWID | BANK | ELEV | LEFT/RIGHT | SSTA | ENDST |
|-----|-----|---|------|-------|-------|------|------|-------|-----|-----|------|-------|------|------|-------|-------|------|------|--------|----|-----|------|-----|----|------|-----|-------|----|-----|-----|-------|-------|-----|-------|--------|------|------|------------|------|-------|
|-----|-----|---|------|-------|-------|------|------|-------|-----|-----|------|-------|------|------|-------|-------|------|------|--------|----|-----|------|-----|----|------|-----|-------|----|-----|-----|-------|-------|-----|-------|--------|------|------|------------|------|-------|

\*SECNO 15045.000  
 3280 CROSS SECTION 15045.00 EXTENDED 3.64 FEET

3301 HV CHANGED MORE THAN HVINS

|    |          |       |        |       |        |        |       |         |       |       |       |         |         |
|----|----------|-------|--------|-------|--------|--------|-------|---------|-------|-------|-------|---------|---------|
| 11 | 15045.00 | 23.02 | 122.04 | 0.00  | 0.00   | 122.04 | 0.00  | 10008.  | 463.  | 9014. | 1601. | 2.46    | 100.80  |
| 12 | 2760.    | 1308. | 193.   | 1260. | 10008. | 463.   | 9014. | 380.    | 0.055 | 0.000 | 0.000 | 380.    | 101.75  |
| 13 | 4.66     | .13   | .42    | .14   | .120   | .055   | .120  | 99.02   | 0     | 0.000 | 0.000 | 99.02   | -236.00 |
| 14 | .000004  | 10.   | 10.    | 10.   | 3      | 0      | 0     | 1736.00 | 0     | 0.000 | 0.000 | 1736.00 | 1500.00 |

\*SECNO 15125.000  
 3280 CROSS SECTION 15125.00 EXTENDED 3.64 FEET

|    |          |       |        |       |       |        |       |         |       |       |       |         |         |
|----|----------|-------|--------|-------|-------|--------|-------|---------|-------|-------|-------|---------|---------|
| 19 | 15125.00 | 21.34 | 122.04 | 0.00  | 0.00  | 122.04 | 0.00  | 8770.   | 822.  | 1636. | 0.000 | 383.    | 102.40  |
| 20 | 2760.    | 1202. | 328.   | 1230. | 8671. | 822.   | 8770. | 383.    | 0.055 | 0.000 | 0.000 | 383.    | 104.30  |
| 21 | 4.79     | .14   | .40    | .14   | .120  | .055   | .120  | 100.70  | 0     | 0.000 | 0.000 | 100.70  | 0.00    |
| 22 | .000004  | 80.   | 80.    | 80.   | 2     | 0      | 0     | 1500.00 | 0     | 0.000 | 0.000 | 1500.00 | 1500.00 |

CCHV= .100 CEHV= .300  
 \*SECNO 15200.000

3280 CROSS SECTION 15200.00 EXTENDED 3.64 FEET

|    |          |       |        |       |       |        |       |         |       |       |       |         |         |
|----|----------|-------|--------|-------|-------|--------|-------|---------|-------|-------|-------|---------|---------|
| 30 | 15200.00 | 21.34 | 122.04 | 0.00  | 0.00  | 122.04 | 0.00  | 8770.   | 822.  | 1667. | 0.000 | 385.    | 102.40  |
| 31 | 2760.    | 1202. | 328.   | 1230. | 8671. | 822.   | 8770. | 385.    | 0.055 | 0.000 | 0.000 | 385.    | 104.30  |
| 32 | 4.91     | .14   | .40    | .14   | .120  | .055   | .120  | 100.70  | 0     | 0.000 | 0.000 | 100.70  | 0.00    |
| 33 | .000004  | 75.   | 75.    | 75.   | 0     | 0      | 0     | 1500.00 | 0     | 0.000 | 0.000 | 1500.00 | 1500.00 |

CCHV= .300 CEHV= .500  
 \*SECNO 15825.000

3280 CROSS SECTION 15825.00 EXTENDED 2.70 FEET

|    |          |       |        |       |       |        |        |         |       |       |       |         |         |
|----|----------|-------|--------|-------|-------|--------|--------|---------|-------|-------|-------|---------|---------|
| 40 | 15825.00 | 21.03 | 122.04 | 0.00  | 0.00  | 122.04 | 0.00   | 14363.  | 440.  | 1918. | 0.000 | 408.    | 104.81  |
| 41 | 2270.    | 798.  | 107.   | 1365. | 8659. | 440.   | 14363. | 408.    | 0.065 | 0.000 | 0.000 | 408.    | 104.81  |
| 42 | 6.36     | .09   | .24    | .10   | .125  | .065   | .125   | 101.01  | 0     | 0.000 | 0.000 | 101.01  | 0.00    |
| 43 | .000002  | 550.  | 625.   | 500.  | 0     | 0      | 0      | 2300.00 | 0     | 0.000 | 0.000 | 2300.00 | 2300.00 |

\*SECNO 15925.000

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 HEC2 RELEASE DATED NOV 76 UPDATED MARC 1982  
 ERROR CORR - 01,02,03,04,05  
 MODIFICATION - 50,51,52,53,54,55  
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NOTE- ASTERISK (\*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

STURGEON CREEK

SUMMARY PRINTOUT

| SECNO | XLCH     | ELTRD  | ELLC   | Q       | ELMIN | CWSEL  | CRWS | VCH  | SSTA     | ENDST   | AREA    | DI FWSP |
|-------|----------|--------|--------|---------|-------|--------|------|------|----------|---------|---------|---------|
| 18    | 1950.000 | 0.00   | 0.00   | 940.00  | 87.54 | 101.67 | 0.00 | 1.51 | 116.96   | 204.81  | 620.72  | 0.00    |
| 19    | 1950.000 | 0.00   | 0.00   | 1930.00 | 87.54 | 106.00 | 0.00 | 1.83 | 105.01   | 218.24  | 1057.35 | 4.33    |
| 20    | 1950.000 | 0.00   | 0.00   | 2480.00 | 87.54 | 107.93 | 0.00 | 1.93 | 6.90     | 224.97  | 1290.92 | 1.93    |
| 21    | 1950.000 | 0.00   | 0.00   | 3760.00 | 87.54 | 109.58 | 0.00 | 2.15 | -1275.42 | 920.26  | 3272.00 | 1.65    |
| 22    | 2050.000 | 100.00 | 0.00   | 940.00  | 87.54 | 101.68 | 0.00 | 1.51 | 116.92   | 204.84  | 621.60  | 0.00    |
| 23    | 2050.000 | 100.00 | 0.00   | 1930.00 | 87.54 | 106.01 | 0.00 | 1.82 | 104.98   | 218.27  | 1058.49 | 4.33    |
| 24    | 2050.000 | 100.00 | 0.00   | 2480.00 | 87.54 | 107.94 | 0.00 | 1.93 | -2.29    | 226.10  | 1293.12 | 1.93    |
| 25    | 2050.000 | 100.00 | 0.00   | 3760.00 | 87.54 | 109.59 | 0.00 | 2.14 | -1283.21 | 924.57  | 3294.09 | 1.65    |
| 26    | 2800.000 | 750.00 | 0.00   | 940.00  | 82.16 | 101.74 | 0.00 | .71  | 274.43   | 410.55  | 1332.93 | 0.00    |
| 27    | 2800.000 | 750.00 | 0.00   | 1930.00 | 82.16 | 106.09 | 0.00 | .95  | 256.00   | 428.00  | 2037.62 | 4.35    |
| 28    | 2800.000 | 750.00 | 0.00   | 2480.00 | 82.16 | 108.03 | 0.00 | .86  | -450.15  | 892.31  | 4315.31 | 1.93    |
| 29    | 2800.000 | 750.00 | 0.00   | 3760.00 | 82.16 | 109.68 | 0.00 | .96  | -1346.89 | 1031.59 | 7527.20 | 1.65    |
| 30    | 2900.000 | 100.00 | 0.00   | 940.00  | 82.16 | 101.74 | 0.00 | .71  | 274.43   | 410.55  | 1332.93 | 0.00    |
| 31    | 2900.000 | 100.00 | 0.00   | 1930.00 | 82.16 | 106.09 | 0.00 | .95  | 256.00   | 428.00  | 2037.62 | 4.35    |
| 32    | 2900.000 | 100.00 | 0.00   | 2480.00 | 82.16 | 108.03 | 0.00 | .86  | -450.15  | 892.31  | 4315.31 | 1.93    |
| 33    | 2900.000 | 100.00 | 0.00   | 3760.00 | 82.16 | 109.68 | 0.00 | .96  | -1346.89 | 1031.59 | 7527.20 | 1.65    |
| 34    | 2928.000 | 28.00  | 107.96 | 940.00  | 82.16 | 101.74 | 0.00 | .71  | 274.44   | 410.54  | 1332.45 | 0.00    |
| 35    | 2928.000 | 28.00  | 107.96 | 1930.00 | 82.16 | 106.09 | 0.00 | .95  | 256.00   | 428.00  | 2037.00 | 4.35    |
| 36    | 2928.000 | 28.00  | 107.96 | 2480.00 | 82.16 | 108.04 | 0.00 | .86  | -463.58  | 894.00  | 4342.36 | 1.95    |
| 37    | 2928.000 | 28.00  | 107.96 | 3760.00 | 82.16 | 109.71 | 0.00 | .95  | -1351.39 | 1034.71 | 7615.31 | 1.67    |
| 38    | 3000.000 | 72.00  | 0.00   | 940.00  | 82.16 | 101.74 | 0.00 | .71  | 274.44   | 410.54  | 1332.59 | 0.00    |
| 39    | 3000.000 | 72.00  | 0.00   | 1930.00 | 82.16 | 106.10 | 0.00 | .90  | 60.21    | 729.28  | 2632.27 | 4.36    |
| 40    | 3000.000 | 72.00  | 0.00   | 2480.00 | 82.16 | 108.04 | 0.00 | .86  | -457.75  | 893.27  | 4330.59 | 1.94    |
| 41    | 3000.000 | 72.00  | 0.00   | 3760.00 | 82.16 | 109.71 | 0.00 | .95  | -1350.32 | 1033.97 | 7594.40 | 1.67    |
| 42    | 3100.000 | 100.00 | 0.00   | 940.00  | 82.16 | 101.74 | 0.00 | .71  | 274.44   | 410.54  | 1332.78 | 0.00    |
| 43    | 3100.000 | 100.00 | 0.00   | 1930.00 | 82.16 | 106.10 | 0.00 | .90  | 60.00    | 729.67  | 2635.29 | 4.36    |
| 44    | 3100.000 | 100.00 | 0.00   | 2480.00 | 82.16 | 108.04 | 0.00 | .86  | -458.61  | 893.37  | 4332.32 | 1.94    |
| 45    | 3100.000 | 100.00 | 0.00   | 3760.00 | 82.16 | 109.72 | 0.00 | .95  | -1350.48 | 1034.08 | 7597.57 | 1.67    |

| SECNO | XLCH      | ELTRD   | ELLC   | Q      | ELMIN   | CWSSEL | CRIMS  | VCH   | SSTA   | ENDST   | AREA    | DI FWSP |
|-------|-----------|---------|--------|--------|---------|--------|--------|-------|--------|---------|---------|---------|
| 1     | 8275.000  | 5175.00 | 0.00   | 0.00   | 640.00  | 93.33  | 101.88 | 1.83  | 382.89 | 1076.43 | 716.12  | 0.00    |
| 2     | 8275.000  | 5175.00 | 0.00   | 0.00   | 1350.00 | 93.33  | 106.22 | 1.03  | 318.03 | 1197.36 | 4080.41 | 4.35    |
| 3     | 8275.000  | 5175.00 | 0.00   | 0.00   | 1760.00 | 93.33  | 108.13 | .93   | 264.85 | 1220.80 | 5820.62 | 1.91    |
| 4     | 8275.000  | 5175.00 | 0.00   | 0.00   | 2760.00 | 93.33  | 109.81 | 1.13  | 104.94 | 1240.16 | 7524.94 | 1.68    |
| 5     | 8400.000  | 125.00  | 0.00   | 0.00   | 640.00  | 94.53  | 101.91 | 2.14  | 738.59 | 805.80  | 298.60  | 0.00    |
| 6     | 8400.000  | 125.00  | 0.00   | 0.00   | 1350.00 | 94.53  | 106.21 | 1.97  | 715.00 | 824.00  | 684.02  | 4.30    |
| 7     | 8400.000  | 125.00  | 0.00   | 0.00   | 1760.00 | 94.53  | 108.14 | 1.03  | 302.32 | 1210.91 | 4304.00 | 1.93    |
| 8     | 8400.000  | 125.00  | 0.00   | 0.00   | 2760.00 | 94.53  | 109.81 | 1.20  | 223.85 | 1230.27 | 5906.18 | 1.68    |
| 9     | 8410.000  | 10.00   | 108.41 | 106.82 | 640.00  | 94.60  | 101.91 | 2.30  | 396.26 | 1017.05 | 278.75  | 0.00    |
| 10    | 8410.000  | 10.00   | 108.41 | 106.82 | 1350.00 | 94.60  | 106.20 | 2.10  | 332.20 | 1174.27 | 641.36  | 4.30    |
| 11    | 8410.000  | 10.00   | 108.41 | 106.82 | 1760.00 | 94.60  | 108.09 | 2.49  | 304.01 | 1209.61 | 705.45  | 1.89    |
| 12    | 8410.000  | 10.00   | 108.41 | 106.82 | 2760.00 | 94.60  | 109.75 | 3.10  | 230.27 | 1228.78 | 1409.56 | 1.66    |
| 13    | 8448.000  | 38.00   | 108.41 | 107.08 | 640.00  | 94.86  | 101.93 | 2.43  | 399.87 | 1000.58 | 263.77  | 0.00    |
| 14    | 8448.000  | 38.00   | 108.41 | 107.08 | 1350.00 | 94.86  | 106.22 | 2.19  | 335.93 | 1168.16 | 615.21  | 4.29    |
| 15    | 8448.000  | 38.00   | 108.41 | 107.08 | 1760.00 | 94.86  | 108.13 | 2.49  | 307.48 | 1206.94 | 705.45  | 1.91    |
| 16    | 8448.000  | 38.00   | 108.41 | 107.08 | 2760.00 | 94.86  | 109.85 | 3.01  | 238.68 | 1226.84 | 1492.26 | 1.72    |
| 17    | 8458.000  | 10.00   | 0.00   | 0.00   | 640.00  | 94.92  | 101.94 | 2.33  | 739.72 | 804.75  | 275.12  | 0.00    |
| 18    | 8458.000  | 10.00   | 0.00   | 0.00   | 1350.00 | 94.92  | 106.23 | 2.10  | 715.00 | 824.00  | 643.26  | 4.28    |
| 19    | 8458.000  | 10.00   | 0.00   | 0.00   | 1760.00 | 94.92  | 108.17 | 2.06  | 715.00 | 824.00  | 856.18  | 1.95    |
| 20    | 8458.000  | 10.00   | 0.00   | 0.00   | 2760.00 | 94.92  | 109.99 | 1.24  | 234.55 | 1227.80 | 5692.24 | 1.81    |
| 21    | 8550.000  | 92.00   | 0.00   | 0.00   | 640.00  | 95.22  | 101.99 | 2.96  | 738.44 | 785.55  | 216.00  | 0.00    |
| 22    | 8550.000  | 92.00   | 0.00   | 0.00   | 1350.00 | 95.22  | 106.31 | 1.60  | 344.97 | 1153.34 | 2557.51 | 4.32    |
| 23    | 8550.000  | 92.00   | 0.00   | 0.00   | 1760.00 | 95.22  | 108.25 | 1.30  | 315.90 | 1200.40 | 4206.42 | 1.95    |
| 24    | 8550.000  | 92.00   | 0.00   | 0.00   | 2760.00 | 95.22  | 109.99 | 1.47  | 266.29 | 1220.47 | 5793.04 | 1.74    |
| 25    | 8650.000  | 100.00  | 0.00   | 0.00   | 640.00  | 95.90  | 102.06 | 3.40  | 739.17 | 783.54  | 188.34  | 0.00    |
| 26    | 8650.000  | 100.00  | 0.00   | 0.00   | 1350.00 | 95.90  | 106.31 | 1.96  | 354.91 | 1137.10 | 2027.71 | 4.25    |
| 27    | 8650.000  | 100.00  | 0.00   | 0.00   | 1760.00 | 95.90  | 108.26 | 1.50  | 325.85 | 1184.58 | 3625.09 | 1.95    |
| 28    | 8650.000  | 100.00  | 0.00   | 0.00   | 2760.00 | 95.90  | 110.00 | 1.65  | 299.99 | 1212.69 | 5163.88 | 1.74    |
| 29    | 14700.000 | 6050.00 | 0.00   | 0.00   | 640.00  | 100.70 | 107.08 | 1.94  | 471.49 | 1022.56 | 766.52  | 0.00    |
| 30    | 14700.000 | 6050.00 | 0.00   | 0.00   | 1350.00 | 100.70 | 108.29 | 2.40  | 388.81 | 1126.44 | 1556.95 | 1.22    |
| 31    | 14700.000 | 6050.00 | 0.00   | 0.00   | 1760.00 | 100.70 | 109.25 | 2.18  | 352.11 | 1203.54 | 2319.08 | .95     |
| 32    | 14700.000 | 6050.00 | 0.00   | 0.00   | 2760.00 | 100.70 | 110.86 | 2.09  | 291.30 | 1242.95 | 3776.58 | 1.62    |
| 33    | 14800.000 | 100.00  | 0.00   | 0.00   | 640.00  | 99.02  | 107.05 | 4.30  | 739.00 | 760.00  | 148.67  | 0.00    |
| 34    | 14800.000 | 100.00  | 0.00   | 0.00   | 1350.00 | 99.02  | 107.96 | 8.04  | 739.00 | 760.00  | 167.84  | .91     |
| 35    | 14800.000 | 100.00  | 0.00   | 0.00   | 1760.00 | 99.02  | 108.65 | 9.64  | 739.00 | 760.00  | 182.54  | .70     |
| 36    | 14800.000 | 100.00  | 0.00   | 0.00   | 2760.00 | 99.02  | 110.90 | 2.37  | 290.38 | 1244.03 | 3839.06 | 2.24    |
| 37    | 14810.000 | 10.00   | 114.37 | 106.02 | 640.00  | 99.02  | 106.98 | 5.33  | 478.27 | 1015.27 | 120.12  | 0.00    |
| 38    | 14810.000 | 10.00   | 114.37 | 106.02 | 1350.00 | 99.02  | 107.53 | 11.24 | 436.12 | 1060.81 | 120.12  | .55     |
| 39    | 14810.000 | 10.00   | 114.37 | 106.02 | 1760.00 | 99.02  | 107.79 | 14.65 | 416.45 | 1082.14 | 120.12  | .26     |
| 40    | 14810.000 | 10.00   | 114.37 | 106.02 | 2760.00 | 99.02  | 106.82 | 22.98 | 490.97 | 1001.49 | 120.12  | -.97    |

E.F.



| 16          | 15      | 14     | 13     | 12      | 11     | 10     | 9      | 8     | 7       | 6       | 5       | 4      | 3           | 2       | 1      |
|-------------|---------|--------|--------|---------|--------|--------|--------|-------|---------|---------|---------|--------|-------------|---------|--------|
| SECNO       | XLCH    | ELTRD  | ELLC   | O       | ELMIN  | CWSEL  | CRIMW  | VCH   | SSTA    | ENDST   | AREA    | DIFWSP |             |         |        |
| 19325.000   | 3290.00 | 0.00   | 0.00   | 400.00  | 107.56 | 112.72 | 0.00   | 1.58  | 1147.43 | 1471.12 | 586.61  | 0.00   | 19325.000   | 3290.00 | 0.00   |
| 19325.000   | 3290.00 | 0.00   | 0.00   | 880.00  | 107.56 | 112.77 | 0.00   | 3.38  | 1147.08 | 1471.23 | 602.53  | .05    | 19325.000   | 3290.00 | 0.00   |
| 19325.000   | 3290.00 | 0.00   | 0.00   | 1180.00 | 107.56 | 114.48 | 0.00   | 2.25  | 1134.75 | 1474.96 | 1171.65 | 1.71   | 19325.000   | 3290.00 | 0.00   |
| 19325.000   | 3290.00 | 0.00   | 0.00   | 1910.00 | 107.56 | 122.06 | 0.00   | .97   | 1075.87 | 1490.00 | 4023.52 | 7.58   | 19325.000   | 3290.00 | 0.00   |
| * 23625.000 | 4300.00 | 0.00   | 0.00   | 200.00  | 119.33 | 123.13 | 123.13 | 7.58  | 279.29  | 307.93  | 37.91   | 0.00   | * 23625.000 | 4300.00 | 0.00   |
| 23625.000   | 4300.00 | 0.00   | 0.00   | 470.00  | 119.33 | 126.36 | 124.53 | 2.27  | 244.09  | 454.29  | 451.59  | 3.23   | 23625.000   | 4300.00 | 0.00   |
| * 23625.000 | 4300.00 | 0.00   | 0.00   | 640.00  | 119.33 | 124.77 | 124.77 | 8.39  | 261.51  | 418.66  | 157.10  | -1.59  | * 23625.000 | 4300.00 | 0.00   |
| * 23625.000 | 4300.00 | 0.00   | 0.00   | 1100.00 | 119.33 | 125.38 | 125.38 | 9.26  | 254.90  | 432.18  | 258.87  | .61    | * 23625.000 | 4300.00 | 0.00   |
| 23725.000   | 100.00  | 0.00   | 0.00   | 200.00  | 119.33 | 124.92 | 0.00   | 2.34  | 259.83  | 422.11  | 184.80  | 0.00   | 23725.000   | 100.00  | 0.00   |
| 23725.000   | 100.00  | 0.00   | 0.00   | 470.00  | 119.33 | 126.57 | 0.00   | 2.13  | 241.97  | 458.62  | 496.06  | 1.65   | 23725.000   | 100.00  | 0.00   |
| 23725.000   | 100.00  | 0.00   | 0.00   | 640.00  | 119.33 | 126.43 | 0.00   | 3.09  | 243.45  | 455.58  | 466.82  | -.14   | 23725.000   | 100.00  | 0.00   |
| 23725.000   | 100.00  | 0.00   | 0.00   | 1100.00 | 119.33 | 127.20 | 0.00   | 3.85  | 235.12  | 472.63  | 639.30  | .77    | 23725.000   | 100.00  | 0.00   |
| * 23766.000 | 41.00   | 128.80 | 123.56 | 200.00  | 119.33 | 124.90 | 0.00   | 7.84  | 299.00  | 311.00  | 25.50   | 0.00   | * 23766.000 | 41.00   | 128.80 |
| * 23766.000 | 41.00   | 128.80 | 123.56 | 470.00  | 119.33 | 124.20 | 123.56 | 18.43 | 299.00  | 310.34  | 25.50   | -.70   | * 23766.000 | 41.00   | 128.80 |
| * 23766.000 | 41.00   | 128.80 | 123.56 | 640.00  | 119.33 | 129.82 | 129.82 | 7.66  | 206.65  | 534.09  | 144.94  | 5.62   | * 23766.000 | 41.00   | 128.80 |
| * 23766.000 | 41.00   | 128.80 | 123.56 | 1100.00 | 119.33 | 130.27 | 130.27 | 7.09  | 201.70  | 545.27  | 253.50  | .46    | * 23766.000 | 41.00   | 128.80 |
| 23825.000   | 59.00   | 0.00   | 0.00   | 200.00  | 119.33 | 126.23 | 0.00   | 1.06  | 245.58  | 451.23  | 425.91  | 0.00   | 23825.000   | 59.00   | 0.00   |
| 23825.000   | 59.00   | 0.00   | 0.00   | 470.00  | 119.33 | 131.07 | 0.00   | .55   | 151.40  | 564.64  | 1825.14 | 4.84   | 23825.000   | 59.00   | 0.00   |
| 23825.000   | 59.00   | 0.00   | 0.00   | 640.00  | 119.33 | 130.44 | 0.00   | .87   | 198.85  | 549.49  | 1589.54 | -.63   | 23825.000   | 59.00   | 0.00   |
| 23825.000   | 59.00   | 0.00   | 0.00   | 1100.00 | 119.33 | 130.81 | 0.00   | 1.37  | 170.49  | 558.55  | 1725.69 | .37    | 23825.000   | 59.00   | 0.00   |

SUMMARY OF ERRORS AND SPECIAL NOTES

|    |         |                 |            |                                     |
|----|---------|-----------------|------------|-------------------------------------|
| 4  | CAUTION | SECNO=23625.000 | PROFILE= 1 | CRITICAL DEPTH ASSUMED              |
| 5  | CAUTION | SECNO=23625.000 | PROFILE= 1 | PROBABLE MINIMUM SPECIFIC ENERGY    |
| 6  | CAUTION | SECNO=23625.000 | PROFILE= 1 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| 7  | CAUTION | SECNO=23625.000 | PROFILE= 3 | CRITICAL DEPTH ASSUMED              |
| 8  | CAUTION | SECNO=23625.000 | PROFILE= 3 | PROBABLE MINIMUM SPECIFIC ENERGY    |
| 9  | CAUTION | SECNO=23625.000 | PROFILE= 3 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| 10 | CAUTION | SECNO=23625.000 | PROFILE= 4 | CRITICAL DEPTH ASSUMED              |
| 11 | CAUTION | SECNO=23625.000 | PROFILE= 4 | PROBABLE MINIMUM SPECIFIC ENERGY    |
| 12 | CAUTION | SECNO=23625.000 | PROFILE= 4 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| 13 |         |                 |            |                                     |
| 14 | CAUTION | SECNO=23766.000 | PROFILE= 1 | SLOPE TOO STEEP                     |
| 15 | CAUTION | SECNO=23766.000 | PROFILE= 2 | SLOPE TOO STEEP                     |
| 16 | CAUTION | SECNO=23766.000 | PROFILE= 3 | CRITICAL DEPTH ASSUMED              |
| 17 | CAUTION | SECNO=23766.000 | PROFILE= 3 | PROBABLE MINIMUM SPECIFIC ENERGY    |
| 18 | CAUTION | SECNO=23766.000 | PROFILE= 3 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| 19 | CAUTION | SECNO=23766.000 | PROFILE= 3 | SLOPE TOO STEEP                     |
| 20 | CAUTION | SECNO=23766.000 | PROFILE= 3 | HYDRAULIC JUMP D.S.                 |
| 21 | CAUTION | SECNO=23766.000 | PROFILE= 4 | CRITICAL DEPTH ASSUMED              |
| 22 | CAUTION | SECNO=23766.000 | PROFILE= 4 | PROBABLE MINIMUM SPECIFIC ENERGY    |
| 23 | CAUTION | SECNO=23766.000 | PROFILE= 4 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| 24 | CAUTION | SECNO=23766.000 | PROFILE= 4 | SLOPE TOO STEEP                     |
| 25 | CAUTION | SECNO=23766.000 | PROFILE= 4 | HYDRAULIC JUMP D.S.                 |

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FLOOD INSURANCE ZONE DATA FOR STURGEON CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE    | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND |       |
|----------------|------------------------|---|-------|
|                |                        | 10  | 2     |
|                |                        |   | 0.2   |
| 9              | 1950.000               | -6.26                                       | -1.93 |
| 10             | 2050.000               | -6.26                                       | -1.93 |
| 11             | 2800.000               | -6.29                                       | -1.93 |
| 12             | 2900.000               | -6.29                                       | -1.93 |
| 13             | 2928.000               | -6.30                                       | -1.95 |
| 14             | 3000.000               | -6.30                                       | -1.94 |
| 15             | 3100.000               | -6.30                                       | -1.94 |
| 16             | 8275.000               | -6.26                                       | -1.91 |
| 17             | 8400.000               | -6.23                                       | -1.93 |
| 18             | 8410.000               | -6.19                                       | -1.89 |
| 19             | 8448.000               | -6.20                                       | -1.91 |
| 20             | 8458.000               | -6.23                                       | -1.95 |
| 21             | 8550.000               | -6.27                                       | -1.95 |
| 22             | 8650.000               | -6.19                                       | -1.95 |
| 23             | 14700.000              | -2.17                                       | -0.95 |
| 24             | 14800.000              | -1.61                                       | -0.70 |
| 25             | 14810.000              | -0.80                                       | -0.26 |
| 26             | 15035.000              | -2.41                                       | -1.02 |
| 27             | 15045.000              | -5.71                                       | -2.75 |
| 28             | 15125.000              | -6.18                                       | -2.80 |
| 29             | 15200.000              | -6.16                                       | -2.80 |
| 30             | 15825.000              | -5.99                                       | -2.77 |
| 31             | 15925.000              | -5.93                                       | -2.86 |
| 32             | 15935.000              | -5.85                                       | -2.80 |
| 33             | 15960.000              | -5.79                                       | -2.79 |
| 34             | 15970.000              | -5.79                                       | -2.80 |
| 35             | 16035.000              | -5.49                                       | -2.49 |
| 36             | 19325.000              | -1.76                                       | -1.71 |
| 37             | 23625.000              | -1.64                                       | 1.59  |
| 38             | 23725.000              | -1.51                                       | 1.14  |
| 39             | 23766.000              | -4.92                                       | -5.62 |
| 40             | 23825.000              | -4.21                                       | 0.63  |
| 41             |                        |   |       |
| 42             | WEIGHTED AVG FOR REACH | -4.28                                       | -1.46 |
| 43             |                        |   | 3.33  |

FHF FOR THE REACH = 045 WITH 43.0 PERCENT OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 9

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CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION | DATA DIFF. | WTD. AVG.     | FHF | PERCENT WITHIN |
|---------|--------------|---------------|------------|---------------|-----|----------------|
| 1       | 0.           | 101.68        | -6.26      | SEC. 1950.000 | 065 | 100.           |
| 2       | 100.         | 101.69        | -6.26      | SEC. 2050.000 | 065 | 100.           |
| 3       | 136.         | 101.70        | -6.27      | SEC. 2050.000 | 065 | 100.           |
| 4       | 272.         | 101.71        | -6.27      | SEC. 2050.000 | 065 | 100.           |
| 5       | 408.         | 101.72        | -6.28      | SEC. 2050.000 | 065 | 100.           |
| 6       | 544.         | 101.73        | -6.28      | SEC. 2050.000 | 065 | 100.           |
| 7       | 680.         | 101.74        | -6.29      | SEC. 2900.000 | 065 | 100.           |
| 8       | 816.         | 101.74        | -6.29      | SEC. 2928.000 | 065 | 100.           |
| 9       | 950.         | 101.74        | -6.30      | SEC. 3000.000 | 065 | 100.           |
| 10      | 1088.        | 101.74        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 11      | 1150.        | 101.74        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 12      | 1224.        | 101.75        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 13      | 1360.        | 101.75        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 14      | 1496.        | 101.75        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 15      | 1632.        | 101.75        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 16      | 1768.        | 101.76        | -6.30      | SEC. 3100.000 | 065 | 100.           |
| 17      | 1904.        | 101.76        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 18      | 2040.        | 101.77        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 19      | 2176.        | 101.77        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 20      | 2312.        | 101.77        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 21      | 2448.        | 101.78        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 22      | 2584.        | 101.78        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 23      | 2720.        | 101.78        | -6.29      | SEC. 3100.000 | 065 | 100.           |
| 24      | 2856.        | 101.79        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 25      | 2992.        | 101.79        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 26      | 3128.        | 101.79        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 27      | 3264.        | 101.80        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 28      | 3400.        | 101.80        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 29      | 3536.        | 101.80        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 30      | 3672.        | 101.81        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 31      | 3808.        | 101.81        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 32      | 3944.        | 101.81        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 33      | 4080.        | 101.82        | -6.27      | SEC. 3100.000 | 065 | 100.           |
| 34      | 4216.        | 101.82        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 35      | 4352.        | 101.82        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 36      | 4488.        | 101.83        | -6.27      | SEC. 3100.000 | 065 | 100.           |
| 37      | 4624.        | 101.83        | -6.27      | SEC. 3100.000 | 065 | 100.           |
| 38      | 4760.        | 101.83        | -6.28      | SEC. 3100.000 | 065 | 100.           |
| 39      | 4896.        | 101.84        | -6.27      | SEC. 3100.000 | 065 | 100.           |
| 40      | 5032.        | 101.84        | -6.27      | SEC. 3100.000 | 065 | 100.           |
| 41      | 5168.        | 101.85        | -6.26      | SEC. 3100.000 | 065 | 100.           |
| 42      | 5304.        | 101.85        | -6.26      | SEC. 3100.000 | 065 | 100.           |
| 43      | 5440.        | 101.85        | -6.27      | SEC. 3100.000 | 065 | 100.           |



|     |    |        |        |        |       |       |          |      |
|-----|----|--------|--------|--------|-------|-------|----------|------|
| 1/8 | 41 | 5576.  | 101.86 | 108.12 | -6.26 | -6.28 | 065      | 100. |
| 1   | 42 | 5712.  | 101.86 | 108.12 | -6.26 | -6.28 | 065      | 100. |
| 2   | 43 | 5848.  | 101.86 | 108.12 | -6.26 | -6.28 | 065      | 100. |
| 3   | 44 | 5984.  | 101.87 | 108.13 | -6.26 | -6.28 | 065      | 100. |
| 4   | 45 | 6120.  | 101.87 | 108.13 | -6.26 | -6.28 | 065      | 100. |
| 5   | 46 | 6256.  | 101.87 | 108.13 | -6.26 | -6.28 | 065      | 100. |
| 6   | 47 | 6325.  | 101.87 | 108.13 | -6.26 | -6.28 | 065      | 100. |
| 7   | 47 | 6392.  | 101.88 | 108.13 | -6.25 | -6.28 | 065      | 100. |
| 8   |    | 6450.  |        |        |       | SEC.  | 8400.000 |      |
| 9   |    | 6460.  |        |        |       | SEC.  | 8410.000 |      |
| 10  |    | 6498.  |        |        |       | SEC.  | 8448.000 |      |
| 11  | 48 | 6508.  |        |        |       | SEC.  | 8458.000 |      |
| 12  |    | 6528.  | 101.92 | 108.16 | -6.24 | -6.28 | 065      | 100. |
| 13  |    | 6600.  |        |        |       | SEC.  | 8550.000 |      |
| 14  | 49 | 6664.  | 102.00 | 108.22 | -6.22 | -6.28 | 065      | 100. |
| 15  |    | 6700.  |        |        |       | SEC.  | 8650.000 |      |
| 16  | 50 | 6800.  | 102.09 | 108.27 | -6.18 | -6.27 | 065      | 100. |
| 17  | 51 | 6936.  | 102.20 | 108.29 | -6.09 | -6.27 | 065      | 100. |
| 18  | 52 | 7072.  | 102.32 | 108.31 | -5.99 | -6.26 | 065      | 100. |
| 19  | 53 | 7208.  | 102.43 | 108.33 | -5.90 | -6.26 | 065      | 100. |
| 20  | 54 | 7344.  | 102.54 | 108.35 | -5.81 | -6.25 | 065      | 100. |
| 21  | 55 | 7480.  | 102.65 | 108.37 | -5.72 | -6.24 | 060      | 100. |
| 22  | 56 | 7616.  | 102.77 | 108.40 | -5.63 | -6.23 | 060      | 100. |
| 23  | 57 | 7752.  | 102.88 | 108.42 | -5.54 | -6.22 | 060      | 100. |
| 24  | 58 | 7888.  | 102.99 | 108.44 | -5.45 | -6.20 | 060      | 100. |
| 25  | 59 | 8024.  | 103.11 | 108.46 | -5.35 | -6.19 | 060      | 100. |
| 26  | 60 | 8160.  | 103.22 | 108.49 | -5.27 | -6.17 | 060      | 100. |
| 27  | 61 | 8296.  | 103.33 | 108.51 | -5.18 | -6.16 | 060      | 100. |
| 28  | 62 | 8432.  | 103.44 | 108.53 | -5.09 | -6.14 | 060      | 98.  |
| 29  | 63 | 8568.  | 103.56 | 108.55 | -4.99 | -6.12 | 060      | 97.  |
| 30  | 64 | 8704.  | 103.67 | 108.57 | -4.90 | -6.10 | 060      | 95.  |
| 31  | 65 | 8840.  | 103.78 | 108.60 | -4.82 | -6.08 | 060      | 95.  |
| 32  | 66 | 8976.  | 103.89 | 108.62 | -4.73 | -6.06 | 060      | 94.  |
| 33  | 67 | 9112.  | 104.01 | 108.64 | -4.63 | -6.04 | 060      | 93.  |
| 34  | 68 | 9248.  | 104.12 | 108.66 | -4.54 | -6.02 | 060      | 91.  |
| 35  | 69 | 9384.  | 104.23 | 108.69 | -4.46 | -6.00 | 060      | 90.  |
| 36  | 70 | 9520.  | 104.34 | 108.71 | -4.37 | -5.97 | 060      | 90.  |
| 37  | 71 | 9656.  | 104.46 | 108.73 | -4.27 | -5.95 | 060      | 89.  |
| 38  | 72 | 9792.  | 104.57 | 108.75 | -4.18 | -5.93 | 060      | 88.  |
| 39  | 73 | 9928.  | 104.68 | 108.77 | -4.09 | -5.90 | 060      | 88.  |
| 40  | 74 | 10064. | 104.80 | 108.80 | -4.00 | -5.87 | 060      | 86.  |
| 41  | 75 | 10200. | 104.91 | 108.82 | -3.91 | -5.85 | 060      | 85.  |
| 42  | 76 | 10336. | 105.02 | 108.84 | -3.82 | -5.82 | 060      | 86.  |
| 43  | 77 | 10472. | 105.13 | 108.86 | -3.73 | -5.79 | 060      | 84.  |
| 44  | 78 | 10608. | 105.25 | 108.89 | -3.64 | -5.77 | 060      | 83.  |
| 45  | 79 | 10744. | 105.36 | 108.91 | -3.55 | -5.74 | 055      | 82.  |
| 46  | 80 | 10880. | 105.47 | 108.93 | -3.46 | -5.71 | 055      | 83.  |
| 47  | 81 | 11016. | 105.58 | 108.95 | -3.37 | -5.68 | 055      | 81.  |
| 48  | 82 | 11152. | 105.70 | 108.97 | -3.27 | -5.65 | 055      | 80.  |
| 49  | 83 | 11288. | 105.81 | 109.00 | -3.19 | -5.62 | 055      | 81.  |
| 50  | 84 | 11424. | 105.92 | 109.02 | -3.10 | -5.59 | 055      | 80.  |
| 51  | 85 | 11560. | 106.03 | 109.04 | -3.01 | -5.56 | 055      | 79.  |
| 52  | 86 | 11696. | 106.15 | 109.06 | -2.91 | -5.53 | 055      | 79.  |
| 53  | 87 | 11832. | 106.26 | 109.08 | -2.82 | -5.50 | 055      | 78.  |

|     |     |        |        |        |       |                |     |     |
|-----|-----|--------|--------|--------|-------|----------------|-----|-----|
| 1/6 | 88  | 11968. | 106.37 | 109.11 | -2.74 | -5.47          | 055 | 77. |
| 1   | 89  | 12104. | 106.49 | 109.13 | -2.64 | -5.44          | 055 | 78. |
| 2   | 90  | 12240. | 106.60 | 109.15 | -2.55 | -5.40          | 055 | 77. |
| 3   | 91  | 12376. | 106.71 | 109.17 | -2.46 | -5.37          | 055 | 77. |
| 4   | 92  | 12512. | 106.82 | 109.20 | -2.38 | -5.34          | 055 | 76. |
| 5   | 93  | 12648. | 106.94 | 109.22 | -2.28 | -5.31          | 055 | 75. |
| 6   | 94  | 12784. | 107.03 | 109.14 | -2.11 | -5.27          | 055 | 46. |
| 7   |     | 12850. |        |        |       | SEC. 14800.000 |     |     |
| 8   |     | 12860. |        |        |       | SEC. 14810.000 |     |     |
| 9   | 95  | 12920. | 107.06 | 108.66 | -1.60 | -5.23          | 050 | 24. |
| 10  | 96  | 13056. | 107.12 | 108.84 | -1.72 | -5.20          | 050 | 23. |
| 11  |     | 13085. |        |        |       | SEC. 15035.000 |     |     |
| 12  |     | 13095. |        |        |       | SEC. 15045.000 |     |     |
| 13  |     | 13175. |        |        |       | SEC. 15125.000 |     |     |
| 14  | 97  | 13192. | 107.52 | 111.71 | -4.19 | -5.19          | 050 | 24. |
| 15  |     | 13250. |        |        |       | SEC. 15200.000 |     |     |
| 16  | 98  | 13328. | 107.85 | 114.01 | -6.16 | -5.20          | 050 | 23. |
| 17  | 99  | 13464. | 107.89 | 114.02 | -6.13 | -5.21          | 050 | 24. |
| 18  | 100 | 13600. | 107.94 | 114.02 | -6.08 | -5.22          | 050 | 26. |
| 19  | 101 | 13736. | 107.98 | 114.02 | -6.04 | -5.22          | 050 | 27. |
| 20  | 102 | 13872. | 108.02 | 114.03 | -6.01 | -5.23          | 050 | 27. |
| 21  |     | 13875. |        |        |       | SEC. 15825.000 |     |     |
| 22  |     | 13975. |        |        |       | SEC. 15925.000 |     |     |
| 23  |     | 13985. |        |        |       | SEC. 15935.000 |     |     |
| 24  | 103 | 14008. | 108.18 | 114.07 | -5.89 | -5.24          | 050 | 29. |
| 25  |     | 14010. |        |        |       | SEC. 15960.000 |     |     |
| 26  |     | 14020. |        |        |       | SEC. 15970.000 |     |     |
| 27  |     | 14085. |        |        |       | SEC. 16035.000 |     |     |
| 28  | 104 | 14144. | 108.55 | 114.16 | -5.61 | -5.24          | 050 | 30. |
| 29  | 105 | 14280. | 108.87 | 114.21 | -5.34 | -5.24          | 050 | 30. |
| 30  | 106 | 14416. | 109.03 | 114.22 | -5.19 | -5.24          | 050 | 31. |
| 31  | 107 | 14552. | 109.20 | 114.23 | -5.03 | -5.24          | 050 | 32. |
| 32  | 108 | 14688. | 109.36 | 114.24 | -4.88 | -5.24          | 050 | 32. |
| 33  | 109 | 14824. | 109.53 | 114.26 | -4.73 | -5.23          | 050 | 32. |
| 34  | 110 | 14960. | 109.69 | 114.27 | -4.58 | -5.23          | 050 | 33. |
| 35  | 111 | 15096. | 109.86 | 114.28 | -4.42 | -5.22          | 050 | 33. |
| 36  | 112 | 15232. | 110.03 | 114.29 | -4.26 | -5.21          | 050 | 33. |
| 37  | 113 | 15368. | 110.19 | 114.30 | -4.11 | -5.20          | 050 | 33. |
| 38  | 114 | 15504. | 110.36 | 114.31 | -3.95 | -5.19          | 050 | 33. |
| 39  | 115 | 15640. | 110.52 | 114.33 | -3.81 | -5.18          | 050 | 34. |
| 40  | 116 | 15776. | 110.69 | 114.34 | -3.65 | -5.16          | 050 | 33. |
| 41  | 117 | 15912. | 110.85 | 114.35 | -3.50 | -5.15          | 050 | 32. |
| 42  | 118 | 16048. | 111.02 | 114.36 | -3.34 | -5.13          | 050 | 31. |
| 43  | 119 | 16184. | 111.18 | 114.37 | -3.19 | -5.12          | 050 | 30. |
| 44  | 120 | 16320. | 111.35 | 114.38 | -3.03 | -5.10          | 050 | 31. |
| 45  | 121 | 16456. | 111.52 | 114.39 | -2.87 | -5.08          | 050 | 31. |
| 46  | 122 | 16592. | 111.68 | 114.41 | -2.73 | -5.06          | 050 | 30. |
| 47  | 123 | 16728. | 111.85 | 114.42 | -2.57 | -5.04          | 050 | 29. |
| 48  | 124 | 16864. | 112.01 | 114.43 | -2.42 | -5.02          | 050 | 28. |
| 49  | 125 | 17000. | 112.18 | 114.44 | -2.26 | -5.00          | 050 | 28. |
| 50  | 126 | 17136. | 112.34 | 114.45 | -2.11 | -4.98          | 050 | 27. |
| 51  | 127 | 17272. | 112.51 | 114.46 | -1.95 | -4.95          | 050 | 28. |
| 52  |     | 17375. |        |        |       | SEC. 19325.000 |     |     |

52 53 54 55 56 57

1/8 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 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76

|     |        |        |        |       |       |                |     |
|-----|--------|--------|--------|-------|-------|----------------|-----|
| 128 | 17408. | 112.70 | 114.51 | -1.81 | -4.93 | 050            | 27. |
| 129 | 17544. | 112.96 | 114.72 | -1.76 | -4.90 | 050            | 28. |
| 130 | 17680. | 113.29 | 115.05 | -1.76 | -4.88 | 050            | 26. |
| 131 | 17816. | 113.62 | 115.37 | -1.75 | -4.86 | 050            | 26. |
| 132 | 17952. | 113.95 | 115.70 | -1.75 | -4.83 | 050            | 26. |
| 133 | 18088. | 114.28 | 116.02 | -1.74 | -4.81 | 050            | 27. |
| 134 | 18224. | 114.61 | 116.35 | -1.74 | -4.79 | 050            | 26. |
| 135 | 18360. | 114.94 | 116.67 | -1.73 | -4.76 | 050            | 26. |
| 136 | 18496. | 115.27 | 117.00 | -1.73 | -4.74 | 045            | 26. |
| 137 | 18632. | 115.60 | 117.32 | -1.72 | -4.72 | 045            | 26. |
| 138 | 18768. | 115.93 | 117.65 | -1.72 | -4.70 | 045            | 25. |
| 139 | 18904. | 116.26 | 117.98 | -1.72 | -4.68 | 045            | 25. |
| 140 | 19040. | 116.59 | 118.30 | -1.71 | -4.65 | 045            | 26. |
| 141 | 19176. | 116.92 | 118.63 | -1.71 | -4.63 | 045            | 26. |
| 142 | 19312. | 117.24 | 118.95 | -1.71 | -4.61 | 045            | 25. |
| 143 | 19448. | 117.57 | 119.28 | -1.71 | -4.59 | 045            | 24. |
| 144 | 19584. | 117.90 | 119.60 | -1.70 | -4.57 | 045            | 24. |
| 145 | 19720. | 118.23 | 119.93 | -1.70 | -4.55 | 045            | 25. |
| 146 | 19856. | 118.56 | 120.25 | -1.69 | -4.53 | 045            | 24. |
| 147 | 19992. | 118.89 | 120.58 | -1.69 | -4.51 | 045            | 24. |
| 148 | 20128. | 119.22 | 120.90 | -1.68 | -4.49 | 045            | 24. |
| 149 | 20264. | 119.55 | 121.23 | -1.68 | -4.48 | 045            | 24. |
| 150 | 20400. | 119.88 | 121.56 | -1.68 | -4.46 | 045            | 25. |
| 151 | 20536. | 120.21 | 121.88 | -1.67 | -4.44 | 045            | 24. |
| 152 | 20672. | 120.54 | 122.21 | -1.67 | -4.42 | 045            | 24. |
| 153 | 20808. | 120.87 | 122.53 | -1.66 | -4.40 | 045            | 24. |
| 154 | 20944. | 121.20 | 122.86 | -1.66 | -4.38 | 045            | 23. |
| 155 | 21080. | 121.53 | 123.18 | -1.65 | -4.37 | 045            | 24. |
| 156 | 21216. | 121.86 | 123.51 | -1.65 | -4.35 | 045            | 24. |
| 157 | 21352. | 122.19 | 123.83 | -1.64 | -4.33 | 045            | 23. |
| 158 | 21488. | 122.52 | 124.16 | -1.64 | -4.32 | 045            | 23. |
| 159 | 21624. | 122.85 | 124.48 | -1.63 | -4.30 | 045            | 23. |
| 160 | 21760. | 123.83 | 125.42 | -1.59 | -4.28 | SEC. 045       | 23. |
|     | 21775. |        |        |       |       | SEC. 23725.000 |     |
|     | 21816. |        |        |       |       | SEC. 23766.000 |     |
|     | 21875. |        |        |       |       | SEC. 23825.000 |     |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS  
 INPUT 20N WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END  
 OF EACH REACH BY INC NO. FOR EXAMPLE 202 83 160  
 A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

|     |        |        |        |       |       |                |     |
|-----|--------|--------|--------|-------|-------|----------------|-----|
| 160 | 21760. | 123.83 | 125.42 | -1.59 | -4.28 | SEC. 045       | 23. |
|     | 21775. |        |        |       |       | SEC. 23725.000 |     |
|     | 21816. |        |        |       |       | SEC. 23766.000 |     |
|     | 21875. |        |        |       |       | SEC. 23825.000 |     |
| 37  |        |        |        |       |       |                |     |
| 38  |        |        |        |       |       |                |     |
| 39  |        |        |        |       |       |                |     |
| 40  |        |        |        |       |       |                |     |
| 41  |        |        |        |       |       |                |     |
| 42  |        |        |        |       |       |                |     |
| 43  |        |        |        |       |       |                |     |
| 44  |        |        |        |       |       |                |     |
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| 47  |        |        |        |       |       |                |     |
| 48  |        |        |        |       |       |                |     |
| 49  |        |        |        |       |       |                |     |
| 50  |        |        |        |       |       |                |     |
| 51  |        |        |        |       |       |                |     |
| 52  |        |        |        |       |       |                |     |
| 53  |        |        |        |       |       |                |     |
| 54  |        |        |        |       |       |                |     |
| 55  |        |        |        |       |       |                |     |
| 56  |        |        |        |       |       |                |     |
| 57  |        |        |        |       |       |                |     |

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO.   | TOTAL LENGTH | WEIGHTED AVG DIFFERENCE BETWEEN BASE FLOOD AND |
|---|--------------|--|
| 83  | 11288.       | -5.62 -1.78 1.68                               |
| FHF FOR REACH 1 = 055 WITH 81. PERCENT OF THE REACH WITHIN 1.0 FEET<br>ZONE FOR THE REACH = A11 |              |  |
| 97  | 13192.       | -2.61 -1.07 1.72                               |
| FHF FOR REACH 2 = 025 WITH 86. PERCENT OF THE REACH WITHIN 1.0 FEET<br>ZONE FOR THE REACH = A 5 |              |  |
| 114   | 15504.       | -5.20 -2.50 7.87                               |
| FHF FOR REACH 3 = 050 WITH 88. PERCENT OF THE REACH WITHIN 1.0 FEET<br>ZONE FOR THE REACH = A10 |              |  |
| 160   | 21760.       | -2.03 -.61 5.12                                |
| FHF FOR REACH 4 = 020 WITH 89. PERCENT OF THE REACH WITHIN 1.0 FEET<br>ZONE FOR THE REACH = A 4 |              |  |

1 \*\*\*\*\*  
2 HEC2 RELEASE DATED NOV 76 UPDATED MARC 1982  
3 ERROR CORR - 01,02,03,04,05  
4 MODIFICATION - 50,51,52,53,54,55  
5 \*\*\*\*\*  
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