A103.904

SCANNED

ENG COPY

Greiner, Inc.
7310 N. 16th Street, Suite 160
Phoenix, Arizona 85020-2402

Property of
Flood Control Distr... Library
Ple...
2801 W. Durango
Phoenix, AZ 85009

OLD CROSS CUT CANAL E002101
Submitted: 2/24/93

HEC-2 Files
STORM Program Output File

GREINER ENGINEERING SCIENCES

D1027 : STORM DRAIN ANALYSIS
VERSION 02.01

PROJECT : Old Cross Cut Canal (1-18x10) EG=1196.32 W/ LAT, n
DESIGNER : =0.014

DATE : 23-FEB-93
TIME : 14:49:07

INPUT FILE : rev-occ8.inp

length of pipe — invert ds — invert us — max allow. HGL — Ent. Loss — minor loss

INPUT

	CD	L2	MAX Q	ADJ Q	LENGTH	FL 1	FL 2	CTL/TW	D	W	S	KJ	KE	KM	LC	L1	L3	L4	A1	A3	A4	J	N
	8	1						195.54															
	2	2	2050.0	2050.0	7.00	179.90	179.92	193.00	120.	216.	3	0.07	0.00	0.00	1	3	22	0	0.	68.	0.	6.00	0.014
1064	2	3	2050.0	2050.0	1057.00	179.95	182.43	203.48	120.	216.	3	0.05	0.00	0.00	0	4	23	0	0.	68.	0.	8.00	0.014
16+592		4	2050.0	2050.0	595.00	182.45	183.84	203.97	120.	216.	3	0.05	0.00	0.00	0	5	24	0	0.	68.	0.	8.00	0.014
26+372		5	2050.0	2050.0	978.00	183.86	186.15	205.49	120.	216.	3	0.15	0.00	0.00	0	6	25	0	0.	45.	0.	22.00	0.014
39+172		6	2050.0	2050.0	1280.00	186.22	189.22	207.06	120.	216.	3	0.08	0.00	0.00	0	7	26	0	0.	45.	0.	16.00	0.014
43+882		7	1800.0	1800.0	471.00	189.28	190.39	207.00	120.	216.	3	0.05	0.00	0.00	0	8	27	0	0.	68.	0.	4.00	0.014
45+492		8	1800.0	1800.0	161.00	190.40	190.78	207.41	120.	216.	3	0.05	0.00	0.00	0	9	28	0	0.	68.	0.	6.00	0.014
52+702		9	1800.0	1800.0	721.00	190.79	192.48	210.74	120.	216.	3	0.05	0.00	0.00	0	10	29	0	0.	68.	0.	8.00	0.014
59+762		10	1650.0	1650.0	706.00	192.50	194.15	213.00	120.	216.	3	0.05	0.00	0.00	0	11	30	0	0.	68.	0.	4.00	0.014
6408	2	11	1650.0	1650.0	432.00	194.16	195.17	213.18	120.	216.	3	0.00	0.00	0.00	0	12	0	0	0.	0.	0.	0.00	0.014
6418	2	12	1650.0	1650.0	10.00	195.17	195.22	213.23	120.	120.	3	0.00	0.10	0.00	0	13	0	0	0.	0.	0.	0.00	0.014
6453	2	13	1650.0	1650.0	75.00	195.22	195.57	213.68	120.	120.	3	0.30	0.00	0.00	0	14	31	0	0.	45.	0.	30.00	0.014
7095.52		14	1250.0	1250.0	602.50	195.76	198.58	218.72	120.	96.	3	0.05	0.00	0.00	0	15	32	0	0.	68.	0.	5.00	0.014
7790	2	15	1250.0	1250.0	694.50	198.60	201.85	222.05	120.	96.	3	0.25	0.00	0.00	0	16	33	0	0.	68.	0.	10.00	0.014
8426	2	16	1250.0	1250.0	636.00	201.95	204.95	227.17	120.	96.	3	0.05	0.00	0.00	0	17	34	0	0.	68.	0.	4.00	0.014
8539	2	17	1250.0	1250.0	113.00	204.97	205.50	228.31	120.	96.	3	0.00	0.00	0.00	0	18	0	0	0.	0.	0.	0.00	0.014
8549	2	18	1250.0	1250.0	10.00	205.50	205.59	228.41	120.	96.	3	0.00	0.10	0.00	0	19	0	0	0.	0.	0.	0.00	0.014
8851.5	2	19	1250.0	1250.0	302.50	205.59	208.21	230.00	120.	96.	3	0.07	0.00	0.00	0	20	35	0	0.	68.	0.	7.00	0.014
10391	2	20	1250.0	1250.0	1539.50	208.27	221.61	243.31	120.	96.	3	0.07	0.00	0.00	0	21	36	0	0.	68.	0.	4.00	0.014
11091	2	21	1250.0	1250.0	700.00	221.62	227.69	252.00	120.	96.	1	0.00	0.28	0.00	0	0	0	0	0.	0.	0.	0.00	0.014
	2	22	322.0	322.0	60.00	179.93	180.53	192.35	54.	0.	1	0.00	0.20	0.00	3	0	0	0	0.	0.	0.	0.00	0.014
	2	23	81.0	81.0	60.00	182.44	183.04	201.68	48.	0.	1	0.00	0.20	0.00	4	0	0	0	0.	0.	0.	0.00	0.014
	2	24	88.0	88.0	75.00	183.85	184.60	203.00	48.	0.	1	0.00	0.20	0.00	5	0	0	0	0.	0.	0.	0.00	0.014

D = depth, W = width, KJ = Junct Loss

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

REV-OCC8.OUT

PROJECT : Old Cross Cut Canal (1-18x10) EG=1196.32 W/ LAT, n DATE : 23-FEB-93
DESIGNER : =0.014 INPUT FILE : rev-occ8.inp TIME : 14:49:07

INPUT

CD	L2	MAX Q	ADJ Q	LENGTH	FL 1	FL 2	CTL/TW	D	W	S	KJ	KE	KM	LC	L1	L3	L4	A1	A3	A4	J	N
2	25	917.0	917.0	95.00	186.18	187.13	203.70	84.	240.	1	0.00	0.20	0.00	6	0	0	0	0.	0.	0.	0.00	0.014
2	26	300.0	300.0	85.00	189.24	190.09	204.85	72.	120.	1	0.00	0.20	0.00	7	0	0	0	0.	0.	0.	0.00	0.014
2	27	7.0	7.0	70.00	190.40	191.10	207.00	18.	0.	1	0.00	0.20	0.00	8	0	0	0	0.	0.	0.	0.00	0.014
2	28	56.0	56.0	85.00	190.79	191.64	207.06	42.	0.	1	0.00	0.20	0.00	9	0	0	0	0.	0.	0.	0.00	0.014
2	29	129.0	129.0	90.00	192.49	193.39	208.23	60.	60.	1	0.00	0.20	0.00	10	0	0	0	0.	0.	0.	0.00	0.014
2	30	19.0	19.0	95.00	194.16	195.11	210.72	24.	0.	1	0.00	0.20	0.00	11	0	0	0	0.	0.	0.	0.00	0.014
2	31	802.0	802.0	60.00	195.64	196.24	211.90	84.	240.	1	0.00	0.20	0.00	14	0	0	0	0.	0.	0.	0.00	0.014
2	32	33.0	33.0	80.00	198.59	199.39	217.72	30.	0.	1	0.00	0.20	0.00	15	0	0	0	0.	0.	0.	0.00	0.014
2	33	196.0	196.0	40.00	201.89	202.29	221.68	48.	84.	1	0.00	0.20	0.00	16	0	0	0	0.	0.	0.	0.00	0.014
2	34	9.0	9.0	45.00	204.96	205.41	226.11	18.	0.	1	0.00	0.20	0.00	17	0	0	0	0.	0.	0.	0.00	0.014
2	35	71.0	71.0	60.00	208.24	208.84	229.90	48.	0.	1	0.00	0.20	0.00	20	0	0	0	0.	0.	0.	0.00	0.014
2	36	24.0	24.0	80.00	221.62	222.42	243.11	24.	0.	1	0.00	0.20	0.00	21	0	0	0	0.	0.	0.	0.00	0.014

PROJECT : Old Cross Cut Canal (1-18x10) EG=1196.32 W/ LAT, n DATE : 23-FEB-93
DESIGNER : =0.014 INPUT FILE : rev-occ8.inp TIME : 14:49:07

How did you get this elev

OUTPUT

HGL HIGHER THAN ALLOWABLE

LINE NO	Q (CFS)	D (IN)	W (IN)	DN (FT)	DC (FT)	FLOW TYPE	SF-FULL (FT/FT)	V 1 (FPS)	V 2 (FPS)	FL 1 (FT)	FL 2 (FT)	HG 1 CALC	HG 2 CALC	D 1 (FT)	D 2 (FT)	TW CALC	TW CK	REMARKS
1	HYDRAULIC GRADE LINE CONTROL = 195.54																	
2	2050.0	120	216	7.75	7.38	FULL	0.00243	11.4	11.4	179.90	179.92	195.54	195.56	15.64	15.64	0.00	0.00	15.64'
3	2050.0	120	216	8.34	7.38	FULL	0.00243	11.4	11.4	179.95	182.43	195.71	198.28	15.76	15.85	0.00	0.00	15.85'
4	2050.0	120	216	8.35	7.38	FULL	0.00243	11.4	11.4	182.45	183.84	198.40	199.84	15.95	16.00	0.00	0.00	
5	2050.0	120	216	8.34	7.38	FULL	0.00243	11.4	11.4	183.86	186.15	199.96	202.34	16.10	16.19	0.00	0.00	
6	2050.0	120	216	8.34	7.38	FULL	0.00243	11.4	11.4	186.22	189.22	202.69	205.80	16.47	16.58	0.00	0.00	
7	1800.0	120	216	7.56	6.76	FULL	0.00187	10.0	10.0	189.28	190.39	206.45	207.34	17.17	16.95	0.00	0.00	
8	1800.0	120	216	7.56	6.76	FULL	0.00187	10.0	10.0	190.40	190.78	207.42	207.72	17.02	16.94	0.00	0.00	
9	1800.0	120	216	7.58	6.76	FULL	0.00187	10.0	10.0	190.79	192.48	207.81	209.16	17.02	16.68	0.00	0.00	
10	1650.0	120	216	7.12	6.38	FULL	0.00157	9.2	9.2	192.50	194.15	209.50	210.61	17.00	16.46	0.00	0.00	
11	1650.0	120	216	7.12	6.38	FULL	0.00157	9.2	9.2	194.16	195.17	210.68	211.36	16.52	16.19	0.00	0.00	
12	1650.0	120	120	9.88	9.45	FULL	0.00712	16.5	16.5	195.17	195.22	208.68	208.75	13.51	13.53	0.00	0.00	
13	1650.0	120	120	10.00	9.45	FULL	0.00712	16.5	16.5	195.22	195.57	209.17	209.70	13.95	14.13	0.00	0.00	
14	1250.0	120	96	10.00	9.11	FULL	0.00747	15.6	15.6	195.76	198.58	211.63	216.13	15.87	17.55	0.00	0.00	
15	1250.0	120	96	10.00	9.11	FULL	0.00747	15.6	15.6	198.60	201.85	216.36	221.55	17.76	19.70	0.00	0.00	
16	1250.0	120	96	10.00	9.11	FULL	0.00747	15.6	15.6	201.95	204.95	222.57	227.32	20.62	22.37	0.00	0.00	

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HGL HIGHER THAN ALLOWABLE

OUTPUT

LINE NO	Q (CFS)	D (IN)	W (IN)	DN (FT)	DC (FT)	FLOW TYPE	SF-FULL (FT/FT)	V 1 (FPS)	V 2 (FPS)	FL 1 (FT)	FL 2 (FT)	HG 1 CALC	HG 2 CALC	D 1 (FT)	D 2 (FT)	TW CALC	TW CK	REMARKS
17	1250.0	120	96	10.00	9.11	FULL	0.00747	15.6	15.6	204.97	205.50	227.54	228.39	22.57	22.89	0.00	0.00	
18	1250.0	120	96	8.06	9.11	FULL	0.00747	15.6	15.6	205.50	205.59	228.39	228.46	22.89	22.87	0.00	0.00	
19	1250.0	120	96	8.18	9.11	FULL	0.00747	15.6	15.6	205.59	208.21	228.84	231.10	23.25	22.89	0.00	0.00	
20	1250.0	120	96	8.18	9.11	FULL	0.00747	15.6	15.6	208.27	221.61	231.42	242.92	23.15	21.31	0.00	0.00	
21	1250.0	120	96	8.18	9.11	FULL	0.00747	15.6	15.6	221.62	227.69	243.22	248.45	21.60	20.76	253.30	252.00	

HGL HIGHER THAN ALLOW

3 HYDRAULIC GRADE LINE CONTROL = 195.63

22	322.0	54	0	4.50	4.41	FULL	0.03109	20.2	20.2	179.93	180.53	195.63	197.50	15.70	16.97	205.14	192.35	

4 HYDRAULIC GRADE LINE CONTROL = 198.34

23	81.0	48	0	2.25	2.72	FULL	0.00369	6.4	6.4	182.44	183.04	198.34	198.56	15.90	15.52	199.33	201.68	

5 HYDRAULIC GRADE LINE CONTROL = 199.90

24	88.0	48	0	2.37	2.84	FULL	0.00435	7.0	7.0	183.85	184.60	199.90	200.23	16.05	15.63	201.14	203.00	

6 HYDRAULIC GRADE LINE CONTROL = 202.51

25	917.0	84	240	2.64	4.02	FULL	0.00107	6.6	6.6	186.18	187.13	202.51	202.62	16.33	15.49	203.41	203.70	

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OUTPUT

LINE NO	Q (CFS)	D (IN)	W (IN)	DN (FT)	DC (FT)	FLOW TYPE	SF-FULL (FT/FT)	V 1 (FPS)	V 2 (FPS)	FL 1 (FT)	FL 2 (FT)	HG 1 CALC	HG 2 CALC	D 1 (FT)	D 2 (FT)	TW CALC	TW CK	REMARKS
7	HYDRAULIC GRADE LINE CONTROL = 206.13																	
26	300.0	72	120	2.15	3.03	FULL	0.00096	5.0	5.0	189.24	190.09	206.13	206.21	16.89	16.12	206.67	204.85	
8	HYDRAULIC GRADE LINE CONTROL = 207.38																	
27	7.0	18	0	0.94	1.02	FULL	0.00515	4.0	4.0	190.40	191.10	207.38	207.74	16.98	16.64	208.03	207.00	
9	HYDRAULIC GRADE LINE CONTROL = 207.77																	
28	56.0	42	0	1.95	2.34	FULL	0.00359	5.8	5.8	190.79	191.64	207.77	208.07	16.98	16.43	208.70	207.06	
10	HYDRAULIC GRADE LINE CONTROL = 209.33																	
29	129.0	60	60	2.19	2.74	FULL	0.00176	5.2	5.2	192.49	193.39	209.33	209.49	16.84	16.10	209.98	208.23	
11	HYDRAULIC GRADE LINE CONTROL = 210.65																	
30	19.0	24	0	1.49	1.57	FULL	0.00818	6.0	6.0	194.16	195.11	210.65	211.42	16.49	16.31	212.10	210.72	
14	HYDRAULIC GRADE LINE CONTROL = 210.67																	
31	802.0	84	240	2.42	3.68	FULL	0.00082	5.7	5.7	195.64	196.24	210.67	210.72	15.03	14.48	211.33	211.90	

HGL HIGHER THAN ALLOW.

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OUTPUT

LINE NO	Q (CFS)	D (IN)	W (IN)	DN (FT)	DC (FT)	FLOW TYPE	SF-FULL (FT/FT)	V 1 (FPS)	V 2 (FPS)	FL 1 (FT)	FL 2 (FT)	HG 1 CALC	HG 2 CALC	D 1 (FT)	D 2 (FT)	TW CALC	TW CK	REMARKS
15	HYDRAULIC GRADE LINE CONTROL = 216.24																	
32	33.0	30	0	1.80	1.95	FULL	0.00751	6.7	6.7	198.59	199.39	216.24	216.84	17.65	17.45	217.69	217.72	
16	HYDRAULIC GRADE LINE CONTROL = 222.06																	
33	196.0	48	84	2.17	2.90	FULL	0.00315	7.0	7.0	201.89	202.29	222.06	222.18	20.17	19.89	223.10	221.68	
17	HYDRAULIC GRADE LINE CONTROL = 227.43																	
34	9.0	18	0	1.14	1.16	FULL	0.00851	5.1	5.1	204.96	205.41	227.43	227.81	22.47	22.40	228.30	226.11	
20	HYDRAULIC GRADE LINE CONTROL = 231.26																	
35	71.0	48	0	2.07	2.54	FULL	0.00283	5.6	5.6	208.24	208.84	231.26	231.43	23.02	22.59	232.02	229.90	
21	HYDRAULIC GRADE LINE CONTROL = 243.07																	
36	24.0	24	0	2.00	1.73	FULL	0.01305	7.6	7.6	221.62	222.42	243.07	244.11	21.45	21.69	245.20	243.11	

V 1, FL 1, D 1 AND HG 1 REFER TO DOWNSTREAM END
V 2, FL 2, D 2 AND HG 2 REFER TO UPSTREAM END
X - DISTANCE IN FEET FROM DOWNSTREAM END TO POINT WHERE HG INTERSECTS SOFFIT IN SEAL CONDITION
X(N) - DISTANCE IN FEET FROM DOWNSTREAM END TO POINT WHERE WATER SURFACE REACHES NORMAL DEPTH BY EITHER DRAWDOWN OR BACKWATER
X(J) - DISTANCE IN FEET FROM DOWNSTREAM END TO POINT WHERE HYDRAULIC JUMP OCCURS IN LINE
F(J) - THE COMPUTED FORCE AT THE HYDRAULIC JUMP
D(BJ) - DEPTH OF WATER BEFORE THE HYDRAULIC JUMP (UPSTREAM SIDE)
D(AJ) - DEPTH OF WATER AFTER THE HYDRAULIC JUMP (DOWNSTREAM SIDE)
SEAL INDICATES FLOW CHANGES FROM PART TO FULL OR FROM FULL TO PART
HYD JUMP INDICATES THAT FLOW CHANGES FROM SUPERCRITICAL TO SUBCRITICAL THROUGH A HYDRAULIC JUMP
HJ @ UJT INDICATES THAT HYDRAULIC JUMP OCCURS AT THE JUNCTION AT THE UPSTREAM END OF THE LINE
HJ @ DJT INDICATES THAT HYDRAULIC JUMP OCCURS AT THE JUNCTION AT THE DOWNSTREAM END OF THE LINE

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T1       GREINER,INC    UPDATE    02-1-93     (FILENAME = OCC-M1D2.DAT)
T2       ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3       SUB-CRITICAL FLOW M1D2                          u/s of McDowell Road
*
* Cross-section numbering has been changed:
*        d/s face of the McDowell Rd. culverts ===> XS  #726.00
*        u/s       "        "        "          ===> XS #1000.00
*        The XS numbering u/s of McDowell Rd. has been modified accordingly.
*        These XS #'s apply to the all other HEC-2 runs
*                                  ← subcritical — slope-area method
J1     0       2       0       0  .00532       0       0       0     180       0
J2     1       0       0       0       0       0       0       6
J3    38      43      39       4      25      26      23      24       1      42
* Refer to the Comments after XS #766 about the discharges.
NC  .035    .035    .015
QT     2    4710    4710       0       0       0
X1     0       7  999.99 1016.01
X3    10
GR184.67  950.00  184.67  999.99  170.00 1000.00  169.67 1008.00  170.00 1016.00
GR184.67 1016.01  184.67 1066.00
X1   384       7  999.99 1016.01     374     394     384
X3    10
GR186.71  950.00  186.71  999.99  172.04 1000.00  171.71 1008.00  172.04 1016.00
GR186.71 1016.01  186.71 1066.00
X1   434       7  999.99 1016.01      49      51      50
X3    10
GR188.36  950.00  188.36  999.99  172.31 1000.00  171.98 1008.00  172.31 1016.00
GR188.36 1016.01  188.36 1066.00
X1   484       7  999.99 1016.01      49      51      50
X3    10
GR190.00  950.00  190.00  999.99  173.13 1000.00  172.80 1008.00  173.13 1016.00
GR190.00 1016.01  190.00 1066.00
NC                          .3      .5  (Bend & Transition losses)
X1   684       7  999.99 1026.01     200     200     200
GR190.00  950.00  190.00  999.99  176.50 1000.00  176.07 1013.00  176.50 1026.00
GR190.00 1026.01  190.00 1076.00
X1   726       7    1000    1026      42      42      42
X3    10                                                189     189
GR192.00  950.00  189.00  999.99  177.11 1000.00  177.11 1013.00  177.11 1026.00
GR189.00 1026.01  192.00 1076.00
* The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
*    discharges for 25, 50, 100-yr event, respectively.  This is due to the
*    assumption that those amount of discharges do not join the d/s channel
*    flowing west along the McDowell Road.
SC 2.014      .2     2.6              10      12     274     9.2  179.85  177.11
X1  1000      10     987    1013     274     274     274
X2                     2  189.85
X3    10                                                194     194
X5     2  195.20  195.20
BT    -7     966  193.00             972  193.00             975  194.00
BT           985  194.00            1027  194.00            1041  193.90
BT          1070  193.90
GR   193     966     193     972     194  984.99  193.87     985  179.85     987
GR179.85    1013  193.87    1027     194 1027.01   193.9    1041   193.9    1070
NC 0.040   0.040   0.025       0       0
QT     2    4710     610       0       0       0
X1  1110    14.0  973.01  1024.0   111.0   108.0   110.0     0.0     0.0       0
CI    -1  193.30   0.045       0       0       0   -60.0
X3    10   ↑ invert  'n value'                          60' BW - fill the channel
GR 205.0   973.0   195.0  973.01   190.0   980.0   185.0   984.5   181.0   989.0
GR 181.0  1000.0   181.0  1006.0   185.0  1013.0   190.0  1018.5   195.0  1024.0
GR 195.5  1030.0   195.0  1036.0   194.0  1058.0   204.0 1058.01
NC     0       0       0     0.1    0.35  ← Bend losses
X1  1514    14.0  974.01  1030.0   418.0   390.0   404.0     0.0     0.0       0
CI    -1  196.60       0       0       0       0   -60.0
X3    10
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OCC-M1D2

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GR 208.6    974.0    198.6   974.01    195.0    977.0    185.0    988.0    181.1    992.0
GR 181.1   1010.0    185.0   1014.0    195.0   1023.0    198.6   1030.0    198.0   1034.5
GR 197.0   1046.0    197.0   1053.0    197.0   1057.0    207.0   1057.0
QT     2     4490      390      510        0        0        0
X1  1912     17.0    972.4   1034.0    408.0    388.0    398.0      0.0      0.0        0
CI    -1   200.70        0        0        0        0    -60.0
X3    10
GR 210.5    912.0    205.0   912.01    200.5   912.02    203.0    926.0    203.6    948.0
GR 203.0    972.4    200.0    975.5    185.0    989.0    181.7    994.0    181.7   1011.0
GR 185.0   1015.0    200.0   1029.0    202.7   1034.0    202.0   1044.0    201.0   1055.0
GR 200.0   1064.0    210.0   1064.0
X1  2312     26.0    969.0   1028.0    410.0    390.0    400.0      0.0      0.0        0
CI    -1   201.00        0        0        0        0    -60.0
X3    10
GR 213.5    900.5    207.5   900.51    205.5   900.52    203.5   900.53    204.9    925.2
GR 204.2    961.5    204.0    969.0    203.0    971.8    200.0    974.2    195.0    979.5
GR 190.0    983.8    185.0    987.5    184.0    988.5    183.0    989.5    183.2   1000.0
GR 185.0   1009.5    190.0   1014.5    195.0   1019.5    200.0   1024.5    203.0   1028.0
GR 203.9   1036.0    203.0   1047.0    202.0   1054.0    201.0   1063.0    200.9   1070.0
GR 210.9  1070.01
NC     0        0        0      0.3      0.5
X1  2485     23.0    969.7   1027.5    173.0    173.0    173.0      0.0      0.0        0
CI    -1   201.00        0        0        0        0    -80.0
X3    10
GR 213.8    904.5    203.8   904.51    204.0    922.5    204.1    929.4    204.1    937.0
GR 203.0    969.7    200.0    977.5    199.0    980.5    198.0    984.0    197.6    990.0
GR 197.6    991.0    183.9    991.0    183.9   1007.0    197.6   1007.0    197.6   1008.0
GR 198.0   1013.0    199.0   1016.0    200.0   1018.5    203.0   1027.5    203.0   1035.0
GR 203.0   1043.0    201.6   1064.0    211.6  1064.01
NC     0        0    0.016        0        0
X1  2515       20      963     1026       30       30       30        0        0        0
CI    -1   201.80    0.045        0        0        0    -80.0
GR213.90      901   203.90   901.01   204.00      926   204.00      934   203.00      963
GR202.00      972   200.00      979   199.00      982   197.60      990   197.60      991
GR184.00      991   184.00     1007   197.60     1007   199.00     1014   201.00     1019
GR203.00     1026   203.00     1042   202.00     1053   201.50     1059   211.50  1059.01
X1  2530     16.0    959.8   1025.0     15.0     15.0     15.0      0.0      0.0      0.0
CI    -1   202.50        0        0        0        0   -100.0
GR 213.9    901.0    203.9   901.01    203.0    959.8    197.6    980.0    197.6    991.5
GR 188.3    991.5    188.3   1007.5    197.6   1007.5    197.6   1018.0    200.0   1021.0
GR 203.0   1025.0    203.2   1036.0    203.0   1042.0    202.0   1050.0    201.5   1059.0
GR 211.5  1059.01
NC     0        0    0.025        0        0
QT     2     4410      310        0        0        0
X1  2712     18.0    975.8   1022.0    182.0    182.0    182.0      0.0      0.0        0
CI    -1   202.50    0.045        0        0        0   -100.0
X3    10
GR   214      899    203.7   899.01    204.2    970.0    204.0    975.8    200.0    980.8
GR 195.0    985.0    190.0    990.0    188.5    991.0    188.5   1007.0    190.0   1009.5
GR 195.0   1014.8    200.0   1019.5    203.0   1022.0    203.6     1036    203.0   1047.0
GR 202.0   1051.0    201.5   1057.0    211.5  1057.01
NC     0        0        0      0.1     0.35
X1  3112     22.0    971.0   1021.0    400.0    400.0    400.0      0.0      0.0        0
CI    -1   203.50        0        0        0        0   -100.0
X3    10
GR 214.0    893.5    204.0   893.51    203.0    900.8    203.6    908.0    203.0    917.0
GR 202.0    951.0    205.0    969.5    205.4    971.0    205.0    973.0    200.0    980.0
GR 195.0    984.7    190.0    988.8    189.4   1000.0    190.0   1006.8    195.0   1011.5
GR 200.0   1016.5    204.0   1021.0    204.5   1034.0    204.0   1045.0    203.0   1048.0
GR 202.4   1060.0    212  1060.01
QT     2     4350      250      310        0        0        0
X1  3513     22.0    976.8   1020.8    401.0    401.0    401.0      0.0      0.0        0
CI    -1   204.44        0        0        0        0   -100.0
X3    10
GR 214.0    896.0    204.0   896.01    205.0    923.0    205.1    933.5    205.0    942.0
GR 204.8    949.0    205.5    955.0    206.2    966.0    205.0    976.8    200.0    981.8
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GR 195.0   986.8   191.0   990.8   190.8  1000.0   191.0  1007.0   195.0  1011.1
GR 200.0  1015.8   205.0  1020.8   205.2  1035.0   205.0  1047.0   204.0  1051.0
GR 203.4  1080.0   213.4 1080.01
X1  3913    19.0   976.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.88       0       0       0       0  -100.0
X3    10
GR 215.1   898.0   210.1   898.01  205.1  898.02   204.6   942.0   205.0   967.0
GR 205.8   976.0   205.0   978.5   200.0   984.1   195.0   989.2   192.0   992.5
GR 191.3  1000.0   192.0  1006.5   195.0  1009.5   200.0  1015.0   205.0  1020.5
GR 206.0  1022.0   206.7  1028.5   202.4  1082.0   212.4 1082.01
X1  4313    28.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.50       0       0       0       0   -60.0
X3    10
GR 215.1   899.0   205.1   899.01  205.0   930.5   205.1   937.0   205.0   944.0
GR 204.4   959.0   205.0   971.0   205.1   977.0   205.0   979.5   200.0   985.0
GR 195.0   990.0   193.0   999.0   192.6  1000.0   193.0  1004.0   194.0  1008.0
GR 195.0  1009.0   200.0  1014.5   205.0  1018.5   206.0  1020.0   207.0  1022.0
GR 207.3  1025.0   207.0  1028.5   206.0  1038.0   205.0  1043.0   204.0  1052.0
GR 203.0  1058.0   202.3  1088.0   212.3 1088.01
QT     2    3850     250       0       0       0
X1  4713    24.0   976.0  1020.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  205.50       0       0       0       0   -60.0
X3    10
GR 215.9   915.0   213.9   915.01  210.9  915.02   205.9  915.03   206.0   972.0
GR 206.6   976.0   206.0   979.5   205.0   981.0   200.0   986.0   195.0   990.3
GR 193.0   992.0   192.8   995.0   193.0   998.5   194.0  1006.0   195.0  1007.5
GR 200.0  1013.5   205.0  1018.5   206.0  1020.5   206.5  1027.0   206.0  1034.8
GR 205.0  1040.5   204.0  1054.0   203.2  1085.0   213.2 1085.01
EJ
T1      GREINER,INC   FERGUSON  02-1-93     (FILENAME = OCC-M1D2.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D2                    Slope Area  CI BOTTOM WIDTH = VARIES
J1     0       3       0       0 0.00532       0       0       0   180.0       0
J2    15       0       0       0       0       0       0       7       0       0
```

Chimp BW on field 7

ER

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T1      GREINER,INC    UPDATE    02-1-93     (FILENAME = OCC-M1D2.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D2                      u/s of McDowell Road

  Cross-section numbering has been changed:
        d/s face of the McDowell Rd. culverts ===> XS  #726.00
        u/s       "       "       "          ===> XS #1000.00
        The XS numbering u/s of McDowell Rd. has been modified accordingly.
        These XS #'s apply to the all other HEC-2 runs


J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL     FQ

      0        2        0        0    .00532       0         0        0       180       0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      1        0        0        0        0        0        0        6


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38       43       39        4       25       26       23       24        1       42
  Refer to the Comments after XS #766 about the discharges.

NC     .035      .035      .015
QT        2      4710      4710        0         0         0
X1        0         7    999.99  1016.01
X3       10
GR   184.67    950.00    184.67   999.99    170.00   1000.00    169.67   1008.00    170.00   1016.00
GR   184.67   1016.01    184.67  1066.00

X1      384         7    999.99  1016.01       374       394       384
X3       10
GR   186.71    950.00    186.71   999.99    172.04   1000.00    171.71   1008.00    172.04   1016.00
GR   186.71   1016.01    186.71  1066.00

X1      434         7    999.99  1016.01        49        51        50
X3       10
GR   188.36    950.00    188.36   999.99    172.31   1000.00    171.98   1008.00    172.31   1016.00
GR   188.36   1016.01    188.36  1066.00
1
   16FEB93     13:42:49                                                                    PAGE    2


X1      484         7    999.99  1016.01        49        51        50
X3       10
GR   190.00    950.00    190.00   999.99    173.13   1000.00    172.80   1008.00    173.13   1016.00
GR   190.00   1016.01    190.00  1066.00

NC                                     .3        .5
X1      684         7    999.99  1026.01       200       200       200
GR   190.00    950.00    190.00   999.99    176.50   1000.00    176.07   1013.00    176.50   1026.00
GR   190.00   1026.01    190.00  1076.00

X1      726         7      1000     1026        42        42        42
X3       10                                                                  189       189
GR   192.00    950.00    189.00   999.99    177.11   1000.00    177.11   1013.00    177.11   1026.00
GR   189.00   1026.01    192.00  1076.00
  The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
     discharges for 25, 50, 100-yr event, respectively.  This is due to the
     assumption that those amount of discharges do not join the d/s channel
     flowing west along the McDowell Road.

SC    2.014        .2       2.6                  10        12       274       9.2    179.85    177.11
```

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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16FEB93    TIME   13:42:49 *
 *****************************************
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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*         (916) 756-1104            *
*************************************
```

```
X     X  XXXXXXX   XXXXX            XXXXX
X     X  X       X     X          X     X
X     X  X       X                      X
XXXXXXX  XXXX     X         XXXXX   XXXXX
X     X  X       X                X
X     X  X       X     X          X
X     X  XXXXXXX   XXXXX           XXXXXXX
```

1

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THIS RUN EXECUTED 16FEB93 13:42:49

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************
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```
X1    1000       10      987     1013      274      274      274
X2                      2    189.85
X3      10                                                     194      194
X5       2   195.20   195.20
BT      -7      966   193.00              972   193.00              975   194.00
BT              985   194.00             1027   194.00             1041   193.90
BT             1070   193.90
GR     193      966      193      972      194   984.99   193.87      985   179.85      987
GR  179.85     1013   193.87     1027      194  1027.01    193.9     1041    193.9     1070

NC   0.040    0.040    0.025        0        0
QT       2     4710      610        0        0        0
X1    1110     14.0   973.01   1024.0    111.0    108.0    110.0      0.0      0.0        0
CI      -1   193.30    0.045        0        0        0    -60.0
X3      10
GR   205.0    973.0    195.0   973.01    190.0    980.0    185.0    984.5    181.0    989.0
GR   181.0   1000.0    181.0   1006.0    185.0   1013.0    190.0   1018.5    195.0   1024.0
GR   195.5   1030.0    195.0   1036.0    194.0   1058.0    204.0  1058.01

NC       0        0        0      0.1     0.35
X1    1514     14.0   974.01   1030.0    418.0    390.0    404.0      0.0      0.0        0
CI      -1   196.60        0        0        0        0    -60.0
X3      10
GR   208.6    974.0    198.6   974.01    195.0    977.0    185.0    988.0    181.1    992.0
GR   181.1   1010.0    185.0   1014.0    195.0   1023.0    198.6   1030.0    198.0   1034.5
GR   197.0   1046.0    197.0   1053.0    197.0   1057.0    207.0   1057.0

QT       2     4490      390        0        0        0
X1    1912     17.0   972.4   1034.0    408.0    388.0    398.0      0.0      0.0        0
CI      -1   200.70        0        0        0        0    -60.0
X3      10
GR   210.5    912.0    205.0   912.01    200.5   912.02    203.0    926.0    203.6    948.0
GR   203.0    972.4    200.0    975.5    185.0    989.0    181.7    994.0    181.7   1011.0
1
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GR   185.0   1015.0    200.0   1029.0    202.7   1034.0    202.0   1044.0    201.0   1055.0
GR   200.0   1064.0    210.0   1064.0

X1    2312     26.0    969.0   1028.0    410.0    390.0    400.0      0.0      0.0        0
CI      -1   201.00        0        0        0        0    -60.0
X3      10
GR   213.5    900.5    207.5   900.51    205.5   900.52    203.5   900.53    204.9    925.2
GR   204.2    961.5    204.0    969.0    203.0    971.8    200.0    974.2    195.0    979.5
GR   190.0    983.8    185.0    987.5    184.0    988.5    183.0    989.5    183.2   1000.0
GR   185.0   1009.5    190.0   1014.5    195.0   1019.5    200.0   1024.5    203.0   1028.0
GR   203.9   1036.0    203.0   1047.0    202.0   1054.0    201.0   1063.0    200.9   1070.0
GR   210.9  1070.01

NC       0        0        0      0.3      0.5
X1    2485     23.0    969.7   1027.5    173.0    173.0    173.0      0.0      0.0        0
CI      -1   201.00        0        0        0        0    -80.0
X3      10
GR   213.8    904.5    203.8   904.51    204.0    922.5    204.1    929.4    204.1    937.0
GR   203.0    969.7    200.0    977.5    199.0    980.5    198.0    984.0    197.6    990.0
GR   197.6    991.0    183.9    991.0    183.9   1007.0    197.6   1007.0    197.6   1008.0
GR   198.0   1013.0    199.0   1016.0    200.0   1018.5    203.0   1027.5    203.0   1035.0
GR   203.0   1043.0    201.6   1064.0    211.6  1064.01

NC       0        0    0.016        0        0
X1    2515       20      963     1026       30       30       30        0        0        0
CI      -1   201.80    0.045        0        0        0    -80.0
GR  213.90      901   203.90   901.01   204.00      926   204.00      934   203.00      963
GR  202.00      972   200.00      979   199.00      982   197.60      990   197.60      991
GR  184.00      991   184.00     1007   197.60     1007   199.00     1014   201.00     1019
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GR   203.00     1026    203.00     1042    202.00     1053    201.50     1059    211.50   1059.01

X1     2530     16.0    959.8   1025.0      15.0     15.0      15.0      0.0       0.0       0.0
CI       -1   202.50        0        0         0        0    -100.0
GR    213.9    901.0    203.9   901.01     203.0    959.8     197.6    980.0     197.6     991.5
GR    188.3    991.5    188.3   1007.5     197.6   1007.5     197.6   1018.0     200.0    1021.0
GR    203.0   1025.0    203.2   1036.0     203.0   1042.0     202.0   1050.0     201.5    1059.0
GR    211.5  1059.01

NC        0        0    0.025        0         0
QT        2     4410      310        0         0        0
X1     2712     18.0    975.8   1022.0     182.0    182.0     182.0      0.0       0.0         0
CI       -1   202.50    0.045        0         0        0    -100.0
X3       10
GR      214      899    203.7   899.01     204.2    970.0     204.0    975.8     200.0     980.8
GR    195.0    985.0    190.0    990.0     188.5    991.0     188.5   1007.0     190.0    1009.5
GR    195.0   1014.8    200.0   1019.5     203.0   1022.0     203.6     1036     203.0    1047.0
GR    202.0   1051.0    201.5   1057.0     211.5  1057.01

NC        0        0        0      0.1      0.35
X1     3112     22.0    971.0   1021.0     400.0    400.0     400.0      0.0       0.0         0
CI       -1   203.50        0        0         0        0    -100.0
X3       10
GR    214.0    893.5    204.0   893.51     203.0    900.8     203.6    908.0     203.0     917.0
GR    202.0    951.0    205.0    969.5     205.4    971.0     205.0    973.0     200.0     980.0
1
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GR    195.0    984.7    190.0    988.8     189.4   1000.0     190.0   1006.8     195.0    1011.5
GR    200.0   1016.5    204.0   1021.0     204.5   1034.0     204.0   1045.0     203.0    1048.0
GR    202.4   1060.0      212  1060.01

QT        2     4350      250        0         0        0
X1     3513     22.0    976.8   1020.8     401.0    401.0     401.0      0.0       0.0         0
CI       -1   204.44        0        0         0        0    -100.0
X3       10
GR    214.0    896.0    204.0   896.01     205.0    923.0     205.1    933.5     205.0     942.0
GR    204.8    949.0    205.5    955.0     206.2    966.0     205.0    976.8     200.0     981.8
GR    195.0    986.8    191.0    990.8     190.8   1000.0     191.0   1007.0     195.0    1011.1
GR    200.0   1015.8    205.0   1020.8     205.2   1035.0     205.0   1047.0     204.0    1051.0
GR    203.4   1080.0    213.4  1080.01

X1     3913     19.0    976.0   1022.0     400.0    400.0     400.0      0.0       0.0         0
CI       -1   204.88        0        0         0        0    -100.0
X3       10
GR    215.1    898.0    210.1   898.01     205.1   898.02     204.6    942.0     205.0     967.0
GR    205.8    976.0    205.0    978.5     200.0    984.1     195.0    989.2     192.0     992.5
GR    191.3   1000.0    192.0   1006.5     195.0   1009.5     200.0   1015.0     205.0    1020.5
GR    206.0   1022.0    206.7   1028.5     202.4   1082.0     212.4  1082.01

X1     4313     28.0    979.5   1022.0     400.0    400.0     400.0      0.0       0.0         0
CI       -1   204.50        0        0         0        0     -60.0
X3       10
GR    215.1    899.0    205.1   899.01     205.0    930.5     205.1    937.0     205.0     944.0
GR    204.4    959.0    205.0    971.0     205.1    977.0     205.0    979.5     200.0     985.0
GR    195.0    990.0    193.0    999.0     192.6   1000.0     193.0   1004.0     194.0    1008.0
GR    195.0   1009.0    200.0   1014.5     205.0   1018.5     206.0   1020.0     207.0    1022.0
GR    207.3   1025.0    207.0   1028.5     206.0   1038.0     205.0   1043.0     204.0    1052.0
GR    203.0   1058.0    202.3   1088.0     212.3  1088.01

QT        2     3850      250        0         0        0
X1     4713     24.0    976.0   1020.5     400.0    400.0     400.0      0.0       0.0         0
CI       -1   205.50        0        0         0        0     -60.0
X3       10
GR    215.9    915.0    213.9   915.01     210.9   915.02     205.9   915.03     206.0     972.0
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GR    206.6     976.0     206.0     979.5     205.0     981.0     200.0     986.0     195.0     990.3
GR    193.0     992.0     192.8     995.0     193.0     998.5     194.0    1006.0     195.0    1007.5
GR    200.0    1013.5     205.0    1018.5     206.0    1020.5     206.5    1027.0     206.0    1034.8
GR    205.0    1040.5     204.0    1054.0     203.2    1085.0     213.2    1085.01
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1

*SECNO  .000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      184.67 ELREA=      184.67

      .000     13.95    183.62    183.52    180.00    190.69      7.08       .00       .00    184.67
    4710.0        .0    4710.0        .0        .0     220.6        .0        .0        .0    184.67
       .00       .00     21.35       .00      .000      .015      .000      .000    169.67    999.99
   .005288        0.        0.        0.         0        14         0       .00     16.02   1016.01


*SECNO 384.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      186.71 ELREA=      186.71

   384.000     13.93    185.64    185.47       .00    192.73      7.09      2.03       .00    186.71
    4710.0        .0    4710.0        .0        .0     220.5        .0       1.9        .1    186.71
       .00       .00     21.36       .00      .000      .015      .000      .000    171.71    999.99
   .005297      374.      384.      394.         0         8         0       .00     16.02   1016.01


*SECNO 434.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

   434.000     14.05    186.03    186.03       .00    193.00      6.97       .26       .00    188.36
    4710.0        .0    4710.0        .0        .0     222.3        .0       2.2        .2    188.36
       .01       .00     21.19       .00      .000      .015      .000      .000    171.98    999.99
   .005189       49.       50.       51.        20         5         0       .00     16.02   1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

   484.000     14.03    186.83    186.83       .00    193.82      6.99       .26       .00    190.00
    4710.0        .0    4710.0        .0        .0     221.9        .0       2.5        .2    190.00
       .01       .00     21.22       .00      .000      .015      .000      .000    172.80    999.99
   .005210       49.       50.       51.        20         5         0       .00     16.02   1016.01


1
   16FEB93      13:42:49                                                                          PAGE    6
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.19 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.24

  684.000     19.12    195.19       .00       .00    195.87       .68       .15      1.89    190.00
   4710.0     525.5    3659.1     525.5     259.2     491.7     259.2       5.3        .5    190.00
      .02      2.03      7.44      2.03      .035      .015      .035      .000    176.07    950.00
  .000290      200.      200.      200.         5         0         0       .00    126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.03 FEET

  726.000     17.91    195.02       .00       .00    196.05      1.02       .01       .17    177.11
   4710.0     324.4    4061.2     324.4     226.3     465.8     226.3       6.2        .6    177.11
      .02      1.43      8.72      1.43      .035      .015      .035      .000    177.11    950.00
  .000165       42.       42.       42.         2         0         0       .00    126.00   1076.00


SPECIAL CULVERT

SC  CUNO      CUNV      ENTLC     COFQ      RDLEN     RISE      SPAN      CULVLN    CHRT      SCL       ELCHU     ELCHD
     2         .014      .20      2.60       .00     10.00     12.00     274.00     9         2       179.85    177.11

CHART  9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE  2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
 WATER EL=X5 CARD=    195.200
3280 CROSS SECTION   1000.00 EXTENDED      2.20 FEET

 1000.000     15.35    195.20       .00       .00    196.88      1.68       .06       .33    179.85
   4710.0      51.1    4325.6     333.3      52.0     399.1     172.0      11.1       1.3    179.85
      .02       .98     10.84      1.94      .035      .015      .035      .000    179.85    966.00
  .000314      274.      274.      274.         0         0         0       .00    104.00   1070.00


*SECNO 1110.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .50

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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 1110.000     14.89    195.89       .00       .00    197.09      1.20       .06       .15    195.00
   4710.0        .0    4655.2      54.8        .0     527.6      38.3      12.6       1.6    195.00
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      .03       .00      8.82      1.43      .000      .025      .040      .000    181.00    973.01
   .001248      111.      110.      108.         3         0         0       .00     84.99   1058.00


CCHV=     .100 CEHV=     .350
*SECNO 1514.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      198.60 ELREA=      198.60

  1514.000     15.25    196.35       .00       .00    197.67      1.32       .54       .04    198.60
    4710.0        .0    4710.0        .0        .0     510.5        .0      17.5       2.2    198.60
       .04       .00      9.23       .00      .000      .025      .000      .000    181.10    975.88
   .001455      418.      404.      390.         2         0         0       .00     49.75   1025.63


*SECNO 1912.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      203.00 ELREA=      202.70

  1912.000     15.35    197.05       .00       .00    198.22      1.17       .53       .02    203.00
    4490.0        .0    4490.0        .0        .0     517.5        .0      22.2       2.7    202.70
       .05       .00      8.68       .00      .000      .025      .000      .000    181.70    978.15
   .001228      408.      398.      388.         2         0         0       .00     48.10   1026.25


*SECNO 2312.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      204.00 ELREA=      203.00

  2312.000     14.37    197.37       .00       .00    198.99      1.62       .61       .16    204.00
    4490.0        .0    4490.0        .0        .0     439.4        .0      26.6       3.1    203.00
       .06       .00     10.22       .00      .000      .025      .000      .000    183.00    976.99
   .001929      410.      400.      390.         2         0         0       .00     44.88   1021.87


CCHV=     .300 CEHV=     .500
*SECNO 2485.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
   16FEB93      13:42:49                                                                          PAGE    8


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      203.00 ELREA=      203.00

  2485.000     15.90    199.80    199.80       .00    203.50      3.70       .64      1.04    203.00
    4490.0        .0    4490.0        .0        .0     290.9        .0      28.1       3.2    203.00
       .07       .00     15.44       .00      .000      .025      .000      .000    183.90    978.11
   .009691      173.      173.      173.        20         8         0       .00     39.88   1017.99


*SECNO 2515.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2515.000     15.96    199.96    199.96       .00    203.81      3.85       .18       .07    203.00
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   4490.0        .0    4490.0        .0        .0     285.3        .0      28.3       3.3    203.00
      .07       .00     15.74       .00      .000      .016      .000      .000    184.00    979.11
  .004005       30.       30.       30.         2         5         0       .00     37.29   1016.41


*SECNO 2530.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2530.000     13.10    201.40    201.40       .00    204.29      2.89       .05       .29    203.00
   4490.0        .0    4490.0        .0        .0     329.3        .0      28.4       3.3    203.00
      .07       .00     13.63       .00      .000      .016      .000      .000    188.30    965.78
  .003130       15.       15.       15.        20        16         0       .00     57.08   1022.87


*SECNO 2712.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       204.00 ELREA=       203.00

1
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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


  2712.000     15.42    203.92       .00       .00    205.14      1.23       .36       .50    204.00
   4410.0        .0    4362.1      47.9        .0     488.1      33.9      30.2       3.6    203.00
      .07       .00      8.94      1.41      .000      .025      .040      .000    188.50    975.91
  .001340      182.      182.      182.         3         0         0       .00     81.09   1057.00


CCHV=     .100 CEHV=     .350
*SECNO 3112.000

3265 DIVIDED FLOW


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       205.40 ELREA=       204.00

  3112.000     15.01    204.41       .00       .00    205.79      1.38       .59       .05    205.40
   4410.0        .0    4364.6      45.4        .0     461.0      27.2      34.8       4.3    204.00
      .09       .00      9.47      1.67      .000      .025      .040      .000    189.40    973.83
  .001633      400.      400.      400.         2         0         0       .00     81.76   1060.00


*SECNO 3513.000

3265 DIVIDED FLOW

  3513.000     14.21    205.01       .00       .00    206.55      1.54       .71       .06    205.00
   4350.0       13.9    4263.3      72.7      14.5     423.5      39.8      39.2       5.2    205.00
      .10       .96     10.07      1.83      .040      .025      .040      .000    190.80    896.01
  .001917      401.      401.      401.         0         0         0       .00    113.71   1080.00
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*SECNO 3913.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      205.80 ELREA=      206.00

  3913.000    14.36    205.66      .00      .00    207.54     1.88      .87      .12    205.80
    4350.0       .0    4350.0       .0       .0     395.4       .0     43.3      6.0    206.00
       .11      .00     11.00      .00     .000      .025     .000     .000   191.30    976.43
   .002507     400.      400.     400.        2         0        0      .00    45.06   1021.49


*SECNO 4313.000
1
   16FEB93      13:42:49                                                                    PAGE   10


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.57

  4313.000    14.96    207.56      .00      .00    208.27      .71      .61      .12    205.00
    4350.0    469.0    3253.3    627.7    211.0     423.8    221.8     49.0      7.0    207.00
       .12     2.22      7.68     2.83     .040      .025     .040     .000   192.60    899.01
   .001023     400.      400.     400.        6         0        0      .00   189.00   1088.01


*SECNO 4713.000
  4713.000    15.22    208.02      .00      .00    208.66      .64      .39      .01    206.60
    3850.0    221.7    3056.5    571.8    125.0     429.9    224.5     56.5      8.7    206.00
       .14     1.77      7.11     2.55     .040      .025     .040     .000   192.80    915.03
   .000915     400.      400.     400.        2         0        0      .00   169.98   1085.00


1
PROFILE FOR STREAM  SUB-CRITICAL FLOW M1D2


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA


ELEVATION  170.     175.     180.     185.     190.     195.     200.     205.     210.     215.
   SECNO   CUMDIS

     .00     0.  I        .        .      W L        . E      .        .        .        .        .
            50.  .I       .        .      W .L       . E      .        .        .        .        .
           100.  .I       .        .       W.L       . E      .        .        .        .        .
           150.  . I      .        .       W. L      .  E     .        .        .        .        .
           200.  . I      .        .        W L      .  E     .        .        .        .        .
           250.  .  I     .        .        CW L     .   E    .        .        .        .        .
           300.  .  I     .        .        .W L     .   E    .        .        .        .        .
           350.  .   I    .        .        .CW L    .    E   .        .        .        .        .
   384.00  400.  .   I    .        .        . W L    .    E   .        .        .        .        .
   434.00  450.  .    I   .        .        .  W   L .     E  .        .        .        .        .
   484.00  500.  .     I  .        .        .   W    .L     E .        .        .        .        .
           550.  C      I .        .        .       W.L      E.        .        .        .        .
```

```
          600. C        I        .        .        .L W     E        .        .        .        .        .
          650. C       .I        .        .        .L    W  .E       .        .        .        .        .
   684.00 700. C        . I      .        .        .L       .WE      .        .        .        .        .
   726.00 750. C        .   I    .        .        .   M   .W E      .        .        .        .        .
          800. C        .    I   .        .        .   M   .W E      .        .        .        .        .
          850. C        .     I  .        .        .   M   .W E      .        .        .        .        .
          900. C        .      I .        .        .    M  .W  E     .        .        .        .        .
          950. C        .       I.        .        .    M  .W  E     .        .        .        .        .
  1000.00 1000. C       .        I        .        .     M .W  E     .        .        .        .        .
          1050. C       .        .I       .  L     .        . W  E M .        .        .        .        .
          1100. C       .        . I      .        .      L . W  E   .     M  .        .        .        .
  1110.00 1150. C       .        . I      .        .        .LW  E   .       M.        .        .        .
          1200. C       .        . I      .        .        . LW E   .       M.        .        .        .
          1250. C       .        . I      .        .        . LW E   .       M         .        .        .
          1300. C       .        . I      .        .        .  W E   .       .M        .        .        .
          1350. C       .        . I      .        .        .  WLE   .       . M       .        .        .
          1400. C       .        . I      .        .        .  W LE  .       . M       .        .        .
          1450. C       .        . I      .        .        .  W  E  .       .  M      .        .        .
          1500. C       .        . I      .        .        .  W  EL .       .   M     .        .        .
  1514.00 1550. C       .        . I      .        .        .  W  E L.       .    M    .        .        .
          1600. C       .        . I      .        .        .   W E  L.      .    M    .        .        .
          1650. C       .        . I      .        .        .   W E  L       .     M   .        .        .
          1700. C       .        . I      .        .        .   W E  .L      .      M  .        .        .
          1750. C       .        . I      .        .        .   W  E . L     .       M .        .        .
          1800. C       .        .  I     .        .        .   W  E . L     .       M .        .        .
          1850. C       .        .  I     .        .        .   W  E .  L    .        M.        .        .
          1900. C       .        .  I     .        .        .    W E .   RL  .         M        .        .
  1912.00 1950. C       .        .  I     .        .        .    W E .    RL .        .M        .        .
          2000. C       .        .  I     .        .        .    W E .    RL .        .M        .        .
          2050. C       .        .   I    .        .        .    W E .    RL .        .M        .        .
          2100. C       .        .   I    .        .        .    W  E.    RL .        .M        .        .
          2150. C       .        .   I    .        .        .    W  E.    R L.        . M       .        .
          2200. C       .        .    I   .        .        .    W  E.    R L.        . M       .        .
          2250. C       .        .    I   .        .        .    W  E.     RL.        . M       .        .
          2300. C       .        .    I   .        .        .    W  E.     RL.        . M       .        .
  2312.00 2350. C       .        .     I  .        .        .    W   E.    R L.        . M       .        .
          2400. C       .        .     I  .        .        .      W  .E   RL.        .  M      .        .
          2450. C       .        .      I.        .        .       W .  E RL.        .  M      .        .
  2485.00 2500. .       .        .      I.        .        .        W     LE.        .   M     .        .
  2515.00 2550. .       .        .       I.       .        .        .W    LE.        .   M     .        .
  2530.00 2600. .       .        .        .    I  .        .        . W  L E.        .   M     .        .
          2650. C       .        .        .    I  .        .        .   W L  E        .   M     .        .
          2700. C       .        .        .    I  .        .        .    WRL E        .   M     .        .
  2712.00 2750. C       .        .        .     I .        .        .     RWL.E       .   M     .        .
          2800. C       .        .        .     I .        .        .     R W.E       .   M     .        .
          2850. C       .        .        .     I .        .        .     R W.E       .   M     .        .
          2900. C       .        .        .     I .        .        .     R WLE       .   M     .        .
          2950. C       .        .        .      I.        .        .      RWL E      .   M     .        .
          3000. C       .        .        .      I.        .        .      RWL E      .   M     .        .
          3050. C       .        .        .      I.        .        .      RW.LE      .   M     .        .
          3100. C       .        .        .      I.        .        .      RW.LE      .    M    .        .
  3112.00 3150. C       .        .        .      I.        .        .       W.LE      .    M    .        .
          3200. C       .        .        .       I        .        .       RWLE      .    M    .        .
          3250. C       .        .        .       I        .        .       RWL E     .    M    .        .
          3300. C       .        .        .      .I        .        .       RWL E     .     M   .        .
          3350. C       .        .        .      .I        .        .        WL E     .     M   .        .
          3400. C       .        .        .      .I        .        .        WL E     .     M   .        .
          3450. C       .        .        .       . I      .        .        WL E     .      M  .        .
          3500. C       .        .        .       . I      .        .        RW  E    .      M  .        .
  3513.00 3550. C       .        .        .       . I      .        .        .W  E    .      M  .        .
          3600. C       .        .        .       . I      .        .        .W  E    .      M  .        .
          3650. C       .        .        .       .  I     .        .        .W  E    .      M  .        .
          3700. C       .        .        .       .  I     .        .        .W   E   .      M  .        .
          3750. C       .        .        .       .  I     .        .        .WR  E   .     M   .        .
          3800. C       .        .        .       .  I     .        .        .WL  E   .     M   .        .
          3850. C       .        .        .       .  I     .        .        . W  E   .     M   .        .
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          3900. C        .         .         .        . I     .         .        . W  E    .    M   .         .
  3913.00 3950. C        .         .         .        . I     .         .        . WR  E   .    M   .         .
          4000. C        .         .         .        .  I    .         .        . WR  E   .    M   .         .
          4050. C        .         .         .        .  I    .         .        . LW  E   .    M   .         .
          4100. C        .         .         .        .  I    .         .        . LW  E   .    M   .         .
          4150. C        .         .         .        .   I   .         .        .L  W E   .    M   .         .
          4200. C        .         .         .        .   I   .         .        .L  W  E  .    M   .         .
          4250. C        .         .         .        .   I   .         .        .L  RW E  .    M   .         .
          4300. C        .         .         .        .    I  .         .        .L  RW E  .    M   .         .
  4313.00 4350. C        .         .         .        .    I  .         .        .L   RWE  .    M   .         .
          4400. C        .         .         .        .    I  .         .        .L  R WE  .    M   .         .
          4450. C        .         .         .        .    I  .         .        .L  R WE  .     M  .         .
          4500. C        .         .         .        .    I  .         .        . L R WE  .     M  .         .
          4550. C        .         .         .        .    I  .         .        . L R W E .     M  .         .
          4600. C        .         .         .        .    I  .         .        .  L  W E .     M  .         .
          4650. C        .         .         .        .    I  .         .        .  L  W E .      M .         .
          4700. C        .         .         .        .    I  .         .        .  L   WE .      M .         .
  4713.00 4750. C        .         .         .        .    I  .         .        .  RL  WE .      M .         .
1
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T1      GREINER,INC   FERGUSON  02-1-93     (FILENAME = OCC-M1D2.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D2                    CI BOTTOM WIDTH = VARIES

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0        3         0         0   0.00532         0         0         0     180.0         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15        0         0         0         0         0         0         7         0         0



1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 2

*SECNO  .000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      184.67 ELREA=      184.67

      .000     13.95    183.62    183.52    180.00    190.69      7.08       .00       .00    184.67
    4710.0        .0    4710.0        .0        .0     220.6        .0        .0        .0    184.67
      .00       .00     21.35       .00      .000      .015      .000      .000    169.67    999.99
   .005288        0.        0.        0.         0        14         0       .00     16.02   1016.01


*SECNO 384.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      186.71 ELREA=      186.71

   384.000     13.93    185.64    185.47       .00    192.73      7.09      2.03       .00    186.71
    4710.0        .0    4710.0        .0        .0     220.5        .0       1.9        .1    186.71
      .00       .00     21.36       .00      .000      .015      .000      .000    171.71    999.99
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   .005297      374.      384.      394.         0         8         0       .00     16.02   1016.01


*SECNO 434.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

   434.000     14.05    186.03    186.03       .00    193.00      6.97       .26       .00    188.36
    4710.0        .0    4710.0        .0        .0     222.3        .0       2.2        .2    188.36
       .01       .00     21.19       .00      .000      .015      .000      .000    171.98    999.99
   .005189       49.       50.       51.        20         5         0       .00     16.02   1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

   484.000     14.03    186.83    186.83       .00    193.82      6.99       .26       .00    190.00
    4710.0        .0    4710.0        .0        .0     221.9        .0       2.5        .2    190.00
       .01       .00     21.22       .00      .000      .015      .000      .000    172.80    999.99
   .005210       49.       50.       51.        20         5         0       .00     16.02   1016.01


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.19 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.24

   684.000     19.12    195.19       .00       .00    195.87       .68       .15      1.89    190.00
    4710.0     525.5    3659.1     525.5     259.2     491.7     259.2       5.3        .5    190.00
       .02      2.03      7.44      2.03      .035      .015      .035      .000    176.07    950.00
   .000290      200.      200.      200.         5         0         0       .00    126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.03 FEET

   726.000     17.91    195.02       .00       .00    196.05      1.02       .01       .17    177.11
    4710.0     324.4    4061.2     324.4     226.3     465.8     226.3       6.2        .6    177.11
       .02      1.43      8.72      1.43      .035      .015      .035      .000    177.11    950.00
   .000165       42.       42.       42.         2         0         0       .00    126.00   1076.00


SPECIAL CULVERT
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SC  CUNO      CUNV      ENTLC     COFQ      RDLEN     RISE      SPAN      CULVLN    CHRT      SCL       ELCHU     ELCHD
    2         .014      .20       2.60      .00       10.00     12.00     274.00    9         2         179.85    177.11

CHART  9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE  2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
 WATER EL=X5 CARD=    195.200
3280 CROSS SECTION   1000.00 EXTENDED      2.20 FEET

  1000.000     15.35    195.20      .00       .00    196.88      1.68       .06       .33    179.85
    4710.0      51.1    4325.6    333.3      52.0     399.1     172.0      11.1       1.3    179.85
       .02       .98     10.84     1.94      .035      .015      .035      .000    179.85    966.00
   .000314      274.      274.     274.         0         0         0       .00    104.00   1070.00


*SECNO 1110.000
CHIMP CLSTA=     998.51 CELCH=     193.30 BW=      55.51 STCHL=     973.00 STCHR=    1028.51
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


EXCAVATION DATA
AEX=    -387.0SQ-FT     VEXR=        .0K*CU-YD     VEXT=         .0K*CU-YD


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .09


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       205.00 ELREA=       195.38

  1110.000      4.04    197.34      .00       .00    197.40       .06       .04       .48    205.00
     610.0        .0     471.2    138.8        .0     224.6      78.0      12.2       1.6    195.38
       .04       .00      2.10     1.78      .000      .045      .040      .000    193.30    973.00
   .000720      111.      110.     108.         2         0         0       .00     85.00   1058.00


CCHV=     .100 CEHV=     .350
*SECNO 1514.000
CHIMP CLSTA=    1002.01 CELCH=     196.60 BW=      58.01 STCHL=     974.00 STCHR=    1032.01
EXCAVATION DATA
AEX=    -513.6SQ-FT     VEXR=      -6.7K*CU-YD     VEXT=       -6.7K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       208.60 ELREA=       198.33

  1514.000      1.74    198.34    198.34      .00    198.71       .37       .74       .11    208.60
     610.0        .0     506.6     103.4        .0     100.9      24.8      14.2       2.4    198.33
       .06       .00      5.02      4.17      .000      .045      .040      .000    196.60    974.00
   .011947      418.      404.      390.       20        26         0       .00     83.00   1057.00


*SECNO 1912.000
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CHIMP CLSTA= 1003.20 CELCH= 200.70 BW= 60.00 STCHL= 972.40 STCHR= 1034.00
EXCAVATION DATA
AEX= -702.3SQ-FT VEXR= -9.0K*CU-YD VEXT= -15.7K*CU-YD

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 202.70

1912.000	1.68	202.38	.00	.00	202.61	.23	3.89	.01	203.00
390.0	.0	390.0	.0	.0	100.7	.0	15.2	3.0	202.70
.09	.00	3.87	.00	.000	.045	.000	.000	200.70	973.20
.007421	408.	398.	388.	4	0	0	.00	60.00	1033.20

*SECNO 2312.000
CHIMP CLSTA= 998.50 CELCH= 201.00 BW= 60.00 STCHL= 968.50 STCHR= 1028.50
EXCAVATION DATA
AEX= -602.6SQ-FT VEXR= -9.7K*CU-YD VEXT= -25.4K*CU-YD

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.01 ELREA= 203.06

2312.000	2.54	203.54	.00	.00	203.60	.06	.97	.02	204.01
390.0	.0	306.4	83.6	.0	152.1	46.4	16.6	3.7	203.06
.15	.00	2.01	1.80	.000	.045	.040	.000	201.00	968.50
.001188	410.	400.	390.	5	0	0	.00	93.79	1070.00

CCHV= .300 CEHV= .500
*SECNO 2485.000
CHIMP CLSTA= 998.60 CELCH= 201.00 BW= 80.00 STCHL= 958.60 STCHR= 1038.60
EXCAVATION DATA
AEX= -285.2SQ-FT VEXR= -2.8K*CU-YD VEXT= -28.2K*CU-YD

2485.000	2.72	203.72	.00	.00	203.76	.04	.15	.01	203.37
390.0	.5	352.9	36.6	1.7	217.1	32.8	17.5	4.1	203.00
.18	.30	1.63	1.11	.040	.045	.040	.000	201.00	948.49
.000688	173.	173.	173.	2	0	0	.00	115.51	1064.00

*SECNO 2515.000
CHIMP CLSTA= 994.50 CELCH= 201.80 BW= 80.00 STCHL= 954.50 STCHR= 1034.50

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -333.7SQ-FT VEXR= -.3K*CU-YD VEXT= -28.6K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .62

2515.000	2.23	203.73	.00	.00	203.80	.07	.03	.01	203.29
390.0	1.7	332.2	56.2	2.9	155.1	31.1	17.6	4.2	203.00
.18	.58	2.14	1.81	.040	.045	.040	.000	201.50	941.57
.001818	30.	30.	30.	1	0	0	.00	117.43	1059.00

*SECNO 2530.000
CHIMP CLSTA= 992.40 CELCH= 202.50 BW= 100.00 STCHL= 942.40 STCHR= 1042.40
EXCAVATION DATA
AEX= -373.1SQ-FT VEXR= -.2K*CU-YD VEXT= -28.7K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .68

2530.000	2.26	203.76	.00	.00	203.86	.10	.04	.02	203.27
390.0	7.0	299.0	84.0	7.7	125.2	27.7	17.7	4.3	202.95
.18	.91	2.39	3.03	.040	.045	.040	.000	201.50	910.67
.003938	15.	15.	15.	0	0	0	.00	148.34	1059.00

*SECNO 2712.000
CHIMP CLSTA= 998.90 CELCH= 202.50 BW= 100.00 STCHL= 948.90 STCHR= 1048.90
EXCAVATION DATA
AEX= -358.8SQ-FT VEXR= -2.5K*CU-YD VEXT= -31.2K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.49

2712.000	2.71	204.21	.00	.00	204.25	.04	.37	.02	204.05
310.0	9.8	266.5	33.7	16.5	170.7	18.8	18.5	4.9	202.52
.22	.59	1.56	1.79	.040	.045	.040	.000	201.50	899.01
.001119	182.	182.	182.	2	0	0	.00	157.99	1057.00

CCHV= .100 CEHV= .350
*SECNO 3112.000
CHIMP CLSTA= 996.00 CELCH= 203.50 BW= 100.00 STCHL= 960.25 STCHR= 1046.00
1
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -385.9SQ-FT VEXR= -5.5K*CU-YD VEXT= -36.7K*CU-YD

3112.000	2.59	204.59	.00	.00	204.62	.03	.37	.00	203.50
310.0	182.4	92.1	35.4	117.0	93.6	25.2	20.5	6.4	203.67
.30	1.56	.98	1.40	.040	.045	.040	.000	202.00	893.51
.000793	400.	400.	400.	3	0	0	.00	166.49	1060.00

*SECNO 3513.000
CHIMP CLSTA= 998.80 CELCH= 204.44 BW= 100.00 STCHL= 948.80 STCHR= 1048.80
EXCAVATION DATA

AEX= -348.5SQ-FT VEXR= -5.5K*CU-YD VEXT= -42.2K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .37

3513.000	1.71	205.11	.00	.00	205.19	.07	.55	.02	204.81
250.0	28.3	104.9	116.9	19.3	67.6	42.9	22.2	8.0	204.55
.35	1.46	1.55	2.72	.040	.045	.040	.000	203.40	896.01
.003736	401.	401.	401.	2	0	0	.00	183.99	1080.00

*SECNO 3913.000
CHIMP CLSTA= 999.00 CELCH= 204.88 BW= 100.00 STCHL= 959.50 STCHR= 1049.00
EXCAVATION DATA
AEX= -324.2SQ-FT VEXR= -5.0K*CU-YD VEXT= -47.2K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.08

3913.000	3.39	205.79	.00	.00	205.82	.03	.63	.00	204.88
250.0	63.5	74.0	112.5	59.7	81.4	68.1	23.7	9.7	205.05
.44	1.06	.91	1.65	.040	.045	.040	.000	202.40	898.02
.000861	400.	400.	400.	2	0	0	.00	183.98	1082.00

*SECNO 4313.000
CHIMP CLSTA= 1000.75 CELCH= 204.50 BW= 60.00 STCHL= 970.75 STCHR= 1030.75
EXCAVATION DATA
AEX= -266.6SQ-FT VEXR= -4.4K*CU-YD VEXT= -51.5K*CU-YD

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.99 ELREA= 206.76

4313.000	3.85	206.15	.00	.00	206.18	.03	.36	.00	204.99
250.0	114.7	135.3	.0	88.4	99.0	.0	25.6	11.1	206.76
.52	1.30	1.37	.00	.040	.045	.000	.000	202.30	899.01
.000920	400.	400.	400.	3	0	0	.00	131.74	1030.75

*SECNO 4713.000
CHIMP CLSTA= 998.25 CELCH= 205.50 BW= 60.00 STCHL= 968.25 STCHR= 1028.25
EXCAVATION DATA
AEX= -306.4SQ-FT VEXR= -4.2K*CU-YD VEXT= -55.8K*CU-YD

4713.000	3.24	206.44	.00	.00	206.47	.03	.29	.00	205.99
250.0	14.8	43.0	192.2	26.2	56.4	121.1	27.4	12.5	206.42
.60	.56	.76	1.59	.040	.045	.040	.000	203.20	915.03
.000598	400.	400.	400.	2	0	0	.00	169.97	1085.00

1
PROFILE FOR STREAM SUB-CRITICAL FLOW M1D2

PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

```
ELEVATION  170.     175.     180.     185.     190.     195.     200.     205.     210.     215.
   SECNO   CUMDIS

     .00     0. I       .        .      W L        . E      .        .        .        .        .
            50. .I      .        .      W .L       .  E     .        .        .        .        .
           100. .I      .        .       W.L       .  E     .        .        .        .        .
           150. . I     .        .       W. L      .   E    .        .        .        .        .
           200. . I     .        .        W L      .   E    .        .        .        .        .
           250. .  I    .        .        CW L     .    E   .        .        .        .        .
           300. .  I    .        .        .W L     .    E   .        .        .        .        .
           350. .   I   .        .        .CW L    .     E  .        .        .        .        .
   384.00  400. .   I   .        .        . W L    .     E  .        .        .        .        .
   434.00  450. .    I  .        .        .  W  L  .      E .        .        .        .        .
   484.00  500. .     I .        .        .   W    .L     E .        .        .        .        .
           550. C      I.        .        .       W.L      E.        .        .        .        .
           600. C       I        .        .       .L W     E         .        .        .        .
           650. C       .I       .        .       .L    W .E         .        .        .        .
   684.00  700. C        . I     .        .       .L       .WE       .        .        .        .
   726.00  750. C        .  I    .        .        .   M   .W E      .        .        .        .
           800. C        .   I   .        .        .   M   .W E      .        .        .        .
           850. C        .    I  .        .        .   M   .W E      .        .        .        .
           900. C        .     I .        .        .    M  .W  E     .        .        .        .
           950. C        .      I.        .        .    M  .W  E     .        .        .        .
  1000.00 1000. C        .       I        .        .     M .W  E     .        .        .        .
          1050. C        .        .       . IR     . L     . W E M   .        .        .        .
          1100. C        .        .        .       .   I  R.   E     .    LM  .        .        .
  1110.00 1150. C        .        .        .       .    I .R  E      .      M.L        .        .
          1200. C        .        .        .       .     I . R  E     .      M. L       .        .
          1250. C        .        .        .       .      I. R E      .       M L       .        .
          1300. C        .        .        .       .       I  R E     .       .M L      .        .
          1350. C        .        .        .       .       .I R WE    .       . M L     .        .
          1400. C        .        .        .       .       .I  R E    .       . M  L    .        .
          1450. C        .        .        .       .       . I  RE    .       .  M  L   .        .
          1500. .   C    .        .        .       .       .  I  WE   .       .   M L   .        .
  1514.00 1550. .        .        .        .       .       .  I WE    .       .    M L  .        .
          1600. .      C .        .        .       .       .   I WE.  .       .    ML   .        .
          1650. C        .        .        .       .       .    I WE  .       .    LM   .        .
          1700. C        .        .        .       .       .     I WE .       .   L M  .        .
          1750. C        .        .        .       .       .      I .WE .     . L    M .        .
          1800. C        .        .        .       .       .       I. WE .    .L     M .        .
          1850. C        .        .        .       .       .        I WE  L.      M.        .
          1900. C        .        .        .       .       .        .I WE L .      M         .
  1912.00 1950. C        .        .        .       .       .        . I WEL .      .M        .
          2000. C        .        .        .       .       .        . I  EL .      .M        .
          2050. C        .        .        .       .       .        . I  EL .      .M        .
          2100. C        .        .        .       .       .        . I  WE .      .M        .
          2150. C        .        .        .       .       .        . I  REL .      . M       .
          2200. C        .        .        .       .       .        . I   EL .      . M       .
          2250. C        .        .        .       .       .        .  I  EL .      . M       .
          2300. C        .        .        .       .       .        .  I  WE .      . M       .
  2312.00 2350. C        .        .        .       .       .        .  I  REL.      . M       .
          2400. C        .        .        .       .       .        .  I  RE .      .  M      .
          2450. C        .        .        .       .       .        .  I  RE .      .  M      .
  2485.00 2500. C        .        .        .       .       .        .  I  LE .      .   M     .
  2515.00 2550. C        .        .        .       .       .        .   I LE .      .   M     .
  2530.00 2600. C        .        .        .       .       .        .   I LE .      .   M     .
          2650. C        .        .        .       .       .        .   I R WE.     .   M     .
          2700. C        .        .        .       .       .        .   I R LE.     .   M     .
  2712.00 2750. C        .        .        .       .       .        .   I R  E.     .   M     .
          2800. C        .        .        .       .       .        .   I R  E.     .   M     .
          2850. C        .        .        .       .       .        .   I R LE.     .   M     .
          2900. C        .        .        .       .       .        .   I  RLE.     .   M     .
          2950. C        .        .        .       .       .        .   I  RLWE     .   M     .
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          3000. C     .     .     .     .     .     . I RL E     .  M  .     .
          3050. C     .     .     .     .     .     . I RL E     .  M  .     .
          3100. C     .     .     .     .     .     .  I L E     .   M  .     .
  3112.00 3150. C     .     .     .     .     .     .  I L E     .   M  .     .
          3200. C     .     .     .     .     .     .  I L E     .   M  .     .
          3250. C     .     .     .     .     .     .  I L E     .   M  .     .
          3300. C     .     .     .     .     .     .   I LE     .    M  .     .
          3350. C     .     .     .     .     .     .   I LE     .    M  .     .
          3400. C     .     .     .     .     .     .   I L.E     .   M  .     .
          3450. C     .     .     .     .     .     .    I RLE     .    M  .     .
          3500. C     .     .     .     .     .     .    I  LE     .    M  .     .
  3513.00 3550. C     .     .     .     .     .     .    I  LE     .    M  .     .
          3600. C     .     .     .     .     .     .    I  LE     .    M  .     .
          3650. C     .     .     .     .     .     .    I  LE     .    M  .     .
          3700. C     .     .     .     .     .     .    I  LWE     .    M  .     .
          3750. C     .     .     .     .     .     .   I   L E     .   M  .     .
          3800. C     .     .     .     .     .     .   I   L E     .   M  .     .
          3850. C     .     .     .     .     .     .   I   LRE     .   M  .     .
          3900. C     .     .     .     .     .     .   I   LRE     .   M  .     .
  3913.00 3950. C     .     .     .     .     .     .  I    LRE     .  M  .     .
          4000. C     .     .     .     .     .     .  I    LRE     .  M  .     .
          4050. C     .     .     .     .     .     .  I    L E     .  M  .     .
          4100. C     .     .     .     .     .     .  I    .LRE     .  M  .     .
          4150. C     .     .     .     .     .     .  I    .LRE     .  M  .     .
          4200. C     .     .     .     .     .     .  I    .L E     .  M  .     .
          4250. C     .     .     .     .     .     .  I    .L E     .  M  .     .
          4300. C     .     .     .     .     .     .  I    .L ER     .  M  .     .
  4313.00 4350. C     .     .     .     .     .     .  I    .L ER     .  M  .     .
          4400. C     .     .     .     .     .     .  I    .L ER     .  M  .     .
          4450. C     .     .     .     .     .     .   I   .L ER     .   M  .     .
          4500. C     .     .     .     .     .     .   I   .L ER     .   M  .     .
          4550. C     .     .     .     .     .     .   I   . LER     .   M  .     .
          4600. C     .     .     .     .     .     .   I   . LER     .   M  .     .
          4650. C     .     .     .     .     .     .    I  . LER     .    M  .     .
          4700. C     .     .     .     .     .     .    I  . LWE     .    M  .     .
  4713.00 4750. C     .     .     .     .     .     .    I  .  LE     .    M  .     .
1
   16FEB93      13:42:49                                                                    PAGE   19


                                                                  THIS RUN EXECUTED 16FEB93    13:43:34
************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


SUB-CRITICAL FLOW M1D2

SUMMARY PRINTOUT


     SECNO       Q      XLCH    TOPWID     AREA      VCH     XLBEL     RBEL     CWSEL    ELMIN

      .000  4710.00       .00     16.02   220.61    21.35    184.67   184.67    183.62   169.67
      .000  4710.00       .00     16.02   220.61    21.35    184.67   184.67    183.62   169.67

   384.000  4710.00    384.00     16.02   220.46    21.36    186.71   186.71    185.64   171.71
   384.000  4710.00    384.00     16.02   220.46    21.36    186.71   186.71    185.64   171.71
```

*	434.000	4710.00	50.00	16.02	222.31	21.19	188.36	188.36	186.03	171.98	
*	434.000	4710.00	50.00	16.02	222.31	21.19	188.36	188.36	186.03	171.98	
*	484.000	4710.00	50.00	16.02	221.93	21.22	190.00	190.00	186.83	172.80	
*	484.000	4710.00	50.00	16.02	221.93	21.22	190.00	190.00	186.83	172.80	
*	684.000	4710.00	200.00	126.00	1010.15	7.44	190.00	190.00	195.19	176.07	
*	684.000	4710.00	200.00	126.00	1010.15	7.44	190.00	190.00	195.19	176.07	
	726.000	4710.00	42.00	126.00	918.45	8.72	177.11	177.11	195.02	177.11	
	726.000	4710.00	42.00	126.00	918.45	8.72	177.11	177.11	195.02	177.11	
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85	
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85	
*	1110.000	4710.00	110.00	84.99	565.91	8.82	195.00	195.00	195.89	181.00	
*	1110.000	610.00	110.00	85.00	302.63	2.10	205.00	195.38	197.34	193.30	1.45' OT
	1514.000	4710.00	404.00	49.75	510.55	9.23	198.60	198.60	196.35	181.10	
*	1514.000	610.00	404.00	83.00	125.70	5.02	208.60	198.33	198.34	196.60	1.99' OT
	1912.000	4490.00	398.00	48.10	517.47	8.68	203.00	202.70	197.05	181.70	5.33' OT
	1912.000	390.00	398.00	60.00	100.67	3.87	203.00	202.70	202.38	200.70	
	2312.000	4490.00	400.00	44.88	439.44	10.22	204.00	203.00	197.37	183.00	
*	2312.000	390.00	400.00	93.79	198.50	2.01	204.01	203.06	203.54	201.00	6.17' OT

should be 610 cfs

1

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN	
*	2485.000	4490.00	173.00	39.88	290.88	15.44	203.00	203.00	199.80	183.90	3.92' OT
	2485.000	390.00	173.00	115.51	251.62	1.63	203.37	203.00	203.72	201.00	
*	2515.000	4490.00	30.00	37.29	285.25	15.74	203.00	203.00	199.96	184.00	
*	2530.000	4490.00	15.00	157.08	329.34	13.63	203.00	203.00	201.40	188.30	2.36' OT
*	2530.000	390.00	15.00	148.34	160.66	2.39	203.27	202.95	203.76	201.50	
*	2712.000	4410.00	182.00	81.09	522.01	8.94	204.00	203.00	203.92	188.50	0.29' OK
*	2712.000	310.00	182.00	157.99	206.07	1.56	204.05	202.52	204.21	201.50	
	3112.000	4410.00	400.00	81.76	488.21	9.47	205.40	204.00	204.41	189.40	0.18' OK
	3112.000	310.00	400.00	166.49	235.81	.98	203.50	203.67	204.59	202.00	
	3513.000	4350.00	401.00	113.71	477.77	10.07	205.00	205.00	205.01	190.80	0.10' OK
*	3513.000	250.00	401.00	183.99	129.91	1.55	204.81	204.55	205.11	203.40	
	3913.000	4350.00	400.00	45.06	395.43	11.00	205.80	206.00	205.66	191.30	0.13' OK
*	3913.000	250.00	400.00	183.98	209.22	.91	204.88	205.05	205.79	202.40	
*	4313.000	4350.00	400.00	189.00	856.56	7.68	205.00	207.00	207.56	192.60	-1.41' OK
	4313.000	250.00	400.00	131.74	187.39	1.37	204.99	206.76	206.15	202.30	
	4713.000	3850.00	400.00	169.98	779.35	7.11	206.60	206.00	208.02	192.80	-1.58' OK
	4713.000	250.00	400.00	169.97	203.73	.76	205.99	206.42	206.44	203.20	

should be 310 cfs

1

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=    434.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    434.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=    484.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    484.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=    684.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    684.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=   1000.000  PROFILE=  1  WSEL BASED ON X5 CARD
NOTE    SECNO=   1000.000  PROFILE=  2  WSEL BASED ON X5 CARD

WARNING SECNO=   1110.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1110.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   1514.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   1514.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   1514.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   2312.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2485.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2485.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2485.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   2515.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2515.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=   2515.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2530.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=   2530.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   2712.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   2712.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3513.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3913.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4313.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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T1       GREINER,INC     UPDATE     02-1-93      (FILENAME = OCC-M1D1.DAT)
T2       ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3       SUB-CRITICAL FLOW M1D1                          u/s of McDowell Road
ER
* Cross-section numbering has been changed:
*        d/s face of the McDowell Rd. culverts ===> XS  #726.00
*        u/s       "       "        "          ===> XS #1000.00
*        The XS numbering u/s of McDowell Rd. has been modified accordingly.
*        These XS #'s apply to the all other HEC-2 runs
*
J1      0       2       0       0  .00532       0       0       0     180       0
J2      1       0       0       0       0       0       0       6
J3     38      43      39       4      25      26      23      24       1      42
* Refer to the Comments after XS #766 about the discharges.
NC   .035    .035    .015
QT      2    4710    4710       0       0       0
X1      0       7  999.99 1016.01
X3     10
GR184.67  950.00  184.67  999.99  170.00 1000.00  169.67 1008.00  170.00 1016.00
GR184.67 1016.01  184.67 1066.00
X1    384       7  999.99 1016.01     374     394     384
X3     10
GR186.71  950.00  186.71  999.99  172.04 1000.00  171.71 1008.00  172.04 1016.00
GR186.71 1016.01  186.71 1066.00
X1    434       7  999.99 1016.01      49      51      50
X3     10
GR188.36  950.00  188.36  999.99  172.31 1000.00  171.98 1008.00  172.31 1016.00
GR188.36 1016.01  188.36 1066.00
X1    484       7  999.99 1016.01      49      51      50
X3     10
GR190.00  950.00  190.00  999.99  173.13 1000.00  172.80 1008.00  173.13 1016.00
GR190.00 1016.01  190.00 1066.00
NC                          .3      .5
X1    684       7  999.99 1026.01     200     200     200
GR190.00  950.00  190.00  999.99  176.50 1000.00  176.07 1013.00  176.50 1026.00
GR190.00 1026.01  190.00 1076.00
X1    726       7    1000    1026      42      42      42
X3     10                                                 189     189
GR192.00  950.00  189.00  999.99  177.11 1000.00  177.11 1013.00  177.11 1026.00
GR189.00 1026.01  192.00 1076.00
* The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
*    discharges for 25, 50, 100-yr event, respectively.  This is due to the
*    assumption that those amount of discharges do not join the d/s channel
*    flowing west along the McDowell Road.
SC 2.014      .2     2.6              10      12     274     9.2  179.85  177.11
X1  1000      10     987    1013     274     274     274
X2                     2  189.85
X3     10                                                 194     194
X5      2  195.20  195.20
BT     -7     966  193.00             972  193.00             975  194.00
BT            985  194.00            1027  194.00            1041  193.90
BT           1070  193.90
GR    193     966     193     972     194  984.99  193.87     985  179.85     987
GR179.85    1013  193.87    1027     194 1027.01   193.9    1041   193.9    1070
NC 0.040   0.040   0.025       0       0
QT      2    4710     610       0       0       0
X1   1110    14.0  973.01  1024.0   111.0   108.0   110.0     0.0     0.0       0
CI     -1  193.30   0.025       0       0       0   -60.0
X3     10
GR 205.0   973.0   195.0  973.01   190.0   980.0   185.0   984.5   181.0   989.0
GR 181.0  1000.0   181.0  1006.0   185.0  1013.0   190.0  1018.5   195.0  1024.0
GR 195.5  1030.0   195.0  1036.0   194.0  1058.0   204.0 1058.01
NC      0       0       0     0.1    0.35
X1   1514    14.0  974.01  1030.0   418.0   390.0   404.0     0.0     0.0       0
CI     -1  196.60       0       0       0       0   -60.0
X3     10
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GR 208.6    974.0    198.6   974.01    195.0    977.0    185.0    988.0    181.1    992.0
GR 181.1   1010.0    185.0   1014.0    195.0   1023.0    198.6   1030.0    198.0   1034.5
GR 197.0   1046.0    197.0   1053.0    197.0   1057.0    207.0   1057.0
QT     2     4490      390        0        0        0
X1  1912     17.0    972.4   1034.0    408.0    388.0    398.0      0.0      0.0        0
CI    -1   200.70        0        0        0        0    -60.0
X3    10
GR 210.5    912.0    205.0   912.01    200.5   912.02    203.0    926.0    203.6    948.0
GR 203.0    972.4    200.0    975.5    185.0    989.0    181.7    994.0    181.7   1011.0
GR 185.0   1015.0    200.0   1029.0    202.7   1034.0    202.0   1044.0    201.0   1055.0
GR 200.0   1064.0    210.0   1064.0
X1  2312     26.0    969.0   1028.0    410.0    390.0    400.0      0.0      0.0        0
CI    -1   201.00        0        0        0        0    -60.0
X3    10
GR 213.5    900.5    207.5   900.51    205.5   900.52    203.5   900.53    204.9    925.2
GR 204.2    961.5    204.0    969.0    203.0    971.8    200.0    974.2    195.0    979.5
GR 190.0    983.8    185.0    987.5    184.0    988.5    183.0    989.5    183.2   1000.0
GR 185.0   1009.5    190.0   1014.5    195.0   1019.5    200.0   1024.5    203.0   1028.0
GR 203.9   1036.0    203.0   1047.0    202.0   1054.0    201.0   1063.0    200.9   1070.0
GR 210.9  1070.01
NC     0        0        0      0.3      0.5
X1  2485     23.0    969.7   1027.5    173.0    173.0    173.0      0.0      0.0        0
CI    -1   201.00        0        0        0        0    -80.0
X3    10
GR 213.8    904.5    203.8   904.51    204.0    922.5    204.1    929.4    204.1    937.0
GR 203.0    969.7    200.0    977.5    199.0    980.5    198.0    984.0    197.6    990.0
GR 197.6    991.0    183.9    991.0    183.9   1007.0    197.6   1007.0    197.6   1008.0
GR 198.0   1013.0    199.0   1016.0    200.0   1018.5    203.0   1027.5    203.0   1035.0
GR 203.0   1043.0    201.6   1064.0    211.6  1064.01
NC     0        0    0.016        0        0
X1  2515       20      963     1026       30       30       30        0        0        0
CI    -1   201.80    0.025        0        0        0    -80.0
GR213.90      901   203.90   901.01   204.00      926   204.00      934   203.00      963
GR202.00      972   200.00      979   199.00      982   197.60      990   197.60      991
GR184.00      991   184.00     1007   197.60     1007   199.00     1014   201.00     1019
GR203.00     1026   203.00     1042   202.00     1053   201.50     1059   211.50  1059.01
X1  2530     16.0    959.8   1025.0     15.0     15.0     15.0      0.0      0.0      0.0
CI    -1   202.50        0        0        0        0   -100.0
GR 213.9    901.0    203.9   901.01    203.0    959.8    197.6    980.0    197.6    991.5
GR 188.3    991.5    188.3   1007.5    197.6   1007.5    197.6   1018.0    200.0   1021.0
GR 203.0   1025.0    203.2   1036.0    203.0   1042.0    202.0   1050.0    201.5   1059.0
GR 211.5  1059.01
NC     0        0    0.025        0        0
QT     2     4410      310        0        0        0
X1  2712     18.0    975.8   1022.0    182.0    182.0    182.0      0.0      0.0        0
CI    -1   202.50        0        0        0        0   -100.0
X3    10
GR   214      899    203.7   899.01    204.2    970.0    204.0    975.8    200.0    980.8
GR 195.0    985.0    190.0    990.0    188.5    991.0    188.5   1007.0    190.0   1009.5
GR 195.0   1014.8    200.0   1019.5    203.0   1022.0    203.6     1036    203.0   1047.0
GR 202.0   1051.0    201.5   1057.0    211.5  1057.01
NC     0        0        0      0.1     0.35
X1  3112     22.0    971.0   1021.0    400.0    400.0    400.0      0.0      0.0        0
CI    -1   203.50        0        0        0        0   -100.0
X3    10
GR 214.0    893.5    204.0   893.51    203.0    900.8    203.6    908.0    203.0    917.0
GR 202.0    951.0    205.0    969.5    205.4    971.0    205.0    973.0    200.0    980.0
GR 195.0    984.7    190.0    988.8    189.4   1000.0    190.0   1006.8    195.0   1011.5
GR 200.0   1016.5    204.0   1021.0    204.5   1034.0    204.0   1045.0    203.0   1048.0
GR 202.4   1060.0      212  1060.01
QT     2     4350      250        0        0        0
X1  3513     22.0    976.8   1020.8    401.0    401.0    401.0      0.0      0.0        0
CI    -1   204.44        0        0        0        0   -100.0
X3    10
GR 214.0    896.0    204.0   896.01    205.0    923.0    205.1    933.5    205.0    942.0
GR 204.8    949.0    205.5    955.0    206.2    966.0    205.0    976.8    200.0    981.8
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GR 195.0   986.8   191.0   990.8   190.8  1000.0   191.0  1007.0   195.0  1011.1
GR 200.0  1015.8   205.0  1020.8   205.2  1035.0   205.0  1047.0   204.0  1051.0
GR 203.4  1080.0   213.4 1080.01
X1  3913    19.0   976.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.88       0       0       0       0  -100.0
X3    10
GR 215.1   898.0   210.1   898.01  205.1   898.02   204.6   942.0   205.0   967.0
GR 205.8   976.0   205.0   978.5   200.0   984.1    195.0   989.2   192.0   992.5
GR 191.3  1000.0   192.0  1006.5   195.0  1009.5    200.0  1015.0   205.0  1020.5
GR 206.0  1022.0   206.7  1028.5   202.4  1082.0    212.4 1082.01
X1  4313    28.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.50       0       0       0       0   -60.0
X3    10
GR 215.1   899.0   205.1   899.01  205.0   930.5    205.1   937.0   205.0   944.0
GR 204.4   959.0   205.0   971.0   205.1   977.0    205.0   979.5   200.0   985.0
GR 195.0   990.0   193.0   999.0   192.6  1000.0    193.0  1004.0   194.0  1008.0
GR 195.0  1009.0   200.0  1014.5   205.0  1018.5    206.0  1020.0   207.0  1022.0
GR 207.3  1025.0   207.0  1028.5   206.0  1038.0    205.0  1043.0   204.0  1052.0
GR 203.0  1058.0   202.3  1088.0   212.3 1088.01
QT     2    3850     250       0       0       0
X1  4713    24.0   976.0  1020.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  205.50       0       0       0       0   -60.0
X3    10
GR 215.9   915.0   213.9   915.01  210.9   915.02   205.9  915.03   206.0   972.0
GR 206.6   976.0   206.0   979.5   205.0   981.0    200.0   986.0   195.0   990.3
GR 193.0   992.0   192.8   995.0   193.0   998.5    194.0  1006.0   195.0  1007.5
GR 200.0  1013.5   205.0  1018.5   206.0  1020.5    206.5  1027.0   206.0  1034.8
GR 205.0  1040.5   204.0  1054.0   203.2  1085.0    213.2 1085.01
EJ
T1      GREINER,INC   FERGUSON  02-1-93     (FILENAME = OCC-M1D1.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D1                     CI BOTTOM WIDTH = VARIES
J1     0       3       0       0 0.00532       0       0       0   180.0       0
J2    15       0       0       0       0       0       0       7       0       0


ER
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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    10FEB93    TIME   09:28:26 *
 *****************************************
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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*         (916) 756-1104            *
*************************************
```

```
X     X  XXXXXXX   XXXXX            XXXXX
X     X  X       X     X          X     X
X     X  X       X                      X
XXXXXXX  XXXX     X         XXXXX   XXXXX
X     X  X       X               X
X     X  X       X     X         X
X     X  XXXXXXX   XXXXX          XXXXXXX
```

1

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THIS RUN EXECUTED 10FEB93 09:28:26

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************
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T1      GREINER,INC    UPDATE    02-1-93     (FILENAME = OCC-M1D1.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D1                     u/s of McDowell Road

  Cross-section numbering has been changed:
        d/s face of the McDowell Rd. culverts ===> XS  #726.00
        u/s      "       "       "          ===> XS #1000.00
        The XS numbering u/s of McDowell Rd. has been modified accordingly.
        These XS #'s apply to the all other HEC-2 runs

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL     FQ

       0        2        0        0   .00532        0        0        0       180       0

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBW      CHNIM    ITRACE

      1        0        0        0        0        0        0        6

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38       43       39        4       25       26       23       24        1       42
  Refer to the Comments after XS #766 about the discharges.

NC     .035     .035     .015
QT        2     4710     4710        0        0        0
X1        0        7   999.99  1016.01
X3       10
GR   184.67   950.00   184.67   999.99   170.00  1000.00   169.67  1008.00   170.00  1016.00
GR   184.67  1016.01   184.67  1066.00
```

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X1      384        7    999.99   1016.01       374       394       384
X3       10
GR   186.71   950.00    186.71    999.99    172.04   1000.00    171.71   1008.00    172.04   1016.00
GR   186.71  1016.01    186.71   1066.00

X1      434        7    999.99   1016.01        49        51        50
X3       10
GR   188.36   950.00    188.36    999.99    172.31   1000.00    171.98   1008.00    172.31   1016.00
GR   188.36  1016.01    188.36   1066.00
1
   10FEB93     09:28:26                                                                          PAGE    2


X1      484        7    999.99   1016.01        49        51        50
X3       10
GR   190.00   950.00    190.00    999.99    173.13   1000.00    172.80   1008.00    173.13   1016.00
GR   190.00  1016.01    190.00   1066.00

NC                                     .3        .5
X1      684        7    999.99   1026.01       200       200       200
GR   190.00   950.00    190.00    999.99    176.50   1000.00    176.07   1013.00    176.50   1026.00
GR   190.00  1026.01    190.00   1076.00

X1      726        7      1000      1026        42        42        42
X3       10                                                                  189       189
GR   192.00   950.00    189.00    999.99    177.11   1000.00    177.11   1013.00    177.11   1026.00
GR   189.00  1026.01    192.00   1076.00
  The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
     discharges for 25, 50, 100-yr event, respectively.  This is due to the
     assumption that those amount of discharges do not join the d/s channel
     flowing west along the McDowell Road.

SC    2.014       .2       2.6                 10        12       274       9.2    179.85    177.11
X1     1000       10       987      1013       274       274       274
X2                          2    189.85
X3       10                                                                  194       194
X5        2   195.20    195.20
BT       -7      966    193.00                972    193.00                 975    194.00
BT               985    194.00               1027    194.00                1041    193.90
BT              1070    193.90
GR      193      966       193       972       194    984.99    193.87       985    179.85       987
GR   179.85     1013    193.87      1027       194   1027.01     193.9      1041     193.9      1070

NC    0.040    0.040     0.025         0         0
QT        2     4710       610         0         0         0
X1     1110     14.0    973.01    1024.0     111.0     108.0     110.0       0.0       0.0         0
CI       -1   193.30     0.025         0         0         0     -60.0
X3       10
GR    205.0    973.0     195.0    973.01     190.0     980.0     185.0     984.5     181.0     989.0
GR    181.0   1000.0     181.0    1006.0     185.0    1013.0     190.0    1018.5     195.0    1024.0
GR    195.5   1030.0     195.0    1036.0     194.0    1058.0     204.0   1058.01

NC        0        0         0       0.1      0.35
X1     1514     14.0    974.01    1030.0     418.0     390.0     404.0       0.0       0.0         0
CI       -1   196.60         0         0         0         0     -60.0
X3       10
GR    208.6    974.0     198.6    974.01     195.0     977.0     185.0     988.0     181.1     992.0
GR    181.1   1010.0     185.0    1014.0     195.0    1023.0     198.6    1030.0     198.0    1034.5
GR    197.0   1046.0     197.0    1053.0     197.0    1057.0     207.0    1057.0

QT        2     4490       390         0         0         0
X1     1912     17.0    972.4    1034.0     408.0     388.0     398.0       0.0       0.0         0
CI       -1   200.70         0         0         0         0     -60.0
X3       10
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GR    210.5     912.0     205.0    912.01     200.5    912.02     203.0     926.0     203.6     948.0
GR    203.0     972.4     200.0     975.5     185.0     989.0     181.7     994.0     181.7    1011.0
1
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GR    185.0    1015.0     200.0    1029.0     202.7    1034.0     202.0    1044.0     201.0    1055.0
GR    200.0    1064.0     210.0    1064.0

X1     2312      26.0     969.0    1028.0     410.0     390.0     400.0       0.0       0.0         0
CI       -1    201.00         0         0         0         0     -60.0
X3       10
GR    213.5     900.5     207.5    900.51     205.5    900.52     203.5    900.53     204.9     925.2
GR    204.2     961.5     204.0     969.0     203.0     971.8     200.0     974.2     195.0     979.5
GR    190.0     983.8     185.0     987.5     184.0     988.5     183.0     989.5     183.2    1000.0
GR    185.0    1009.5     190.0    1014.5     195.0    1019.5     200.0    1024.5     203.0    1028.0
GR    203.9    1036.0     203.0    1047.0     202.0    1054.0     201.0    1063.0     200.9    1070.0
GR    210.9   1070.01

NC        0         0         0       0.3       0.5
X1     2485      23.0     969.7    1027.5     173.0     173.0     173.0       0.0       0.0         0
CI       -1    201.00         0         0         0         0     -80.0
X3       10
GR    213.8     904.5     203.8    904.51     204.0     922.5     204.1     929.4     204.1     937.0
GR    203.0     969.7     200.0     977.5     199.0     980.5     198.0     984.0     197.6     990.0
GR    197.6     991.0     183.9     991.0     183.9    1007.0     197.6    1007.0     197.6    1008.0
GR    198.0    1013.0     199.0    1016.0     200.0    1018.5     203.0    1027.5     203.0    1035.0
GR    203.0    1043.0     201.6    1064.0     211.6   1064.01

NC        0         0     0.016         0         0
X1     2515        20       963      1026        30        30        30         0         0         0
CI       -1    201.80     0.025         0         0         0     -80.0
GR   213.90       901    203.90    901.01    204.00       926    204.00       934    203.00       963
GR   202.00       972    200.00       979    199.00       982    197.60       990    197.60       991
GR   184.00       991    184.00      1007    197.60      1007    199.00      1014    201.00      1019
GR   203.00      1026    203.00      1042    202.00      1053    201.50      1059    211.50   1059.01

X1     2530      16.0     959.8    1025.0      15.0      15.0      15.0       0.0       0.0       0.0
CI       -1    202.50         0         0         0         0    -100.0
GR    213.9     901.0     203.9    901.01     203.0     959.8     197.6     980.0     197.6     991.5
GR    188.3     991.5     188.3    1007.5     197.6    1007.5     197.6    1018.0     200.0    1021.0
GR    203.0    1025.0     203.2    1036.0     203.0    1042.0     202.0    1050.0     201.5    1059.0
GR    211.5   1059.01

NC        0         0     0.025         0         0
QT        2      4410       310         0         0         0
X1     2712      18.0     975.8    1022.0     182.0     182.0     182.0       0.0       0.0         0
CI       -1    202.50         0         0         0         0    -100.0
X3       10
GR      214       899     203.7    899.01     204.2     970.0     204.0     975.8     200.0     980.8
GR    195.0     985.0     190.0     990.0     188.5     991.0     188.5    1007.0     190.0    1009.5
GR    195.0    1014.8     200.0    1019.5     203.0    1022.0     203.6      1036     203.0    1047.0
GR    202.0    1051.0     201.5    1057.0     211.5   1057.01

NC        0         0         0       0.1      0.35
X1     3112      22.0     971.0    1021.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1    203.50         0         0         0         0    -100.0
X3       10
GR    214.0     893.5     204.0    893.51     203.0     900.8     203.6     908.0     203.0     917.0
GR    202.0     951.0     205.0     969.5     205.4     971.0     205.0     973.0     200.0     980.0
1
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GR    195.0     984.7     190.0     988.8     189.4    1000.0     190.0    1006.8     195.0    1011.5
GR    200.0    1016.5     204.0    1021.0     204.5    1034.0     204.0    1045.0     203.0    1048.0
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GR    202.4     1060.0       212    1060.01

QT        2       4350       250          0          0          0
X1     3513       22.0     976.8     1020.8      401.0      401.0      401.0        0.0        0.0          0
CI       -1     204.44         0          0          0          0     -100.0
X3       10
GR    214.0      896.0     204.0      896.01      205.0      923.0      205.1      933.5      205.0      942.0
GR    204.8      949.0     205.5       955.0      206.2      966.0      205.0      976.8      200.0      981.8
GR    195.0      986.8     191.0      990.8      190.8     1000.0      191.0     1007.0      195.0     1011.1
GR    200.0     1015.8     205.0     1020.8      205.2     1035.0      205.0     1047.0      204.0     1051.0
GR    203.4     1080.0     213.4    1080.01

X1     3913       19.0     976.0     1022.0      400.0      400.0      400.0        0.0        0.0          0
CI       -1     204.88         0          0          0          0     -100.0
X3       10
GR    215.1      898.0     210.1      898.01      205.1     898.02      204.6      942.0      205.0      967.0
GR    205.8      976.0     205.0       978.5      200.0      984.1      195.0      989.2      192.0      992.5
GR    191.3     1000.0     192.0     1006.5      195.0     1009.5      200.0     1015.0      205.0     1020.5
GR    206.0     1022.0     206.7     1028.5      202.4     1082.0      212.4    1082.01

X1     4313       28.0     979.5     1022.0      400.0      400.0      400.0        0.0        0.0          0
CI       -1     204.50         0          0          0          0      -60.0
X3       10
GR    215.1      899.0     205.1      899.01      205.0      930.5      205.1      937.0      205.0      944.0
GR    204.4      959.0     205.0       971.0      205.1      977.0      205.0      979.5      200.0      985.0
GR    195.0      990.0     193.0       999.0      192.6     1000.0      193.0     1004.0      194.0     1008.0
GR    195.0     1009.0     200.0     1014.5      205.0     1018.5      206.0     1020.0      207.0     1022.0
GR    207.3     1025.0     207.0     1028.5      206.0     1038.0      205.0     1043.0      204.0     1052.0
GR    203.0     1058.0     202.3     1088.0      212.3    1088.01

QT        2       3850       250          0          0          0
X1     4713       24.0     976.0     1020.5      400.0      400.0      400.0        0.0        0.0          0
CI       -1     205.50         0          0          0          0      -60.0
X3       10
GR    215.9      915.0     213.9      915.01      210.9     915.02      205.9     915.03      206.0      972.0
GR    206.6      976.0     206.0       979.5      205.0      981.0      200.0      986.0      195.0      990.3
GR    193.0      992.0     192.8       995.0      193.0      998.5      194.0     1006.0      195.0     1007.5
GR    200.0     1013.5     205.0     1018.5      206.0     1020.5      206.5     1027.0      206.0     1034.8
GR    205.0     1040.5     204.0     1054.0      203.2     1085.0      213.2    1085.01
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SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1

*SECNO  .000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      184.67 ELREA=      184.67

     .000     13.95    183.62    183.52    180.00    190.69      7.08       .00       .00    184.67
   4710.0        .0    4710.0        .0        .0     220.6        .0        .0        .0    184.67
     .00       .00     21.35       .00      .000      .015      .000      .000    169.67    999.99
  .005288        0.        0.        0.         0        14         0       .00     16.02   1016.01


*SECNO 384.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      186.71 ELREA=      186.71

   384.000     13.93    185.64    185.47       .00    192.73      7.09      2.03       .00    186.71
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   4710.0        .0    4710.0        .0        .0     220.5        .0       1.9        .1    186.71
     .00        .00     21.36       .00      .000      .015      .000      .000    171.71    999.99
  .005297       374.     384.      394.         0         8         0       .00     16.02   1016.01


*SECNO 434.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

  434.000     14.05    186.03    186.03       .00    193.00      6.97       .26       .00    188.36
   4710.0        .0    4710.0        .0        .0     222.3        .0       2.2        .2    188.36
      .01       .00     21.19       .00      .000      .015      .000      .000    171.98    999.99
  .005189       49.      50.       51.        20         5         0       .00     16.02   1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

  484.000     14.03    186.83    186.83       .00    193.82      6.99       .26       .00    190.00
   4710.0        .0    4710.0        .0        .0     221.9        .0       2.5        .2    190.00
      .01       .00     21.22       .00      .000      .015      .000      .000    172.80    999.99
  .005210       49.      50.       51.        20         5         0       .00     16.02   1016.01


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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.19 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.24

  684.000     19.12    195.19       .00       .00    195.87       .68       .15      1.89    190.00
   4710.0     525.5    3659.1     525.5     259.2     491.7     259.2       5.3        .5    190.00
      .02      2.03      7.44      2.03      .035      .015      .035      .000    176.07    950.00
  .000290      200.      200.      200.         5         0         0       .00    126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.03 FEET

  726.000     17.91    195.02       .00       .00    196.05      1.02       .01       .17    177.11
   4710.0     324.4    4061.2     324.4     226.3     465.8     226.3       6.2        .6    177.11
      .02      1.43      8.72      1.43      .035      .015      .035      .000    177.11    950.00
  .000165       42.       42.       42.         2         0         0       .00    126.00   1076.00
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SPECIAL CULVERT

SC	CUNO	CUNV	ENTLC	COFQ	RDLEN	RISE	SPAN	CULVLN	CHRT	SCL	ELCHU	ELCHD
	2	.014	.20	2.60	.00	10.00	12.00	274.00	9	2	179.85	177.11

CHART 9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE 2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
WATER EL=X5 CARD= 195.200
3280 CROSS SECTION 1000.00 EXTENDED 2.20 FEET

1000.000	15.35	195.20	.00	.00	196.88	1.68	.06	.33	179.85
4710.0	51.1	4325.6	333.3	52.0	399.1	172.0	11.1	1.3	179.85
.02	.98	10.84	1.94	.035	.015	.035	.000	179.85	966.00
.000314	274.	274.	274.	0	0	0	.00	104.00	1070.00

*SECNO 1110.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1110.000	14.89	195.89	.00	.00	197.09	1.20	.06	.15	195.00
4710.0	.0	4655.2	54.8	.0	527.6	38.3	12.6	1.6	195.00
.03	.00	8.82	1.43	.000	.025	.040	.000	181.00	973.01
.001248	111.	110.	108.	3	0	0	.00	84.99	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 198.60 ELREA= 198.60

1514.000	15.25	196.35	.00	.00	197.67	1.32	.54	.04	198.60
4710.0	.0	4710.0	.0	.0	510.5	.0	17.5	2.2	198.60
.04	.00	9.23	.00	.000	.025	.000	.000	181.10	975.88
.001455	418.	404.	390.	2	0	0	.00	49.75	1025.63

*SECNO 1912.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 202.70

1912.000	15.35	197.05	.00	.00	198.22	1.17	.53	.02	203.00
4490.0	.0	4490.0	.0	.0	517.5	.0	22.2	2.7	202.70
.05	.00	8.68	.00	.000	.025	.000	.000	181.70	978.15
.001228	408.	398.	388.	2	0	0	.00	48.10	1026.25

*SECNO 2312.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.00 ELREA= 203.00

2312.000	14.37	197.37	.00	.00	198.99	1.62	.61	.16	204.00
4490.0	.0	4490.0	.0	.0	439.4	.0	26.6	3.1	203.00

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      .06       .00     10.22       .00      .000      .025      .000      .000    183.00    976.99
   .001929      410.      400.      390.         2         0         0       .00     44.88   1021.87


CCHV=     .300 CEHV=     .500
*SECNO 2485.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      203.00 ELREA=      203.00

  2485.000     15.90    199.80    199.80       .00    203.50      3.70       .64      1.04    203.00
    4490.0        .0    4490.0       .0        .0     290.9        .0      28.1       3.2    203.00
       .07       .00     15.44       .00      .000      .025      .000      .000    183.90    978.11
   .009691      173.      173.      173.        20         8         0       .00     39.88   1017.99


*SECNO 2515.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2515.000     15.96    199.96    199.96       .00    203.81      3.85       .18       .07    203.00
    4490.0        .0    4490.0       .0        .0     285.3        .0      28.3       3.3    203.00
       .07       .00     15.74       .00      .000      .016      .000      .000    184.00    979.11
   .004005       30.       30.       30.         2         5         0       .00     37.29   1016.41


*SECNO 2530.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2530.000     13.10    201.40    201.40       .00    204.29      2.89       .05       .29    203.00
    4490.0        .0    4490.0       .0        .0     329.3        .0      28.4       3.3    203.00
       .07       .00     13.63       .00      .000      .016      .000      .000    188.30    965.78
   .003130       15.       15.       15.        20        16         0       .00     57.08   1022.87


*SECNO 2712.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      204.00 ELREA=      203.00

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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


  2712.000    15.42    203.92       .00       .00    205.14      1.23       .36       .50    204.00
    4410.0       .0    4362.1      47.9        .0     488.1      33.9      30.2       3.6    203.00
       .07      .00      8.94      1.41      .000      .025      .040      .000    188.50    975.91
   .001340     182.      182.      182.         3         0         0       .00     81.09   1057.00


CCHV=     .100 CEHV=     .350
*SECNO 3112.000

3265 DIVIDED FLOW


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      205.40 ELREA=      204.00

  3112.000    15.01    204.41       .00       .00    205.79      1.38       .59       .05    205.40
    4410.0       .0    4364.6      45.4        .0     461.0      27.2      34.8       4.3    204.00
       .09      .00      9.47      1.67      .000      .025      .040      .000    189.40    973.83
   .001633     400.      400.      400.         2         0         0       .00     81.76   1060.00


*SECNO 3513.000

3265 DIVIDED FLOW

  3513.000    14.21    205.01       .00       .00    206.55      1.54       .71       .06    205.00
    4350.0      13.9    4263.3      72.7      14.5     423.5      39.8      39.2       5.2    205.00
       .10      .96     10.07      1.83      .040      .025      .040      .000    190.80    896.01
   .001917     401.      401.      401.         0         0         0       .00    113.71   1080.00


*SECNO 3913.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      205.80 ELREA=      206.00

  3913.000    14.36    205.66       .00       .00    207.54      1.88       .87       .12    205.80
    4350.0       .0    4350.0        .0        .0     395.4        .0      43.3       6.0    206.00
       .11      .00     11.00       .00      .000      .025      .000      .000    191.30    976.43
   .002507     400.      400.      400.         2         0         0       .00     45.06   1021.49


*SECNO 4313.000
1
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.57

  4313.000    14.96    207.56       .00       .00    208.27       .71       .61       .12    205.00
    4350.0     469.0    3253.3     627.7     211.0     423.8     221.8      49.0       7.0    207.00
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      .12      2.22      7.68      2.83      .040      .025      .040      .000    192.60    899.01
  .001023      400.      400.      400.         6         0         0       .00    189.00   1088.01


*SECNO 4713.000
 4713.000     15.22    208.02       .00       .00    208.66       .64       .39       .01    206.60
   3850.0     221.7    3056.5     571.8     125.0     429.9     224.5      56.5       8.7    206.00
      .14      1.77      7.11      2.55      .040      .025      .040      .000    192.80    915.03
  .000915      400.      400.      400.         2         0         0       .00    169.98   1085.00


1
 PROFILE FOR STREAM  SUB-CRITICAL FLOW M1D1


 PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA


 ELEVATION  170.     175.     180.     185.     190.     195.     200.     205.     210.     215.
    SECNO   CUMDIS

      .00     0. I        .        .      W L        . E      .        .        .        .        .        .
             50. .I       .        .      W .L       .  E     .        .        .        .        .        .
            100. .I       .        .       W.L       .  E     .        .        .        .        .        .
            150. . I      .        .       W. L      .   E    .        .        .        .        .        .
            200. . I      .        .        W L      .   E    .        .        .        .        .        .
            250. .  I     .        .        CW L     .    E   .        .        .        .        .        .
            300. .  I     .        .        .W L     .    E   .        .        .        .        .        .
            350. .   I    .        .        .CW L    .     E  .        .        .        .        .        .
   384.00   400. .   I    .        .        . W L    .     E  .        .        .        .        .        .
   434.00   450. .    I   .        .        .  W   L .      E .        .        .        .        .        .
   484.00   500. .     I  .        .        .   W    .L      E.        .        .        .        .        .
            550. C      I .        .        .       W.L      E.        .        .        .        .        .
            600. C        I        .        .        .L W     E        .        .        .        .        .
            650. C        .I       .        .        .L    W  .E       .        .        .        .        .
   684.00   700. C        . I      .        .        .L       .WE      .        .        .        .        .
   726.00   750. C        .   I    .        .        .   M   .W E      .        .        .        .        .
            800. C        .    I   .        .        .   M   .W E      .        .        .        .        .
            850. C        .     I  .        .        .   M   .W E      .        .        .        .        .
            900. C        .      I .        .        .    M  .W  E     .        .        .        .        .
            950. C        .       I.        .        .    M  .W  E     .        .        .        .        .
  1000.00  1000. C        .        I        .        .     M .W  E     .        .        .        .        .
           1050. C        .        .I       .   L    .        . W  E M .        .        .        .        .
           1100. C        .        . I      .        .      L . W  E   .      M  .        .        .        .
  1110.00  1150. C        .        .  I     .        .       .LW  E   .       M.        .        .        .
           1200. C        .        .  I     .        .       . LW E   .       M.        .        .        .
           1250. C        .        .  I     .        .       . LW E   .       M         .        .        .
           1300. C        .        .  I     .        .        . W E   .       .M        .        .        .
           1350. C        .        .  I     .        .        . WLE   .       . M       .        .        .
           1400. C        .        .  I     .        .        . W LE  .       . M       .        .        .
           1450. C        .        .  I     .        .        . W  E  .       .  M      .        .        .
           1500. C        .        .  I     .        .        . W  EL .       .   M     .        .        .
  1514.00  1550. C        .        .  I     .        .        . W  E L.       .   M     .        .        .
           1600. C        .        .  I     .        .        .  W E  L.      .   M     .        .        .
           1650. C        .        .  I     .        .        .  W E   L      .    M    .        .        .
           1700. C        .        .  I     .        .        .  W E  .L      .     M   .        .        .
           1750. C        .        .  I     .        .        .  W  E . L     .      M  .        .        .
           1800. C        .        .   I    .        .        .  W  E  . L    .      M  .        .        .
           1850. C        .        .   I    .        .        .  W  E  .  L   .       M.        .        .
           1900. C        .        .   I    .        .        .   W E  .  RL  .        M        .        .
  1912.00  1950. C        .        .   I    .        .        .   W E  .   RL .        .M       .        .
           2000. C        .        .   I    .        .        .   W E  .   RL .        .M       .        .
           2050. C        .        .    I   .        .        .   W E  .   RL .        .M       .        .
           2100. C        .        .    I   .        .        .   W  E .   RL .        .M       .        .
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          2150. C     .     .  I  .     .     .  W  E .    R L .     . M    .     .
          2200. C     .     .   I .     .     .  W  E .    R L .     . M    .     .
          2250. C     .     .   I .     .     .  W  E .     RL .     . M    .     .
          2300. C     .     .   I .     .     .  W  E .     RL .     . M    .     .
  2312.00 2350. C     .     .    I .     .     .  W   E.     R L.     . M    .     .
          2400. C     .     .    I .     .     .   W  .E    RL .     .  M   .     .
          2450. C     .     .     I .     .     .   W .   E  RL .     .  M   .     .
  2485.00 2500. .     .     .     I .     .     .     W     LE .     .   M  .     .
  2515.00 2550. .     .     .      I.     .     .     .W    LE .     .   M  .     .
  2530.00 2600. .     .     .       .   I .     .     . W   L E.     .   M  .     .
          2650. C     .     .       .   I .     .     .   W L  E     .   M  .     .
          2700. C     .     .       .   I .     .     .    WRL E     .   M  .     .
  2712.00 2750. C     .     .       .    I .     .     .     RWL.E    .   M  .     .
          2800. C     .     .       .    I .     .     .     R W.E    .   M  .     .
          2850. C     .     .       .    I .     .     .     R W.E    .   M  .     .
          2900. C     .     .       .    I .     .     .     R WLE    .   M  .     .
          2950. C     .     .       .     I.     .     .      RWL E   .   M  .     .
          3000. C     .     .       .     I.     .     .      RWL E   .   M  .     .
          3050. C     .     .       .     I.     .     .      RW.LE   .   M  .     .
          3100. C     .     .       .     I.     .     .      RW.LE   .    M .     .
  3112.00 3150. C     .     .       .     I.     .     .       W.LE   .    M .     .
          3200. C     .     .       .      I     .     .       RWLE   .    M .     .
          3250. C     .     .       .      I     .     .       RWL E  .    M .     .
          3300. C     .     .       .      .I    .     .       RWL E  .     M .     .
          3350. C     .     .       .      .I    .     .        WL E  .     M .     .
          3400. C     .     .       .      .I    .     .        WL E  .     M .     .
          3450. C     .     .       .       . I  .     .        WL E  .      M .     .
          3500. C     .     .       .       . I  .     .        RW  E .      M .     .
  3513.00 3550. C     .     .       .       . I  .     .        .W  E .      M .     .
          3600. C     .     .       .       . I  .     .        .W  E .      M .     .
          3650. C     .     .       .       .  I .     .        .W  E .      M .     .
          3700. C     .     .       .       .  I .     .        .W   E .     M .     .
          3750. C     .     .       .       .  I .     .        .WR  E .     M .     .
          3800. C     .     .       .       .  I .     .        .WL  E .     M .     .
          3850. C     .     .       .       .  I .     .        . W  E .     M .     .
          3900. C     .     .       .       .  I .     .        . W  E .     M .     .
  3913.00 3950. C     .     .       .       .  I .     .        . WR  E .    M .     .
          4000. C     .     .       .       .   I .     .        . WR  E .    M .     .
          4050. C     .     .       .       .   I .     .        . LW  E .    M .     .
          4100. C     .     .       .       .   I .     .        . LW  E .    M .     .
          4150. C     .     .       .       .    I .     .        .L  W E .   M .     .
          4200. C     .     .       .       .    I .     .        .L  W  E .  M .     .
          4250. C     .     .       .       .    I .     .        .L  RW E .  M .     .
          4300. C     .     .       .       .     I .     .        .L  RW E .  M .     .
  4313.00 4350. C     .     .       .       .     I .     .        .L   RWE .  M .     .
          4400. C     .     .       .       .     I .     .        .L  R WE .  M .     .
          4450. C     .     .       .       .     I .     .        .L  R WE .   M .     .
          4500. C     .     .       .       .     I .     .        . L R WE .   M .     .
          4550. C     .     .       .       .     I .     .        . L R W E .  M .     .
          4600. C     .     .       .       .     I .     .        .  L  W E .  M .     .
          4650. C     .     .       .       .     I .     .        .  L  W E .   M .     .
          4700. C     .     .       .       .     I .     .        .  L   WE .   M .     .
  4713.00 4750. C     .     .       .       .     I .     .        .  RL  WE .   M .     .
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T1      GREINER,INC   FERGUSON  02-1-93     (FILENAME = OCC-M1D1.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M1D1                    CI BOTTOM WIDTH = VARIES

J1  ICHECK    INQ      NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0        3         0         0   0.00532         0         0         0     180.0         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
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   15        0        0        0        0        0        0        7        0        0
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

*PROF 2

*SECNO  .000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      184.67 ELREA=      184.67

     .000    13.95   183.62   183.52   180.00   190.69     7.08      .00      .00   184.67
   4710.0       .0   4710.0       .0       .0    220.6       .0       .0       .0   184.67
     .00      .00    21.35      .00     .000     .015     .000     .000   169.67   999.99
  .005288       0.       0.       0.        0       14        0      .00    16.02  1016.01


*SECNO 384.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      186.71 ELREA=      186.71

  384.000    13.93   185.64   185.47      .00   192.73     7.09     2.03      .00   186.71
   4710.0       .0   4710.0       .0       .0    220.5       .0      1.9       .1   186.71
     .00      .00    21.36      .00     .000     .015     .000     .000   171.71   999.99
  .005297     374.     384.     394.        0        8        0      .00    16.02  1016.01


*SECNO 434.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

  434.000    14.05   186.03   186.03      .00   193.00     6.97      .26      .00   188.36
   4710.0       .0   4710.0       .0       .0    222.3       .0      2.2       .2   188.36
     .01      .00    21.19      .00     .000     .015     .000     .000   171.98   999.99
  .005189      49.      50.      51.       20        5        0      .00    16.02  1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

  484.000    14.03   186.83   186.83      .00   193.82     6.99      .26      .00   190.00
   4710.0       .0   4710.0       .0       .0    221.9       .0      2.5       .2   190.00
     .01      .00    21.22      .00     .000     .015     .000     .000   172.80   999.99
  .005210      49.      50.      51.       20        5        0      .00    16.02  1016.01
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .300 CEHV= .500
*SECNO 684.000
3280 CROSS SECTION 684.00 EXTENDED 5.19 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 4.24

684.000	19.12	195.19	.00	.00	195.87	.68	.15	1.89	190.00
4710.0	525.5	3659.1	525.5	259.2	491.7	259.2	5.3	.5	190.00
.02	2.03	7.44	2.03	.035	.015	.035	.000	176.07	950.00
.000290	200.	200.	200.	5	0	0	.00	126.00	1076.00

*SECNO 726.000
3280 CROSS SECTION 726.00 EXTENDED 3.03 FEET

726.000	17.91	195.02	.00	.00	196.05	1.02	.01	.17	177.11
4710.0	324.4	4061.2	324.4	226.3	465.8	226.3	6.2	.6	177.11
.02	1.43	8.72	1.43	.035	.015	.035	.000	177.11	950.00
.000165	42.	42.	42.	2	0	0	.00	126.00	1076.00

SPECIAL CULVERT

SC	CUNO	CUNV	ENTLC	COFQ	RDLEN	RISE	SPAN	CULVLN	CHRT	SCL	ELCHU	ELCHD
	2	.014	.20	2.60	.00	10.00	12.00	274.00	9	2	179.85	177.11

CHART 9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE 2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
WATER EL=X5 CARD= 195.200
3280 CROSS SECTION 1000.00 EXTENDED 2.20 FEET

1000.000	15.35	195.20	.00	.00	196.88	1.68	.06	.33	179.85
4710.0	51.1	4325.6	333.3	52.0	399.1	172.0	11.1	1.3	179.85
.02	.98	10.84	1.94	.035	.015	.035	.000	179.85	966.00
.000314	274.	274.	274.	0	0	0	.00	104.00	1070.00

*SECNO 1110.000
CHIMP CLSTA= 998.51 CELCH= 193.30 BW= 55.51 STCHL= 973.00 STCHR= 1028.51
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -387.0SQ-FT VEXR= .0K*CU-YD VEXT= .0K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .14

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.00 ELREA= 195.38

1110.000	4.02	197.32	.00	.00	197.39	.08	.03	.48	205.00
610.0	.0	524.7	85.3	.0	222.9	77.2	12.2	1.6	195.38
.04	.00	2.35	1.11	.000	.025	.040	.000	193.30	973.00
.000282	111.	110.	108.	3	0	0	.00	85.00	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000
CHIMP CLSTA= 1002.01 CELCH= 196.60 BW= 58.01 STCHL= 974.00 STCHR= 1032.01
EXCAVATION DATA
AEX= -513.6SQ-FT VEXR= -6.7K*CU-YD VEXT= -6.7K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 208.60 ELREA= 198.33

1514.000	1.74	198.34	198.34	.00	198.76	.42	.29	.12	208.60
610.0	.0	547.9	62.1	.0	100.9	24.8	14.2	2.4	198.33
.06	.00	5.43	2.50	.000	.025	.040	.000	196.60	974.00
.004306	418.	404.	390.	20	24	0	.00	83.00	1057.00

*SECNO 1912.000
CHIMP CLSTA= 1003.20 CELCH= 200.70 BW= 60.00 STCHL= 972.40 STCHR= 1034.00
EXCAVATION DATA
AEX= -702.3SQ-FT VEXR= -9.0K*CU-YD VEXT= -15.7K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 202.70

1912.000	1.09	201.79	201.79	.00	202.34	.55	2.24	.05	203.00
390.0	.0	390.0	.0	.0	65.4	.0	15.0	3.0	202.70
.08	.00	5.96	.00	.000	.025	.000	.000	200.70	973.20
.009394	408.	398.	388.	20	14	0	.00	60.00	1033.20

*SECNO 2312.000
CHIMP CLSTA= 998.50 CELCH= 201.00 BW= 60.00 STCHL= 968.50 STCHR= 1028.50
EXCAVATION DATA
AEX= -602.6SQ-FT VEXR= -9.7K*CU-YD VEXT= -25.4K*CU-YD

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.30

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.01 ELREA= 203.06

2312.000	2.09	203.09	.00	.00	203.20	.11	.81	.04	204.01
390.0	.0	342.9	47.1	.0	125.4	33.5	16.1	3.7	203.06
.12	.00	2.73	1.41	.000	.025	.040	.000	201.00	968.50
.000865	410.	400.	390.	5	0	0	.00	84.42	1070.00

CCHV= .300 CEHV= .500
*SECNO 2485.000
CHIMP CLSTA= 998.60 CELCH= 201.00 BW= 80.00 STCHL= 958.60 STCHR= 1038.60
EXCAVATION DATA
AEX= -285.2SQ-FT VEXR= -2.8K*CU-YD VEXT= -28.2K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.37 ELREA= 203.00

2485.000	2.25	203.25	.00	.00	203.32	.07	.10	.01	203.37
390.0	.0	375.3	14.7	.0	180.1	21.1	16.8	4.0	203.00
.15	.00	2.08	.70	.000	.025	.040	.000	201.00	958.60
.000446	173.	173.	173.	2	0	0	.00	105.40	1064.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2515.000
CHIMP CLSTA= 994.50 CELCH= 201.80 BW= 80.00 STCHL= 954.50 STCHR= 1034.50
EXCAVATION DATA
AEX= -333.7SQ-FT VEXR= -.3K*CU-YD VEXT= -28.6K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .49

2515.000	1.73	203.23	.00	.00	203.38	.15	.02	.04	203.29
390.0	.0	363.0	27.0	.0	114.8	18.8	16.9	4.1	203.00
.15	.00	3.16	1.44	.000	.025	.040	.000	201.50	954.50
.001826	30.	30.	30.	2	0	0	.00	104.50	1059.00

*SECNO 2530.000
CHIMP CLSTA= 992.40 CELCH= 202.50 BW= 100.00 STCHL= 942.40 STCHR= 1042.40
EXCAVATION DATA
AEX= -373.1SQ-FT VEXR= -.2K*CU-YD VEXT= -28.7K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .45

2530.000	1.71	203.21	.00	.00	203.51	.30	.05	.07	203.27
390.0	.0	320.3	69.7	.0	71.3	18.8	16.9	4.2	202.95
.15	.00	4.49	3.71	.000	.025	.040	.000	201.50	942.40
.009099	15.	15.	15.	2	0	0	.00	116.60	1059.00

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*SECNO 2712.000
CHIMP CLSTA=     998.90 CELCH=     202.50 BW=     100.00 STCHL=     948.90 STCHR=    1048.90
EXCAVATION DATA
AEX=    -358.8SQ-FT     VEXR=      -2.5K*CU-YD     VEXT=      -31.2K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.72


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      204.05 ELREA=      202.52

  2712.000      1.40    203.90       .00       .00    203.96       .06       .38       .07    204.05
     310.0        .0     287.4      22.6        .0     140.0      16.3      17.5       4.6    202.52
       .17       .00      2.05      1.38      .000      .025      .040      .000    202.50    948.90
   .000775      182.      182.      182.         3         0         0       .00    108.10   1057.00


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   10FEB93      09:28:26                                                                          PAGE   17


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=      .100 CEHV=      .350
*SECNO 3112.000
CHIMP CLSTA=     996.00 CELCH=     203.50 BW=     100.00 STCHL=     960.25 STCHR=    1046.00
EXCAVATION DATA
AEX=    -385.9SQ-FT     VEXR=      -5.5K*CU-YD     VEXT=      -36.7K*CU-YD

  3112.000      2.29    204.29       .00       .00    204.34       .04       .37       .00    203.50
     310.0     161.9     116.3      31.8      97.1      68.0      21.0      19.0       5.9    203.67
       .24      1.67      1.71      1.51      .040      .025      .040      .000    202.00    893.51
   .001131      400.      400.      400.         4         0         0       .00    166.49   1060.00


*SECNO 3513.000
CHIMP CLSTA=     998.80 CELCH=     204.44 BW=     100.00 STCHL=     948.80 STCHR=    1048.80
EXCAVATION DATA
AEX=    -348.5SQ-FT     VEXR=      -5.5K*CU-YD     VEXT=      -42.2K*CU-YD


3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .44

  3513.000       .54    204.98       .00       .00    205.07       .09       .72       .02    204.81
     250.0      18.3     131.4     100.2      13.4      53.8      38.6      20.4       7.4    204.55
       .29      1.36      2.44      2.60      .040      .025      .040      .000    204.44    896.01
   .003874      401.      401.      401.         3         0         0       .00    163.66   1080.00


*SECNO 3913.000
CHIMP CLSTA=     999.00 CELCH=     204.88 BW=     100.00 STCHL=     959.50 STCHR=    1049.00
EXCAVATION DATA
AEX=    -324.2SQ-FT     VEXR=      -5.0K*CU-YD     VEXT=      -47.2K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.16
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 3913.000     3.27    205.67      .00      .00    205.70      .03      .62      .01    204.88
    250.0     49.2     101.3     99.5     51.7      69.8     63.8     21.7      9.0    205.05
      .37      .95      1.45     1.56     .040      .025     .040     .000    202.40    898.02
  .000833     400.     400.     400.        2         0        0      .00    183.98   1082.00


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  10FEB93     09:28:26                                                                    PAGE   18


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 4313.000
CHIMP CLSTA=    1000.75 CELCH=     204.50 BW=      60.00 STCHL=     970.75 STCHR=    1030.75
EXCAVATION DATA
AEX=    -266.6SQ-FT     VEXR=      -4.4K*CU-YD     VEXT=      -51.5K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       204.99 ELREA=       206.76

 4313.000     3.66    205.96      .00      .00    206.01      .05      .30      .01    204.99
    250.0     76.3     173.7       .0     75.0      87.8       .0     23.3     10.4    206.76
      .43     1.02      1.98      .00     .040      .025     .000     .000    202.30    899.01
  .000696     400.     400.     400.        3         0        0      .00    131.74   1030.75


*SECNO 4713.000
CHIMP CLSTA=     998.25 CELCH=     205.50 BW=      60.00 STCHL=     968.25 STCHR=    1028.25
EXCAVATION DATA
AEX=    -306.4SQ-FT     VEXR=      -4.2K*CU-YD     VEXT=      -55.8K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4713.000     1.37    206.87    206.87      .00    206.88      .01      .13      .00    205.99
    250.0     23.8      82.7    143.6     48.9      82.0    145.3     25.3     11.8    206.42
      .55      .49      1.01      .99     .040      .025     .040     .000    205.50    915.03
  .000196     400.     400.     400.       20         8        0      .00    169.98   1085.00


1
PROFILE FOR STREAM  SUB-CRITICAL FLOW M1D1


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA


ELEVATION  170.     175.     180.     185.     190.     195.     200.     205.     210.     215.
   SECNO   CUMDIS

     .00     0. I        .        .      W L        . E      .        .        .        .        .
            50. .I       .        .      W .L       . E      .        .        .        .        .
           100. .I       .        .       W.L       . E      .        .        .        .        .
           150. . I      .        .       W. L      .  E     .        .        .        .        .
           200. . I      .        .        W L      .  E     .        .        .        .        .
           250. .  I     .        .        CW L     .   E    .        .        .        .        .
           300. .  I     .        .        .W L     .   E    .        .        .        .        .
           350. .   I    .        .        .CW L    .    E   .        .        .        .        .
   384.00  400. .   I    .        .        . W L    .    E   .        .        .        .        .
   434.00  450. .    I   .        .        .  W  L  .     E  .        .        .        .        .
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484.00  500.  .   I  .        .        .  W    .L     E .        .        .        .        .        .
        550.  C     I .        .        .     W.L      E.        .        .        .        .        .
        600.  C       I        .        .      .L W     E        .        .        .        .        .
        650.  C       .I       .        .      .L    W .E        .        .        .        .        .
684.00  700.  C       . I      .        .      .L       .WE       .        .        .        .        .
726.00  750.  C       .   I    .        .        .   M   .W E     .        .        .        .        .
        800.  C       .    I   .        .        .   M   .W E     .        .        .        .        .
        850.  C       .     I  .        .        .   M   .W E     .        .        .        .        .
        900.  C       .      I .        .        .    M  .W  E    .        .        .        .        .
        950.  C       .       I.        .        .    M  .W  E    .        .        .        .        .
1000.00 1000. C       .        I        .        .     M .W  E    .        .        .        .        .
        1050. C       .        .        . IR     . L     . W E M  .        .        .        .        .
        1100. C       .        .        .        .   I  R.   E    .     LM .        .        .        .
1110.00 1150. C       .        .        .        .    I .R   E    .       M.L       .        .        .
        1200. C       .        .        .        .     I . R  E   .       M. L      .        .        .
        1250. C       .        .        .        .      I. R E    .        M L      .        .        .
        1300. C       .        .        .        .       I  R E   .        .M L     .        .        .
        1350. C       .        .        .        .       .I  R WE .        . M L    .        .        .
        1400. C       .        .        .        .       .I   R E .        . M  L   .        .        .
        1450. C       .        .        .        .       . I   RE .        .  M  L  .        .        .
        1500. .   C   .        .        .        .        . I   WE .        .   M  L .        .        .
1514.00 1550. .       .        .        .        .        .  I  WE .        .    M  L .        .        .
        1600. .       .        .        .        .         . I  WE.        .    ML   .        .        .
        1650. .       .        .        .        .         .  I  WE        .    LM   .        .        .
        1700. .       .        .        .        .          I  WE        .   L  M   .        .        .
        1750. .       .        .        .        .           I .WE      . L     M .        .        .
        1800. .       .        .        .        .            I. WE     .L      M .        .        .
        1850. .       .        .        .        .             I  WE   L.       M.        .        .
        1900. .       .        .        .        .             .I WER  L .        M        .        .
1912.00 1950. .       .        .        .        .             . I WERL  .        .M       .        .
        2000. .       .   C    .        .        .             . I  WEL  .        .M       .        .
        2050. C       .        .        .        .             . I  WEL  .        .M       .        .
        2100. C       .        .        .        .             . I  WEL  .        .M       .        .
        2150. C       .        .        .        .             . I   E L .        . M      .        .
        2200. C       .        .        .        .             . I   ERL .        . M      .        .
        2250. C       .        .        .        .             .  I  WEL .        . M      .        .
        2300. C       .        .        .        .             . I   EL  .        . M      .        .
2312.00 2350. C       .        .        .        .             . I   E L. .        . M      .        .
        2400. C       .        .        .        .             . I   EL  .        .  M     .        .
        2450. C       .        .        .        .             . I   EL  .        .  M     .        .
2485.00 2500. C       .        .        .        .             . I   E  .        .   M     .        .
2515.00 2550. C       .        .        .        .             .  I  E  .        .   M     .        .
2530.00 2600. C       .        .        .        .             .  I  WE .        .   M     .        .
        2650. C       .        .        .        .             .  I RWE .        .   M     .        .
        2700. C       .        .        .        .             .   IR E .        .   M     .        .
2712.00 2750. C       .        .        .        .             .    I WE.        .   M     .        .
        2800. C       .        .        .        .             .    I  E.        .   M     .        .
        2850. C       .        .        .        .             .   IR LE.        .   M     .        .
        2900. C       .        .        .        .             .   I RLE.        .   M     .        .
        2950. C       .        .        .        .             .   I RLE.        .   M     .        .
        3000. C       .        .        .        .             .   I RLE.        .   M     .        .
        3050. C       .        .        .        .             .   I RLE.        .   M     .        .
        3100. C       .        .        .        .             .   I  LE.        .    M    .        .
3112.00 3150. C       .        .        .        .             .   I  LE.        .    M    .        .
        3200. C       .        .        .        .             .   I  LWE        .    M    .        .
        3250. C       .        .        .        .             .    I L E        .    M    .        .
        3300. C       .        .        .        .             .    I  LE        .     M   .        .
        3350. C       .        .        .        .             .     I LE        .     M   .        .
        3400. C       .        .        .        .             .      ILE        .     M   .        .
        3450. C       .        .        .        .             .      IRE        .      M  .        .
        3500. C       .        .        .        .             .       IWE       .      M  .        .
3513.00 3550. C       .        .        .        .             .        IE       .      M  .        .
        3600. C       .        .        .        .             .       ILE       .      M  .        .
        3650. C       .        .        .        .             .       ILE       .      M  .        .
        3700. C       .        .        .        .             .      I LE       .      M  .        .
        3750. C       .        .        .        .             .      I LE       .     M   .        .
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          3800. C        .         .         .         .         .         .   I  LWE      .    M    .         .
          3850. C        .         .         .         .         .         .   I  LRE      .    M    .         .
          3900. C        .         .         .         .         .         .   I  LRE      .    M    .         .
  3913.00 3950. C        .         .         .         .         .         .   I  LRE      .    M    .         .
          4000. C        .         .         .         .         .         .   I  LRE      .    M    .         .
          4050. C        .         .         .         .         .         .   I  L E      .    M    .         .
          4100. C        .         .         .         .         .         .   I  .LE      .    M    .         .
          4150. C        .         .         .         .         .         .   I  .LE      .    M    .         .
          4200. C        .         .         .         .         .         .   I  .LER     .    M    .         .
          4250. C        .         .         .         .         .         .   I  .LWE     .    M    .         .
          4300. C        .         .         .         .         .         .   I  .L ER    .    M    .         .
  4313.00 4350. C        .         .         .         .         .         .   I  .L ER    .    M    .         .
          4400. C        .         .         .         .         .         .   I  .L ER    .    M    .         .
          4450. C        .         .         .         .         .         .   I  .L ER    .    M    .         .
          4500. C        .         .         .         .         .         .   I .L ER     .    M    .         .
          4550. C        .         .         .         .         .         .   I . LWE     .    M    .         .
          4600. C        .         .         .         .         .         .   I. L E      .    M    .         .
          4650. C        .         .         .         .         .         .   I L E       .    M    .         .
          4700. .        .         . C       .         .         .         .   .IL E       .    M    .         .
  4713.00 4750. .        .         .         .         .         .         .   . ILE       .    M    .         .
1
   10FEB93      09:28:26                                                                                  PAGE   19
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THIS RUN EXECUTED 10FEB93 09:28:30

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SUB-CRITICAL FLOW M1D1

SUMMARY PRINTOUT

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
	.000	4710.00	.00	16.02	220.61	21.35	184.67	184.67	183.62	169.67
	.000	4710.00	.00	16.02	220.61	21.35	184.67	184.67	183.62	169.67
	384.000	4710.00	384.00	16.02	220.46	21.36	186.71	186.71	185.64	171.71
	384.000	4710.00	384.00	16.02	220.46	21.36	186.71	186.71	185.64	171.71
*	434.000	4710.00	50.00	16.02	222.31	21.19	188.36	188.36	186.03	171.98
*	434.000	4710.00	50.00	16.02	222.31	21.19	188.36	188.36	186.03	171.98
*	484.000	4710.00	50.00	16.02	221.93	21.22	190.00	190.00	186.83	172.80
*	484.000	4710.00	50.00	16.02	221.93	21.22	190.00	190.00	186.83	172.80
*	684.000	4710.00	200.00	126.00	1010.15	7.44	190.00	190.00	195.19	176.07
*	684.000	4710.00	200.00	126.00	1010.15	7.44	190.00	190.00	195.19	176.07
	726.000	4710.00	42.00	126.00	918.45	8.72	177.11	177.11	195.02	177.11
	726.000	4710.00	42.00	126.00	918.45	8.72	177.11	177.11	195.02	177.11
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85
*	1110.000	4710.00	110.00	84.99	565.91	8.82	195.00	195.00	195.89	181.00

*	1110.000	610.00	110.00	85.00	300.06	2.35	205.00	195.38	197.32	193.30
	1514.000	4710.00	404.00	49.75	510.55	9.23	198.60	198.60	196.35	181.10
*	1514.000	610.00	404.00	83.00	125.76	5.43	208.60	198.33	198.34	196.60
	1912.000	4490.00	398.00	48.10	517.47	8.68	203.00	202.70	197.05	181.70
*	1912.000	390.00	398.00	60.00	65.43	5.96	203.00	202.70	201.79	200.70
	2312.000	4490.00	400.00	44.88	439.44	10.22	204.00	203.00	197.37	183.00
*	2312.000	390.00	400.00	84.42	158.94	2.73	204.01	203.06	203.09	201.00

1

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	2485.000	4490.00	173.00	39.88	290.88	15.44	203.00	203.00	199.80	183.90
	2485.000	390.00	173.00	105.40	201.23	2.08	203.37	203.00	203.25	201.00
*	2515.000	4490.00	30.00	37.29	285.25	15.74	203.00	203.00	199.96	184.00
*	2515.000	390.00	30.00	104.50	133.54	3.16	203.29	203.00	203.23	201.50
*	2530.000	4490.00	15.00	57.08	329.34	13.63	203.00	203.00	201.40	188.30
*	2530.000	390.00	15.00	116.60	90.10	4.49	203.27	202.95	203.21	201.50
*	2712.000	4410.00	182.00	81.09	522.01	8.94	204.00	203.00	203.92	188.50
*	2712.000	310.00	182.00	108.10	156.38	2.05	204.05	202.52	203.90	202.50
	3112.000	4410.00	400.00	81.76	488.21	9.47	205.40	204.00	204.41	189.40
	3112.000	310.00	400.00	166.49	186.15	1.71	203.50	203.67	204.29	202.00
	3513.000	4350.00	401.00	113.71	477.77	10.07	205.00	205.00	205.01	190.80
	3913.000	4350.00	400.00	145.06	395.43	11.00	205.80	206.00	205.66	191.30
*	3913.000	250.00	400.00	183.98	185.29	1.45	204.88	205.05	205.67	202.40
*	4313.000	4350.00	400.00	189.00	856.56	7.68	205.00	207.00	207.56	192.60
	4313.000	250.00	400.00	131.74	162.75	1.98	204.99	206.76	205.96	202.30
	4713.000	3850.00	400.00	169.98	779.35	7.11	206.60	206.00	208.02	192.80
*	4713.000	250.00	400.00	169.98	276.24	1.01	205.99	206.42	206.87	205.50

1

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=    434.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    434.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=    484.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    484.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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WARNING SECNO=    684.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    684.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=   1000.000  PROFILE=  1  WSEL BASED ON X5 CARD
NOTE    SECNO=   1000.000  PROFILE=  2  WSEL BASED ON X5 CARD

WARNING SECNO=   1110.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1110.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   1514.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   1514.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   1514.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   1912.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   1912.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   1912.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   2312.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2485.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2485.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2485.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   2515.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2515.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=   2515.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2530.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=   2530.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   2712.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   2712.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3513.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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WARNING SECNO=   3913.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4313.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4713.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4713.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4713.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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T1      FERGUSON    GREINER, INC 02-19-92     (FILENAME = T-M3D1A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M3D1A                     u/s of McDowell Road
*
* Cross-section numbering has been changed:
*       d/s face of the McDowell Rd. culverts ===> XS  #726.00
*       u/s       "       "         "          ===> XS #1000.00
*       The XS numbering u/s of McDowell Rd. has been modified accordingly.
*       These XS #'s apply to the all other HEC-2 runs
*
J1            2                  .00532                              180
J2     1      0       0       0       0       0       0       6       0
J3    38     43      39       4      25      26      23      24       1      42
QT     2   4710    5470       0       0       0       0       0       0
* Refer to the Comments after XS #766 about the discharges.
NC  .035    .035    .015
X1     0       7  999.99 1016.01
X3    10                   1000            1016
GR184.67  950.00  184.67  999.99  170.00 1000.00  169.67 1008.00  170.00 1016.00
GR184.67 1016.01  184.67 1066.00
X1   384       7  999.99 1016.01     374     394     384
X3    10
GR186.71  950.00  186.71  999.99  172.04 1000.00  171.71 1008.00  172.04 1016.00
GR186.71 1016.01  186.71 1066.00
X1   434       7  999.99 1016.01      49      51      50
X3    10
GR188.36  950.00  188.36  999.99  172.31 1000.00  171.98 1008.00  172.31 1016.00
GR188.36 1016.01  188.36 1066.00
X1   484       7  999.99 1016.01      49      51      50
X3    10
GR190.00  950.00  190.00  999.99  173.13 1000.00  172.80 1008.00  173.13 1016.00
GR190.00 1016.01  190.00 1066.00
NC                      .3      .5
X1   684       7  999.99 1026.01     200     200     200
GR190.00  950.00  190.00  999.99  176.50 1000.00  176.07 1013.00  176.50 1026.00
GR190.00 1026.01  190.00 1076.00
X1   726       7    1000    1026      42      42      42
X3    10                                                 189     189
GR192.00  950.00  189.00  999.99  177.11 1000.00  177.11 1013.00  177.11 1026.00
GR189.00 1026.01  192.00 1076.00
* The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
*    discharges for 25, 50, 100-yr event, respectively.  This is due to the
*    assumption that those amount of discharges do not join the d/s channel
*    flowing west along the McDowell Road.
SC 2.014      .2     2.6              10      12     274     9.2  179.85  177.11
X1  1000      10     987    1013     274     274     274
X2                     2  189.85
X3    10                                                 194     194
X5     2  195.20  196.90
BT    -7     966  193.00             972  193.00             975  194.00
BT          985  194.00            1027  194.00            1041  193.90
BT         1070  193.90
GR   193     966     193     972     194  984.99  193.87     985  179.85     987
GR179.85    1013  193.87    1027     194 1027.01   193.9    1041   193.9    1070
NC 0.040   0.040   0.025       0       0
QT     2    4710    1370       0       0       0
X1  1110    14.0  973.01  1024.0   111.0   108.0   110.0     0.0     0.0       0
CI    -1  191.44   0.025       0       0       0  -100.0
X3    10
GR 205.0   973.0   195.0  973.01   190.0   980.0   185.0   984.5   181.0   989.0
GR 181.0  1000.0   181.0  1006.0   185.0  1013.0   190.0  1018.5   195.0  1024.0
GR 195.5  1030.0   195.0  1036.0   194.0  1058.0   204.0 1058.01
NC     0       0       0     0.1    0.35
X1  1514    14.0  974.01  1030.0   418.0   390.0   404.0     0.0     0.0       0
CI    -1  194.39       0       0       0       0  -100.0
X3    10
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T-M3D1A

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GR 208.6   974.0   198.6  974.01   195.0   977.0   185.0   988.0   181.1   992.0
GR 181.1  1010.0   185.0  1014.0   195.0  1023.0   198.6  1030.0   198.0  1034.5
GR 197.0  1046.0   197.0  1053.0   197.0  1057.0   207.0  1057.0
QT     2    4490    1150       0       0       0
X1  1912    17.0   972.4  1034.0   408.0   388.0   398.0     0.0     0.0       0
CI    -1  195.51       0       0       0       0  -100.0
X3    10
GR 210.5   912.0   205.0  912.01   200.5  912.02   203.0   926.0   203.6   948.0
GR 203.0   972.4   200.0   975.5   185.0   989.0   181.7   994.0   181.7  1011.0
GR 185.0  1015.0   200.0  1029.0   202.7  1034.0   202.0  1044.0   201.0  1055.0
GR 200.0  1064.0   210.0  1064.0
X1  2312    26.0   969.0  1028.0   410.0   390.0   400.0     0.0     0.0       0
CI    -1  194.74       0       0       0       0  -100.0
X3    10
GR 213.5   900.5   207.5  900.51   205.5  900.52   203.5  900.53   204.9   925.2
GR 204.2   961.5   204.0   969.0   203.0   971.8   200.0   974.2   195.0   979.5
GR 190.0   983.8   185.0   987.5   184.0   988.5   183.0   989.5   183.2  1000.0
GR 185.0  1009.5   190.0  1014.5   195.0  1019.5   200.0  1024.5   203.0  1028.0
GR 203.9  1036.0   203.0  1047.0   202.0  1054.0   201.0  1063.0   200.9  1070.0
GR 210.9 1070.01
NC     0       0       0     0.3     0.5
X1  2485    23.0   969.7  1027.5   173.0   173.0   173.0     0.0     0.0       0
CI    -1  197.14       0       0       0       0  -100.0
X3    10
GR 213.8   904.5   203.8  904.51   204.0   922.5   204.1   929.4   204.1   937.0
GR 203.0   969.7   200.0   977.5   199.0   980.5   198.0   984.0   197.6   990.0
GR 197.6   991.0   183.9   991.0   183.9  1007.0   197.6  1007.0   197.6  1008.0
GR 198.0  1013.0   199.0  1016.0   200.0  1018.5   203.0  1027.5   203.0  1035.0
GR 203.0  1043.0   201.6  1064.0   211.6 1064.01
NC     0       0   0.016       0       0
X1  2515      20     963    1026      30      30      30       0       0       0
CI    -1  197.96   0.025       0       0       0  -100.0
GR213.90     901  203.90  901.01  204.00     926  204.00     934  203.00     963
GR202.00     972  200.00     979  199.00     982  197.60     990  197.60     991
GR184.00     991  184.00    1007  197.60    1007  199.00    1014  201.00    1019
GR203.00    1026  203.00    1042  202.00    1053  201.50    1059  211.50 1059.01
X1  2530    16.0   959.8  1025.0    15.0    15.0    15.0     0.0     0.0     0.0
CI    -1  198.91       0       0       0       0  -100.0
GR 213.9   901.0   203.9  901.01   203.0   959.8   197.6   980.0   197.6   991.5
GR 188.3   991.5   188.3  1007.5   197.6  1007.5   197.6  1018.0   200.0  1021.0
GR 203.0  1025.0   203.2  1036.0   203.0  1042.0   202.0  1050.0   201.5  1059.0
GR 211.5 1059.01
NC     0       0   0.025       0       0
QT     2    4410    1080       0       0       0
X1  2712    18.0   975.8  1022.0   182.0   182.0   182.0     0.0     0.0       0
CI    -1  201.20       0       0       0       0  -100.0
X3    10
GR   214     899   203.7  899.01   204.2   970.0   204.0   975.8   200.0   980.8
GR 195.0   985.0   190.0   990.0   188.5   991.0   188.5  1007.0   190.0  1009.5
GR 195.0  1014.8   200.0  1019.5   203.0  1022.0   203.6    1036   203.0  1047.0
GR 202.0  1051.0   201.5  1057.0   211.5 1057.01
NC     0       0       0     0.1    0.35
X1  3112    22.0   971.0  1021.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  202.26       0       0       0       0  -100.0
X3    10
GR 214.0   893.5   204.0  893.51   203.0   900.8   203.6   908.0   203.0   917.0
GR 202.0   951.0   205.0   969.5   205.4   971.0   205.0   973.0   200.0   980.0
GR 195.0   984.7   190.0   988.8   189.4  1000.0   190.0  1006.8   195.0  1011.5
GR 200.0  1016.5   204.0  1021.0   204.5  1034.0   204.0  1045.0   203.0  1048.0
GR 202.4  1060.0     212 1060.01
QT     2    4350    1010       0       0       0
X1  3513    22.0   976.8  1020.8   401.0   401.0   401.0     0.0     0.0       0
CI    -1  203.35       0       0       0       0  -100.0
X3    10
GR 214.0   896.0   204.0  896.01   205.0   923.0   205.1   933.5   205.0   942.0
GR 204.8   949.0   205.5   955.0   206.2   966.0   205.0   976.8   200.0   981.8
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GR 195.0   986.8   191.0   990.8   190.8  1000.0   191.0  1007.0   195.0  1011.1
GR 200.0  1015.8   205.0  1020.8   205.2  1035.0   205.0  1047.0   204.0  1051.0
GR 203.4  1080.0   213.4 1080.01
X1  3913    19.0   976.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.04       0       0       0       0  -100.0
X3    10
GR 215.1   898.0   210.1   898.01  205.1   898.02   204.6   942.0   205.0   967.0
GR 205.8   976.0   205.0   978.5   200.0   984.1    195.0   989.2   192.0   992.5
GR 191.3  1000.0   192.0  1006.5   195.0  1009.5    200.0  1015.0   205.0  1020.5
GR 206.0  1022.0   206.7  1028.5   202.4  1082.0    212.4 1082.01
X1  4313    28.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.50       0       0       0       0  -100.0
X3    10
GR 215.1   899.0   205.1   899.01  205.0   930.5    205.1   937.0   205.0   944.0
GR 204.4   959.0   205.0   971.0   205.1   977.0    205.0   979.5   200.0   985.0
GR 195.0   990.0   193.0   999.0   192.6  1000.0    193.0  1004.0   194.0  1008.0
GR 195.0  1009.0   200.0  1014.5   205.0  1018.5    206.0  1020.0   207.0  1022.0
GR 207.3  1025.0   207.0  1028.5   206.0  1038.0    205.0  1043.0   204.0  1052.0
GR 203.0  1058.0   202.3  1088.0   212.3 1088.01
QT     2    3850     940       0       0       0
X1  4713    24.0   976.0  1020.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  205.50       0       0       0       0  -100.0
X3    10
GR 215.9   915.0   213.9   915.01  210.9   915.02   205.9  915.03   206.0   972.0
GR 206.6   976.0   206.0   979.5   205.0   981.0    200.0   986.0   195.0   990.3
GR 193.0   992.0   192.8   995.0   193.0   998.5    194.0  1006.0   195.0  1007.5
GR 200.0  1013.5   205.0  1018.5   206.0  1020.5    206.5  1027.0   206.0  1034.8
GR 205.0  1040.5   204.0  1054.0   203.2  1085.0    213.2 1085.01
QT     2    3540     630       0       0       0
X1  5113    23.0   977.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  206.50       0       0       0       0  -100.0
X3    10
GR 216.9   913.5   211.9   913.51  208.9   913.52   206.9  913.53   207.0   976.0
GR 207.2   977.0   207.0   978.0   206.0   980.0    205.0   981.5   200.0   987.5
GR 195.0   992.5   194.5  1000.0   195.0  1008.5    200.0  1013.0   205.0  1018.5
GR 206.0  1019.5   207.0  1022.0   207.1  1026.5    207.0  1031.0   206.0  1048.0
GR 205.0  1069.0   204.5  1095.0   214.5  1095.0
QT     2    3530     620       0       0       0
X1  5513    17.0   980.5  1018.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  206.50       0       0       0       0  -100.0
X3    10
GR 217.9   912.0   207.9   912.01  207.7   944.0    207.0   980.5   206.0   982.0
GR 205.0   982.5   200.0   987.0   196.0   991.0    195.6  1000.0   196.0  1007.0
GR 200.0  1010.5   205.0  1015.5   207.0  1018.5    207.8  1028.5   207.0  1054.0
GR 206.6  1085.0   216.6 1085.01
X1  5914    24.0   977.5  1020.0   401.0   401.0   401.0     0.0     0.0       0
CI    -1  207.50       0       0       0       0  -100.0
X3    10
GR 219.3   916.0   209.3   916.01  209.0   953.5    208.0   977.5   207.0   979.0
GR 206.0   980.5   205.0   982.0   200.0   988.0    199.0   990.0   198.0   991.0
GR 197.0   993.5   196.6   997.0   197.0  1000.0    197.1  1001.0   197.0  1002.0
GR 196.6  1007.0   197.0  1009.0   200.0  1011.5    205.0  1015.5   208.0  1020.0
GR 208.6  1047.0   208.0  1076.0   207.8  1086.2    217.8 1086.21
X1  6156      21     978    1024     242     242     242       0       0       0
CI    -1  208.27       0       0       0       0  -100.0
X3    10
GR 220.0     911   210.1   911.01  210.4     940   210.0     955   209.6     964
GR 210.1     964   210.0     978   205.0     983   200.0     988   198.0     991
GR 197.8     992   197.8    1005   198.0    1007   200.0    1009   205.0    1014
GR 209.0    1018   209.8    1024   209.6    1044   209.0    1058   208.5    1075
GR 218.0 1075.01
NC     0       0       0     0.3     0.5
X1  6307      17  989.25    1012     151     151     151       0       0       0
CI    -1  209.25       0       0       0       0  -100.0
X3    10
GR 220.0     908   210.1   908.01  210.5     937   210.1     969   210.5     970
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GR 210.0     987  209.75  989.25  198.75  989.25  198.75  999.25  199.75 1000.75
GR199.75 1010.75  209.75 1010.75   210.1    1012   210.5    1028   210.1    1029
GR 210.0    1063   220.0 1063.01
NC     0       0   0.016       0       0
QT     2    3470     560       0       0       0
SB  1.25    1.58    2.60       0    20.5     1.5     190    0.01  199.51  198.75
X1  6388      13  989.25 1010.75      81      81      81       0       0       0
CI    -1  210.11   0.025       0       0       0  -100.0
X2     0       0       1  209.61  210.61       0       0       0       0       0
BT     5     968  210.61  209.61  989.25  210.61  209.61  989.25  211.22  209.61
BT1010.8  211.22  209.61    1025  210.61  209.61
GR 220.0     901   210.3  901.01   210.1     967   210.5     968  210.61  989.25
GR199.61  989.25  199.61  999.25  200.61 1000.75  200.61 1010.75  210.61 1010.75
GR 210.1    1025   210.0    1070   220.0 1070.01
NC     0       0   0.025       0       0
QT     2    3470     560       0       0       0
X1  6517      16   977.0    1023   129.0   129.0   129.0       0       0       0
CI    -1  210.80       0       0       0       0  -100.0
X3    10
GR   220     908   210.5  908.01   210.7   931.0   211.0   973.0   211.3   977.0
GR   211     980   210.0     981   205.0   987.0   200.0   993.0   200.0  1011.0
GR   205    1014   210.0    1019   211.5  1023.0   210.0  1030.0   210.0  1080.0
GR   220 1080.01
NC     0       0       0     0.1    0.35
X1  6714      29   979.0  1017.5   197.0   197.0   197.0     0.0     0.0       0
CI    -1  210.50       0       0       0       0  -100.0
X3    10
GR   224     898   214.0  898.01   213.0   901.0   212.0   905.5   211.0   955.0
GR 211.0   958.0   211.4   969.5   211.0   979.0   210.0   981.0   205.0   986.5
GR 201.0   991.0   200.3  1000.0   201.1  1007.0   205.0  1010.5   210.0  1015.5
GR 211.0  1017.5   211.3  1026.5   211.0  1035.5   210.8  1043.0   211.0  1050.0
GR 212.0  1078.5   212.7  1081.5   212.0  1083.5   210.0  1086.0   208.0  1089.5
GR 207.6  1092.5   209.0  1095.0   210.0  1096.5     220 1096.51
QT     2    3330     720       0       0       0
X1  7115    30.0   979.0  1022.0   401.0   401.0   401.0     0.0     0.0       0
CI    -1  211.50       0       0       0       0  -100.0
X3    10
GR 222.1   904.5   212.1  904.51   212.0   910.0   211.9   912.0   212.0   915.0
GR 212.4   930.0   212.0   950.5   211.8   954.5   212.0   959.2   213.0   973.5
GR 213.1   976.5   213.0   979.0   212.0   981.5   211.5   982.5   210.0   983.5
GR 205.0   989.0   201.0   995.5   200.6  1000.0   201.0  1009.5   205.0  1012.5
GR 210.0  1018.5   211.0  1021.0   212.0  1022.0   213.0  1068.5   213.5  1077.5
GR 213.0  1086.0   210.0  1090.5   208.1  1095.0   210.0  1100.0   220.0 1100.01
QT     2    3310     700       0       0       0
X1  7515    33.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  212.50       0       0       0       0  -100.0
X3    10
GR 224.0   902.5   220.0  902.51   214.0  902.52   214.0   903.5   213.0   921.5
GR 213.3   931.0   213.0   979.5   210.0   982.0   205.0   988.0   204.0   990.0
GR 203.0   992.0   202.0   994.5   201.0   996.0   200.9  1000.0   201.0  1007.5
GR 205.0  1011.0   210.0  1016.0   211.0  1018.0   212.0  1020.3   213.0  1022.0
GR 213.4  1033.0   213.0  1048.0   213.0  1050.0   214.0  1080.5   213.0  1083.5
GR 212.0  1085.0   210.0  1087.0   209.0  1090.0   208.9  1093.0   209.0  1095.0
GR 210.0  1096.5   212.0  1100.5   222.0 1100.51
X1  7715    32.0   978.0  1021.0   200.0   200.0   200.0     0.0     0.0       0
CI    -1  213.50       0       0       0       0  -100.0
X3    10
GR 224.5   900.0   214.5  900.01   214.0   918.5   214.0   920.0   214.4   950.0
GR 214.0   978.0   212.0   982.0   210.0   984.0   205.0   989.5   204.0   991.5
GR 202.0   993.0   201.5  1000.0   203.0  1007.0   205.0  1009.5   210.0  1014.0
GR 214.0  1021.0   214.4  1034.0   214.0  1049.0   213.9  1051.0   214.0  1054.0
GR 215.0  1075.0   215.2  1081.0   215.0  1087.0   213.0  1091.0   212.0  1091.5
GR 211.0  1094.0   211.0  1101.0   214.0  1105.5   214.5  1108.0   214.0  1109.0
GR 212.5  1123.0   222.5 1123.01
X1  7916    25.0   978.0  1019.5   201.0   201.0   201.0     0.0     0.0       0
CI    -1  214.00       0       0       0       0  -100.0
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X3     10
GR 225.6   901.5   215.6  901.51   215.0   918.0   215.0   921.0   215.1   930.0
GR 216.0   978.0   215.0   980.5   210.0   986.0   205.0   991.5   204.0   993.0
GR 203.0   994.5   202.1  1000.0   203.0  1005.5   205.0  1007.5   210.0  1012.5
GR 211.0  1014.0   212.0  1015.5   213.0  1016.5   214.0  1018.0   215.0  1019.5
GR 215.6  1026.5   215.0  1052.0   215.4 1052.01   215.0  1089.0   225.0 1089.01
QT      2    2300     480       0       0       0
X1   8317    26.0   973.0  1020.5   401.0   401.0   401.0     0.0     0.0       0
CI     -1  216.00       0       0       0       0  -100.0
X3     10
GR 227.7   905.5   222.7  905.51   217.7  905.52   218.0   952.5   219.0   962.0
GR 219.4   968.0   219.0   973.0   218.0   977.0   217.0   978.5   216.0   980.0
GR 215.0   980.5   210.0   986.8   205.0   993.0   204.0   995.0   203.0  1000.0
GR 205.0  1006.0   210.0  1011.0   215.0  1016.5   216.0  1019.0   217.0  1020.5
GR 218.0  1054.0   218.6  1068.0   218.0  1080.0   217.0  1083.0   216.0  1086.0
GR 226.0 1086.01
X1   8717    31.0   976.5  1024.0   400.0   400.0   400.0     0.0     0.0       0
CI     -1  218.75       0       0       0       0  -100.0
X3     10
GR 230.1   904.5   220.1  904.51   220.0   909.0   220.0   914.0   220.4   928.0
GR 220.0   942.5   219.9   945.5   220.0   949.0   221.0   965.0   221.6   972.5
GR 221.0   976.5   220.0   978.0   215.0   982.5   210.0   988.5   205.0   992.0
GR 204.0   994.5   204.0  1000.0   204.0  1005.5   205.0  1007.0   210.0  1011.5
GR 215.0  1017.0   220.0  1022.0   221.0  1024.0   221.4  1029.5   221.0  1040.0
GR 220.9  1045.0   221.0  1050.0   221.2  1065.0   221.0  1080.0   220.0  1084.0
GR 230.0 1084.01
X1   8859      21     974    1024     142     142     142       0       0       0
CI     -1  219.72       0       0       0       0  -100.0
X3     10
GR 231.3     902   221.3  902.01   221.0     912   221.4     926   221.0     939
GR 221.3     966   221.0     974   220.0     976   210.0     987   205.0     990
GR 204.6     993   204.6    1002   205.0    1004   220.0    1020   221.0    1022
GR 222.0    1024   222.4    1032   222.0    1059   221.0    1076   220.0    1085
GR 230.0 1085.01
NC      0       0       0     0.3     0.5
X1   8977      19     976    1026     118     118     118     0.0     0.0       0
CI     -1  220.53       0       0       0       0  -100.0
X3     10
GR 232.0     900   222.0  900.01   222.0     912   222.5     924   221.6     942
GR 222.0     956   222.4     966   222.0     976   213.9  983.55   213.9     993
GR 205.9     993   205.9    1010   213.9    1010   213.9    1015   215.9    1015
GR 222.0    1026   222.0    1084   221.5    1090   232.0 1090.01
NC      0       0   0.016       0       0
QT      2    2270     450       0       0       0
SB   1.25    1.69     2.6       0      17    3.83  105.36       0  206.49  205.90
X1   9037      16     974    1029      60      60      60     0.0     0.0       0
CI     -1  220.94   0.025       0       0       0  -100.0
X2      0       0       1  214.49   222.5       0       0       0       0       0
BT     15     927   222.6   222.6     935   222.5   222.5     935   222.1   222.1
BT    974   222.6   222.6     983   222.6  214.49     983   223.9  214.49     993
BT  223.9  214.49     993   223.9  206.49    1010   223.9  206.49    1010   223.9
BT214.49    1014   223.9  214.49    1014   222.5   216.5    1022   222.5   221.0
BT   1029   222.5   222.5    1065   222.5   222.5
GR 233.0     927   222.6  927.01   222.5     935   222.1     935   222.6     974
GR214.49  982.05  214.49     993  206.49     993  206.49    1010  214.49    1010
GR214.49    1014   216.5    1014   221.0    1022   222.5    1029   222.5    1065
GR 233.0 1065.01
NC      0       0   0.028       0       0
QT      2    2270     450       0       0       0
X1   9118    27.0   973.0  1025.5      81      81      81     0.0     0.0       0
CI     -1  221.50   0.025       0       0       0  -100.0
X3     10
GR 233.0   927.0   230.0  927.01   227.0  927.02   223.0  927.03   224.0   965.5
GR 224.4   969.5   224.0   973.0   223.0   975.0   222.0   976.8   221.0   978.0
GR 220.0   979.5   215.0   984.5   210.0   990.0   207.0   992.0   205.6  1000.0
GR 207.0  1007.0   210.0  1010.8   215.0  1016.0   220.0  1021.5   223.0  1025.5
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GR 223.6   1039.0   223.0  1052.0   220.0   1055.5   221.0   1065.0   222.0  1068.5
GR 222.3   1084.0   233.3 1084.01
NC     0       0       0     0.1    0.35
X1  9318    30.0   979.0  1024.0   200.0    200.0   200.0      0.0      0.0       0
CI    -1  222.87       0       0       0        0  -100.0
X3    10
GR 233.9    929.0   223.9  929.01   224.0    959.5   225.0    964.5   225.6   971.5
GR 225.0    979.0   224.0   982.8   223.0    985.0   220.0    989.0   215.0   991.0
GR 210.0    994.0   208.0   995.0   206.4   1000.0   208.0   1006.0   210.0  1008.0
GR 215.0   1011.0   220.0  1017.0   225.0   1024.0   225.8   1033.0   225.0  1043.0
GR 224.9   1045.0   225.0  1049.0   225.0   1051.0   220.0   1059.5   219.5  1062.0
GR 220.0   1065.0   222.0  1067.0   223.0   1069.0   223.2   1084.5   233.2 1084.51
QT     2     1700     120       0       0        0
X1  9518    27.0   975.1  1025.0   200.0    200.0   200.0      0.0      0.0       0
CI    -1  224.25       0       0       0        0  -100.0
X3    10
GR 235.3    929.5   225.3  929.51   225.0    944.0   226.0    964.5   227.0   971.0
GR 227.1    973.1   227.0   975.1   226.0    978.8   225.0    980.3   220.0   985.0
GR 215.0    990.5   210.0   996.0   207.2   1000.0   208.0   1003.5   210.0  1005.0
GR 215.0   1008.0   220.0  1013.0   225.0   1019.0   226.0   1021.0   227.0  1025.0
GR 227.2   1034.8   225.0  1054.0   220.0   1061.0   220.0   1067.0   223.0  1071.0
GR 224.5   1084.0   234.5 1084.01
QT     2     1700     110       0       0        0
X1  9919    29.0   967.8  1030.0   401.0    401.0   401.0      0.0      0.0       0
CI    -1  227.00       0       0       0        0  -100.0
X3    10
GR 238.8    933.0   228.8  933.01   228.8    958.0   228.0    967.8   227.0   968.5
GR 226.0    973.0   225.0   975.0   223.0    979.5   220.0    985.5   215.0   992.0
GR 213.0    993.5   212.2  1000.0   213.0   1001.5   214.0   1006.0   215.0  1007.0
GR 220.0   1011.5   225.0  1018.0   227.0   1023.0   229.0   1027.0   230.0  1030.0
GR 230.2   1038.5   230.0  1048.5   225.0   1057.0   223.0   1059.0   223.0  1063.0
GR 225.0   1065.5   227.0  1070.0   227.1   1080.5   237.1 1080.51
X1 10119    21.0   976.0  1023.0   200.0    200.0   200.0      0.0      0.0     0.0
CI    -1  229.00       0       0       0        0  -100.0
X3    10
GR 240.3    934.5   230.3  934.51   230.4    962.0   230.0    976.0   225.0   984.8
GR 220.0    993.5   215.0  1000.0   217.0   1004.0   218.0   1007.5   220.0  1008.5
GR 225.0   1013.0   229.0  1019.5   230.0   1023.0   230.7   1034.0   230.0  1048.0
GR 225.0   1058.0   224.7  1060.5   225.0   1064.0   228.0   1066.0   229.0  1076.0
GR 239.0 1076.01
X1 10319    32.0   972.5  1028.0   200.0    200.0   200.0      0.0      0.0       0
CI    -1  231.00       0       0       0        0  -100.0
X3    10
GR 243.0    948.0   233.0  948.01   232.6   948.02   232.0    972.5   231.0   974.0
GR 230.0    978.0   225.0   990.0   220.0    995.0   219.0    996.0   218.0   998.0
GR 217.8   1000.0   218.0  1001.0   219.0   1002.0   220.0   1003.0   225.0  1010.0
GR 230.0   1019.0   231.0  1021.5   232.0   1024.0   232.8   1028.0   232.9  1034.0
GR 232.8   1043.0   233.0  1054.0   233.0   1055.0   232.0   1056.5   230.0  1058.0
GR 229.0   1060.0   228.6  1062.0   229.0   1064.0   230.0   1065.0   231.0  1067.5
GR 231.0   1070.0   241.0 1070.01
X1 10720    34.0   981.0  1019.5   401.0    401.0   401.0      0.0      0.0       0
CI    -1  235.00       0       0       0        0  -100.0
X3    10
GR 246.0    955.0   236.0  955.01   236.0    964.0   236.0    969.5   237.0   979.0
GR 237.1    981.0   236.0   984.5   235.0    986.5   230.0    993.5   225.0   995.5
GR 221.0    997.0   220.5  1000.0   221.0   1003.5   225.0   1005.0   230.0  1010.5
GR 231.0   1012.0   232.0  1013.5   233.0   1015.0   234.0   1016.0   235.0  1017.0
GR 236.0   1019.5   236.5  1037.0   236.0   1052.5   235.0   1054.5   234.0  1056.0
GR 233.0   1057.0   232.0  1058.5   231.0   1059.0   230.1   1064.0   231.0  1068.0
GR 232.0   1069.0   233.0  1070.0   233.0   1073.5   243.0 1073.51
X1 11120    32.0   976.0  1028.0   400.0    400.0   400.0      0.0      0.0       0
CI    -1  239.00       0       0       0        0  -100.0
X3    10
GR 249.6    949.5   239.6  949.51   240.0    953.5   241.0    970.5   241.3   973.0
GR 241.0    976.0   240.0   978.5   239.0    981.0   238.0    982.0   237.0   983.5
GR 236.0    984.5   235.0   986.0   230.0    992.5   225.0    996.0   222.0   997.0
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GR 222.0  1004.0   225.0  1005.0   230.0  1008.5   231.0  1011.5   232.0  1014.0
GR 233.0  1015.0   234.0  1017.0   235.0  1018.0   236.0  1020.0   237.0  1021.5
GR 238.0  1023.0   239.0  1025.5   240.0  1028.0   240.5  1038.5   240.0  1047.5
GR 239.7  1049.0   249.7 1049.01
X1 11408    16.0   978.0  1022.3   288.0   288.0   288.0     0.0     0.0       0
CI    -1  240.00       0       0       0       0  -100.0
X3    10
GR 251.6   941.5   241.6  941.51   241.0   954.5   241.0   973.0   241.0   978.0
GR 240.0   981.5   235.0   990.0   230.0   994.8   226.0  1000.0   230.0  1009.0
GR 235.0  1011.0   240.0  1018.0   241.0  1022.3   241.5  1035.5   241.0  1049.0
GR 251.0 1049.01
NC     0       0       0     0.1    0.35
X1 11558      18     979    1020   149.2   151.2   150.0     0.0     0.0       0
CI    -1  242.00       0       0       0       0  -100.0
X3    10
GR253.00     951  243.00  951.01  242.80     964  243.00     979  238.47     992
GR238.47     993  229.22     993  229.22 1011.17  237.22 1011.17  237.22    1013
GR238.47    1013  238.47    1014  243.00    1020  243.10    1023  242.70    1024
GR243.10    1032  242.40    1046  253.00 1046.01
NC     0       0   0.016       0       0
QT     2    1640      60       0       0       0
SB  1.25    1.69     2.6       0   18.17    5.00  105.36       0  229.70  229.22
X1 11690      22   976.0  1017.0   129.0   136.3   132.0     0.0     0.0       0
CI    -1  242.60   0.025       0       0       0  -100.0
X2     0       0       1  237.70   243.1       0       0       0       0       0
BT    16     950   244.0  244.00     974   244.0  243.70     976   244.0  243.60
BT   989   244.0  238.95     990   244.0  238.95     990   244.0  237.70    1010
BT 244.0  237.70    1010   244.0  238.95    1011   244.0  238.95    1015   244.0
BT243.00    1017   244.0  243.80    1018   244.0  243.40    1031   244.0  244.00
BT  1042   244.0  244.00    1074   243.1  243.10    1075   243.5  243.50
GR 254.0     939   244.3  939.01   244.0     950   243.7     974   243.6     976
GR238.95     989  238.95     990   229.7     990   229.7 1008.17   237.7 1008.17
GR 237.7    1010  238.95    1010  238.95    1011   243.0    1015   243.8    1017
GR 243.4    1018   244.0    1031   244.0    1042   243.1    1074   243.5    1075
GR 243.6    1080   254.0 1080.01
EJ
T1      FERGUSON   GREINER, INC  02-19-92     (FILENAME = T-M3D1A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL M3D1A                    u/s of McDowell Road
J1     0       3       0       0 0.00532       0       0       0   180.0       0
J2    15       0       0       0       0       0       0       7       0       0


ER
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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    19FEB93    TIME   11:23:06 *
 *****************************************
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*************************************
 *  U.S. ARMY CORPS OF ENGINEERS     *
 *  HYDROLOGIC ENGINEERING CENTER    *
 *  609 SECOND STREET, SUITE D       *
 *  DAVIS, CALIFORNIA 95616-4687     *
 *         (916) 756-1104            *
*************************************
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X     X  XXXXXXX   XXXXX            XXXXX
X     X  X       X     X          X     X
X     X  X       X                      X
XXXXXXX  XXXX     X         XXXXX   XXXXX
X     X  X       X                X
X     X  X       X     X          X
X     X  XXXXXXX   XXXXX           XXXXXXX
```

1

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THIS RUN EXECUTED 19FEB93 11:23:06

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*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1      FERGUSON    GREINER, INC 02-19-92     (FILENAME = T-M3D1A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M3D1A                   u/s of McDowell Road

  Cross-section numbering has been changed:
        d/s face of the McDowell Rd. culverts ===> XS  #726.00
        u/s       "       "       "          ===> XS #1000.00
        The XS numbering u/s of McDowell Rd. has been modified accordingly.
        These XS #'s apply to the all other HEC-2 runs


J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL     FQ

                2                        .00532                                  180

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC     IBW      CHNIM    ITRACE

     1         0        0        0        0        0        0         6        0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38        43        39         4        25        26        23        24         1        42

QT       2      4710      5470         0         0         0         0         0         0
  Refer to the Comments after XS #766 about the discharges.
NC     .035      .035      .015
X1        0         7    999.99   1016.01
X3       10                          1000                   1016
GR   184.67    950.00    184.67    999.99    170.00   1000.00    169.67   1008.00    170.00   1016.00
GR   184.67   1016.01    184.67   1066.00
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X1      384         7     999.99    1016.01       374       394       384
X3       10
GR   186.71    950.00    186.71     999.99    172.04   1000.00    171.71   1008.00    172.04   1016.00
GR   186.71   1016.01    186.71    1066.00

X1      434         7     999.99    1016.01        49        51        50
X3       10
GR   188.36    950.00    188.36     999.99    172.31   1000.00    171.98   1008.00    172.31   1016.00
GR   188.36   1016.01    188.36    1066.00
1
   19FEB93     11:23:06                                                                          PAGE    2


X1      484         7     999.99    1016.01        49        51        50
X3       10
GR   190.00    950.00    190.00     999.99    173.13   1000.00    172.80   1008.00    173.13   1016.00
GR   190.00   1016.01    190.00    1066.00

NC                                      .3        .5
X1      684         7     999.99    1026.01       200       200       200
GR   190.00    950.00    190.00     999.99    176.50   1000.00    176.07   1013.00    176.50   1026.00
GR   190.00   1026.01    190.00    1076.00

X1      726         7      1000       1026        42        42        42
X3       10                                                                   189       189
GR   192.00    950.00    189.00     999.99    177.11   1000.00    177.11   1013.00    177.11   1026.00
GR   189.00   1026.01    192.00    1076.00
  The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
     discharges for 25, 50, 100-yr event, respectively.  This is due to the
     assumption that those amount of discharges do not join the d/s channel
     flowing west along the McDowell Road.

SC    2.014       .2       2.6                 10        12       274       9.2    179.85    177.11
X1     1000       10       987      1013       274       274       274
X2                          2    189.85
X3       10                                                                   194       194
X5        2   195.20    196.90
BT       -7      966    193.00                972    193.00                  975    194.00
BT               985    194.00               1027    194.00                 1041    193.90
BT              1070    193.90
GR      193      966       193       972       194    984.99    193.87       985    179.85       987
GR   179.85     1013    193.87      1027       194   1027.01     193.9      1041     193.9      1070

NC    0.040    0.040     0.025         0         0
QT        2     4710      1370         0         0         0
X1     1110     14.0    973.01    1024.0     111.0     108.0     110.0       0.0       0.0         0
CI       -1   191.44     0.025         0         0         0    -100.0
X3       10
GR    205.0    973.0     195.0    973.01     190.0     980.0     185.0     984.5     181.0     989.0
GR    181.0   1000.0     181.0    1006.0     185.0    1013.0     190.0    1018.5     195.0    1024.0
GR    195.5   1030.0     195.0    1036.0     194.0    1058.0     204.0   1058.01

NC        0        0         0       0.1      0.35
X1     1514     14.0    974.01    1030.0     418.0     390.0     404.0       0.0       0.0         0
CI       -1   194.39         0         0         0         0    -100.0
X3       10
GR    208.6    974.0     198.6    974.01     195.0     977.0     185.0     988.0     181.1     992.0
GR    181.1   1010.0     185.0    1014.0     195.0    1023.0     198.6    1030.0     198.0    1034.5
GR    197.0   1046.0     197.0    1053.0     197.0    1057.0     207.0    1057.0

QT        2     4490      1150         0         0         0
X1     1912     17.0    972.4    1034.0     408.0     388.0     398.0       0.0       0.0         0
CI       -1   195.51         0         0         0         0    -100.0
X3       10
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GR    210.5     912.0     205.0     912.01    200.5     912.02    203.0     926.0     203.6     948.0
GR    203.0     972.4     200.0     975.5     185.0     989.0     181.7     994.0     181.7     1011.0
1
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GR    185.0     1015.0    200.0     1029.0    202.7     1034.0    202.0     1044.0    201.0     1055.0
GR    200.0     1064.0    210.0     1064.0

X1    2312      26.0      969.0     1028.0    410.0     390.0     400.0     0.0       0.0       0
CI    -1        194.74    0         0         0         0         -100.0
X3    10
GR    213.5     900.5     207.5     900.51    205.5     900.52    203.5     900.53    204.9     925.2
GR    204.2     961.5     204.0     969.0     203.0     971.8     200.0     974.2     195.0     979.5
GR    190.0     983.8     185.0     987.5     184.0     988.5     183.0     989.5     183.2     1000.0
GR    185.0     1009.5    190.0     1014.5    195.0     1019.5    200.0     1024.5    203.0     1028.0
GR    203.9     1036.0    203.0     1047.0    202.0     1054.0    201.0     1063.0    200.9     1070.0
GR    210.9     1070.01

NC    0         0         0         0.3       0.5
X1    2485      23.0      969.7     1027.5    173.0     173.0     173.0     0.0       0.0       0
CI    -1        197.14    0         0         0         0         -100.0
X3    10
GR    213.8     904.5     203.8     904.51    204.0     922.5     204.1     929.4     204.1     937.0
GR    203.0     969.7     200.0     977.5     199.0     980.5     198.0     984.0     197.6     990.0
GR    197.6     991.0     183.9     991.0     183.9     1007.0    197.6     1007.0    197.6     1008.0
GR    198.0     1013.0    199.0     1016.0    200.0     1018.5    203.0     1027.5    203.0     1035.0
GR    203.0     1043.0    201.6     1064.0    211.6     1064.01

NC    0         0         0.016     0         0
X1    2515      20        963       1026      30        30        30        0         0         0
CI    -1        197.96    0.025     0         0         0         -100.0
GR    213.90    901       203.90    901.01    204.00    926       204.00    934       203.00    963
GR    202.00    972       200.00    979       199.00    982       197.60    990       197.60    991
GR    184.00    991       184.00    1007      197.60    1007      199.00    1014      201.00    1019
GR    203.00    1026      203.00    1042      202.00    1053      201.50    1059      211.50    1059.01

X1    2530      16.0      959.8     1025.0    15.0      15.0      15.0      0.0       0.0       0.0
CI    -1        198.91    0         0         0         0         -100.0
GR    213.9     901.0     203.9     901.01    203.0     959.8     197.6     980.0     197.6     991.5
GR    188.3     991.5     188.3     1007.5    197.6     1007.5    197.6     1018.0    200.0     1021.0
GR    203.0     1025.0    203.2     1036.0    203.0     1042.0    202.0     1050.0    201.5     1059.0
GR    211.5     1059.01

NC    0         0         0.025     0         0
QT    2         4410      1080      0         0         0
X1    2712      18.0      975.8     1022.0    182.0     182.0     182.0     0.0       0.0       0
CI    -1        201.20    0         0         0         0         -100.0
X3    10
GR    214       899       203.7     899.01    204.2     970.0     204.0     975.8     200.0     980.8
GR    195.0     985.0     190.0     990.0     188.5     991.0     188.5     1007.0    190.0     1009.5
GR    195.0     1014.8    200.0     1019.5    203.0     1022.0    203.6     1036      203.0     1047.0
GR    202.0     1051.0    201.5     1057.0    211.5     1057.01

NC    0         0         0         0.1       0.35
X1    3112      22.0      971.0     1021.0    400.0     400.0     400.0     0.0       0.0       0
CI    -1        202.26    0         0         0         0         -100.0
X3    10
GR    214.0     893.5     204.0     893.51    203.0     900.8     203.6     908.0     203.0     917.0
GR    202.0     951.0     205.0     969.5     205.4     971.0     205.0     973.0     200.0     980.0
1
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GR    195.0     984.7     190.0     988.8     189.4     1000.0    190.0     1006.8    195.0     1011.5
GR    200.0     1016.5    204.0     1021.0    204.5     1034.0    204.0     1045.0    203.0     1048.0
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GR    202.4     1060.0      212    1060.01

QT        2       4350     1010         0         0         0
X1     3513       22.0    976.8    1020.8     401.0     401.0     401.0       0.0       0.0         0
CI       -1     203.35        0         0         0         0    -100.0
X3       10
GR    214.0      896.0    204.0     896.01     205.0     923.0     205.1     933.5     205.0     942.0
GR    204.8      949.0    205.5      955.0     206.2     966.0     205.0     976.8     200.0     981.8
GR    195.0      986.8    191.0      990.8     190.8    1000.0     191.0    1007.0     195.0    1011.1
GR    200.0     1015.8    205.0     1020.8     205.2    1035.0     205.0    1047.0     204.0    1051.0
GR    203.4     1080.0    213.4    1080.01

X1     3913       19.0    976.0     1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     204.04        0         0         0         0    -100.0
X3       10
GR    215.1      898.0    210.1     898.01     205.1    898.02     204.6     942.0     205.0     967.0
GR    205.8      976.0    205.0      978.5     200.0     984.1     195.0     989.2     192.0     992.5
GR    191.3     1000.0    192.0     1006.5     195.0    1009.5     200.0    1015.0     205.0    1020.5
GR    206.0     1022.0    206.7     1028.5     202.4    1082.0     212.4    1082.01

X1     4313       28.0    979.5     1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     204.50        0         0         0         0    -100.0
X3       10
GR    215.1      899.0    205.1     899.01     205.0     930.5     205.1     937.0     205.0     944.0
GR    204.4      959.0    205.0      971.0     205.1     977.0     205.0     979.5     200.0     985.0
GR    195.0      990.0    193.0      999.0     192.6    1000.0     193.0    1004.0     194.0    1008.0
GR    195.0     1009.0    200.0     1014.5     205.0    1018.5     206.0    1020.0     207.0    1022.0
GR    207.3     1025.0    207.0     1028.5     206.0    1038.0     205.0    1043.0     204.0    1052.0
GR    203.0     1058.0    202.3     1088.0     212.3    1088.01

QT        2       3850      940         0         0         0
X1     4713       24.0    976.0     1020.5     400.0     400.0     400.0       0.0       0.0         0
CI       -1     205.50        0         0         0         0    -100.0
X3       10
GR    215.9      915.0    213.9     915.01     210.9    915.02     205.9    915.03     206.0     972.0
GR    206.6      976.0    206.0      979.5     205.0     981.0     200.0     986.0     195.0     990.3
GR    193.0      992.0    192.8      995.0     193.0     998.5     194.0    1006.0     195.0    1007.5
GR    200.0     1013.5    205.0     1018.5     206.0    1020.5     206.5    1027.0     206.0    1034.8
GR    205.0     1040.5    204.0     1054.0     203.2    1085.0     213.2    1085.01

QT        2       3540      630         0         0         0
X1     5113       23.0    977.0     1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     206.50        0         0         0         0    -100.0
X3       10
GR    216.9      913.5    211.9     913.51     208.9    913.52     206.9    913.53     207.0     976.0
GR    207.2      977.0    207.0      978.0     206.0     980.0     205.0     981.5     200.0     987.5
GR    195.0      992.5    194.5     1000.0     195.0    1008.5     200.0    1013.0     205.0    1018.5
GR    206.0     1019.5    207.0     1022.0     207.1    1026.5     207.0    1031.0     206.0    1048.0
GR    205.0     1069.0    204.5     1095.0     214.5    1095.0
1
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QT        2       3530      620         0         0         0
X1     5513       17.0    980.5     1018.5     400.0     400.0     400.0       0.0       0.0         0
CI       -1     206.50        0         0         0         0    -100.0
X3       10
GR    217.9      912.0    207.9     912.01     207.7     944.0     207.0     980.5     206.0     982.0
GR    205.0      982.5    200.0      987.0     196.0     991.0     195.6    1000.0     196.0    1007.0
GR    200.0     1010.5    205.0     1015.5     207.0    1018.5     207.8    1028.5     207.0    1054.0
GR    206.6     1085.0    216.6    1085.01

X1     5914       24.0    977.5     1020.0     401.0     401.0     401.0       0.0       0.0         0
CI       -1     207.50        0         0         0         0    -100.0
X3       10
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GR    219.3     916.0     209.3     916.01    209.0     953.5     208.0     977.5     207.0     979.0
GR    206.0     980.5     205.0     982.0     200.0     988.0     199.0     990.0     198.0     991.0
GR    197.0     993.5     196.6     997.0     197.0     1000.0    197.1     1001.0    197.0     1002.0
GR    196.6     1007.0    197.0     1009.0    200.0     1011.5    205.0     1015.5    208.0     1020.0
GR    208.6     1047.0    208.0     1076.0    207.8     1086.2    217.8     1086.21

X1    6156      21        978       1024      242       242       242       0         0         0
CI    -1        208.27    0         0         0         0         -100.0
X3    10
GR    220.0     911       210.1     911.01    210.4     940       210.0     955       209.6     964
GR    210.1     964       210.0     978       205.0     983       200.0     988       198.0     991
GR    197.8     992       197.8     1005      198.0     1007      200.0     1009      205.0     1014
GR    209.0     1018      209.8     1024      209.6     1044      209.0     1058      208.5     1075
GR    218.0     1075.01

NC    0         0         0         0.3       0.5
X1    6307      17        989.25    1012      151       151       151       0         0         0
CI    -1        209.25    0         0         0         0         -100.0
X3    10
GR    220.0     908       210.1     908.01    210.5     937       210.1     969       210.5     970
GR    210.0     987       209.75    989.25    198.75    989.25    198.75    999.25    199.75    1000.75
GR    199.75    1010.75   209.75    1010.75   210.1     1012      210.5     1028      210.1     1029
GR    210.0     1063      220.0     1063.01

NC    0         0         0.016     0         0
QT    2         3470      560       0         0         0
SB    1.25      1.58      2.60      0         20.5      1.5       190       0.01      199.51    198.75
X1    6388      13        989.25    1010.75   81        81        81        0         0         0
CI    -1        210.11    0.025     0         0         0         -100.0
X2    0         0         1         209.61    210.61    0         0         0         0         0
BT    5         968       210.61    209.61    989.25    210.61    209.61    989.25    211.22    209.61
BT    1010.8    211.22    209.61    1025      210.61    209.61
GR    220.0     901       210.3     901.01    210.1     967       210.5     968       210.61    989.25
GR    199.61    989.25    199.61    999.25    200.61    1000.75   200.61    1010.75   210.61    1010.75
GR    210.1     1025      210.0     1070      220.0     1070.01
1
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NC    0         0         0.025     0         0
QT    2         3470      560       0         0         0
X1    6517      16        977.0     1023      129.0     129.0     129.0     0         0         0
CI    -1        210.80    0         0         0         0         -100.0
X3    10
GR    220       908       210.5     908.01    210.7     931.0     211.0     973.0     211.3     977.0
GR    211       980       210.0     981       205.0     987.0     200.0     993.0     200.0     1011.0
GR    205       1014      210.0     1019      211.5     1023.0    210.0     1030.0    210.0     1080.0
GR    220       1080.01

NC    0         0         0         0.1       0.35
X1    6714      29        979.0     1017.5    197.0     197.0     197.0     0.0       0.0       0
CI    -1        210.50    0         0         0         0         -100.0
X3    10
GR    224       898       214.0     898.01    213.0     901.0     212.0     905.5     211.0     955.0
GR    211.0     958.0     211.4     969.5     211.0     979.0     210.0     981.0     205.0     986.5
GR    201.0     991.0     200.3     1000.0    201.1     1007.0    205.0     1010.5    210.0     1015.5
GR    211.0     1017.5    211.3     1026.5    211.0     1035.5    210.8     1043.0    211.0     1050.0
GR    212.0     1078.5    212.7     1081.5    212.0     1083.5    210.0     1086.0    208.0     1089.5
GR    207.6     1092.5    209.0     1095.0    210.0     1096.5    220       1096.51

QT    2         3330      720       0         0         0
X1    7115      30.0      979.0     1022.0    401.0     401.0     401.0     0.0       0.0       0
CI    -1        211.50    0         0         0         0         -100.0
X3    10
GR    222.1     904.5     212.1     904.51    212.0     910.0     211.9     912.0     212.0     915.0
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GR    212.4     930.0     212.0     950.5     211.8     954.5     212.0     959.2     213.0     973.5
GR    213.1     976.5     213.0     979.0     212.0     981.5     211.5     982.5     210.0     983.5
GR    205.0     989.0     201.0     995.5     200.6    1000.0     201.0    1009.5     205.0    1012.5
GR    210.0    1018.5     211.0    1021.0     212.0    1022.0     213.0    1068.5     213.5    1077.5
GR    213.0    1086.0     210.0    1090.5     208.1    1095.0     210.0    1100.0     220.0    1100.01

QT        2      3310       700         0         0         0
X1     7515      33.0     979.5    1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1    212.50         0         0         0         0    -100.0
X3       10
GR    224.0     902.5     220.0    902.51     214.0    902.52     214.0     903.5     213.0     921.5
GR    213.3     931.0     213.0     979.5     210.0     982.0     205.0     988.0     204.0     990.0
GR    203.0     992.0     202.0     994.5     201.0     996.0     200.9    1000.0     201.0    1007.5
GR    205.0    1011.0     210.0    1016.0     211.0    1018.0     212.0    1020.3     213.0    1022.0
GR    213.4    1033.0     213.0    1048.0     213.0    1050.0     214.0    1080.5     213.0    1083.5
GR    212.0    1085.0     210.0    1087.0     209.0    1090.0     208.9    1093.0     209.0    1095.0
GR    210.0    1096.5     212.0    1100.5     222.0   1100.51

X1     7715      32.0     978.0    1021.0     200.0     200.0     200.0       0.0       0.0         0
CI       -1    213.50         0         0         0         0    -100.0
X3       10
GR    224.5     900.0     214.5    900.01     214.0     918.5     214.0     920.0     214.4     950.0
GR    214.0     978.0     212.0     982.0     210.0     984.0     205.0     989.5     204.0     991.5
GR    202.0     993.0     201.5    1000.0     203.0    1007.0     205.0    1009.5     210.0    1014.0
GR    214.0    1021.0     214.4    1034.0     214.0    1049.0     213.9    1051.0     214.0    1054.0
GR    215.0    1075.0     215.2    1081.0     215.0    1087.0     213.0    1091.0     212.0    1091.5
GR    211.0    1094.0     211.0    1101.0     214.0    1105.5     214.5    1108.0     214.0    1109.0
1
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GR    212.5    1123.0     222.5   1123.01

X1     7916      25.0     978.0    1019.5     201.0     201.0     201.0       0.0       0.0         0
CI       -1    214.00         0         0         0         0    -100.0
X3       10
GR    225.6     901.5     215.6    901.51     215.0     918.0     215.0     921.0     215.1     930.0
GR    216.0     978.0     215.0     980.5     210.0     986.0     205.0     991.5     204.0     993.0
GR    203.0     994.5     202.1    1000.0     203.0    1005.5     205.0    1007.5     210.0    1012.5
GR    211.0    1014.0     212.0    1015.5     213.0    1016.5     214.0    1018.0     215.0    1019.5
GR    215.6    1026.5     215.0    1052.0     215.4   1052.01     215.0    1089.0     225.0   1089.01

QT        2      2300       480         0         0         0
X1     8317      26.0     973.0    1020.5     401.0     401.0     401.0       0.0       0.0         0
CI       -1    216.00         0         0         0         0    -100.0
X3       10
GR    227.7     905.5     222.7    905.51     217.7    905.52     218.0     952.5     219.0     962.0
GR    219.4     968.0     219.0     973.0     218.0     977.0     217.0     978.5     216.0     980.0
GR    215.0     980.5     210.0     986.8     205.0     993.0     204.0     995.0     203.0    1000.0
GR    205.0    1006.0     210.0    1011.0     215.0    1016.5     216.0    1019.0     217.0    1020.5
GR    218.0    1054.0     218.6    1068.0     218.0    1080.0     217.0    1083.0     216.0    1086.0
GR    226.0   1086.01

X1     8717      31.0     976.5    1024.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1    218.75         0         0         0         0    -100.0
X3       10
GR    230.1     904.5     220.1    904.51     220.0     909.0     220.0     914.0     220.4     928.0
GR    220.0     942.5     219.9     945.5     220.0     949.0     221.0     965.0     221.6     972.5
GR    221.0     976.5     220.0     978.0     215.0     982.5     210.0     988.5     205.0     992.0
GR    204.0     994.5     204.0    1000.0     204.0    1005.5     205.0    1007.0     210.0    1011.5
GR    215.0    1017.0     220.0    1022.0     221.0    1024.0     221.4    1029.5     221.0    1040.0
GR    220.9    1045.0     221.0    1050.0     221.2    1065.0     221.0    1080.0     220.0    1084.0
GR    230.0   1084.01

X1     8859        21       974       1024       142       142       142         0         0         0
CI       -1    219.72         0         0         0         0    -100.0
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X3      10
GR   231.3      902    221.3   902.01    221.0      912    221.4      926    221.0      939
GR   221.3      966    221.0      974    220.0      976    210.0      987    205.0      990
GR   204.6      993    204.6     1002    205.0     1004    220.0     1020    221.0     1022
GR   222.0     1024    222.4     1032    222.0     1059    221.0     1076    220.0     1085
GR   230.0  1085.01

NC       0        0        0      0.3      0.5
X1    8977       19      976     1026      118      118      118      0.0      0.0        0
CI      -1   220.53        0        0        0        0   -100.0
X3      10
GR   232.0      900    222.0   900.01    222.0      912    222.5      924    221.6      942
GR   222.0      956    222.4      966    222.0      976    213.9   983.55    213.9      993
GR   205.9      993    205.9     1010    213.9     1010    213.9     1015    215.9     1015
GR   222.0     1026    222.0     1084    221.5     1090    232.0  1090.01
1
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NC       0        0    0.016        0        0
QT       2     2270      450        0        0        0
SB    1.25     1.69      2.6        0       17     3.83   105.36        0   206.49   205.90
X1    9037       16      974     1029       60       60       60      0.0      0.0        0
CI      -1   220.94    0.025        0        0        0   -100.0
X2       0        0        1   214.49    222.5        0        0        0        0        0
BT      15      927    222.6    222.6      935    222.5    222.5      935    222.1    222.1
BT     974    222.6    222.6      983    222.6   214.49      983    223.9   214.49      993
BT   223.9   214.49      993    223.9   206.49     1010    223.9   206.49     1010    223.9
BT  214.49     1014    223.9   214.49     1014    222.5    216.5     1022    222.5    221.0
BT    1029    222.5    222.5     1065    222.5    222.5
GR   233.0      927    222.6   927.01    222.5      935    222.1      935    222.6      974
GR  214.49   982.05   214.49      993   206.49      993   206.49     1010   214.49     1010
GR  214.49     1014    216.5     1014    221.0     1022    222.5     1029    222.5     1065
GR   233.0  1065.01

NC       0        0    0.028        0        0
QT       2     2270      450        0        0        0
X1    9118     27.0    973.0   1025.5       81       81       81      0.0      0.0        0
CI      -1   221.50    0.025        0        0        0   -100.0
X3      10
GR   233.0    927.0    230.0   927.01    227.0   927.02    223.0   927.03    224.0    965.5
GR   224.4    969.5    224.0    973.0    223.0    975.0    222.0    976.8    221.0    978.0
GR   220.0    979.5    215.0    984.5    210.0    990.0    207.0    992.0    205.6   1000.0
GR   207.0   1007.0    210.0   1010.8    215.0   1016.0    220.0   1021.5    223.0   1025.5
GR   223.6   1039.0    223.0   1052.0    220.0   1055.5    221.0   1065.0    222.0   1068.5
GR   222.3   1084.0    233.3  1084.01

NC       0        0        0      0.1     0.35
X1    9318     30.0    979.0   1024.0    200.0    200.0    200.0      0.0      0.0        0
CI      -1   222.87        0        0        0        0   -100.0
X3      10
GR   233.9    929.0    223.9   929.01    224.0    959.5    225.0    964.5    225.6    971.5
GR   225.0    979.0    224.0    982.8    223.0    985.0    220.0    989.0    215.0    991.0
GR   210.0    994.0    208.0    995.0    206.4   1000.0    208.0   1006.0    210.0   1008.0
GR   215.0   1011.0    220.0   1017.0    225.0   1024.0    225.8   1033.0    225.0   1043.0
GR   224.9   1045.0    225.0   1049.0    225.0   1051.0    220.0   1059.5    219.5   1062.0
GR   220.0   1065.0    222.0   1067.0    223.0   1069.0    223.2   1084.5    233.2  1084.51

QT       2     1700      120        0        0        0
X1    9518     27.0    975.1   1025.0    200.0    200.0    200.0      0.0      0.0        0
CI      -1   224.25        0        0        0        0   -100.0
X3      10
GR   235.3    929.5    225.3   929.51    225.0    944.0    226.0    964.5    227.0    971.0
GR   227.1    973.1    227.0    975.1    226.0    978.8    225.0    980.3    220.0    985.0
GR   215.0    990.5    210.0    996.0    207.2   1000.0    208.0   1003.5    210.0   1005.0
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GR    215.0     1008.0     220.0     1013.0     225.0     1019.0     226.0     1021.0     227.0     1025.0
GR    227.2     1034.8     225.0     1054.0     220.0     1061.0     220.0     1067.0     223.0     1071.0
GR    224.5     1084.0     234.5     1084.01
1
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QT        2       1700       110         0         0         0
X1     9919       29.0     967.8    1030.0     401.0     401.0     401.0       0.0       0.0         0
CI       -1     227.00         0         0         0         0    -100.0
X3       10
GR    238.8      933.0     228.8     933.01     228.8     958.0     228.0     967.8     227.0     968.5
GR    226.0      973.0     225.0      975.0     223.0     979.5     220.0     985.5     215.0     992.0
GR    213.0      993.5     212.2     1000.0     213.0    1001.5     214.0    1006.0     215.0    1007.0
GR    220.0     1011.5     225.0     1018.0     227.0    1023.0     229.0    1027.0     230.0    1030.0
GR    230.2     1038.5     230.0     1048.5     225.0    1057.0     223.0    1059.0     223.0    1063.0
GR    225.0     1065.5     227.0     1070.0     227.1    1080.5     237.1    1080.51

X1    10119       21.0     976.0     1023.0     200.0     200.0     200.0       0.0       0.0       0.0
CI       -1     229.00         0         0         0         0    -100.0
X3       10
GR    240.3      934.5     230.3     934.51     230.4     962.0     230.0     976.0     225.0     984.8
GR    220.0      993.5     215.0     1000.0     217.0    1004.0     218.0    1007.5     220.0    1008.5
GR    225.0     1013.0     229.0     1019.5     230.0    1023.0     230.7    1034.0     230.0    1048.0
GR    225.0     1058.0     224.7     1060.5     225.0    1064.0     228.0    1066.0     229.0    1076.0
GR    239.0    1076.01

X1    10319       32.0     972.5     1028.0     200.0     200.0     200.0       0.0       0.0         0
CI       -1     231.00         0         0         0         0    -100.0
X3       10
GR    243.0      948.0     233.0     948.01     232.6    948.02     232.0     972.5     231.0     974.0
GR    230.0      978.0     225.0      990.0     220.0     995.0     219.0     996.0     218.0     998.0
GR    217.8     1000.0     218.0     1001.0     219.0    1002.0     220.0    1003.0     225.0    1010.0
GR    230.0     1019.0     231.0     1021.5     232.0    1024.0     232.8    1028.0     232.9    1034.0
GR    232.8     1043.0     233.0     1054.0     233.0    1055.0     232.0    1056.5     230.0    1058.0
GR    229.0     1060.0     228.6     1062.0     229.0    1064.0     230.0    1065.0     231.0    1067.5
GR    231.0     1070.0     241.0    1070.01

X1    10720       34.0     981.0     1019.5     401.0     401.0     401.0       0.0       0.0         0
CI       -1     235.00         0         0         0         0    -100.0
X3       10
GR    246.0      955.0     236.0     955.01     236.0     964.0     236.0     969.5     237.0     979.0
GR    237.1      981.0     236.0      984.5     235.0     986.5     230.0     993.5     225.0     995.5
GR    221.0      997.0     220.5     1000.0     221.0    1003.5     225.0    1005.0     230.0    1010.5
GR    231.0     1012.0     232.0     1013.5     233.0    1015.0     234.0    1016.0     235.0    1017.0
GR    236.0     1019.5     236.5     1037.0     236.0    1052.5     235.0    1054.5     234.0    1056.0
GR    233.0     1057.0     232.0     1058.5     231.0    1059.0     230.1    1064.0     231.0    1068.0
GR    232.0     1069.0     233.0     1070.0     233.0    1073.5     243.0    1073.51

X1    11120       32.0     976.0     1028.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     239.00         0         0         0         0    -100.0
X3       10
GR    249.6      949.5     239.6     949.51     240.0     953.5     241.0     970.5     241.3     973.0
GR    241.0      976.0     240.0      978.5     239.0     981.0     238.0     982.0     237.0     983.5
GR    236.0      984.5     235.0      986.0     230.0     992.5     225.0     996.0     222.0     997.0
GR    222.0     1004.0     225.0     1005.0     230.0    1008.5     231.0    1011.5     232.0    1014.0
GR    233.0     1015.0     234.0     1017.0     235.0    1018.0     236.0    1020.0     237.0    1021.5
GR    238.0     1023.0     239.0     1025.5     240.0    1028.0     240.5    1038.5     240.0    1047.5
GR    239.7     1049.0     249.7     1049.01
1
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X1    11408       16.0     978.0     1022.3     288.0     288.0     288.0       0.0       0.0         0
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CI       -1    240.00        0        0        0        0     -100.0
X3       10
GR    251.6     941.5    241.6   941.51    241.0    954.5     241.0     973.0     241.0     978.0
GR    240.0     981.5    235.0    990.0    230.0    994.8     226.0    1000.0     230.0    1009.0
GR    235.0    1011.0    240.0   1018.0    241.0   1022.3     241.5    1035.5     241.0    1049.0
GR    251.0   1049.01

NC        0         0        0      0.1     0.35
X1    11558        18      979     1020    149.2    151.2     150.0       0.0       0.0        0
CI       -1    242.00        0        0        0        0     -100.0
X3       10
GR   253.00       951   243.00   951.01   242.80      964    243.00       979    238.47      992
GR   238.47       993   229.22      993   229.22  1011.17    237.22   1011.17    237.22     1013
GR   238.47      1013   238.47     1014   243.00     1020    243.10      1023    242.70     1024
GR   243.10      1032   242.40     1046   253.00  1046.01

NC        0         0    0.016        0        0
QT        2      1640       60        0        0        0
SB     1.25      1.69      2.6        0    18.17     5.00    105.36        0    229.70   229.22
X1    11690        22    976.0   1017.0    129.0    136.3     132.0       0.0       0.0        0
CI       -1    242.60    0.025        0        0        0     -100.0
X2        0         0        1   237.70    243.1        0         0        0         0        0
BT       16       950    244.0   244.00      974    244.0    243.70      976     244.0   243.60
BT      989     244.0   238.95      990    244.0   238.95       990    244.0    237.70     1010
BT    244.0    237.70     1010    244.0   238.95     1011     244.0   238.95      1015    244.0
BT   243.00      1017    244.0   243.80     1018    244.0    243.40     1031     244.0   244.00
BT     1042     244.0   244.00     1074    243.1   243.10      1075    243.5    243.50
GR    254.0       939    244.3   939.01    244.0      950     243.7      974     243.6      976
GR   238.95       989   238.95      990    229.7      990     229.7  1008.17     237.7  1008.17
GR    237.7      1010   238.95     1010   238.95     1011     243.0     1015     243.8     1017
GR    243.4      1018    244.0     1031    244.0     1042     243.1     1074     243.5     1075
GR    243.6      1080    254.0  1080.01
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SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    L-BANK ELEV
Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      R-BANK ELEV
TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*PROF 1

*SECNO  .000
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=    1000.0    1016.0  TYPE=     1  TARGET=      16.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     .000    14.03   183.70   183.70   180.00   190.70     7.00      .00      .00 100000.00
   4710.0       .0   4710.0       .0       .0    221.9       .0       .0       .0 100000.00
     .00      .00    21.23      .00     .000     .015     .000     .000   169.67   1000.00
  .005214       0.       0.       0.        0       11        0      .00    16.00   1016.00


*SECNO 384.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      186.71 ELREA=      186.71

  384.000    13.85   185.56   185.56      .00   192.74     7.18     2.03      .00   186.71
   4710.0       .0   4710.0       .0       .0    219.0       .0      1.9       .1   186.71
     .00      .00    21.51      .00     .000     .015     .000     .000   171.71   999.99
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  .005384     374.     384.     394.       2        8        0      .00    16.02   1016.01


*SECNO 434.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

  434.000    14.06   186.04   186.04      .00   193.00     6.96      .26      .00   188.36
   4710.0       .0   4710.0       .0       .0    222.5       .0      2.2       .2   188.36
      .01      .00    21.17      .00     .000     .015     .000     .000   171.98   999.99
  .005177      49.      50.      51.        0        5        0      .00    16.02   1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

  484.000    14.03   186.83   186.83      .00   193.82     7.00      .26      .00   190.00
   4710.0       .0   4710.0       .0       .0    221.9       .0      2.5       .2   190.00
      .01      .00    21.23      .00     .000     .015     .000     .000   172.80   999.99
  .005214      49.      50.      51.       20        5        0      .00    16.02   1016.01


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.19 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.24

  684.000    19.12   195.19      .00      .00   195.87      .68      .15     1.89   190.00
   4710.0    525.6   3658.8    525.6    259.3    491.7    259.3      5.3       .5   190.00
      .02     2.03     7.44     2.03     .035     .015     .035     .000   176.07   950.00
  .000289     200.     200.     200.        5        0        0      .00   126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.03 FEET

  726.000    17.92   195.03      .00      .00   196.05     1.02      .01      .17   177.11
   4710.0    324.5   4061.0    324.5    226.4    465.8    226.4      6.2       .6   177.11
      .02     1.43     8.72     1.43     .035     .015     .035     .000   177.11   950.00
  .000165      42.      42.      42.        2        0        0      .00   126.00   1076.00


SPECIAL CULVERT
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SC	CUNO	CUNV	ENTLC	COFQ	RDLEN	RISE	SPAN	CULVLN	CHRT	SCL	ELCHU	ELCHD
	2	.014	.20	2.60	.00	10.00	12.00	274.00	9	2	179.85	177.11

CHART 9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE 2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
WATER EL=X5 CARD= 195.200
3280 CROSS SECTION 1000.00 EXTENDED 2.20 FEET

1000.000	15.35	195.20	.00	.00	196.88	1.68	.06	.33	179.85
4710.0	51.1	4325.6	333.3	52.0	399.1	172.0	11.1	1.3	179.85
.02	.98	10.84	1.94	.035	.015	.035	.000	179.85	966.00
.000314	274.	274.	274.	0	0	0	.00	104.00	1070.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1110.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

1110.000	14.89	195.89	.00	.00	197.09	1.20	.06	.15	195.00
4710.0	.0	4655.2	54.8	.0	527.6	38.3	12.6	1.6	195.00
.03	.00	8.82	1.43	.000	.025	.040	.000	181.00	973.01
.001248	111.	110.	108.	3	0	0	.00	84.99	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 198.60 ELREA= 198.60

1514.000	15.25	196.35	.00	.00	197.67	1.32	.54	.04	198.60
4710.0	.0	4710.0	.0	.0	510.5	.0	17.5	2.2	198.60
.04	.00	9.23	.00	.000	.025	.000	.000	181.10	975.88
.001455	418.	404.	390.	2	0	0	.00	49.75	1025.63

*SECNO 1912.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 202.70

1912.000	15.35	197.05	.00	.00	198.22	1.17	.53	.02	203.00
4490.0	.0	4490.0	.0	.0	517.5	.0	22.2	2.7	202.70
.05	.00	8.68	.00	.000	.025	.000	.000	181.70	978.15
.001228	408.	398.	388.	2	0	0	.00	48.10	1026.25

*SECNO 2312.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.00 ELREA= 203.00

2312.000	14.37	197.37	.00	.00	198.99	1.62	.61	.16	204.00
4490.0	.0	4490.0	.0	.0	439.4	.0	26.6	3.1	203.00
.06	.00	10.22	.00	.000	.025	.000	.000	183.00	976.99
.001929	410.	400.	390.	2	0	0	.00	44.88	1021.87

CCHV= .300 CEHV= .500

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2485.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 203.00

2485.000	15.90	199.80	199.80	.00	203.50	3.70	.64	1.04	203.00
4490.0	.0	4490.0	.0	.0	290.9	.0	28.1	3.2	203.00
.07	.00	15.44	.00	.000	.025	.000	.000	183.90	978.11
.009691	173.	173.	173.	20	8	0	.00	39.88	1017.99

*SECNO 2515.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2515.000	15.96	199.96	199.96	.00	203.81	3.85	.18	.07	203.00
4490.0	.0	4490.0	.0	.0	285.3	.0	28.3	3.3	203.00
.07	.00	15.74	.00	.000	.016	.000	.000	184.00	979.11
.004005	30.	30.	30.	2	5	0	.00	37.29	1016.41

*SECNO 2530.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2530.000	13.10	201.40	201.40	.00	204.29	2.89	.05	.29	203.00
4490.0	.0	4490.0	.0	.0	329.3	.0	28.4	3.3	203.00
.07	.00	13.63	.00	.000	.016	.000	.000	188.30	965.78
.003130	15.	15.	15.	20	16	0	.00	57.08	1022.87

*SECNO 2712.000

3301 HV CHANGED MORE THAN HVINS

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.00 ELREA= 203.00

2712.000	15.42	203.92	.00	.00	205.14	1.23	.36	.50	204.00
4410.0	.0	4362.1	47.9	.0	488.1	33.9	30.2	3.6	203.00
.07	.00	8.94	1.41	.000	.025	.040	.000	188.50	975.91
.001340	182.	182.	182.	3	0	0	.00	81.09	1057.00

CCHV= .100 CEHV= .350
*SECNO 3112.000

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.40 ELREA= 204.00

3112.000	15.01	204.41	.00	.00	205.79	1.38	.59	.05	205.40
4410.0	.0	4364.6	45.4	.0	461.0	27.2	34.8	4.3	204.00
.08	.00	9.47	1.67	.000	.025	.040	.000	189.40	973.83
.001633	400.	400.	400.	2	0	0	.00	81.76	1060.00

*SECNO 3513.000

3265 DIVIDED FLOW

3513.000	14.21	205.01	.00	.00	206.55	1.54	.71	.06	205.00
4350.0	13.9	4263.3	72.7	14.5	423.5	39.8	39.2	5.2	205.00
.10	.96	10.07	1.83	.040	.025	.040	.000	190.80	896.01
.001917	401.	401.	401.	0	0	0	.00	113.71	1080.00

*SECNO 3913.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.80 ELREA= 206.00

3913.000	14.36	205.66	.00	.00	207.54	1.88	.87	.12	205.80
4350.0	.0	4350.0	.0	.0	395.4	.0	43.3	6.0	206.00
.11	.00	11.00	.00	.000	.025	.000	.000	191.30	976.43
.002507	400.	400.	400.	2	0	0	.00	45.06	1021.49

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4313.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.57

4313.000	14.96	207.56	.00	.00	208.27	.71	.61	.12	205.00
4350.0	469.0	3253.3	627.7	211.0	423.8	221.8	49.0	7.0	207.00
.12	2.22	7.68	2.83	.040	.025	.040	.000	192.60	899.01
.001023	400.	400.	400.	6	0	0	.00	189.00	1088.01

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*SECNO 4713.000
  4713.000     15.22    208.02       .00       .00    208.66       .64       .39       .01    206.60
    3850.0     221.7    3056.5     571.8     125.0     429.9     224.5      56.5       8.7    206.00
       .14      1.77      7.11      2.55      .040      .025      .040      .000    192.80    915.03
   .000915      400.      400.      400.         2         0         0       .00    169.98   1085.00


*SECNO 5113.000
  5113.000     13.87    208.37       .00       .00    209.07       .69       .39       .02    207.20
    3540.0     133.1    2947.5     459.4      90.1     405.6     198.2      63.3      10.3    207.00
       .16      1.48      7.27      2.32      .040      .025      .040      .000    194.50    913.52
   .001022      400.      400.      400.         2         0         0       .00    181.48   1095.00


*SECNO 5513.000

3301 HV CHANGED MORE THAN HVINS

  5513.000     12.95    208.55       .00       .00    209.76      1.21       .51       .18    207.00
    3530.0     103.8    3245.1     181.2      67.7     352.8      95.0      68.8      11.9    207.00
       .17      1.53      9.20      1.91      .040      .025      .040      .000    195.60    912.01
   .001643      400.      400.      400.         2         0         0       .00    172.99   1085.00


*SECNO 5914.000
  5914.000     12.57    209.17       .00       .00    210.47      1.30       .68       .03    208.00
    3530.0      19.6    3419.9      90.5      17.8     367.8      61.6      73.3      13.4    208.00
       .18      1.10      9.30      1.47      .040      .025      .040      .000    196.60    932.43
   .001752      401.      401.      401.         2         0         0       .00    153.77   1086.20


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    SECNO      DEPTH      CWSEL      CRIWS      WSELK         EG         HV         HL      OLOSS   L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB        ACH       AROB        VOL        TWA   R-BANK ELEV
    TIME       VLOB       VCH        VROB        XNL       XNCH        XNR        WTN      ELMIN   SSTA
    SLOPE      XLOBL      XLCH       XLOBR     ITRIAL        IDC      ICONT      CORAR    TOPWID   ENDST


*SECNO 6156.000

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       210.00 ELREA=       209.80

  6156.000     11.55    209.35       .00       .00    211.19      1.84       .53       .19    210.00
    3530.0        .0    3530.0        .0        .0     324.2        .0      75.4      14.0    209.80
       .19       .00     10.89       .00      .000      .025      .000      .000    197.80    978.65
   .002856      242.      242.      242.         2         0         0       .00     42.00   1020.64


CCHV=     .300 CEHV=     .500
*SECNO 6307.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6307.000     12.82    211.57    211.57       .00    213.36      1.79       .47       .01    209.75
    3530.0     266.1    3066.2     197.7     104.9     266.9      73.2      76.7      14.3    210.10
       .19      2.54     11.49      2.70      .040      .025      .040      .000    198.75    908.01
   .003386      151.      151.      151.         3        15         0       .00    154.99   1063.00
```

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	1.58	2.60	.00	20.50	1.50	190.00	.01	199.51	198.75

*SECNO 6388.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.73

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
219.75	214.04	.67	1229.	2250.	190.	193.	209.61	210.61	57.

6388.000	14.85	214.46	.00	.00	215.01	.55	1.65	.00	210.61
3470.0	721.8	2240.5	507.7	368.9	308.7	257.4	78.0	14.6	210.61
.20	1.96	7.26	1.97	.040	.016	.040	.000	199.61	901.01
.000438	81.	81.	81.	2	0	2	.00	169.00	1070.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 6517.000

6517.000	14.85	214.85	.00	.00	215.14	.29	.05	.08	211.30
3470.0	498.4	2445.3	526.3	280.7	491.3	271.4	81.0	15.1	211.50
.21	1.78	4.98	1.94	.040	.025	.040	.000	200.00	908.01
.000380	129.	129.	129.	2	0	0	.00	172.00	1080.00

CCHV= .100 CEHV= .350

*SECNO 6714.000

6714.000	14.60	214.90	.00	.00	215.24	.35	.08	.02	211.00
3470.0	499.7	2345.3	625.0	272.3	417.8	311.1	85.6	16.0	211.00
.22	1.83	5.61	2.01	.040	.025	.040	.000	200.30	898.01
.000475	197.	197.	197.	2	0	0	.00	198.50	1096.50

*SECNO 7115.000

7115.000	14.45	215.05	.00	.00	215.49	.43	.21	.03	213.00
3330.0	369.2	2555.7	405.1	208.8	430.1	223.9	94.2	17.8	212.00
.24	1.77	5.94	1.81	.040	.025	.040	.000	200.60	904.51
.000591	401.	401.	401.	1	0	0	.00	195.50	1100.01

*SECNO 7515.000

7515.000	14.36	215.26	.00	.00	215.76	.51	.25	.03	213.00
3310.0	240.6	2663.3	406.1	155.8	422.9	204.7	101.7	19.6	213.00
.26	1.54	6.30	1.98	.040	.025	.040	.000	200.90	902.52
.000674	400.	400.	400.	0	0	0	.00	197.99	1100.50

*SECNO 7715.000

7715.000	13.71	215.21	.00	.00	216.07	.86	.18	.13	214.00
3310.0	103.2	2921.5	285.3	77.9	369.4	138.5	104.9	20.5	214.00
.27	1.32	7.91	2.06	.040	.025	.040	.000	201.50	900.01
.001284	200.	200.	200.	2	0	0	.00	222.99	1123.00

*SECNO 7916.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 216.00 ELREA= 215.00

7916.000	12.80	214.90	.00	.00	216.82	1.91	.38	.37	216.00
3310.0	.0	3310.0	.0	.0	298.1	.0	106.9	21.1	215.00
.28	.00	11.10	.00	.000	.025	.000	.000	202.10	980.61
.003040	201.	201.	201.	2	0	0	.00	38.75	1019.35

*SECNO 8317.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 219.00 ELREA= 217.00

8317.000	13.95	216.95	.00	.00	217.69	.74	.76	.12	219.00
2300.0	.0	2300.0	.0	.0	334.1	.0	109.8	21.5	217.00
.29	.00	6.88	.00	.000	.025	.000	.000	203.00	978.57
.001107	401.	401.	401.	3	0	0	.00	41.86	1020.43

*SECNO 8717.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.00 ELREA= 221.00

8717.000	13.41	217.41	.00	.00	218.12	.71	.42	.00	221.00
2300.0	.0	2300.0	.0	.0	340.3	.0	112.9	21.9	221.00
.31	.00	6.76	.00	.000	.025	.000	.000	204.00	980.33
.001008	400.	400.	400.	2	0	0	.00	39.07	1019.41

*SECNO 8859.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.00 ELREA= 222.00

8859.000	12.91	217.51	.00	.00	218.29	.78	.15	.03	221.00
2300.0	.0	2300.0	.0	.0	324.4	.0	114.0	22.0	222.00
.31	.00	7.09	.00	.000	.025	.000	.000	204.60	978.74
.001156	142.	142.	142.	2	0	0	.00	38.61	1017.35

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .300 CEHV= .500
*SECNO 8977.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .61

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 222.00 ELREA= 222.00

8977.000	11.59	217.49	.00	.00	218.73	1.24	.21	.23	222.00
2300.0	.0	2300.0	.0	.0	257.3	.0	114.8	22.1	222.00
.32	.00	8.94	.00	.000	.025	.000	.000	205.90	980.20
.003077	118.	118.	118.	2	0	0	.00	37.67	1017.87

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 211.57 , NOT 217.49 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.69	2.60	.00	17.00	3.83	105.36	.00	206.49	205.90

*SECNO 9037.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 4.45

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
229.67	221.45	.00	601.	1673.	105.	105.	214.49	222.50	138.

9037.000	17.37	223.86	.00	.00	224.11	.26	5.38	.00	222.60
2270.0	40.2	2203.1	26.7	69.2	533.6	48.8	115.4	22.2	222.50
.32	.58	4.13	.55	.040	.016	.040	.000	206.49	927.01
.000151	60.	60.	60.	2	0	4	.00	137.99	1065.00

*SECNO 9118.000
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 224.00 ELREA= 223.00

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  9118.000     18.32    223.92      .00      .00    224.14      .22      .02      .01    224.00
    2270.0        .0    2173.6     96.4       .0     564.4     93.3    116.6     22.5    223.00
       .33       .00      3.85     1.03     .000      .028     .040     .000   205.60    973.16
   .000297       81.       81.      81.        2         0        0      .00   110.84   1084.00


CCHV=     .100 CEHV=     .350
*SECNO 9318.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .52


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      225.00 ELREA=      225.00

  9318.000     17.37    223.77      .00      .00    224.38      .60      .10      .13    225.00
    2270.0        .0    2270.0       .0       .0     364.2       .0    119.0     22.8    225.00
       .34       .00      6.23      .00     .000      .028     .000     .000   206.40    983.30
   .001102      200.      200.     200.        2         0        0      .00    38.99   1022.28


*SECNO 9518.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      227.00 ELREA=      227.00

  9518.000     16.98    224.18      .00      .00    224.58      .41      .19      .02    227.00
    1700.0        .0    1700.0       .0       .0     331.1       .0    120.6     23.0    227.00
       .35       .00      5.13      .00     .000      .028     .000     .000   207.20    981.07
   .000773      200.      200.     200.        2         0        0      .00    36.94   1018.01


*SECNO 9919.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      228.00 ELREA=      230.00

  9919.000     12.26    224.46      .00      .00    225.04      .57      .39      .06    228.00
    1700.0        .0    1700.0       .0       .0     279.6       .0    123.4     23.3    230.00
       .37       .00      6.08      .00     .000      .028     .000     .000   212.20    976.21
   .001298      401.      401.     401.        2         0        0      .00    41.09   1017.30


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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 10119.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      230.00 ELREA=      230.00

 10119.000      9.37    224.37    224.37      .00    226.92     2.55      .55      .69    230.00
    1700.0        .0    1700.0       .0       .0     132.6       .0    124.3     23.5    230.00
       .37       .00     12.82      .00     .000      .028     .000     .000   215.00    985.90
   .009194      200.      200.     200.       20        15        0      .00    26.52   1012.43
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*SECNO 10319.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 232.00 ELREA= 232.80

10319.000	9.47	227.27	227.27	.00	229.63	2.35	1.81	.02	232.00
1700.0	.0	1700.0	.0	.0	138.1	.0	124.9	23.6	232.80
.37	.00	12.31	.00	.000	.028	.000	.000	217.80	984.54
.008880	200.	200.	200.	20	5	0	.00	29.55	1014.09

*SECNO 10720.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 237.10 ELREA= 236.00

10720.000	10.69	231.19	231.19	.00	234.20	3.01	4.05	.23	237.10
1700.0	.0	1700.0	.0	.0	122.1	.0	126.1	23.9	236.00
.38	.00	13.92	.00	.000	.028	.000	.000	220.50	991.84
.011597	401.	401.	401.	2	8	0	.00	20.45	1012.28

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 11120.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.15

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 241.00 ELREA= 240.00

11120.000	13.38	235.38	.00	.00	236.28	.90	1.87	.21	241.00
1700.0	.0	1700.0	.0	.0	223.4	.0	127.7	24.1	240.00
.40	.00	7.61	.00	.000	.028	.000	.000	222.00	985.43
.002512	400.	400.	400.	2	0	0	.00	33.33	1018.76

*SECNO 11408.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 241.00 ELREA= 241.00

11408.000	9.42	235.42	235.42	.00	238.27	2.85	1.28	.68	241.00
1700.0	.0	1700.0	.0	.0	125.4	.0	128.9	24.3	241.00
.40	.00	13.55	.00	.000	.028	.000	.000	226.00	989.29

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   .009794      288.      288.      288.        4        19         0       .00     22.30   1011.58


CCHV=     .100 CEHV=     .350
*SECNO 11558.000

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      243.00 ELREA=      243.00

 11558.000      8.43    237.65       .00       .00    239.54      1.89      1.18       .10    243.00
    1700.0        .0    1700.0        .0        .0     154.1        .0     129.4      24.4    243.00
       .41       .00     11.03       .00      .000      .028      .000      .000    229.22    993.00
   .006416      149.      150.      151.         3         0         0       .00     20.00   1013.00


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS     233.41 , NOT     237.65 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.69      2.60       .00     18.17      5.00    105.36       .00    229.70    229.22

*SECNO 11690.000

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.92

PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape


 EGPRS      EGLWC      H3        QWEIR     QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
    244.01    242.32       .00       15.     1613.      105.      105.     237.70    243.10       26.


 11690.000     13.65    243.35       .00       .00    243.81       .45      4.26       .00    243.60
    1640.0        .0    1639.8        .2        .0     304.1       1.2     130.1      24.5    243.80
       .41       .00      5.39       .17      .000      .016      .040      .000    229.70    976.69
   .000389      129.      132.      136.         2         0         3       .00     48.91   1074.64


1
PROFILE FOR STREAM  SUB-CRITICAL FLOW M3D1A


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA
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ELEVATION  170.     180.     190.     200.     210.     220.     230.     240.     250.     260.
  SECNO   CUMDIS

     .00     0. I        .  WM    .E       .        .        .        .        .        .        .        L
            50. I        .  WM    .E       .        .        .        .        .        .        .        L
           100. .I       .   WM   . E      .        .        .        .        .        .        .        L
           150. .I       .   WM   . E      .        .        .        .        .        .        .        L
           200. .I       .   WM   . E      .        .        .        .        .        .        .        L
           250. .I       .   WM   . E      .        .        .        .        .        .        .        L
           300. . I      .   W M  . E      .        .        .        .        .        .        .        L
           350. . I      .    WM  . E      .        .        .        .        .        .        .        L
  384.00   400. . I      .    WL  . E      .        .        .        .        .        .        .        .
  434.00   450. . I      .    W  L. E      .        .        .        .        .        .        .        .
  484.00   500. .  I     .     W  L  E     .        .        .        .        .        .        .        .
           550. C   I    .       WL   E    .        .        .        .        .        .        .        .
           600. C    I   .        LW   E   .        .        .        .        .        .        .        .
           650. C     I  .        L  W  E  .        .        .        .        .        .        .        .
  684.00   700. C     I  .        L     E  .        .        .        .        .        .        .        .
  726.00   750. C      I .        . M  WE  .        .        .        .        .        .        .        .
           800. C       I .        .  M W E .        .        .        .        .        .        .        .
           850. C       I .        .  M W E .        .        .        .        .        .        .        .
           900. C        I.        .  M W E .        .        .        .        .        .        .        .
           950. C        I.        .  M W E .        .        .        .        .        .        .        .
 1000.00  1000. C         I        .  M  WE  .        .        .        .        .        .        .        .
          1050. C         .I    L  .    WEM .        .        .        .        .        .        .        .
          1100. C         .I       .  L WE  .  M     .        .        .        .        .        .        .
 1110.00  1150. C         .I       .   LWE  .   M    .        .        .        .        .        .        .
          1200. C         .I       .    WE  .    M   .        .        .        .        .        .        .
          1250. C         .I       .    W E .    M   .        .        .        .        .        .        .
          1300. C         .I       .    WLE .    M   .        .        .        .        .        .        .
          1350. C         .I       .    WLE .     M  .        .        .        .        .        .        .
          1400. C         .I       .     WE .     M  .        .        .        .        .        .        .
          1450. C         .I       .     WE .      M .        .        .        .        .        .        .
          1500. C         .I       .     WE .      M .        .        .        .        .        .        .
 1514.00  1550. C         .I       .     WEL.      M .        .        .        .        .        .        .
          1600. C         . I      .     WEL.       M.        .        .        .        .        .        .
          1650. C         . I      .     WE L       M.        .        .        .        .        .        .
          1700. C         . I      .     WE RL      M.        .        .        .        .        .        .
          1750. C         . I      .     WE .L      M.        .        .        .        .        .        .
          1800. C         . I      .     WE . L     M.        .        .        .        .        .        .
          1850. C         . I      .     WE . L      M        .        .        .        .        .        .
          1900. C         . I      .     WE .  L     M        .        .        .        .        .        .
 1912.00  1950. C         . I      .     W E.  L     M        .        .        .        .        .        .
          2000. C         . I      .     W E.  L     M        .        .        .        .        .        .
          2050. C         . I      .     W E.  RL    .M       .        .        .        .        .        .
          2100. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
          2150. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
          2200. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
          2250. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
          2300. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
 2312.00  2350. C         .  I     .      WE.  RL    .M       .        .        .        .        .        .
          2400. C         .   I    .      W .E RL    .M       .        .        .        .        .        .
          2450. C         .   I    .       W. ERL    . M      .        .        .        .        .        .
 2485.00  2500. .         .   I    .        W  LE    . M      .        .        .        .        .        .
 2515.00  2550. .         .   I    .        W  LE    . M      .        .        .        .        .        .
 2530.00  2600. .         .       I.        . WL E   . M      .        .        .        .        .        .
          2650. C         .       I.        . WRLE   . M      .        .        .        .        .        .
          2700. C         .       I.        .  WLE   . M      .        .        .        .        .        .
 2712.00  2750. C         .       I.        .  RWE   . M      .        .        .        .        .        .
          2800. C         .       I.        .  RWLE  . M      .        .        .        .        .        .
          2850. C         .       I.        .   WLE  . M      .        .        .        .        .        .
          2900. C         .       I.        .   WLE  . M      .        .        .        .        .        .
          2950. C         .       I.        .   WLE  . M      .        .        .        .        .        .
          3000. C         .       I.        .   RWE  . M      .        .        .        .        .        .
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         3050. C     .     I     .  RWE  . M    .     .     .     .     .
         3100. C     .     I     .  RWE  . M    .     .     .     .     .
3112.00  3150. C     .     I     .  RWE  . M    .     .     .     .     .
         3200. C     .     I     .  RWE  .  M   .     .     .     .     .
         3250. C     .     I     .   WE  .  M   .     .     .     .     .
         3300. C     .     I     .   WE  .  M   .     .     .     .     .
         3350. C     .     I     .   WE  .  M   .     .     .     .     .
         3400. C     .    .I     .   W E .  M   .     .     .     .     .
         3450. C     .    .I     .   W E .  M   .     .     .     .     .
         3500. C     .    .I     .   W E .   M  .     .     .     .     .
3513.00  3550. C     .    .I     .   W E .   M  .     .     .     .     .
         3600. C     .    .I     .   W E .   M  .     .     .     .     .
         3650. C     .    .I     .   WLE .  M   .     .     .     .     .
         3700. C     .    .I     .    WE .  M   .     .     .     .     .
         3750. C     .    .I     .    WE .  M   .     .     .     .     .
         3800. C     .    .I     .    WE .  M   .     .     .     .     .
         3850. C     .     . I   .    W E .  M   .     .     .     .     .
         3900. C     .     . I   .    W E .  M   .     .     .     .     .
3913.00  3950. C     .     . I   .    W E .  M   .     .     .     .     .
         4000. C     .     . I   .    W E .  M   .     .     .     .     .
         4050. C     .     . I   .    WRE .  M   .     .     .     .     .
         4100. C     .     . I   .    LWE .  M   .     .     .     .     .
         4150. C     .     . I   .    LWE .  M   .     .     .     .     .
         4200. C     .     . I   .    LWE .  M   .     .     .     .     .
         4250. C     .     .  I  .    LWE .  M   .     .     .     .     .
         4300. C     .     .  I  .   L RWE.  M   .     .     .     .     .
4313.00  4350. C     .     .  I  .   L RWE.  M   .     .     .     .     .
         4400. C     .     .  I  .    LRWE.  M   .     .     .     .     .
         4450. C     .     .  I  .    LRWE.  M   .     .     .     .     .
         4500. C     .     .  I  .    LRWE.  M   .     .     .     .     .
         4550. C     .     .  I  .    LRWE.  M   .     .     .     .     .
         4600. C     .     .  I  .    LRWE.  M   .     .     .     .     .
         4650. C     .     .  I  .     LWE.  M   .     .     .     .     .
         4700. C     .     .  I  .    RLWE.  M   .     .     .     .     .
4713.00  4750. C     .     .  I  .    RLWE.   M  .     .     .     .     .
         4800. C     .     .  I  .    RLWE.   M  .     .     .     .     .
         4850. C     .     .   I .     LWE.   M  .     .     .     .     .
         4900. C     .     .   I .     LWE.   M  .     .     .     .     .
         4950. C     .     .   I .     L E.   M  .     .     .     .     .
         5000. C     .     .   I .     L E.   M  .     .     .     .     .
         5050. C     .     .   I .     L E.    M .     .     .     .     .
         5100. C     .     .    I .    L E.    M .     .     .     .     .
5113.00  5150. C     .     .    I .    RLE.    M .     .     .     .     .
         5200. C     .     .    I .    RLE.    M .     .     .     .     .
         5250. C     .     .    I .    L WE    M .     .     .     .     .
         5300. C     .     .    I .    L WE     M .     .     .     .     .
         5350. C     .     .    I .    L WE     M .     .     .     .     .
         5400. C     .     .     I .   L WE     M .     .     .     .     .
         5450. C     .     .     I .   L WE     M .     .     .     .     .
         5500. C     .     .     I .   L WE      M .     .     .     .     .
5513.00  5550. C     .     .     I .   L WE      M .     .     .     .     .
         5600. C     .     .     I .   L WE      M .     .     .     .     .
         5650. C     .     .     I .    LWE      M .     .     .     .     .
         5700. C     .     .     I .    LWE      M .     .     .     .     .
         5750. C     .     .     I .    LWE       M.     .     .     .     .
         5800. C     .     .      I .   LW.E      M.     .     .     .     .
         5850. C     .     .      I .   LW.E      M.     .     .     .     .
         5900. C     .     .      I .   LW.E      M.     .     .     .     .
5914.00  5950. C     .     .      I .   L WE      M.     .     .     .     .
         6000. C     .     .      I .    LWE      M.     .     .     .     .
         6050. C     .     .      I .    LWE      M.     .     .     .     .
         6100. C     .     .       I.    RWE      M.     .     .     .     .
         6150. C     .     .       I.     WE      M.     .     .     .     .
6156.00  6200. C     .     .       I.     W E     M.     .     .     .     .
         6250. C     .     .       I.     W E      M.    .     .     .     .
         6300. C     .     .        I.     LW E     M    .     .     .     .
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6307.00 6350.  .         .         .        I.        L W E    M        .         .         .         .         .
6388.00 6400.  C         .         .         I        .L   E   M        .         .         .         .         .
        6450.  C         .         .         I        .L   E   M        .         .         .         .         .
        6500.  C         .         .         I        .LR  E   M        .         .         .         .         .
6517.00 6550.  C         .         .         I        . L  E   M        .         .         .         .         .
        6600.  C         .         .         I        . L  E   M        .         .         .         .         .
        6650.  C         .         .         I        .LR  WE  M        .         .         .         .         .
        6700.  C         .         .        .I        .L   WE  M        .         .         .         .         .
6714.00 6750.  C         .         .        .I        .L   WE  M        .         .         .         .         .
        6800.  C         .         .        .I        .RL  WE  M        .         .         .         .         .
        6850.  C         .         .        .I        . L  WE  M        .         .         .         .         .
        6900.  C         .         .        .I        . L  WE  M        .         .         .         .         .
        6950.  C         .         .        .I        . L  WE  M        .         .         .         .         .
        7000.  C         .         .        .I        . RL WE  M        .         .         .         .         .
        7050.  C         .         .        .I        . RL WE  M        .         .         .         .         .
        7100.  C         .         .        .I        . RL WE  M        .         .         .         .         .
7115.00 7150.  C         .         .        .I        . RL WE  M        .         .         .         .         .
        7200.  C         .         .        .I        . RL WE  .M       .         .         .         .         .
        7250.  C         .         .        .I        . L WE  .M        .         .         .         .         .
        7300.  C         .         .        .I        . L WE  .M        .         .         .         .         .
        7350.  C         .         .        .I        . L WE  .M        .         .         .         .         .
        7400.  C         .         .        .I        . L  E  . M       .         .         .         .         .
        7450.  C         .         .        .I        . L  E  . M       .         .         .         .         .
        7500.  C         .         .        .I        . L  E  . M       .         .         .         .         .
7515.00 7550.  C         .         .        .I        . L  E  . M       .         .         .         .         .
        7600.  C         .         .        .I        .  L E  . M       .         .         .         .         .
        7650.  C         .         .        . I       .  L E  .  M      .         .         .         .         .
        7700.  C         .         .        . I       .  L E  .  M      .         .         .         .         .
7715.00 7750.  C         .         .        . I       .  L E  .  M      .         .         .         .         .
        7800.  C         .         .        . I       .   W E .  M      .         .         .         .         .
        7850.  C         .         .        . I       .   W E .   M     .         .         .         .         .
        7900.  C         .         .        . I       .   WLE .    M    .         .         .         .         .
7916.00 7950.  C         .         .        . I       .   WLE .    M    .         .         .         .         .
        8000.  C         .         .        .  I      .   WRE .    M    .         .         .         .         .
        8050.  C         .         .        .  I      .    WE .     M   .         .         .         .         .
        8100.  C         .         .        .  I      .    WE .     M   .         .         .         .         .
        8150.  C         .         .        .  I      .    W E.     M   .         .         .         .         .
        8200.  C         .         .        .  I      .     WE.     M   .         .         .         .         .
        8250.  C         .         .        .  I      .     WEL.    M   .         .         .         .         .
        8300.  C         .         .        .  I      .     WEL.    M   .         .         .         .         .
8317.00 8350.  C         .         .        .  I      .     WEL.    M   .         .         .         .         .
        8400.  C         .         .        .  I      .     WE L     M  .         .         .         .         .
        8450.  C         .         .        .   I     .     WE L     M  .         .         .         .         .
        8500.  C         .         .        .   I     .     WERL      M.         .         .         .         .
        8550.  C         .         .        .   I     .      ERL      M.         .         .         .         .
        8600.  C         .         .        .   I     .      E RL      M.        .         .         .         .
        8650.  C         .         .        .   I     .      E RL      M.        .         .         .         .
        8700.  C         .         .        .   I     .      E .L       M        .         .         .         .
8717.00 8750.  C         .         .        .   I     .      E .L       M        .         .         .         .
        8800.  C         .         .        .    I    .      WE.LR      M        .         .         .         .
        8850.  C         .         .        .    I    .      WE.LR      M        .         .         .         .
8859.00 8900.  C         .         .        .    I    .      WE.LR      M        .         .         .         .
        8950.  C         .         .        .    I    .      WE. L      .M       .         .         .         .
8977.00 9000.  C         .         .        .     I   .      WE. L      . M      .         .         .         .
9037.00 9050.  C         .         .        .      I  .         . LE    .  M     .         .         .         .
        9100.  C         .         .        .     I   .         . RE    .  M     .         .         .         .
9118.00 9150.  C         .         .        .     I   .         . RE    .  M     .         .         .         .
        9200.  C         .         .        .     I   .         .  WE   .  M     .         .         .         .
        9250.  C         .         .        .     I   .         .  WE   .  M     .         .         .         .
        9300.  C         .         .        .      I  .         .  WE   .  M     .         .         .         .
9318.00 9350.  C         .         .        .      I  .         .  WE   .   M    .         .         .         .
        9400.  C         .         .        .      I  .         .  WEL  .   M    .         .         .         .
        9450.  C         .         .        .      I  .         .  WEL  .   M    .         .         .         .
        9500.  C         .         .        .      I  .         .  WE L .    M   .         .         .         .
9518.00 9550.  C         .         .        .       I .         .   E L .    M   .         .         .         .
        9600.  C         .         .        .       I .         .   E LR .   M   .         .         .         .
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                9650. C        .        .        .       I.        .   E  L .   M   .        .        .        .
                9700. C        .        .        .       I.        .   E  L .    M  .        .        .        .
                9750. C        .        .        .        I        .   E  LR.    M  .        .        .        .
                9800. C        .        .        .       .I        .   E  LR.    M  .        .        .        .
                9850. C        .        .        .       .I        .   E  L R     M .        .        .        .
                9900. C        .        .        .        . I      .   E  L R     M .        .        .        .
     9919.00    9950. C        .        .        .        . I      .   E  L R     M .        .        .        .
               10000. C        .        .        .        . I      .   WE  LR      M .        .        .        .
               10050. C        .        .        .        .  I     .   WE  LR      M .        .        .        .
               10100. C        .        .        .        .   I    .   W E  L       M.        .        .        .
    10119.00   10150. .        .        .        .        .   I    .   W E  L       M.        .        .        .
               10200. .        .        .        .        .    I   .   W  E .L       M        .        .        .
               10250. .        .        .        .        .     I  .    W  E.LR      M        .        .        .
               10300. .        .        .        .        .     I  .     W E. L      .M        .        .        .
    10319.00   10350. .        .        .        .        .      I .     W E LR     .M        .        .        .
               10400. .        .        .        .        .      I .     W .E LR    . M        .        .        .
               10450. .        .        .        .        .       I.      W.E  L    . M        .        .        .
               10500. .        .        .        .        .       I.      W. E L    . M        .        .        .
               10550. .        .        .        .        .       I.       W E  L   . M        .        .        .
               10600. .        .        .        .        .        I       W  E RL  . M        .        .        .
               10650. .        .        .        .        .        I       .W E  L  . M        .        .        .
               10700. .        .        .        .        .        I       .W  E RL . M        .        .        .
    10720.00   10750. .        .        .        .        .       .I       . W  ERL . M        .        .        .
               10800. .        .        .        . C      .       .I       . W  E RL .  M       .        .        .
               10850. .   C    .        .        .        .       .I       .  W E RL .   M      .        .        .
               10900. C        .        .        .        .       .I       . W E  RL.    M      .        .        .
               10950. C        .        .        .        .       . I      .  W E RL.     M     .        .        .
               11000. C        .        .        .        .       . I      .  W E  RL     M     .        .        .
               11050. C        .        .        .        .       . I      .   WE  RL      M    .        .        .
               11100. C        .        .        .        .       . I      .   WE   RL      M.  .        .        .
    11120.00   11150. C        .        .        .        .       . I      .    WE  RL       M  .        .        .
               11200. C        .        .        .        .       .  I     .    WE  .L       M  .        .        .
               11250. C        .        .        .        .       .   I    .    WE  .L       M  .        .        .
               11300. C        .        .        .        .       .   I    .    W E .L       .M .        .        .
               11350. C        .        .        .        .       .    I   .    W E .L       .M .        .        .
               11400. .        .        .        .   C    .       .     I  .    W E .L       .M .        .        .
    11408.00   11450. .        .        .        .        .       .     I  .    W  E.L       .M .        .        .
               11500. C        .        .        .        .       .      I .    W  E. L      . M .        .        .
               11550. C        .        .        .        .       .      I .     W E.  L     . M .        .        .
    11558.00   11600. C        .        .        .        .       .       I      W E  L     . M .        .        .
               11650. C        .        .        .        .       .       I       WE  L    .  M .        .        .
    11690.00   11700. C        .        .        .        .       .       I        .  E    .  M .        .        .
1
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T1      FERGUSON   GREINER, INC  02-19-92     (FILENAME = T-M3D1A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL M3D1A                  u/s of McDowell Road

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL      FQ

      0        3        0        0   0.00532       0        0        0      180.0       0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC     IBW      CHNIM     ITRACE

     15        0        0        0        0        0        0        7        0         0
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
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    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      R-BANK ELEV
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*PROF 2

*SECNO  .000
3280 CROSS SECTION       .00 EXTENDED       .79 FEET


3470 ENCROACHMENT STATIONS=     1000.0    1016.0  TYPE=      1  TARGET=       16.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      .000     15.79    185.46    185.20    180.00    192.89      7.43       .00       .00 100000.00
    5470.0        .0    5470.0       .0        .0     250.1        .0        .0        .0 100000.00
       .00       .00     21.87       .00      .000      .015      .000      .000    169.67   1000.00
   .005240        0.        0.        0.         0        11         0       .00     16.00   1016.00


*SECNO 384.000
3280 CROSS SECTION    384.00 EXTENDED      5.67 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.55

   384.000     20.67    192.38    189.78       .00    193.53      1.16       .64       .00    186.71
    5470.0    1009.4    3451.3    1009.4     283.3     328.3     283.3       5.0        .6    186.71
       .01      3.56     10.51      3.56      .035      .015      .035      .000    171.71    950.00
   .000804      374.      384.      394.        12         8         0       .00    116.00   1066.00


*SECNO 434.000
3280 CROSS SECTION    434.00 EXTENDED      2.84 FEET


3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   434.000     19.22    191.20    191.20       .00    193.95      2.75       .06       .00    188.36
    5470.0     502.0    4466.0     502.0     141.9     305.1     141.9       5.9        .7    188.36
       .01      3.54     14.64      3.54      .035      .015      .035      .000    171.98    950.00
   .001861       49.       50.       51.        20        12         0       .00    116.00   1066.00


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    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    L-BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      R-BANK ELEV
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*SECNO 484.000
3280 CROSS SECTION    484.00 EXTENDED      2.45 FEET

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
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3720 CRITICAL DEPTH ASSUMED
   484.000     19.65    192.45    192.45       .00    195.42      2.97       .10       .00    190.00
    5470.0     406.5    4657.0     406.5     122.7     312.0     122.7       6.6        .8    190.00
       .02      3.31     14.92      3.31      .035      .015      .035      .000    172.80    950.00
   .001962       49.       50.       51.        20         8         0       .00    116.00   1066.00


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.29 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.27

   684.000     19.23    195.30       .00       .00    196.19       .90       .15       .62    190.00
    5470.0     621.5    4227.0     621.5     264.6     494.5     264.6      10.2       1.4    190.00
       .02      2.35      8.55      2.35      .035      .015      .035      .000    176.07    950.00
   .000379      200.      200.      200.         4         0         0       .00    126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.07 FEET

   726.000     17.96    195.07       .00       .00    196.44      1.36       .01       .23    177.11
    5470.0     381.0    4708.0     381.0     228.8     467.1     228.8      11.1       1.5    177.11
       .02      1.67     10.08      1.67      .035      .015      .035      .000    177.11    950.00
   .000220       42.       42.       42.         2         0         0       .00    126.00   1076.00


SPECIAL CULVERT

1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


SC  CUNO      CUNV      ENTLC     COFQ      RDLEN     RISE      SPAN      CULVLN    CHRT      SCL       ELCHU     ELCHD
     2         .014      .20      2.60       .00     10.00     12.00     274.00     9         2       179.85    177.11

CHART  9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE  2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

5135, EGOC=  208.07 ..MAY BE TOO LARGE IF OUTLET CONTROLS.
*SECNO 1000.000
 WATER EL=X5 CARD=    196.900
3280 CROSS SECTION   1000.00 EXTENDED      3.90 FEET

  1000.000     17.05    196.90       .00       .00    198.52      1.62       .07       .13    179.85
    5470.0     116.8    4811.7     541.4      87.7     443.3     268.9      16.5       2.2    179.85
       .03      1.33     10.85      2.01      .035      .015      .035      .000    179.85    966.00
   .000274      274.      274.      274.         0         0         0       .00    104.00   1070.00


*SECNO 1110.000
CHIMP CLSTA=     998.51 CELCH=     191.44 BW=      75.51 STCHL=     973.00 STCHR=    1048.51
EXCAVATION DATA
AEX=    -213.9SQ-FT     VEXR=        .0K*CU-YD     VEXT=        .0K*CU-YD
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3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .37

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.00 ELREA= 194.43

1110.000	7.48	198.92	.00	.00	199.00	.08	.03	.46	205.00
1370.0	.0	1330.2	39.8	.0	564.5	44.6	18.3	2.5	194.43
.05	.00	2.36	.89	.000	.025	.040	.000	191.44	973.00
.000128	111.	110.	108.	3	0	0	.00	85.00	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000
CHIMP CLSTA= 1002.01 CELCH= 194.39 BW= 78.01 STCHL= 974.00 STCHR= 1052.01
EXCAVATION DATA
AEX= -324.5SQ-FT VEXR= -4.0K*CU-YD VEXT= -4.0K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .45

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 208.60 ELREA= 197.00

1514.000	4.53	198.92	.00	.00	199.15	.23	.10	.05	208.60
1370.0	.0	1358.7	11.3	.0	353.5	9.6	22.8	3.3	197.00
.07	.00	3.84	1.17	.000	.025	.040	.000	194.39	974.00
.000627	418.	404.	390.	2	0	0	.00	83.00	1057.00

*SECNO 1912.000
CHIMP CLSTA= 1003.20 CELCH= 195.51 BW= 100.00 STCHL= 953.20 STCHR= 1053.20
EXCAVATION DATA
AEX= -106.6SQ-FT VEXR= -3.2K*CU-YD VEXT= -7.2K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.47 ELREA= 201.16

1912.000	3.73	199.24	.00	.00	199.38	.15	.23	.01	203.47
1150.0	.0	1150.0	.0	.0	372.7	.0	26.2	4.1	201.16
.11	.00	3.09	.00	.000	.025	.000	.000	195.51	953.20
.000513	408.	398.	388.	2	0	0	.00	100.00	1053.20

*SECNO 2312.000
CHIMP CLSTA= 998.50 CELCH= 194.74 BW= 100.00 STCHL= 948.50 STCHR= 1048.50
EXCAVATION DATA
AEX= 136.8SQ-FT VEXR= .2K*CU-YD VEXT= -7.0K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.45

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      204.45 ELREA=      202.79

  2312.000      4.69    199.43       .00       .00    199.53       .09       .14       .01    204.45
    1150.0        .0    1150.0        .0        .0     469.3        .0      30.0       5.0    202.79
       .16       .00      2.45       .00      .000      .025      .000      .000    194.74    948.50
   .000244      410.      400.      390.         2         0         0       .00    100.00   1048.50


CCHV=     .300 CEHV=     .500
*SECNO 2485.000
CHIMP CLSTA=     998.60 CELCH=     197.14 BW=     100.00 STCHL=     948.60 STCHR=    1048.60
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


EXCAVATION DATA
AEX=     145.1SQ-FT     VEXR=        .9K*CU-YD     VEXT=       -6.1K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .30


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      203.71 ELREA=      202.63

  2485.000      2.23    199.37       .00       .00    199.79       .41       .10       .16    203.71
    1150.0        .0    1150.0        .0        .0     223.5        .0      31.4       5.4    202.63
       .17       .00      5.15       .00      .000      .025      .000      .000    197.14    948.60
   .002718      173.      173.      173.         2         0         0       .00    100.00   1048.60


*SECNO 2515.000
CHIMP CLSTA=     994.50 CELCH=     197.96 BW=     100.00 STCHL=     944.50 STCHR=    1044.50
EXCAVATION DATA
AEX=      78.7SQ-FT     VEXR=        .1K*CU-YD     VEXT=       -6.0K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2515.000      1.60    199.56    199.56       .00    200.36       .80       .13       .20    203.64
    1150.0        .0    1150.0        .0        .0     160.0        .0      31.6       5.5    202.77
       .17       .00      7.19       .00      .000      .025      .000      .000    197.96    944.50
   .008140       30.       30.       30.        20        15         0       .00    100.00   1044.50


*SECNO 2530.000
CHIMP CLSTA=     992.40 CELCH=     198.91 BW=     100.00 STCHL=     942.40 STCHR=    1042.40
EXCAVATION DATA
AEX=     -14.1SQ-FT     VEXR=        .0K*CU-YD     VEXT=       -5.9K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2530.000      1.60    200.51    200.51       .00    201.31       .81       .12       .00    203.27
    1150.0        .0    1150.0        .0        .0     159.6        .0      31.6       5.5    202.95
       .17       .00      7.20       .00      .000      .025      .000      .000    198.91    942.40
   .008209       15.       15.       15.        20         5         0       .00    100.00   1042.40
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 2712.000
CHIMP CLSTA=     998.90 CELCH=     201.20 BW=     100.00 STCHL=     948.90 STCHR=    1048.90
EXCAVATION DATA
AEX=    -228.8SQ-FT     VEXR=       -.8K*CU-YD     VEXT=       -6.8K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       204.05 ELREA=       202.52

  2712.000      1.52    202.72    202.72       .00    203.47       .74      1.49       .02    204.05
    1080.0        .0    1061.1      18.8        .0     152.4       6.8      32.3       6.0    202.52
       .17       .00      6.96      2.77      .000      .025      .040      .000    201.20    948.90
   .008129      182.      182.      182.         3         8         0       .00    108.10   1057.00


CCHV=     .100 CEHV=     .350
*SECNO 3112.000
CHIMP CLSTA=     996.00 CELCH=     202.26 BW=     100.00 STCHL=     952.60 STCHR=    1046.00
EXCAVATION DATA
AEX=    -274.9SQ-FT     VEXR=      -3.7K*CU-YD     VEXT=      -10.5K*CU-YD


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.31

  3112.000      2.51    204.51       .00       .00    204.70       .20      1.18       .05    202.26
    1080.0     209.0     825.6      45.4      98.9     209.8      24.0      34.5       7.2    203.67
       .21      2.11      3.93      1.89      .040      .025      .040      .000    202.00    893.51
   .001519      400.      400.      400.         4         0         0       .00    166.49   1060.00


*SECNO 3513.000
CHIMP CLSTA=     998.80 CELCH=     203.35 BW=     100.00 STCHL=     948.80 STCHR=    1048.80
EXCAVATION DATA
AEX=    -239.5SQ-FT     VEXR=      -3.8K*CU-YD     VEXT=      -14.3K*CU-YD

  3513.000      1.88    205.23       .00       .00    205.52       .29       .78       .03    204.81
    1010.0      33.9     863.7     112.3      25.4     188.1      46.5      37.3       8.8    204.55
       .23      1.34      4.59      2.42      .040      .025      .040      .000    203.35    896.01
   .002659      401.      401.      401.         3         0         0       .00    183.99   1080.00
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 3913.000
CHIMP CLSTA=     999.00 CELCH=     204.04 BW=     100.00 STCHL=     949.00 STCHR=    1049.00
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EXCAVATION DATA
AEX= -241.1SQ-FT VEXR= -3.6K*CU-YD VEXT= -17.9K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.41

3913.000	3.71	206.11	.00	.00	206.27	.16	.74	.01	204.71
1010.0	105.0	726.8	178.2	65.7	207.3	78.8	40.1	10.5	205.05
.27	1.60	3.51	2.26	.040	.025	.040	.000	202.40	898.02
.001346	400.	400.	400.	2	0	0	.00	183.99	1082.00

*SECNO 4313.000
CHIMP CLSTA= 1000.75 CELCH= 204.50 BW= 100.00 STCHL= 950.75 STCHR= 1047.50
EXCAVATION DATA
AEX= -243.8SQ-FT VEXR= -3.6K*CU-YD VEXT= -21.5K*CU-YD

4313.000	4.29	206.59	.00	.00	206.68	.10	.41	.01	204.73
1010.0	112.1	554.3	343.6	80.6	201.8	147.0	43.7	12.2	204.50
.31	1.39	2.75	2.34	.040	.025	.040	.000	202.30	899.01
.000804	400.	400.	400.	2	0	0	.00	189.00	1088.00

*SECNO 4713.000
CHIMP CLSTA= 998.25 CELCH= 205.50 BW= 100.00 STCHL= 948.25 STCHR= 1037.65
EXCAVATION DATA
AEX= -291.5SQ-FT VEXR= -4.0K*CU-YD VEXT= -25.4K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .64

4713.000	3.80	207.00	.00	.00	207.15	.15	.45	.02	205.96
940.0	56.8	435.2	448.0	35.8	134.8	144.5	47.1	13.9	205.50
.35	1.58	3.23	3.10	.040	.025	.040	.000	203.20	915.03
.001717	400.	400.	400.	1	0	0	.00	169.98	1085.00

*SECNO 5113.000
CHIMP CLSTA= 999.50 CELCH= 206.50 BW= 100.00 STCHL= 949.50 STCHR= 1039.50
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -301.0SQ-FT VEXR= -4.4K*CU-YD VEXT= -29.8K*CU-YD

5113.000	3.19	207.69	.00	.00	207.78	.09	.63	.01	206.96
630.0	31.4	267.3	331.3	27.5	107.4	134.9	49.8	15.5	206.50
.40	1.14	2.49	2.46	.040	.025	.040	.000	204.50	913.53
.001394	400.	400.	400.	2	0	0	.00	181.47	1095.00

*SECNO 5513.000
CHIMP CLSTA= 999.50 CELCH= 206.50 BW= 100.00 STCHL= 949.50 STCHR= 1049.50
EXCAVATION DATA
AEX= -220.9SQ-FT VEXR= -3.9K*CU-YD VEXT= -33.7K*CU-YD

5513.000	1.71	208.21	.00	.00	208.34	.13	.55	.01	207.59
620.0	12.8	527.1	80.1	16.3	171.4	49.0	52.1	17.1	207.14
.44	.78	3.08	1.64	.040	.025	.040	.000	206.50	912.01

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   .001336      400.      400.      400.        2        0        0      .00   172.99   1085.00


*SECNO 5914.000
CHIMP CLSTA=     998.75 CELCH=     207.50 BW=     100.00 STCHL=     948.75 STCHR=    1048.75
EXCAVATION DATA
AEX=    -242.1SQ-FT     VEXR=      -3.4K*CU-YD     VEXT=      -37.1K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .67


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      209.04 ELREA=      208.56

  5914.000      1.42    208.92       .00       .00    209.16       .24       .77       .04    209.04
     620.0        .0     574.0      46.0        .0     141.6      27.7      54.0      18.5    208.56
       .46       .00      4.05      1.66      .000      .025      .040      .000    207.50    948.75
   .003020      401.      401.      401.        2        0        0      .00   137.45   1086.20


*SECNO 6156.000
CHIMP CLSTA=    1001.00 CELCH=     208.27 BW=     100.00 STCHL=     951.00 STCHR=    1051.00
EXCAVATION DATA
AEX=    -190.7SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -39.1K*CU-YD

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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      210.11 ELREA=      209.30

  6156.000      1.40    209.67       .00       .00    209.93       .26       .76       .01    210.11
     620.0        .0     585.2      34.8        .0     139.4      19.1      54.9      19.3    209.30
       .48       .00      4.20      1.82      .000      .025      .040      .000    208.27    951.00
   .003303      242.      242.      242.        2        0        0      .00   124.00   1075.00


CCHV=      .300 CEHV=      .500
*SECNO 6307.000
CHIMP CLSTA=    1000.63 CELCH=     209.25 BW=     100.00 STCHL=     950.63 STCHR=    1050.63
EXCAVATION DATA
AEX=    -141.4SQ-FT     VEXR=       -.9K*CU-YD     VEXT=      -40.0K*CU-YD


3265 DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6307.000      1.11    210.36    210.36       .00    210.82       .47       .73       .10    210.33
     620.0       2.0     611.5       6.5       2.4     110.7       4.2      55.3      19.7    210.04
       .49       .81      5.52      1.56      .040      .025      .040      .000    209.25    908.01
   .007730      151.      151.      151.        2       16        0      .00   133.18   1063.00


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
    1.25      1.58      2.60       .00     20.50      1.50    190.00       .01    199.51    198.75
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*SECNO 6388.000
CHIMP CLSTA=    1000.00 CELCH=     210.11 BW=     100.00 STCHL=     950.00 STCHR=    1024.72
EXCAVATION DATA
AEX=    -201.6SQ-FT     VEXR=       -.5K*CU-YD     VEXT=      -40.5K*CU-YD

 PRESS FLOW BECAUSE EGLWC OF     212.46  EXCEEDS 1.5 DEPTH
6110 EGLWC OF   210.57 LESS THAN XEG OF   210.82
PRESSURE FLOW

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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC     ELTRD     WEIRLN
                                                               AREA
   210.57    212.46      .09       0.      560.      190.      193.      209.61    210.61       0.


3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3720 CRITICAL DEPTH ASSUMED
  6388.000      .87    210.87    210.87      .00    211.24      .37       .80      -.80    210.15
     560.0     99.6     323.2     137.2     31.4      56.5     36.9      55.6      20.0    210.11
       .49     3.18      5.72      3.71     .040      .025     .040      .000    210.00    901.01
   .013455      81.       81.       81.       20        15        0       .00    168.99   1070.00


*SECNO 6517.000
CHIMP CLSTA=    1000.00 CELCH=     210.80 BW=     100.00 STCHL=     950.00 STCHR=    1026.27
EXCAVATION DATA
AEX=    -299.6SQ-FT     VEXR=      -1.2K*CU-YD     VEXT=      -41.7K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.41

  6517.000     1.81    211.81      .00       .00    211.92      .11       .60       .08    210.84
     560.0     91.0     222.3     246.7     47.7      77.2     95.9      56.1      20.5    210.80
       .51     1.91      2.88      2.57     .040      .025     .040      .000    210.00    908.01
   .002316     129.      129.      129.        4         0        0       .00    171.99   1080.00


CCHV=     .100 CEHV=     .350
*SECNO 6714.000
CHIMP CLSTA=     998.25 CELCH=     210.50 BW=     100.00 STCHL=     948.25 STCHR=    1048.25
EXCAVATION DATA
AEX=    -211.9SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -43.6K*CU-YD


3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50

  6714.000     4.52    212.12      .00       .00    212.21      .09       .29       .00    211.14
     560.0     18.9     423.8     117.3     23.6     162.0     59.9      57.1      21.3    210.95
       .53      .80      2.62      1.96     .040      .025     .040      .000    207.60    904.96
   .001033     197.      197.      197.        3         0        0       .00    187.40   1096.50
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SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 7115.000
CHIMP CLSTA=    1000.50 CELCH=     211.50 BW=     100.00 STCHL=     950.50 STCHR=    1050.50
EXCAVATION DATA
AEX=    -227.8SQ-FT     VEXR=      -3.3K*CU-YD     VEXT=      -46.8K*CU-YD


3265 DIVIDED FLOW

  7115.000      4.66    212.76       .00       .00    213.00       .24       .74       .05    212.00
     720.0      44.3     509.9     165.8      28.4     127.2      41.7      59.2      22.9    212.61
       .56      1.56      4.01      3.98      .040      .025      .040      .000    208.10    904.51
   .003371      401.      401.      401.         1         0         0       .00    167.05   1100.00


*SECNO 7515.000
CHIMP CLSTA=    1000.75 CELCH=     212.50 BW=     100.00 STCHL=     950.75 STCHR=    1050.75
EXCAVATION DATA
AEX=    -268.9SQ-FT     VEXR=      -3.7K*CU-YD     VEXT=      -50.5K*CU-YD


3265 DIVIDED FLOW

  7515.000      4.95    213.85       .00       .00    214.01       .16      1.00       .01    213.18
     700.0      28.1     422.1     249.9      24.9     134.3      74.3      61.2      24.6    213.02
       .59      1.13      3.14      3.36      .040      .025      .040      .000    208.90    906.33
   .001919      400.      400.      400.         1         0         0       .00    188.90   1100.50


*SECNO 7715.000
CHIMP CLSTA=     999.50 CELCH=     213.50 BW=     100.00 STCHL=     949.50 STCHR=    1049.50
EXCAVATION DATA
AEX=    -256.1SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -52.5K*CU-YD


3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .53


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       214.39 ELREA=       213.97

  7715.000       .89    214.39       .00       .00    214.73       .34       .66       .06    214.39
     700.0        .0     396.3     303.7        .0      88.1      62.0      62.0      25.4    213.97
       .61       .00      4.50      4.90      .000      .025      .040      .000    213.50    949.50
   .006904      200.      200.      200.         0         0         0       .00    146.43   1123.00
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SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST
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*SECNO 7916.000
CHIMP CLSTA=     998.75 CELCH=     214.00 BW=     100.00 STCHL=     948.75 STCHR=    1048.75
EXCAVATION DATA
AEX=    -169.8SQ-FT     VEXR=      -1.6K*CU-YD     VEXT=      -54.0K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       215.45 ELREA=       215.08

  7916.000      1.44    215.44       .00       .00    215.79       .35      1.06       .00    215.45
     700.0        .0     690.3       9.7        .0    143.9      10.1      62.7      26.0    215.08
       .62       .00      4.80       .95      .000      .025      .040      .000    214.00    948.75
   .004144      201.      201.      201.         2         0         0       .00    140.25   1089.00


*SECNO 8317.000
CHIMP CLSTA=     996.75 CELCH=     216.00 BW=     100.00 STCHL=     946.75 STCHR=    1046.75
EXCAVATION DATA
AEX=    -174.9SQ-FT     VEXR=      -2.6K*CU-YD     VEXT=      -56.6K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       217.96 ELREA=       217.78

  8317.000      1.17    217.17       .00       .00    217.43       .26      1.62       .01    217.96
     480.0        .0     480.0        .0        .0    117.6        .0      64.0      27.1    217.78
       .64       .00      4.08       .00      .000      .025      .000      .000    216.00    946.75
   .003913      401.      401.      401.         2         0         0       .00    100.00   1046.75


*SECNO 8717.000
CHIMP CLSTA=    1000.25 CELCH=     218.75 BW=     100.00 STCHL=     950.25 STCHR=    1050.25
EXCAVATION DATA
AEX=    -269.4SQ-FT     VEXR=      -3.3K*CU-YD     VEXT=      -59.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       220.08 ELREA=       221.00

  8717.000       .89    219.64    219.64       .00    220.09       .45      2.35       .07    220.08
     480.0        .0     480.0        .0        .0     89.1        .0      64.9      28.0    221.00
       .67       .00      5.39       .00      .000      .025      .000      .000    218.75    950.25
   .009803      400.      400.      400.        15        15         0       .00    100.00   1050.25


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 8859.000
CHIMP CLSTA=     999.00 CELCH=     219.72 BW=     100.00 STCHL=     949.00 STCHR=    1049.00
EXCAVATION DATA
AEX=    -308.1SQ-FT     VEXR=      -1.5K*CU-YD     VEXT=      -61.4K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       221.11 ELREA=       222.15

  8859.000      1.07    220.79       .00       .00    221.11       .31      1.00       .01    221.11
     480.0        .0     480.0        .0        .0    107.3        .0      65.3      28.4    222.15
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      .67       .00      4.47       .00      .000      .025      .000      .000    219.72    949.00
   .005303      142.      142.      142.         2         0         0       .00    100.00   1049.00


CCHV=     .300 CEHV=     .500
*SECNO 8977.000
CHIMP CLSTA=    1001.00 CELCH=     220.53 BW=     100.00 STCHL=     951.00 STCHR=    1051.00
EXCAVATION DATA
AEX=    -304.2SQ-FT     VEXR=      -1.3K*CU-YD     VEXT=      -62.7K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       221.86 ELREA=       222.00

  8977.000       .97    221.50       .00       .00    221.88       .38       .74       .04    221.86
     480.0        .0     480.0        .0        .0      96.7        .0      65.5      28.6    222.00
       .68       .00      4.96       .00      .000      .025      .000      .000    220.53    951.00
   .007481      118.      118.      118.         3         0         0       .00    100.00   1051.00



SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.69      2.60       .00    17.00      3.83    105.36       .00    206.49    205.90

*SECNO 9037.000
CHIMP CLSTA=    1001.50 CELCH=     220.94 BW=     100.00 STCHL=     951.50 STCHR=    1051.50
EXCAVATION DATA
AEX=    -304.0SQ-FT     VEXR=       -.7K*CU-YD     VEXT=      -63.4K*CU-YD

 PRESS FLOW BECAUSE EGLWC OF     222.24  EXCEEDS 1.5 DEPTH
PRESSURE FLOW

1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                               AREA
    221.98    222.24      .23        0.      450.      105.      105.      214.49    222.50        0.


3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
  9037.000       .87    221.81    221.79       .00    222.23       .41       .50      -.50    222.31
     450.0        .0     450.0        .0        .0      87.3        .0      65.7      28.8    222.50
       .68       .00      5.16       .00      .000      .025      .000      .000    220.94    951.50
   .009227       60.       60.       60.        20        11         0       .00    100.00   1051.50


*SECNO 9118.000
CHIMP CLSTA=     999.25 CELCH=     221.50 BW=     100.00 STCHL=     949.25 STCHR=    1049.25
EXCAVATION DATA
AEX=    -336.6SQ-FT     VEXR=      -1.0K*CU-YD     VEXT=      -64.4K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       223.58 ELREA=       223.13

  9118.000      1.02    222.52       .00       .00    222.82       .30       .56       .03    223.58
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    450.0       .0     450.0       .0       .0     102.4       .0      65.8      29.0    223.13
      .69      .00      4.40      .00     .000      .025     .000      .000    221.50    949.25
  .005447      81.       81.       81.        2         0        0       .00    100.00   1049.25


CCHV=     .100 CEHV=     .350
*SECNO 9318.000
CHIMP CLSTA=    1001.50 CELCH=     222.87 BW=     100.00 STCHL=     951.50 STCHR=    1051.50
EXCAVATION DATA
AEX=    -201.5SQ-FT     VEXR=      -2.0K*CU-YD     VEXT=      -66.4K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       223.97 ELREA=       224.71

  9318.000       .91    223.78       .00       .00    224.16       .38      1.31       .03    223.97
    450.0        .0     450.0        .0        .0      91.1        .0      66.3      29.4    224.71
      .70       .00      4.94       .00      .000      .025      .000      .000    222.87    951.50
  .008005      200.      200.      200.         3         0         0       .00    100.00   1051.50


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 9518.000
CHIMP CLSTA=    1000.05 CELCH=     224.25 BW=     100.00 STCHL=     950.05 STCHR=    1050.05
EXCAVATION DATA
AEX=    -205.6SQ-FT     VEXR=      -1.5K*CU-YD     VEXT=      -67.9K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       225.30 ELREA=       225.45

  9518.000       .76    225.01       .00       .00    225.04       .04       .85       .03    225.30
    120.0        .0     120.0        .0        .0      75.8        .0      66.7      29.9    225.45
      .74       .00      1.58       .00      .000      .025      .000      .000    224.25    950.05
  .001045      200.      200.      200.         2         0         0       .00    100.00   1050.05


*SECNO 9919.000
CHIMP CLSTA=     998.90 CELCH=     227.00 BW=     100.00 STCHL=     948.90 STCHR=    1048.90
EXCAVATION DATA
AEX=    -298.0SQ-FT     VEXR=      -3.7K*CU-YD     VEXT=      -71.6K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       228.80 ELREA=       229.76

  9919.000       .33    227.33    227.33       .00    227.50       .17       .98       .05    228.80
    110.0        .0     110.0        .0        .0      33.4        .0      67.2      30.8    229.76
      .77       .00      3.30       .00      .000      .025      .000      .000    227.00    948.90
  .013395      401.      401.      401.        20        14         0       .00    100.00   1048.90


*SECNO 10119.000
CHIMP CLSTA=     999.50 CELCH=     229.00 BW=     100.00 STCHL=     949.50 STCHR=    1049.50
EXCAVATION DATA
AEX=    -218.6SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -73.5K*CU-YD
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3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 230.35 ELREA= 229.25

10119.000	.26	229.26	229.26	.00	229.29	.04	.30	.01	230.35
110.0	.0	14.0	96.0	.0	25.5	57.6	67.4	31.3	229.25
.81	.00	.55	1.67	.000	.025	.040	.000	229.00	949.50
.000531	200.	200.	200.	20	22	0	.00	126.50	1076.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10319.000
CHIMP CLSTA= 1000.25 CELCH= 231.00 BW= 100.00 STCHL= 950.25 STCHR= 1050.25
EXCAVATION DATA
AEX= -201.4SQ-FT VEXR= -1.6K*CU-YD VEXT= -75.1K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 232.55 ELREA= 232.93

10319.000	.33	231.33	231.33	.00	231.50	.17	.30	.05	232.55
110.0	.0	110.0	.0	.0	33.4	.0	67.7	31.8	232.93
.82	.00	3.30	.00	.000	.025	.000	.000	231.00	950.25
.013395	200.	200.	200.	20	11	0	.00	100.00	1050.25

*SECNO 10720.000
CHIMP CLSTA= 1000.25 CELCH= 235.00 BW= 95.25 STCHL= 955.00 STCHR= 1050.25
EXCAVATION DATA
AEX= -140.6SQ-FT VEXR= -2.5K*CU-YD VEXT= -77.6K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 246.00 ELREA= 236.07

10720.000	.40	235.40	.00	.00	235.52	.13	4.02	.00	246.00
110.0	.0	110.0	.0	.0	38.6	.0	68.0	32.7	236.07
.86	.00	2.85	.00	.000	.025	.000	.000	235.00	955.00
.007777	401.	401.	401.	9	0	0	.00	95.25	1050.25

*SECNO 11120.000
CHIMP CLSTA= 1002.00 CELCH= 239.00 BW= 97.01 STCHL= 952.00 STCHR= 1049.01
EXCAVATION DATA
AEX= -293.1SQ-FT VEXR= -3.2K*CU-YD VEXT= -80.8K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 239.85 ELREA= 249.70

11120.000	.35	239.35	239.34	.00	239.52	.17	3.98	.02	239.85
110.0	.0	110.0	.0	.0	33.1	.0	68.4	33.6	249.70
.90	.00	3.32	.00	.000	.025	.000	.000	239.00	952.00
.013181	400.	400.	400.	5	11	0	.00	97.01	1049.01

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 11408.000
CHIMP CLSTA= 1000.15 CELCH= 240.00 BW= 98.86 STCHL= 950.15 STCHR= 1049.01
EXCAVATION DATA
AEX= -194.5SQ-FT VEXR= -2.6K*CU-YD VEXT= -83.4K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.67

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 241.20 ELREA= 251.00

11408.000	.61	240.61	.00	.00	240.66	.05	1.13	.01	241.20
110.0	.0	110.0	.0	.0	60.3	.0	68.7	34.3	251.00
.94	.00	1.82	.00	.000	.025	.000	.000	240.00	950.15
.001846	288.	288.	288.	4	0	0	.00	98.86	1049.01

CCHV= .100 CEHV= .350
*SECNO 11558.000
CHIMP CLSTA= 999.50 CELCH= 242.00 BW= 95.01 STCHL= 951.00 STCHR= 1046.01
EXCAVATION DATA
AEX= -225.0SQ-FT VEXR= -1.2K*CU-YD VEXT= -84.6K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 253.00 ELREA= 253.00

11558.000	.35	242.35	242.35	.00	242.52	.17	.59	.04	253.00
110.0	.0	110.0	.0	.0	32.9	.0	68.8	34.6	253.00
.95	.00	3.35	.00	.000	.025	.000	.000	242.00	951.00
.013162	149.	150.	151.	20	11	0	.00	95.01	1046.01

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.69	2.60	.00	18.17	5.00	105.36	.00	229.70	229.22

*SECNO 11690.000
CHIMP CLSTA= 996.50 CELCH= 242.60 BW= 100.00 STCHL= 946.50 STCHR= 1046.50

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -198.9SQ-FT VEXR= -1.0K*CU-YD VEXT= -85.6K*CU-YD

PRESS FLOW BECAUSE EGLWC OF 243.77 EXCEEDS 1.5 DEPTH
6110 EGLWC OF 242.35 LESS THAN XEG OF 242.52
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
242.35	243.77	.12	0.	60.	105.	105.	237.70	243.10	0.

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF

11690.000	.23	242.83	242.82	.00	242.94	.11	1.81	-1.81	244.10
60.0	.0	60.0	.0	.0	22.5	.0	68.9	34.9	243.87
.97	.00	2.66	.00	.000	.025	.000	.000	242.60	946.50
.014739	129.	132.	136.	20	14	0	.00	100.00	1046.50

1
PROFILE FOR STREAM SUB-CRITICAL M3D1A

PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

```
ELEVATION  170.     180.     190.     200.     210.     220.     230.     240.     250.     260.
   SECNO   CUMDIS

     .00     0. I        .  MW   . E     .        .        .        .        .        .        .        L
            50. I        .  MCW  . E     .        .        .        .        .        .        .        L
           100. .I       .   MCW . E     .        .        .        .        .        .        .        L
           150. .I       .   MCW . E     .        .        .        .        .        .        .        L
           200. .I       .   M CW.  E    .        .        .        .        .        .        .        L
           250. .I       .   M  CW  E    .        .        .        .        .        .        .        L
           300. . I      .    M C.W  E   .        .        .        .        .        .        .        L
           350. . I      .    M  C W E   .        .        .        .        .        .        .        L
  384.00   400. . I      .    L  C  WE   .        .        .        .        .        .        .        .
  434.00   450. . I      .      L. W E   .        .        .        .        .        .        .        .
  484.00   500. .  I     .       L  W  E .        .        .        .        .        .        .        .
           550. C   I    .       L  W  E .        .        .        .        .        .        .        .
           600. C    I   .       L   W E .        .        .        .        .        .        .        .
           650. C     I  .       L    WE .        .        .        .        .        .        .        .
  684.00   700. C     I  .       L     WE .        .        .        .        .        .        .        .
  726.00   750. C      I .       . M  W E .        .        .        .        .        .        .        .
           800. C       I .       . M  WE .        .        .        .        .        .        .        .
           850. C       I .       . M  W E .        .        .        .        .        .        .        .
           900. C        I.       . M  W E .        .        .        .        .        .        .        .
           950. C        I.       . M   WE .        .        .        .        .        .        .        .
 1000.00  1000. C         I       . M   W E.        .        .        .        .        .        .        .
          1050. C         .   I R . L    WE.        .        .        .        .        .        .        .
          1100. C         .       .I R    E. L      .        .        .        .        .        .        .
 1110.00  1150. C         .       . I  R  E.  ML    .        .        .        .        .        .        .
          1200. C         .       . I  R  E.   ML   .        .        .        .        .        .        .
          1250. C         .       .  I R  E.   ML   .        .        .        .        .        .        .
          1300. C         .       .  I  R E.   M L  .        .        .        .        .        .        .
          1350. C         .       .  I  R E.    ML  .        .        .        .        .        .        .
          1400. C         .       .   I R E.    M L .        .        .        .        .        .        .
          1450. C         .       .   I  R E.    ML .        .        .        .        .        .        .
          1500. C         .       .   I  R E.    ML .        .        .        .        .        .        .
 1514.00  1550. C         .       .    I R E.    M L.        .        .        .        .        .        .
          1600. C         .       .    I  RWE     L .        .        .        .        .        .        .
          1650. C         .       .    I  RWE     L .        .        .        .        .        .        .
          1700. C         .       .    I   WE    LM .        .        .        .        .        .        .
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         1750. C        .        .  I  WE    L M.      .        .        .        .        .        .
         1800. C        .        .  I  WE    L M.      .        .        .        .        .        .
         1850. C        .        .   I WE   L   M      .        .        .        .        .        .
         1900. C        .        .   I  ER L    M      .        .        .        .        .        .
1912.00  1950. C        .        .   I  ER L    M      .        .        .        .        .        .
         2000. C        .        .   I  E R L   M      .        .        .        .        .        .
         2050. C        .        .   I  E R L   .M     .        .        .        .        .        .
         2100. C        .        .   I  E R L   .M     .        .        .        .        .        .
         2150. C        .        .  I   E R L   .M     .        .        .        .        .        .
         2200. C        .        .  I   E  RL   .M     .        .        .        .        .        .
         2250. C        .        .  I   E  R L  .M     .        .        .        .        .        .
         2300. C        .        .  I   E  R L  .M     .        .        .        .        .        .
2312.00  2350. C        .        .  I   E  R L  .M     .        .        .        .        .        .
         2400. C        .        .   I  E  R L  .M     .        .        .        .        .        .
         2450. C        .        .   I  E  RL   . M    .        .        .        .        .        .
2485.00  2500. C        .        .    I E  RL   . M    .        .        .        .        .        .
2515.00  2550. .        .        .     I WE RL   . M    .        .        .        .        .        .
2530.00  2600. .        .        .      I.WERL   . M    .        .        .        .        .        .
         2650. .        .        .      IWERL    . M    .        .        .        .        .        .
         2700. .        .        .      I WEL    . M    .        .        .        .        .        .
2712.00  2750. .        .        .      . IWE    . M    .        .        .        .        .        .
         2800. .      C .        .      . IWE    . M    .        .        .        .        .        .
         2850. C        .        .      . IWE    . M    .        .        .        .        .        .
         2900. C        .        .      . IRE    . M    .        .        .        .        .        .
         2950. C        .        .      . ILE    . M    .        .        .        .        .        .
         3000. C        .        .      . ILWE   . M    .        .        .        .        .        .
         3050. C        .        .      . ILWE   . M    .        .        .        .        .        .
         3100. C        .        .      . ILRE   . M    .        .        .        .        .        .
3112.00  3150. C        .        .      . ILRE   . M    .        .        .        .        .        .
         3200. C        .        .      . ILRE   .  M   .        .        .        .        .        .
         3250. C        .        .      .  IRE   .  M   .        .        .        .        .        .
         3300. C        .        .      .  ILE   .  M   .        .        .        .        .        .
         3350. C        .        .      .  ILE   .  M   .        .        .        .        .        .
         3400. C        .        .      .  ILWE  .  M   .        .        .        .        .        .
         3450. C        .        .      .  ILWE  .  M   .        .        .        .        .        .
         3500. C        .        .      .   IWE  .   M  .        .        .        .        .        .
3513.00  3550. C        .        .      .   ILE  .   M  .        .        .        .        .        .
         3600. C        .        .      .   ILE  .   M  .        .        .        .        .        .
         3650. C        .        .      . I LE   . M    .        .        .        .        .        .
         3700. C        .        .      . I LE   . M    .        .        .        .        .        .
         3750. C        .        .      . I LE   . M    .        .        .        .        .        .
         3800. C        .        .      . I LE   . M    .        .        .        .        .        .
         3850. C        .        .      . I LE   . M    .        .        .        .        .        .
         3900. C        .        .      . I LWE  . M    .        .        .        .        .        .
3913.00  3950. C        .        .      . I LWE  . M    .        .        .        .        .        .
         4000. C        .        .      . I LWE  . M    .        .        .        .        .        .
         4050. C        .        .      . I L E  . M    .        .        .        .        .        .
         4100. C        .        .      . I L E  . M    .        .        .        .        .        .
         4150. C        .        .      . I L E  . M    .        .        .        .        .        .
         4200. C        .        .      . I L E  . M    .        .        .        .        .        .
         4250. C        .        .      . I L E  . M    .        .        .        .        .        .
         4300. C        .        .      . I L E  . M    .        .        .        .        .        .
4313.00  4350. C        .        .      . I L E  . M    .        .        .        .        .        .
         4400. C        .        .      . I L E  . M    .        .        .        .        .        .
         4450. C        .        .      . I L E  . M    .        .        .        .        .        .
         4500. C        .        .      . I RLE  . M    .        .        .        .        .        .
         4550. C        .        .      . I RLE  . M    .        .        .        .        .        .
         4600. C        .        .      . I RLE  . M    .        .        .        .        .        .
         4650. C        .        .      . I  LE  . M    .        .        .        .        .        .
         4700. C        .        .      . I  LE  . M    .        .        .        .        .        .
4713.00  4750. C        .        .      .  I LE  .  M   .        .        .        .        .        .
         4800. C        .        .      .  I LWE .  M   .        .        .        .        .        .
         4850. C        .        .      .  I RLE .  M   .        .        .        .        .        .
         4900. C        .        .      .  I RLE .  M   .        .        .        .        .        .
         4950. C        .        .      .  I RLE .  M   .        .        .        .        .        .
         5000. C        .        .      .  I RLE .  M   .        .        .        .        .        .
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         5050. C     .     .     . I LE .   M   .     .     .     .     .     .
         5100. C     .     .     . I LE .   M   .     .     .     .     .     .
5113.00  5150. C     .     .     . I LE .   M   .     .     .     .     .     .
         5200. C     .     .     . I LE .   M   .     .     .     .     .     .
         5250. C     .     .     . I LE .   M   .     .     .     .     .     .
         5300. C     .     .     .  IRE .    M  .     .     .     .     .     .
         5350. C     .     .     .  IRE .    M  .     .     .     .     .     .
         5400. C     .     .     .  IRE .    M  .     .     .     .     .     .
         5450. C     .     .     .  IRWE.    M  .     .     .     .     .     .
         5500. C     .     .     .   IWE.     M .     .     .     .     .     .
5513.00  5550. C     .     .     .   ILE.     M .     .     .     .     .     .
         5600. C     .     .     .   ILE.     M .     .     .     .     .     .
         5650. C     .     .     .   ILE.     M .     .     .     .     .     .
         5700. C     .     .     .   ILE.     M .     .     .     .     .     .
         5750. C     .     .     .   IRE.      M.     .     .     .     .     .
         5800. C     .     .     .   IRE.      M.     .     .     .     .     .
         5850. C     .     .     .    IE.      M.     .     .     .     .     .
         5900. C     .     .     .    IE.      M.     .     .     .     .     .
5914.00  5950. C     .     .     .    IE.      M.     .     .     .     .     .
         6000. C     .     .     .    IWE      M.     .     .     .     .     .
         6050. C     .     .     .    IRE      M.     .     .     .     .     .
         6100. C     .     .     .    IRE      M.     .     .     .     .     .
         6150. C     .     .     .    I E      M.     .     .     .     .     .
6156.00  6200. C     .     .     .     IE      M.     .     .     .     .     .
         6250. C     .     .     .     IWE      M.    .     .     .     .     .
         6300. C     .     .     .     IWE       M    .     .     .     .     .
6307.00  6350. .     .     .     .      IE       M    .     .     .     .     .
6388.00  6400. .     .     .     .      IWE      M    .     .     .     .     .
         6450. C     .     .     .      ILE      M    .     .     .     .     .
         6500. C     .     .     .      ILE      M    .     .     .     .     .
6517.00  6550. C     .     .     .      ILE      M    .     .     .     .     .
         6600. C     .     .     .      ILE      M    .     .     .     .     .
         6650. C     .     .     .     I.LE      M    .     .     .     .     .
         6700. C     .     .     .     I.LE      M    .     .     .     .     .
6714.00  6750. C     .     .     .    I .LWE     M    .     .     .     .     .
         6800. C     .     .     .    I .RLE     M    .     .     .     .     .
         6850. C     .     .     .    I . LE     M    .     .     .     .     .
         6900. C     .     .     .    I . LE     M    .     .     .     .     .
         6950. C     .     .     .    I . LE     M    .     .     .     .     .
         7000. C     .     .     .    I . LE     M    .     .     .     .     .
         7050. C     .     .     .    I . LE     M    .     .     .     .     .
         7100. C     .     .     .    I . LE     M    .     .     .     .     .
7115.00  7150. C     .     .     .    I . LE     M    .     .     .     .     .
         7200. C     .     .     .     I. LE     .M   .     .     .     .     .
         7250. C     .     .     .     I.  WE    .M   .     .     .     .     .
         7300. C     .     .     .     I.  LE    .M   .     .     .     .     .
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         7450. C     .     .     .     I.  LE    . M  .     .     .     .     .
         7500. C     .     .     .     I.  LE    . M  .     .     .     .     .
7515.00  7550. C     .     .     .     I.  RE    . M  .     .     .     .     .
         7600. C     .     .     .      I  WE    . M  .     .     .     .     .
         7650. C     .     .     .      . I WE   .  M .     .     .     .     .
         7700. C     .     .     .      .  ILE   .  M .     .     .     .     .
7715.00  7750. C     .     .     .      .   IE   .  M .     .     .     .     .
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         7850. C     .     .     .      .   IWE  .   M.     .     .     .     .
         7900. C     .     .     .      .   IRE  .    M.    .     .     .     .
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         8000. C     .     .     .      .    IE  .    M.    .     .     .     .
         8050. C     .     .     .      .    IWE .     M.   .     .     .     .
         8100. C     .     .     .      .    IWE .     M.   .     .     .     .
         8150. C     .     .     .      .    I E .     M.   .     .     .     .
         8200. C     .     .     .      .     IE .     M.   .     .     .     .
         8250. C     .     .     .      .     IEL .    M.   .     .     .     .
         8300. C     .     .     .      .     IWE .    M.   .     .     .     .
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8317.00  8350. C       .       .       .       .   I E .   M   .       .       .       .       .
         8400. C       .       .       .       .   IEL.     M .       .       .       .       .
         8450. C       .       .       .       .   IEL.     M .       .       .       .       .
         8500. C       .       .       .       .   IWE.      M .       .       .       .       .
         8550. C       .       .       .       .    IER      M .       .       .       .       .
         8600. C       .       .       .       .    IEL       M.       .       .       .       .
         8650. C       .       .       .       .    IWER      M.       .       .       .       .
         8700. .       .       . C     .       .     IER       M       .       .       .       .
8717.00  8750. .       .       .       .       .     IER       M       .       .       .       .
         8800. C       .       .       .       .     IWER      M       .       .       .       .
         8850. C       .       .       .       .      IER      M       .       .       .       .
8859.00  8900. C       .       .       .       .      IER      M       .       .       .       .
         8950. C       .       .       .       .      IWE      .M      .       .       .       .
8977.00  9000. C       .       .       .       .      .IE      . M     .       .       .       .
9037.00  9050. .       .       .       .       .      .IWE     .  M    .       .       .       .
         9100. C       .       .       .       .      . IE     .  M    .       .       .       .
9118.00  9150. C       .       .       .       .      . IEL    .  M    .       .       .       .
         9200. C       .       .       .       .      . IEL    .  M    .       .       .       .
         9250. C       .       .       .       .      .  WE    .  M    .       .       .       .
         9300. C       .       .       .       .      .  IER   .  M    .       .       .       .
9318.00  9350. C       .       .       .       .      .  IER   .   M   .       .       .       .
         9400. C       .       .       .       .      .   WE   .   M   .       .       .       .
         9450. C       .       .       .       .      .   IE   .   M   .       .       .       .
         9500. C       .       .       .       .      .   IER  .    M  .       .       .       .
9518.00  9550. C       .       .       .       .      .    EL  .    M  .       .       .       .
         9600. C       .       .       .       .      .    IE  .    M  .       .       .       .
         9650. C       .       .       .       .      .    IEL .    M  .       .       .       .
         9700. C       .       .       .       .      .     EL .     M .       .       .       .
         9750. C       .       .       .       .      .     WER .    M .       .       .       .
         9800. C       .       .       .       .      .     IEL .    M .       .       .       .
         9850. C       .       .       .       .      .      ELR.     M .       .       .       .
         9900. .       .       .       C.      .      .      WELR     M .       .       .       .
9919.00  9950. .       .       .       .       .      .      IELR     M .       .       .       .
        10000. .       .       .       .       .      .       E L      M .       .       .       .
        10050. .       .       .       .       .      .      IEL       M .       .       .       .
        10100. .       .       .       .       .      .       EL       M.       .       .       .
10119.00 10150. .       .       .       .       .      .      IEL       M.       .       .       .
        10200. .       .       .       .       .      .       EL       M       .       .       .
        10250. .       .       .       .       .      .      IEL       M       .       .       .
        10300. .       .       .       .       .      .      .EL       .M      .       .       .
10319.00 10350. .       .       .       .       .      .      .IEL      .M      .       .       .
        10400. .       .       .       . C     .      .      . E RL    . M     .       .       .
        10450. .  C    .       .       .       .      .      . IER L   . M     .       .       .
        10500. C       .       .       .       .      .      .  ER   L . M     .       .       .
        10550. C       .       .       .       .      .      .  IER   L M      .       .       .
        10600. C       .       .       .       .      .      .   ER   .L M     .       .       .
        10650. C       .       .       .       .      .      .   IER  .  L     .       .       .
        10700. C       .       .       .       .      .      .    ER  .  M L   .       .       .
10720.00 10750. C       .       .       .       .      .      .    IE  .  M  L  .       .       .
        10800. C       .       .       .       .      .      .     E R .   M L .       .       .
        10850. C       .       .       .       .      .      .     IE  R   L   .       .       .
        10900. C       .       .       .       .      .      .      E  . R L M .       .       .
        10950. C       .       .       .       .      .      .      IE . L  M  .       .       .
        11000. C       .       .       .       .      .      .       E . L  R M .       .       .
        11050. .       C       .       .       .      .      .       IE. L   RM .       .       .
        11100. .       .       .       .       C      .      .        E.L     RM.       .       .
11120.00 11150. .       .       .       .       .      .      .        IE        R       .       .
        11200. .       .       .       C .     .      .      .         E        R       .       .
        11250. C       .       .       .       .      .      .         EL       R       .       .
        11300. C       .       .       .       .      .      .         EL       .R      .       .
        11350. C       .       .       .       .      .      .         IE       .R      .       .
        11400. C       .       .       .       .      .      .         IE       .R      .       .
11408.00 11450. C       .       .       .       .      .      .         IEL      .R      .       .
        11500. C       .       .       .       .      .      .         .IE  L    . R     .       .
        11550. C       .       .       .       .      .      .         . E      L.  R   .       .
11558.00 11600. .       .       .       .       .      .      .         . IE       . L   .       .
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        11650.  .        .        .        .        .        .        .  E     L  M     .        .
 11690.00 11700.  .        .        .        .        .        .        .  EL    .  M     .        .
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   19FEB93      11:23:06                                                                                                    PAGE   44
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THIS RUN EXECUTED 19FEB93 11:23:14

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 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SUB-CRITICAL FLOW M3D1A

SUMMARY PRINTOUT

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	.000	4710.00	.00	16.00	221.91	21.23	100000.00	100000.00	183.70	169.67
	.000	5470.00	.00	16.00	250.06	21.87	100000.00	100000.00	185.46	169.67
*	384.000	4710.00	384.00	16.02	219.01	21.51	186.71	186.71	185.56	171.71
*	384.000	5470.00	384.00	116.00	894.91	10.51	186.71	186.71	192.38	171.71
*	434.000	4710.00	50.00	16.02	222.51	21.17	188.36	188.36	186.04	171.98
*	434.000	5470.00	50.00	116.00	588.80	14.64	188.36	188.36	191.20	171.98
*	484.000	4710.00	50.00	16.02	221.88	21.23	190.00	190.00	186.83	172.80
*	484.000	5470.00	50.00	116.00	557.36	14.92	190.00	190.00	192.45	172.80
*	684.000	4710.00	200.00	126.00	1010.31	7.44	190.00	190.00	195.19	176.07
*	684.000	5470.00	200.00	126.00	1023.76	8.55	190.00	190.00	195.30	176.07
	726.000	4710.00	42.00	126.00	918.62	8.72	177.11	177.11	195.03	177.11
	726.000	5470.00	42.00	126.00	924.73	10.08	177.11	177.11	195.07	177.11
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85
*	1000.000	5470.00	274.00	104.00	799.84	10.85	179.85	179.85	196.90	179.85
*	1110.000	4710.00	110.00	84.99	565.91	8.82	195.00	195.00	195.89	181.00
*	1110.000	1370.00	110.00	85.00	609.17	2.36	205.00	194.43	198.92	191.44
	1514.000	4710.00	404.00	49.75	510.55	9.23	198.60	198.60	196.35	181.10
*	1514.000	1370.00	404.00	83.00	363.07	3.84	208.60	197.00	198.92	194.39
	1912.000	4490.00	398.00	48.10	517.47	8.68	203.00	202.70	197.05	181.70
	1912.000	1150.00	398.00	100.00	372.66	3.09	203.47	201.16	199.24	195.51
	2312.000	4490.00	400.00	44.88	439.44	10.22	204.00	203.00	197.37	183.00
*	2312.000	1150.00	400.00	100.00	469.32	2.45	204.45	202.79	199.43	194.74

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   19FEB93      11:23:06                                                                                                    PAGE   45
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	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	2485.000	4490.00	173.00	39.88	290.88	15.44	203.00	203.00	199.80	183.90

*	2485.000	1150.00	173.00	100.00	223.51	5.15	203.71	202.63	199.37	197.14
*	2515.000	4490.00	30.00	37.29	285.25	15.74	203.00	203.00	199.96	184.00
*	2515.000	1150.00	30.00	100.00	160.05	7.19	203.64	202.77	199.56	197.96
*	2530.000	4490.00	15.00	57.08	329.34	13.63	203.00	203.00	201.40	188.30
*	2530.000	1150.00	15.00	100.00	159.64	7.20	203.27	202.95	200.51	198.91
*	2712.000	4410.00	182.00	81.09	522.01	8.94	204.00	203.00	203.92	188.50
*	2712.000	1080.00	182.00	108.10	159.18	6.96	204.05	202.52	202.72	201.20
	3112.000	4410.00	400.00	81.76	488.21	9.47	205.40	204.00	204.41	189.40
*	3112.000	1080.00	400.00	166.49	332.78	3.93	202.26	203.67	204.51	202.00
	3513.000	4350.00	401.00	113.71	477.77	10.07	205.00	205.00	205.01	190.80
	3513.000	1010.00	401.00	183.99	260.08	4.59	204.81	204.55	205.23	203.35
	3913.000	4350.00	400.00	45.06	395.43	11.00	205.80	206.00	205.66	191.30
*	4313.000	4350.00	400.00	189.00	856.56	7.68	205.00	207.00	207.56	192.60
	4313.000	1010.00	400.00	189.00	429.44	2.75	204.73	204.50	206.59	202.30
	4713.000	3850.00	400.00	169.98	779.35	7.11	206.60	206.00	208.02	192.80
*	4713.000	940.00	400.00	169.98	315.18	3.23	205.96	205.50	207.00	203.20
	5113.000	3540.00	400.00	181.48	693.97	7.27	207.20	207.00	208.37	194.50
	5113.000	630.00	400.00	181.47	269.75	2.49	206.96	206.50	207.69	204.50
	5513.000	3530.00	400.00	172.99	515.56	9.20	207.00	207.00	208.55	195.60
	5513.000	620.00	400.00	172.99	236.68	3.08	207.59	207.14	208.21	206.50
	5914.000	3530.00	401.00	153.77	447.17	9.30	208.00	208.00	209.17	196.60
*	5914.000	620.00	401.00	137.45	169.29	4.05	209.04	208.56	208.92	207.50
	6156.000	3530.00	242.00	42.00	324.17	10.89	210.00	209.80	209.35	197.80
	6156.000	620.00	242.00	124.00	158.59	4.20	210.11	209.30	209.67	208.27
*	6307.000	3530.00	151.00	154.99	445.04	11.49	209.75	210.10	211.57	198.75
*	6307.000	620.00	151.00	133.18	117.31	5.52	210.33	210.04	210.36	209.25
*	6388.000	3470.00	81.00	169.00	935.02	7.26	210.61	210.61	214.46	199.61
*	6388.000	560.00	81.00	168.99	124.79	5.72	210.15	210.11	210.87	210.00
	6517.000	3470.00	129.00	172.00	1043.41	4.98	211.30	211.50	214.85	200.00
*	6517.000	560.00	129.00	171.99	220.69	2.88	210.84	210.80	211.81	210.00
	6714.000	3470.00	197.00	198.50	1001.21	5.61	211.00	211.00	214.90	200.30
*	6714.000	560.00	197.00	187.40	245.52	2.62	211.14	210.95	212.12	207.60

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	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
	7115.000	3330.00	401.00	195.50	862.78	5.94	213.00	212.00	215.05	200.60
	7115.000	720.00	401.00	167.05	197.29	4.01	212.00	212.61	212.76	208.10
	7515.000	3310.00	400.00	197.99	783.43	6.30	213.00	213.00	215.26	200.90
	7515.000	700.00	400.00	188.90	233.50	3.14	213.18	213.02	213.85	208.90
	7715.000	3310.00	200.00	222.99	585.82	7.91	214.00	214.00	215.21	201.50
*	7715.000	700.00	200.00	146.43	150.12	4.50	214.39	213.97	214.39	213.50
*	7916.000	3310.00	201.00	38.75	298.14	11.10	216.00	215.00	214.90	202.10

	7916.000	700.00	201.00	140.25	154.06	4.80	215.45	215.08	215.44	214.00
	8317.000	2300.00	401.00	41.86	334.08	6.88	219.00	217.00	216.95	203.00
	8317.000	480.00	401.00	100.00	117.65	4.08	217.96	217.78	217.17	216.00
	8717.000	2300.00	400.00	39.07	340.32	6.76	221.00	221.00	217.41	204.00
*	8717.000	480.00	400.00	100.00	89.12	5.39	220.08	221.00	219.64	218.75
	8859.000	2300.00	142.00	38.61	324.36	7.09	221.00	222.00	217.51	204.60
	8859.000	480.00	142.00	100.00	107.31	4.47	221.11	222.15	220.79	219.72
*	8977.000	2300.00	118.00	37.67	257.30	8.94	222.00	222.00	217.49	205.90
	8977.000	480.00	118.00	100.00	96.70	4.96	221.86	222.00	221.50	220.53
*	9037.000	2270.00	60.00	137.99	651.64	4.13	222.60	222.50	223.86	206.49
*	9037.000	450.00	60.00	100.00	87.29	5.16	222.31	222.50	221.81	220.94
	9118.000	2270.00	81.00	110.84	657.68	3.85	224.00	223.00	223.92	205.60
	9118.000	450.00	81.00	100.00	102.37	4.40	223.58	223.13	222.52	221.50
*	9318.000	2270.00	200.00	38.99	364.20	6.23	225.00	225.00	223.77	206.40
	9318.000	450.00	200.00	100.00	91.12	4.94	223.97	224.71	223.78	222.87
	9518.000	1700.00	200.00	36.94	331.07	5.13	227.00	227.00	224.18	207.20
	9518.000	120.00	200.00	100.00	75.84	1.58	225.30	225.45	225.01	224.25
	9919.000	1700.00	401.00	41.09	279.63	6.08	228.00	230.00	224.46	212.20
*	9919.000	110.00	401.00	100.00	33.38	3.30	228.80	229.76	227.33	227.00
*	10119.000	1700.00	200.00	26.52	132.63	12.82	230.00	230.00	224.37	215.00
*	10119.000	110.00	200.00	126.50	83.13	.55	230.35	229.25	229.26	229.00
*	10319.000	1700.00	200.00	29.55	138.12	12.31	232.00	232.80	227.27	217.80
*	10319.000	110.00	200.00	100.00	33.38	3.30	232.55	232.93	231.33	231.00
*	10720.000	1700.00	401.00	20.45	122.12	13.92	237.10	236.00	231.19	220.50
	10720.000	110.00	401.00	95.25	38.56	2.85	246.00	236.07	235.40	235.00
*	11120.000	1700.00	400.00	33.33	223.43	7.61	241.00	240.00	235.38	222.00
	11120.000	110.00	400.00	97.01	33.14	3.32	239.85	249.70	239.35	239.00

1

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	11408.000	1700.00	288.00	22.30	125.44	13.55	241.00	241.00	235.42	226.00
*	11408.000	110.00	288.00	98.86	60.35	1.82	241.20	251.00	240.61	240.00
	11558.000	1700.00	150.00	20.00	154.12	11.03	243.00	243.00	237.65	229.22
*	11558.000	110.00	150.00	95.01	32.88	3.35	253.00	253.00	242.35	242.00
*	11690.000	1640.00	132.00	48.91	305.31	5.39	243.60	243.80	243.35	229.70
*	11690.000	60.00	132.00	100.00	22.53	2.66	244.10	243.87	242.83	242.60

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SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= .000 PROFILE= 1 CRITICAL DEPTH ASSUMED

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CAUTION SECNO=    384.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    384.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=    384.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    434.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=    484.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    484.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=    684.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    684.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=   1000.000  PROFILE=  1  WSEL BASED ON X5 CARD
NOTE    SECNO=   1000.000  PROFILE=  2  WSEL BASED ON X5 CARD

WARNING SECNO=   1110.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1110.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   1514.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   2312.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2485.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2485.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2485.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=   2485.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2515.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2515.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2515.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2515.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2515.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   2530.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   2530.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   2712.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=   2712.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2712.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   3112.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3913.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4313.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4713.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   5914.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=   6307.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6307.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   6307.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6307.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   6388.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=   6388.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6388.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   6517.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   6714.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   7715.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   7916.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   8717.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   8717.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   8977.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   9037.000  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=   9037.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=   9037.000  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=   9037.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   9318.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   9919.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   9919.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   9919.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10119.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10119.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10119.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=  10119.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10119.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10119.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10319.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
1
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CAUTION SECNO=  10319.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10319.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=  10319.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10319.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10319.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10720.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10720.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=  11120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  11408.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  11408.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=  11408.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  11558.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  11558.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  11558.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  11690.000  PROFILE=  1  HYDRAULIC JUMP D.S.
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WARNING SECNO=  11690.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=  11690.000  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=  11690.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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T-M3D2A

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T1      FERGUSON    GREINER, INC 02-19-92     (FILENAME = T-M3D2A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M3D2A                     u/s of McDowell Road
*
* Cross-section numbering has been changed:
*       d/s face of the McDowell Rd. culverts ===> XS  #726.00
*       u/s       "       "       "           ===> XS #1000.00
*       The XS numbering u/s of McDowell Rd. has been modified accordingly.
*       These XS #'s apply to the all other HEC-2 runs
*
J1            2                  .00532                              180
J2     1      0       0       0       0       0       0       6       0
J3    38     43      39       4      25      26      23      24       1      42
QT     2   4710    5470       0       0       0       0       0       0
* Refer to the Comments after XS #766 about the discharges.
NC  .035    .035    .015
X1     0       7  999.99 1016.01
X3    10                   1000            1016
GR184.67  950.00  184.67  999.99  170.00 1000.00  169.67 1008.00  170.00 1016.00
GR184.67 1016.01  184.67 1066.00
X1   384       7  999.99 1016.01     374     394     384
X3    10
GR186.71  950.00  186.71  999.99  172.04 1000.00  171.71 1008.00  172.04 1016.00
GR186.71 1016.01  186.71 1066.00
X1   434       7  999.99 1016.01      49      51      50
X3    10
GR188.36  950.00  188.36  999.99  172.31 1000.00  171.98 1008.00  172.31 1016.00
GR188.36 1016.01  188.36 1066.00
X1   484       7  999.99 1016.01      49      51      50
X3    10
GR190.00  950.00  190.00  999.99  173.13 1000.00  172.80 1008.00  173.13 1016.00
GR190.00 1016.01  190.00 1066.00
NC                          .3      .5
X1   684       7  999.99 1026.01     200     200     200
GR190.00  950.00  190.00  999.99  176.50 1000.00  176.07 1013.00  176.50 1026.00
GR190.00 1026.01  190.00 1076.00
X1   726       7    1000    1026      42      42      42
X3    10                                                 189     189
GR192.00  950.00  189.00  999.99  177.11 1000.00  177.11 1013.00  177.11 1026.00
GR189.00 1026.01  192.00 1076.00
* The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
*    discharges for 25, 50, 100-yr event, respectively.  This is due to the
*    assumption that those amount of discharges do not join the d/s channel
*    flowing west along the McDowell Road.
SC 2.014      .2     2.6                10      12     274     9.2  179.85  177.11
X1  1000      10     987    1013     274     274     274
X2                     2  189.85
X3    10                                                 194     194
X5     2  195.20  196.90
BT    -7     966  193.00             972  193.00             975  194.00
BT          985  194.00            1027  194.00            1041  193.90
BT         1070  193.90
GR   193     966     193     972     194  984.99  193.87     985  179.85     987
GR179.85    1013  193.87    1027     194 1027.01   193.9    1041   193.9    1070
NC 0.040   0.040   0.025       0       0
QT     2    4710    1370       0       0       0
X1  1110    14.0  973.01  1024.0   111.0   108.0   110.0     0.0     0.0       0
CI    -1  191.44   0.045       0       0       0  -100.0
X3    10
GR 205.0   973.0   195.0  973.01   190.0   980.0   185.0   984.5   181.0   989.0
GR 181.0  1000.0   181.0  1006.0   185.0  1013.0   190.0  1018.5   195.0  1024.0
GR 195.5  1030.0   195.0  1036.0   194.0  1058.0   204.0 1058.01
NC     0       0       0     0.1    0.35
X1  1514    14.0  974.01  1030.0   418.0   390.0   404.0     0.0     0.0       0
CI    -1  194.39       0       0       0       0  -100.0
X3    10
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GR 208.6    974.0    198.6   974.01    195.0    977.0    185.0    988.0    181.1    992.0
GR 181.1   1010.0    185.0   1014.0    195.0   1023.0    198.6   1030.0    198.0   1034.5
GR 197.0   1046.0    197.0   1053.0    197.0   1057.0    207.0   1057.0
QT     2     4490     1150        0        0        0
X1  1912     17.0    972.4   1034.0    408.0    388.0    398.0      0.0      0.0        0
CI    -1   195.51        0        0        0        0   -100.0
X3    10
GR 210.5    912.0    205.0   912.01    200.5   912.02    203.0    926.0    203.6    948.0
GR 203.0    972.4    200.0    975.5    185.0    989.0    181.7    994.0    181.7   1011.0
GR 185.0   1015.0    200.0   1029.0    202.7   1034.0    202.0   1044.0    201.0   1055.0
GR 200.0   1064.0    210.0   1064.0
X1  2312     26.0    969.0   1028.0    410.0    390.0    400.0      0.0      0.0        0
CI    -1   194.74        0        0        0        0   -100.0
X3    10
GR 213.5    900.5    207.5   900.51    205.5   900.52    203.5   900.53    204.9    925.2
GR 204.2    961.5    204.0    969.0    203.0    971.8    200.0    974.2    195.0    979.5
GR 190.0    983.8    185.0    987.5    184.0    988.5    183.0    989.5    183.2   1000.0
GR 185.0   1009.5    190.0   1014.5    195.0   1019.5    200.0   1024.5    203.0   1028.0
GR 203.9   1036.0    203.0   1047.0    202.0   1054.0    201.0   1063.0    200.9   1070.0
GR 210.9  1070.01
NC     0        0        0      0.3      0.5
X1  2485     23.0    969.7   1027.5    173.0    173.0    173.0      0.0      0.0        0
CI    -1   197.14        0        0        0        0   -100.0
X3    10
GR 213.8    904.5    203.8   904.51    204.0    922.5    204.1    929.4    204.1    937.0
GR 203.0    969.7    200.0    977.5    199.0    980.5    198.0    984.0    197.6    990.0
GR 197.6    991.0    183.9    991.0    183.9   1007.0    197.6   1007.0    197.6   1008.0
GR 198.0   1013.0    199.0   1016.0    200.0   1018.5    203.0   1027.5    203.0   1035.0
GR 203.0   1043.0    201.6   1064.0    211.6  1064.01
NC     0        0    0.016        0        0
X1  2515       20      963     1026       30       30       30        0        0        0
CI    -1   197.96    0.045        0        0        0   -100.0
GR213.90      901   203.90   901.01   204.00      926   204.00      934   203.00      963
GR202.00      972   200.00      979   199.00      982   197.60      990   197.60      991
GR184.00      991   184.00     1007   197.60     1007   199.00     1014   201.00     1019
GR203.00     1026   203.00     1042   202.00     1053   201.50     1059   211.50  1059.01
X1  2530     16.0    959.8   1025.0     15.0     15.0     15.0      0.0      0.0      0.0
CI    -1   198.91        0        0        0        0   -100.0
GR 213.9    901.0    203.9   901.01    203.0    959.8    197.6    980.0    197.6    991.5
GR 188.3    991.5    188.3   1007.5    197.6   1007.5    197.6   1018.0    200.0   1021.0
GR 203.0   1025.0    203.2   1036.0    203.0   1042.0    202.0   1050.0    201.5   1059.0
GR 211.5  1059.01
NC     0        0    0.025        0        0
QT     2     4410     1080        0        0        0
X1  2712     18.0    975.8   1022.0    182.0    182.0    182.0      0.0      0.0        0
CI    -1   201.20    0.045        0        0        0   -100.0
X3    10
GR   214      899    203.7   899.01    204.2    970.0    204.0    975.8    200.0    980.8
GR 195.0    985.0    190.0    990.0    188.5    991.0    188.5   1007.0    190.0   1009.5
GR 195.0   1014.8    200.0   1019.5    203.0   1022.0    203.6     1036    203.0   1047.0
GR 202.0   1051.0    201.5   1057.0    211.5  1057.01
NC     0        0        0      0.1     0.35
X1  3112     22.0    971.0   1021.0    400.0    400.0    400.0      0.0      0.0        0
CI    -1   202.26        0        0        0        0   -100.0
X3    10
GR 214.0    893.5    204.0   893.51    203.0    900.8    203.6    908.0    203.0    917.0
GR 202.0    951.0    205.0    969.5    205.4    971.0    205.0    973.0    200.0    980.0
GR 195.0    984.7    190.0    988.8    189.4   1000.0    190.0   1006.8    195.0   1011.5
GR 200.0   1016.5    204.0   1021.0    204.5   1034.0    204.0   1045.0    203.0   1048.0
GR 202.4   1060.0      212  1060.01
QT     2     4350     1010        0        0        0
X1  3513     22.0    976.8   1020.8    401.0    401.0    401.0      0.0      0.0        0
CI    -1   203.35        0        0        0        0   -100.0
X3    10
GR 214.0    896.0    204.0   896.01    205.0    923.0    205.1    933.5    205.0    942.0
GR 204.8    949.0    205.5    955.0    206.2    966.0    205.0    976.8    200.0    981.8
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GR 195.0   986.8   191.0   990.8   190.8  1000.0   191.0  1007.0   195.0  1011.1
GR 200.0  1015.8   205.0  1020.8   205.2  1035.0   205.0  1047.0   204.0  1051.0
GR 203.4  1080.0   213.4 1080.01
X1  3913    19.0   976.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.04       0       0       0       0  -100.0
X3    10
GR 215.1   898.0   210.1   898.01  205.1   898.02   204.6   942.0   205.0   967.0
GR 205.8   976.0   205.0   978.5   200.0   984.1    195.0   989.2   192.0   992.5
GR 191.3  1000.0   192.0  1006.5   195.0  1009.5    200.0  1015.0   205.0  1020.5
GR 206.0  1022.0   206.7  1028.5   202.4  1082.0    212.4 1082.01
X1  4313    28.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  204.50       0       0       0       0  -100.0
X3    10
GR 215.1   899.0   205.1   899.01  205.0   930.5    205.1   937.0   205.0   944.0
GR 204.4   959.0   205.0   971.0   205.1   977.0    205.0   979.5   200.0   985.0
GR 195.0   990.0   193.0   999.0   192.6  1000.0    193.0  1004.0   194.0  1008.0
GR 195.0  1009.0   200.0  1014.5   205.0  1018.5    206.0  1020.0   207.0  1022.0
GR 207.3  1025.0   207.0  1028.5   206.0  1038.0    205.0  1043.0   204.0  1052.0
GR 203.0  1058.0   202.3  1088.0   212.3 1088.01
QT     2    3850     940       0       0       0
X1  4713    24.0   976.0  1020.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  205.50       0       0       0       0  -100.0
X3    10
GR 215.9   915.0   213.9   915.01  210.9   915.02   205.9  915.03   206.0   972.0
GR 206.6   976.0   206.0   979.5   205.0   981.0    200.0   986.0   195.0   990.3
GR 193.0   992.0   192.8   995.0   193.0   998.5    194.0  1006.0   195.0  1007.5
GR 200.0  1013.5   205.0  1018.5   206.0  1020.5    206.5  1027.0   206.0  1034.8
GR 205.0  1040.5   204.0  1054.0   203.2  1085.0    213.2 1085.01
QT     2    3540     630       0       0       0
X1  5113    23.0   977.0  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  206.50       0       0       0       0  -100.0
X3    10
GR 216.9   913.5   211.9   913.51  208.9   913.52   206.9  913.53   207.0   976.0
GR 207.2   977.0   207.0   978.0   206.0   980.0    205.0   981.5   200.0   987.5
GR 195.0   992.5   194.5  1000.0   195.0  1008.5    200.0  1013.0   205.0  1018.5
GR 206.0  1019.5   207.0  1022.0   207.1  1026.5    207.0  1031.0   206.0  1048.0
GR 205.0  1069.0   204.5  1095.0   214.5  1095.0
QT     2    3530     620       0       0       0
X1  5513    17.0   980.5  1018.5   400.0   400.0   400.0     0.0     0.0       0
CI    -1  206.50       0       0       0       0  -100.0
X3    10
GR 217.9   912.0   207.9   912.01  207.7   944.0    207.0   980.5   206.0   982.0
GR 205.0   982.5   200.0   987.0   196.0   991.0    195.6  1000.0   196.0  1007.0
GR 200.0  1010.5   205.0  1015.5   207.0  1018.5    207.8  1028.5   207.0  1054.0
GR 206.6  1085.0   216.6 1085.01
X1  5914    24.0   977.5  1020.0   401.0   401.0   401.0     0.0     0.0       0
CI    -1  207.50       0       0       0       0  -100.0
X3    10
GR 219.3   916.0   209.3   916.01  209.0   953.5    208.0   977.5   207.0   979.0
GR 206.0   980.5   205.0   982.0   200.0   988.0    199.0   990.0   198.0   991.0
GR 197.0   993.5   196.6   997.0   197.0  1000.0    197.1  1001.0   197.0  1002.0
GR 196.6  1007.0   197.0  1009.0   200.0  1011.5    205.0  1015.5   208.0  1020.0
GR 208.6  1047.0   208.0  1076.0   207.8  1086.2    217.8 1086.21
X1  6156      21     978    1024     242     242     242       0       0       0
CI    -1  208.27       0       0       0       0  -100.0
X3    10
GR 220.0     911   210.1   911.01  210.4     940   210.0     955   209.6     964
GR 210.1     964   210.0     978   205.0     983   200.0     988   198.0     991
GR 197.8     992   197.8    1005   198.0    1007   200.0    1009   205.0    1014
GR 209.0    1018   209.8    1024   209.6    1044   209.0    1058   208.5    1075
GR 218.0 1075.01
NC     0       0       0     0.3     0.5
X1  6307      17  989.25    1012     151     151     151       0       0       0
CI    -1  209.25       0       0       0       0  -100.0
X3    10
GR 220.0     908   210.1   908.01  210.5     937   210.1     969   210.5     970
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GR 210.0     987  209.75  989.25  198.75  989.25  198.75  999.25  199.75 1000.75
GR199.75 1010.75  209.75 1010.75   210.1    1012   210.5    1028   210.1    1029
GR 210.0    1063   220.0 1063.01
NC     0       0   0.016       0       0
QT     2    3470     560       0       0       0
SB  1.25    1.58    2.60       0    20.5     1.5     190    0.01  199.51  198.75
X1  6388      13  989.25 1010.75      81      81      81       0       0       0
CI    -1  210.11   0.045       0       0       0  -100.0
X2     0       0       1  209.61  210.61       0       0       0       0       0
BT     5     968  210.61  209.61  989.25  210.61  209.61  989.25  211.22  209.61
BT1010.8  211.22  209.61    1025  210.61  209.61
GR 220.0     901   210.3  901.01   210.1     967   210.5     968  210.61  989.25
GR199.61  989.25  199.61  999.25  200.61 1000.75  200.61 1010.75  210.61 1010.75
GR 210.1    1025   210.0    1070   220.0 1070.01
NC     0       0   0.025       0       0
QT     2    3470     560       0       0       0
X1  6517      16   977.0    1023   129.0   129.0   129.0       0       0       0
CI    -1  210.80   0.045       0       0       0  -100.0
X3    10
GR   220     908   210.5  908.01   210.7   931.0   211.0   973.0   211.3   977.0
GR   211     980   210.0     981   205.0   987.0   200.0   993.0   200.0  1011.0
GR   205    1014   210.0    1019   211.5  1023.0   210.0  1030.0   210.0  1080.0
GR   220 1080.01
NC     0       0       0     0.1    0.35
X1  6714      29   979.0  1017.5   197.0   197.0   197.0     0.0     0.0       0
CI    -1  210.50       0       0       0       0  -100.0
X3    10
GR   224     898   214.0  898.01   213.0   901.0   212.0   905.5   211.0   955.0
GR 211.0   958.0   211.4   969.5   211.0   979.0   210.0   981.0   205.0   986.5
GR 201.0   991.0   200.3  1000.0   201.1  1007.0   205.0  1010.5   210.0  1015.5
GR 211.0  1017.5   211.3  1026.5   211.0  1035.5   210.8  1043.0   211.0  1050.0
GR 212.0  1078.5   212.7  1081.5   212.0  1083.5   210.0  1086.0   208.0  1089.5
GR 207.6  1092.5   209.0  1095.0   210.0  1096.5     220 1096.51
QT     2    3330     720       0       0       0
X1  7115    30.0   979.0  1022.0   401.0   401.0   401.0     0.0     0.0       0
CI    -1  211.50       0       0       0       0  -100.0
X3    10
GR 222.1   904.5   212.1  904.51   212.0   910.0   211.9   912.0   212.0   915.0
GR 212.4   930.0   212.0   950.5   211.8   954.5   212.0   959.2   213.0   973.5
GR 213.1   976.5   213.0   979.0   212.0   981.5   211.5   982.5   210.0   983.5
GR 205.0   989.0   201.0   995.5   200.6  1000.0   201.0  1009.5   205.0  1012.5
GR 210.0  1018.5   211.0  1021.0   212.0  1022.0   213.0  1068.5   213.5  1077.5
GR 213.0  1086.0   210.0  1090.5   208.1  1095.0   210.0  1100.0   220.0 1100.01
QT     2    3310     700       0       0       0
X1  7515    33.0   979.5  1022.0   400.0   400.0   400.0     0.0     0.0       0
CI    -1  212.50       0       0       0       0  -100.0
X3    10
GR 224.0   902.5   220.0  902.51   214.0  902.52   214.0   903.5   213.0   921.5
GR 213.3   931.0   213.0   979.5   210.0   982.0   205.0   988.0   204.0   990.0
GR 203.0   992.0   202.0   994.5   201.0   996.0   200.9  1000.0   201.0  1007.5
GR 205.0  1011.0   210.0  1016.0   211.0  1018.0   212.0  1020.3   213.0  1022.0
GR 213.4  1033.0   213.0  1048.0   213.0  1050.0   214.0  1080.5   213.0  1083.5
GR 212.0  1085.0   210.0  1087.0   209.0  1090.0   208.9  1093.0   209.0  1095.0
GR 210.0  1096.5   212.0  1100.5   222.0 1100.51
X1  7715    32.0   978.0  1021.0   200.0   200.0   200.0     0.0     0.0       0
CI    -1  213.50       0       0       0       0  -100.0
X3    10
GR 224.5   900.0   214.5  900.01   214.0   918.5   214.0   920.0   214.4   950.0
GR 214.0   978.0   212.0   982.0   210.0   984.0   205.0   989.5   204.0   991.5
GR 202.0   993.0   201.5  1000.0   203.0  1007.0   205.0  1009.5   210.0  1014.0
GR 214.0  1021.0   214.4  1034.0   214.0  1049.0   213.9  1051.0   214.0  1054.0
GR 215.0  1075.0   215.2  1081.0   215.0  1087.0   213.0  1091.0   212.0  1091.5
GR 211.0  1094.0   211.0  1101.0   214.0  1105.5   214.5  1108.0   214.0  1109.0
GR 212.5  1123.0   222.5 1123.01
X1  7916    25.0   978.0  1019.5   201.0   201.0   201.0     0.0     0.0       0
CI    -1  214.00       0       0       0       0  -100.0
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X3     10
GR 225.6   901.5   215.6  901.51   215.0   918.0   215.0   921.0   215.1   930.0
GR 216.0   978.0   215.0   980.5   210.0   986.0   205.0   991.5   204.0   993.0
GR 203.0   994.5   202.1  1000.0   203.0  1005.5   205.0  1007.5   210.0  1012.5
GR 211.0  1014.0   212.0  1015.5   213.0  1016.5   214.0  1018.0   215.0  1019.5
GR 215.6  1026.5   215.0  1052.0   215.4 1052.01   215.0  1089.0   225.0 1089.01
QT      2    2300     480       0       0       0
X1   8317    26.0   973.0  1020.5   401.0   401.0   401.0     0.0     0.0       0
CI     -1  216.00       0       0       0       0  -100.0
X3     10
GR 227.7   905.5   222.7  905.51   217.7  905.52   218.0   952.5   219.0   962.0
GR 219.4   968.0   219.0   973.0   218.0   977.0   217.0   978.5   216.0   980.0
GR 215.0   980.5   210.0   986.8   205.0   993.0   204.0   995.0   203.0  1000.0
GR 205.0  1006.0   210.0  1011.0   215.0  1016.5   216.0  1019.0   217.0  1020.5
GR 218.0  1054.0   218.6  1068.0   218.0  1080.0   217.0  1083.0   216.0  1086.0
GR 226.0 1086.01
X1   8717    31.0   976.5  1024.0   400.0   400.0   400.0     0.0     0.0       0
CI     -1  218.75       0       0       0       0  -100.0
X3     10
GR 230.1   904.5   220.1  904.51   220.0   909.0   220.0   914.0   220.4   928.0
GR 220.0   942.5   219.9   945.5   220.0   949.0   221.0   965.0   221.6   972.5
GR 221.0   976.5   220.0   978.0   215.0   982.5   210.0   988.5   205.0   992.0
GR 204.0   994.5   204.0  1000.0   204.0  1005.5   205.0  1007.0   210.0  1011.5
GR 215.0  1017.0   220.0  1022.0   221.0  1024.0   221.4  1029.5   221.0  1040.0
GR 220.9  1045.0   221.0  1050.0   221.2  1065.0   221.0  1080.0   220.0  1084.0
GR 230.0 1084.01
X1   8859      21     974    1024     142     142     142       0       0       0
CI     -1  219.72       0       0       0       0  -100.0
X3     10
GR 231.3     902   221.3  902.01   221.0     912   221.4     926   221.0     939
GR 221.3     966   221.0     974   220.0     976   210.0     987   205.0     990
GR 204.6     993   204.6    1002   205.0    1004   220.0    1020   221.0    1022
GR 222.0    1024   222.4    1032   222.0    1059   221.0    1076   220.0    1085
GR 230.0 1085.01
NC      0       0       0     0.3     0.5
X1   8977      19     976    1026     118     118     118     0.0     0.0       0
CI     -1  220.53       0       0       0       0  -100.0
X3     10
GR 232.0     900   222.0  900.01   222.0     912   222.5     924   221.6     942
GR 222.0     956   222.4     966   222.0     976   213.9  983.55   213.9     993
GR 205.9     993   205.9    1010   213.9    1010   213.9    1015   215.9    1015
GR 222.0    1026   222.0    1084   221.5    1090   232.0 1090.01
NC      0       0   0.016       0       0
QT      2    2270     450       0       0       0
SB   1.25    1.69     2.6       0      17    3.83  105.36       0  206.49  205.90
X1   9037      16     974    1029      60      60      60     0.0     0.0       0
CI     -1  220.94   0.045       0       0       0  -100.0
X2      0       0       1  214.49   222.5       0       0       0       0       0
BT     15     927   222.6   222.6     935   222.5   222.5     935   222.1   222.1
BT    974   222.6   222.6     983   222.6  214.49     983   223.9  214.49     993
BT  223.9  214.49     993   223.9  206.49    1010   223.9  206.49    1010   223.9
BT214.49    1014   223.9  214.49    1014   222.5   216.5    1022   222.5   221.0
BT   1029   222.5   222.5    1065   222.5   222.5
GR 233.0     927   222.6  927.01   222.5     935   222.1     935   222.6     974
GR214.49  982.05  214.49     993  206.49     993  206.49    1010  214.49    1010
GR214.49    1014   216.5    1014   221.0    1022   222.5    1029   222.5    1065
GR 233.0 1065.01
NC      0       0   0.028       0       0
QT      2    2270     450       0       0       0
X1   9118    27.0   973.0  1025.5      81      81      81     0.0     0.0       0
CI     -1  221.50   0.045       0       0       0  -100.0
X3     10
GR 233.0   927.0   230.0  927.01   227.0  927.02   223.0  927.03   224.0   965.5
GR 224.4   969.5   224.0   973.0   223.0   975.0   222.0   976.8   221.0   978.0
GR 220.0   979.5   215.0   984.5   210.0   990.0   207.0   992.0   205.6  1000.0
GR 207.0  1007.0   210.0  1010.8   215.0  1016.0   220.0  1021.5   223.0  1025.5
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GR	223.6	1039.0	223.0	1052.0	220.0	1055.5	221.0	1065.0	222.0	1068.5
GR	222.3	1084.0	233.3	1084.01						
NC	0	0	0	0.1	0.35					
X1	9318	30.0	979.0	1024.0	200.0	200.0	200.0	0.0	0.0	0
CI	-1	222.87	0	0	0	0	-100.0			
X3	10									
GR	233.9	929.0	223.9	929.01	224.0	959.5	225.0	964.5	225.6	971.5
GR	225.0	979.0	224.0	982.8	223.0	985.0	220.0	989.0	215.0	991.0
GR	210.0	994.0	208.0	995.0	206.4	1000.0	208.0	1006.0	210.0	1008.0
GR	215.0	1011.0	220.0	1017.0	225.0	1024.0	225.8	1033.0	225.0	1043.0
GR	224.9	1045.0	225.0	1049.0	225.0	1051.0	220.0	1059.5	219.5	1062.0
GR	220.0	1065.0	222.0	1067.0	223.0	1069.0	223.2	1084.5	233.2	1084.51
QT	2	1700	120	0	0	0				
X1	9518	27.0	975.1	1025.0	200.0	200.0	200.0	0.0	0.0	0
CI	-1	224.25	0	0	0	0	-100.0			
X3	10									
GR	235.3	929.5	225.3	929.51	225.0	944.0	226.0	964.5	227.0	971.0
GR	227.1	973.1	227.0	975.1	226.0	978.8	225.0	980.3	220.0	985.0
GR	215.0	990.5	210.0	996.0	207.2	1000.0	208.0	1003.5	210.0	1005.0
GR	215.0	1008.0	220.0	1013.0	225.0	1019.0	226.0	1021.0	227.0	1025.0
GR	227.2	1034.8	225.0	1054.0	220.0	1061.0	220.0	1067.0	223.0	1071.0
GR	224.5	1084.0	234.5	1084.01						
QT	2	1700	110	0	0	0				
X1	9919	29.0	967.8	1030.0	401.0	401.0	401.0	0.0	0.0	0
CI	-1	227.00	0	0	0	0	-100.0			
X3	10									
GR	238.8	933.0	228.8	933.01	228.8	958.0	228.0	967.8	227.0	968.5
GR	226.0	973.0	225.0	975.0	223.0	979.5	220.0	985.5	215.0	992.0
GR	213.0	993.5	212.2	1000.0	213.0	1001.5	214.0	1006.0	215.0	1007.0
GR	220.0	1011.5	225.0	1018.0	227.0	1023.0	229.0	1027.0	230.0	1030.0
GR	230.2	1038.5	230.0	1048.5	225.0	1057.0	223.0	1059.0	223.0	1063.0
GR	225.0	1065.5	227.0	1070.0	227.1	1080.5	237.1	1080.51		
X1	10119	21.0	976.0	1023.0	200.0	200.0	200.0	0.0	0.0	0.0
CI	-1	229.00	0	0	0	0	-100.0			
X3	10									
GR	240.3	934.5	230.3	934.51	230.4	962.0	230.0	976.0	225.0	984.8
GR	220.0	993.5	215.0	1000.0	217.0	1004.0	218.0	1007.5	220.0	1008.5
GR	225.0	1013.0	229.0	1019.5	230.0	1023.0	230.7	1034.0	230.0	1048.0
GR	225.0	1058.0	224.7	1060.5	225.0	1064.0	228.0	1066.0	229.0	1076.0
GR	239.0	1076.01								
X1	10319	32.0	972.5	1028.0	200.0	200.0	200.0	0.0	0.0	0
CI	-1	231.00	0	0	0	0	-100.0			
X3	10									
GR	243.0	948.0	233.0	948.01	232.6	948.02	232.0	972.5	231.0	974.0
GR	230.0	978.0	225.0	990.0	220.0	995.0	219.0	996.0	218.0	998.0
GR	217.8	1000.0	218.0	1001.0	219.0	1002.0	220.0	1003.0	225.0	1010.0
GR	230.0	1019.0	231.0	1021.5	232.0	1024.0	232.8	1028.0	232.9	1034.0
GR	232.8	1043.0	233.0	1054.0	233.0	1055.0	232.0	1056.5	230.0	1058.0
GR	229.0	1060.0	228.6	1062.0	229.0	1064.0	230.0	1065.0	231.0	1067.5
GR	231.0	1070.0	241.0	1070.01						
X1	10720	34.0	981.0	1019.5	401.0	401.0	401.0	0.0	0.0	0
CI	-1	235.00	0	0	0	0	-100.0			
X3	10									
GR	246.0	955.0	236.0	955.01	236.0	964.0	236.0	969.5	237.0	979.0
GR	237.1	981.0	236.0	984.5	235.0	986.5	230.0	993.5	225.0	995.5
GR	221.0	997.0	220.5	1000.0	221.0	1003.5	225.0	1005.0	230.0	1010.5
GR	231.0	1012.0	232.0	1013.5	233.0	1015.0	234.0	1016.0	235.0	1017.0
GR	236.0	1019.5	236.5	1037.0	236.0	1052.5	235.0	1054.5	234.0	1056.0
GR	233.0	1057.0	232.0	1058.5	231.0	1059.0	230.1	1064.0	231.0	1068.0
GR	232.0	1069.0	233.0	1070.0	233.0	1073.5	243.0	1073.51		
X1	11120	32.0	976.0	1028.0	400.0	400.0	400.0	0.0	0.0	0
CI	-1	239.00	0	0	0	0	-100.0			
X3	10									
GR	249.6	949.5	239.6	949.51	240.0	953.5	241.0	970.5	241.3	973.0
GR	241.0	976.0	240.0	978.5	239.0	981.0	238.0	982.0	237.0	983.5
GR	236.0	984.5	235.0	986.0	230.0	992.5	225.0	996.0	222.0	997.0

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GR 222.0  1004.0   225.0  1005.0   230.0  1008.5   231.0  1011.5   232.0  1014.0
GR 233.0  1015.0   234.0  1017.0   235.0  1018.0   236.0  1020.0   237.0  1021.5
GR 238.0  1023.0   239.0  1025.5   240.0  1028.0   240.5  1038.5   240.0  1047.5
GR 239.7  1049.0   249.7 1049.01
X1 11408    16.0   978.0  1022.3   288.0   288.0   288.0     0.0     0.0       0
CI    -1 240.00       0       0       0       0  -100.0
X3    10
GR 251.6   941.5   241.6   941.51   241.0   954.5   241.0   973.0   241.0   978.0
GR 240.0   981.5   235.0   990.0    230.0   994.8   226.0  1000.0   230.0  1009.0
GR 235.0  1011.0   240.0  1018.0    241.0  1022.3   241.5  1035.5   241.0  1049.0
GR 251.0 1049.01
NC     0       0       0     0.1    0.35
X1 11558      18     979    1020   149.2   151.2   150.0     0.0     0.0       0
CI    -1 242.00       0       0       0       0  -100.0
X3    10
GR253.00     951  243.00  951.01  242.80     964  243.00     979  238.47     992
GR238.47     993  229.22     993  229.22 1011.17  237.22 1011.17  237.22    1013
GR238.47    1013  238.47    1014  243.00    1020  243.10    1023  242.70    1024
GR243.10    1032  242.40    1046  253.00 1046.01
NC     0       0   0.016       0       0
QT     2    1640      60       0       0       0
SB  1.25    1.69     2.6       0   18.17    5.00  105.36       0  229.70  229.22
X1 11690      22   976.0  1017.0   129.0   136.3   132.0     0.0     0.0       0
CI    -1 242.60   0.045       0       0       0  -100.0
X2     0       0       1  237.70   243.1       0       0       0       0       0
BT    16     950   244.0  244.00     974   244.0  243.70     976   244.0  243.60
BT   989   244.0  238.95     990   244.0  238.95     990   244.0  237.70    1010
BT 244.0  237.70    1010   244.0  238.95    1011   244.0  238.95    1015   244.0
BT243.00    1017   244.0  243.80    1018   244.0  243.40    1031   244.0  244.00
BT  1042   244.0  244.00    1074   243.1  243.10    1075   243.5  243.50
GR 254.0     939   244.3  939.01   244.0     950   243.7     974   243.6     976
GR238.95     989  238.95     990   229.7     990   229.7 1008.17   237.7 1008.17
GR 237.7    1010  238.95    1010  238.95    1011   243.0    1015   243.8    1017
GR 243.4    1018   244.0    1031   244.0    1042   243.1    1074   243.5    1075
GR 243.6    1080   254.0 1080.01
EJ
T1      FERGUSON   GREINER, INC  02-19-92     (FILENAME = T-M3D2A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL M3D2A                     u/s of McDowell Road
J1     0       3       0       0 0.00532       0       0       0   180.0       0
J2    15       0       0       0       0       0       0       7       0       0


ER
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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    19FEB93    TIME   14:05:25 *
 *****************************************
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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*         (916) 756-1104            *
*************************************
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X     X  XXXXXXX   XXXXX            XXXXX
X     X  X       X     X          X     X
X     X  X       X                      X
XXXXXXX  XXXX     X         XXXXX   XXXXX
X     X  X       X                X
X     X  X       X     X          X
X     X  XXXXXXX   XXXXX           XXXXXXX
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THIS RUN EXECUTED 19FEB93 14:05:25

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************
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T1      FERGUSON    GREINER, INC 02-19-92     (FILENAME = T-M3D2A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL FLOW M3D2A                   u/s of McDowell Road

  Cross-section numbering has been changed:
        d/s face of the McDowell Rd. culverts ===> XS  #726.00
        u/s       "       "       "          ===> XS #1000.00
        The XS numbering u/s of McDowell Rd. has been modified accordingly.
        These XS #'s apply to the all other HEC-2 runs


J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL     FQ

               2                        .00532                                  180

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN       ALLDC     IBW      CHNIM    ITRACE

     1        0        0        0        0        0        0        6        0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38       43       39        4       25       26       23       24        1       42

QT       2     4710     5470        0        0        0        0        0        0
  Refer to the Comments after XS #766 about the discharges.
NC    .035     .035     .015
X1       0        7   999.99  1016.01
X3      10                     1000                1016
GR  184.67   950.00   184.67   999.99   170.00  1000.00   169.67  1008.00   170.00  1016.00
GR  184.67  1016.01   184.67  1066.00
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X1      384        7     999.99    1016.01       374       394       384
X3       10
GR   186.71   950.00    186.71     999.99    172.04   1000.00    171.71   1008.00    172.04   1016.00
GR   186.71  1016.01    186.71    1066.00

X1      434        7     999.99    1016.01        49        51        50
X3       10
GR   188.36   950.00    188.36     999.99    172.31   1000.00    171.98   1008.00    172.31   1016.00
GR   188.36  1016.01    188.36    1066.00
1
   19FEB93     14:05:25                                                                          PAGE    2


X1      484        7     999.99    1016.01        49        51        50
X3       10
GR   190.00   950.00    190.00     999.99    173.13   1000.00    172.80   1008.00    173.13   1016.00
GR   190.00  1016.01    190.00    1066.00

NC                                     .3        .5
X1      684        7     999.99    1026.01       200       200       200
GR   190.00   950.00    190.00     999.99    176.50   1000.00    176.07   1013.00    176.50   1026.00
GR   190.00  1026.01    190.00    1076.00

X1      726        7      1000       1026        42        42        42
X3       10                                                                  189       189
GR   192.00   950.00    189.00     999.99    177.11   1000.00    177.11   1013.00    177.11   1026.00
GR   189.00  1026.01    192.00    1076.00
  The discharges d/s of McDowell Road are 500, 750, 1000 cfs less than the u/s
     discharges for 25, 50, 100-yr event, respectively.  This is due to the
     assumption that those amount of discharges do not join the d/s channel
     flowing west along the McDowell Road.

SC    2.014       .2       2.6                 10        12       274       9.2    179.85    177.11
X1     1000       10       987      1013       274       274       274
X2                          2    189.85
X3       10                                                                  194       194
X5        2   195.20    196.90
BT       -7      966    193.00                972    193.00                 975    194.00
BT               985    194.00               1027    194.00                1041    193.90
BT              1070    193.90
GR      193      966       193       972       194    984.99    193.87       985    179.85       987
GR   179.85     1013    193.87      1027       194   1027.01     193.9      1041     193.9      1070

NC    0.040    0.040     0.025         0         0
QT        2     4710      1370         0         0         0
X1     1110     14.0    973.01    1024.0     111.0     108.0     110.0       0.0       0.0         0
CI       -1   191.44     0.045         0         0         0    -100.0
X3       10
GR    205.0    973.0     195.0    973.01     190.0     980.0     185.0     984.5     181.0     989.0
GR    181.0   1000.0     181.0    1006.0     185.0    1013.0     190.0    1018.5     195.0    1024.0
GR    195.5   1030.0     195.0    1036.0     194.0    1058.0     204.0   1058.01

NC        0        0         0       0.1      0.35
X1     1514     14.0    974.01    1030.0     418.0     390.0     404.0       0.0       0.0         0
CI       -1   194.39         0         0         0         0    -100.0
X3       10
GR    208.6    974.0     198.6    974.01     195.0     977.0     185.0     988.0     181.1     992.0
GR    181.1   1010.0     185.0    1014.0     195.0    1023.0     198.6    1030.0     198.0    1034.5
GR    197.0   1046.0     197.0    1053.0     197.0    1057.0     207.0    1057.0

QT        2     4490      1150         0         0         0
X1     1912     17.0    972.4    1034.0     408.0     388.0     398.0       0.0       0.0         0
CI       -1   195.51         0         0         0         0    -100.0
X3       10
```

GR	210.5	912.0	205.0	912.01	200.5	912.02	203.0	926.0	203.6	948.0
GR	203.0	972.4	200.0	975.5	185.0	989.0	181.7	994.0	181.7	1011.0

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GR	185.0	1015.0	200.0	1029.0	202.7	1034.0	202.0	1044.0	201.0	1055.0
GR	200.0	1064.0	210.0	1064.0						
X1	2312	26.0	969.0	1028.0	410.0	390.0	400.0	0.0	0.0	0
CI	-1	194.74	0	0	0	0	-100.0			
X3	10									
GR	213.5	900.5	207.5	900.51	205.5	900.52	203.5	900.53	204.9	925.2
GR	204.2	961.5	204.0	969.0	203.0	971.8	200.0	974.2	195.0	979.5
GR	190.0	983.8	185.0	987.5	184.0	988.5	183.0	989.5	183.2	1000.0
GR	185.0	1009.5	190.0	1014.5	195.0	1019.5	200.0	1024.5	203.0	1028.0
GR	203.9	1036.0	203.0	1047.0	202.0	1054.0	201.0	1063.0	200.9	1070.0
GR	210.9	1070.01								
NC	0	0	0	0.3	0.5					
X1	2485	23.0	969.7	1027.5	173.0	173.0	173.0	0.0	0.0	0
CI	-1	197.14	0	0	0	0	-100.0			
X3	10									
GR	213.8	904.5	203.8	904.51	204.0	922.5	204.1	929.4	204.1	937.0
GR	203.0	969.7	200.0	977.5	199.0	980.5	198.0	984.0	197.6	990.0
GR	197.6	991.0	183.9	991.0	183.9	1007.0	197.6	1007.0	197.6	1008.0
GR	198.0	1013.0	199.0	1016.0	200.0	1018.5	203.0	1027.5	203.0	1035.0
GR	203.0	1043.0	201.6	1064.0	211.6	1064.01				
NC	0	0	0.016	0	0					
X1	2515	20	963	1026	30	30	30	0	0	0
CI	-1	197.96	0.045	0	0	0	-100.0			
GR	213.90	901	203.90	901.01	204.00	926	204.00	934	203.00	963
GR	202.00	972	200.00	979	199.00	982	197.60	990	197.60	991
GR	184.00	991	184.00	1007	197.60	1007	199.00	1014	201.00	1019
GR	203.00	1026	203.00	1042	202.00	1053	201.50	1059	211.50	1059.01
X1	2530	16.0	959.8	1025.0	15.0	15.0	15.0	0.0	0.0	0.0
CI	-1	198.91	0	0	0	0	-100.0			
GR	213.9	901.0	203.9	901.01	203.0	959.8	197.6	980.0	197.6	991.5
GR	188.3	991.5	188.3	1007.5	197.6	1007.5	197.6	1018.0	200.0	1021.0
GR	203.0	1025.0	203.2	1036.0	203.0	1042.0	202.0	1050.0	201.5	1059.0
GR	211.5	1059.01								
NC	0	0	0.025	0	0					
QT	2	4410	1080	0	0	0				
X1	2712	18.0	975.8	1022.0	182.0	182.0	182.0	0.0	0.0	0
CI	-1	201.20	0.045	0	0	0	-100.0			
X3	10									
GR	214	899	203.7	899.01	204.2	970.0	204.0	975.8	200.0	980.8
GR	195.0	985.0	190.0	990.0	188.5	991.0	188.5	1007.0	190.0	1009.5
GR	195.0	1014.8	200.0	1019.5	203.0	1022.0	203.6	1036	203.0	1047.0
GR	202.0	1051.0	201.5	1057.0	211.5	1057.01				
NC	0	0	0	0.1	0.35					
X1	3112	22.0	971.0	1021.0	400.0	400.0	400.0	0.0	0.0	0
CI	-1	202.26	0	0	0	0	-100.0			
X3	10									
GR	214.0	893.5	204.0	893.51	203.0	900.8	203.6	908.0	203.0	917.0
GR	202.0	951.0	205.0	969.5	205.4	971.0	205.0	973.0	200.0	980.0

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GR	195.0	984.7	190.0	988.8	189.4	1000.0	190.0	1006.8	195.0	1011.5
GR	200.0	1016.5	204.0	1021.0	204.5	1034.0	204.0	1045.0	203.0	1048.0

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GR    202.4     1060.0      212    1060.01

QT        2       4350     1010         0         0         0
X1     3513       22.0    976.8    1020.8     401.0     401.0     401.0       0.0       0.0         0
CI       -1     203.35        0         0         0         0    -100.0
X3       10
GR    214.0      896.0    204.0     896.01     205.0     923.0     205.1     933.5     205.0     942.0
GR    204.8      949.0    205.5      955.0     206.2     966.0     205.0     976.8     200.0     981.8
GR    195.0      986.8    191.0      990.8     190.8    1000.0     191.0    1007.0     195.0    1011.1
GR    200.0     1015.8    205.0     1020.8     205.2    1035.0     205.0    1047.0     204.0    1051.0
GR    203.4     1080.0    213.4    1080.01

X1     3913       19.0    976.0    1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     204.04        0         0         0         0    -100.0
X3       10
GR    215.1      898.0    210.1     898.01     205.1     898.02     204.6     942.0     205.0     967.0
GR    205.8      976.0    205.0      978.5     200.0     984.1     195.0     989.2     192.0     992.5
GR    191.3     1000.0    192.0     1006.5     195.0    1009.5     200.0    1015.0     205.0    1020.5
GR    206.0     1022.0    206.7     1028.5     202.4    1082.0     212.4    1082.01

X1     4313       28.0    979.5    1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     204.50        0         0         0         0    -100.0
X3       10
GR    215.1      899.0    205.1     899.01     205.0     930.5     205.1     937.0     205.0     944.0
GR    204.4      959.0    205.0      971.0     205.1     977.0     205.0     979.5     200.0     985.0
GR    195.0      990.0    193.0      999.0     192.6    1000.0     193.0    1004.0     194.0    1008.0
GR    195.0     1009.0    200.0     1014.5     205.0    1018.5     206.0    1020.0     207.0    1022.0
GR    207.3     1025.0    207.0     1028.5     206.0    1038.0     205.0    1043.0     204.0    1052.0
GR    203.0     1058.0    202.3     1088.0     212.3    1088.01

QT        2       3850      940         0         0         0
X1     4713       24.0    976.0    1020.5     400.0     400.0     400.0       0.0       0.0         0
CI       -1     205.50        0         0         0         0    -100.0
X3       10
GR    215.9      915.0    213.9     915.01     210.9     915.02     205.9    915.03     206.0     972.0
GR    206.6      976.0    206.0      979.5     205.0     981.0     200.0     986.0     195.0     990.3
GR    193.0      992.0    192.8      995.0     193.0     998.5     194.0    1006.0     195.0    1007.5
GR    200.0     1013.5    205.0     1018.5     206.0    1020.5     206.5    1027.0     206.0    1034.8
GR    205.0     1040.5    204.0     1054.0     203.2    1085.0     213.2    1085.01

QT        2       3540      630         0         0         0
X1     5113       23.0    977.0    1022.0     400.0     400.0     400.0       0.0       0.0         0
CI       -1     206.50        0         0         0         0    -100.0
X3       10
GR    216.9      913.5    211.9     913.51     208.9     913.52     206.9    913.53     207.0     976.0
GR    207.2      977.0    207.0      978.0     206.0     980.0     205.0     981.5     200.0     987.5
GR    195.0      992.5    194.5     1000.0     195.0    1008.5     200.0    1013.0     205.0    1018.5
GR    206.0     1019.5    207.0     1022.0     207.1    1026.5     207.0    1031.0     206.0    1048.0
GR    205.0     1069.0    204.5     1095.0     214.5    1095.0
1
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QT        2       3530      620         0         0         0
X1     5513       17.0    980.5    1018.5     400.0     400.0     400.0       0.0       0.0         0
CI       -1     206.50        0         0         0         0    -100.0
X3       10
GR    217.9      912.0    207.9     912.01     207.7     944.0     207.0     980.5     206.0     982.0
GR    205.0      982.5    200.0      987.0     196.0     991.0     195.6    1000.0     196.0    1007.0
GR    200.0     1010.5    205.0     1015.5     207.0    1018.5     207.8    1028.5     207.0    1054.0
GR    206.6     1085.0    216.6    1085.01

X1     5914       24.0    977.5    1020.0     401.0     401.0     401.0       0.0       0.0         0
CI       -1     207.50        0         0         0         0    -100.0
X3       10
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GR    219.3     916.0     209.3     916.01    209.0     953.5     208.0     977.5     207.0     979.0
GR    206.0     980.5     205.0     982.0     200.0     988.0     199.0     990.0     198.0     991.0
GR    197.0     993.5     196.6     997.0     197.0     1000.0    197.1     1001.0    197.0     1002.0
GR    196.6     1007.0    197.0     1009.0    200.0     1011.5    205.0     1015.5    208.0     1020.0
GR    208.6     1047.0    208.0     1076.0    207.8     1086.2    217.8     1086.21

X1    6156      21        978       1024      242       242       242       0         0         0
CI    -1        208.27    0         0         0         0         -100.0
X3    10
GR    220.0     911       210.1     911.01    210.4     940       210.0     955       209.6     964
GR    210.1     964       210.0     978       205.0     983       200.0     988       198.0     991
GR    197.8     992       197.8     1005      198.0     1007      200.0     1009      205.0     1014
GR    209.0     1018      209.8     1024      209.6     1044      209.0     1058      208.5     1075
GR    218.0     1075.01

NC    0         0         0         0.3       0.5
X1    6307      17        989.25    1012      151       151       151       0         0         0
CI    -1        209.25    0         0         0         0         -100.0
X3    10
GR    220.0     908       210.1     908.01    210.5     937       210.1     969       210.5     970
GR    210.0     987       209.75    989.25    198.75    989.25    198.75    999.25    199.75    1000.75
GR    199.75    1010.75   209.75    1010.75   210.1     1012      210.5     1028      210.1     1029
GR    210.0     1063      220.0     1063.01

NC    0         0         0.016     0         0
QT    2         3470      560       0         0         0
SB    1.25      1.58      2.60      0         20.5      1.5       190       0.01      199.51    198.75
X1    6388      13        989.25    1010.75   81        81        81        0         0         0
CI    -1        210.11    0.045     0         0         0         -100.0
X2    0         0         1         209.61    210.61    0         0         0         0         0
BT    5         968       210.61    209.61    989.25    210.61    209.61    989.25    211.22    209.61
BT    1010.8    211.22    209.61    1025      210.61    209.61
GR    220.0     901       210.3     901.01    210.1     967       210.5     968       210.61    989.25
GR    199.61    989.25    199.61    999.25    200.61    1000.75   200.61    1010.75   210.61    1010.75
GR    210.1     1025      210.0     1070      220.0     1070.01
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NC    0         0         0.025     0         0
QT    2         3470      560       0         0         0
X1    6517      16        977.0     1023      129.0     129.0     129.0     0         0         0
CI    -1        210.80    0.045     0         0         0         -100.0
X3    10
GR    220       908       210.5     908.01    210.7     931.0     211.0     973.0     211.3     977.0
GR    211       980       210.0     981       205.0     987.0     200.0     993.0     200.0     1011.0
GR    205       1014      210.0     1019      211.5     1023.0    210.0     1030.0    210.0     1080.0
GR    220       1080.01

NC    0         0         0         0.1       0.35
X1    6714      29        979.0     1017.5    197.0     197.0     197.0     0.0       0.0       0
CI    -1        210.50    0         0         0         0         -100.0
X3    10
GR    224       898       214.0     898.01    213.0     901.0     212.0     905.5     211.0     955.0
GR    211.0     958.0     211.4     969.5     211.0     979.0     210.0     981.0     205.0     986.5
GR    201.0     991.0     200.3     1000.0    201.1     1007.0    205.0     1010.5    210.0     1015.5
GR    211.0     1017.5    211.3     1026.5    211.0     1035.5    210.8     1043.0    211.0     1050.0
GR    212.0     1078.5    212.7     1081.5    212.0     1083.5    210.0     1086.0    208.0     1089.5
GR    207.6     1092.5    209.0     1095.0    210.0     1096.5    220       1096.51

QT    2         3330      720       0         0         0
X1    7115      30.0      979.0     1022.0    401.0     401.0     401.0     0.0       0.0       0
CI    -1        211.50    0         0         0         0         -100.0
X3    10
GR    222.1     904.5     212.1     904.51    212.0     910.0     211.9     912.0     212.0     915.0
```

GR	212.4	930.0	212.0	950.5	211.8	954.5	212.0	959.2	213.0	973.5
GR	213.1	976.5	213.0	979.0	212.0	981.5	211.5	982.5	210.0	983.5
GR	205.0	989.0	201.0	995.5	200.6	1000.0	201.0	1009.5	205.0	1012.5
GR	210.0	1018.5	211.0	1021.0	212.0	1022.0	213.0	1068.5	213.5	1077.5
GR	213.0	1086.0	210.0	1090.5	208.1	1095.0	210.0	1100.0	220.0	1100.01
QT	2	3310	700	0	0	0				
X1	7515	33.0	979.5	1022.0	400.0	400.0	400.0	0.0	0.0	0
CI	-1	212.50	0	0	0	0	-100.0			
X3	10									
GR	224.0	902.5	220.0	902.51	214.0	902.52	214.0	903.5	213.0	921.5
GR	213.3	931.0	213.0	979.5	210.0	982.0	205.0	988.0	204.0	990.0
GR	203.0	992.0	202.0	994.5	201.0	996.0	200.9	1000.0	201.0	1007.5
GR	205.0	1011.0	210.0	1016.0	211.0	1018.0	212.0	1020.3	213.0	1022.0
GR	213.4	1033.0	213.0	1048.0	213.0	1050.0	214.0	1080.5	213.0	1083.5
GR	212.0	1085.0	210.0	1087.0	209.0	1090.0	208.9	1093.0	209.0	1095.0
GR	210.0	1096.5	212.0	1100.5	222.0	1100.51				
X1	7715	32.0	978.0	1021.0	200.0	200.0	200.0	0.0	0.0	0
CI	-1	213.50	0	0	0	0	-100.0			
X3	10									
GR	224.5	900.0	214.5	900.01	214.0	918.5	214.0	920.0	214.4	950.0
GR	214.0	978.0	212.0	982.0	210.0	984.0	205.0	989.5	204.0	991.5
GR	202.0	993.0	201.5	1000.0	203.0	1007.0	205.0	1009.5	210.0	1014.0
GR	214.0	1021.0	214.4	1034.0	214.0	1049.0	213.9	1051.0	214.0	1054.0
GR	215.0	1075.0	215.2	1081.0	215.0	1087.0	213.0	1091.0	212.0	1091.5
GR	211.0	1094.0	211.0	1101.0	214.0	1105.5	214.5	1108.0	214.0	1109.0

1

GR	212.5	1123.0	222.5	1123.01
X1	7916	25.0	978.0	1019.5	201.0	201.0	201.0	0.0	0.0	0
CI	-1	214.00	0	0	0	0	-100.0			
X3	10									
GR	225.6	901.5	215.6	901.51	215.0	918.0	215.0	921.0	215.1	930.0
GR	216.0	978.0	215.0	980.5	210.0	986.0	205.0	991.5	204.0	993.0
GR	203.0	994.5	202.1	1000.0	203.0	1005.5	205.0	1007.5	210.0	1012.5
GR	211.0	1014.0	212.0	1015.5	213.0	1016.5	214.0	1018.0	215.0	1019.5
GR	215.6	1026.5	215.0	1052.0	215.4	1052.01	215.0	1089.0	225.0	1089.01
QT	2	2300	480	0	0	0				
X1	8317	26.0	973.0	1020.5	401.0	401.0	401.0	0.0	0.0	0
CI	-1	216.00	0	0	0	0	-100.0			
X3	10									
GR	227.7	905.5	222.7	905.51	217.7	905.52	218.0	952.5	219.0	962.0
GR	219.4	968.0	219.0	973.0	218.0	977.0	217.0	978.5	216.0	980.0
GR	215.0	980.5	210.0	986.8	205.0	993.0	204.0	995.0	203.0	1000.0
GR	205.0	1006.0	210.0	1011.0	215.0	1016.5	216.0	1019.0	217.0	1020.5
GR	218.0	1054.0	218.6	1068.0	218.0	1080.0	217.0	1083.0	216.0	1086.0
GR	226.0	1086.01								
X1	8717	31.0	976.5	1024.0	400.0	400.0	400.0	0.0	0.0	0
CI	-1	218.75	0	0	0	0	-100.0			
X3	10									
GR	230.1	904.5	220.1	904.51	220.0	909.0	220.0	914.0	220.4	928.0
GR	220.0	942.5	219.9	945.5	220.0	949.0	221.0	965.0	221.6	972.5
GR	221.0	976.5	220.0	978.0	215.0	982.5	210.0	988.5	205.0	992.0
GR	204.0	994.5	204.0	1000.0	204.0	1005.5	205.0	1007.0	210.0	1011.5
GR	215.0	1017.0	220.0	1022.0	221.0	1024.0	221.4	1029.5	221.0	1040.0
GR	220.9	1045.0	221.0	1050.0	221.2	1065.0	221.0	1080.0	220.0	1084.0
GR	230.0	1084.01								
X1	8859	21	974	1024	142	142	142	0	0	0
CI	-1	219.72	0	0	0	0	-100.0			

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X3      10
GR   231.3      902    221.3   902.01    221.0      912    221.4      926    221.0      939
GR   221.3      966    221.0      974    220.0      976    210.0      987    205.0      990
GR   204.6      993    204.6     1002    205.0     1004    220.0     1020    221.0     1022
GR   222.0     1024    222.4     1032    222.0     1059    221.0     1076    220.0     1085
GR   230.0  1085.01

NC       0        0        0      0.3      0.5
X1    8977       19      976     1026      118      118      118      0.0      0.0        0
CI      -1   220.53        0        0        0        0   -100.0
X3      10
GR   232.0      900    222.0   900.01    222.0      912    222.5      924    221.6      942
GR   222.0      956    222.4      966    222.0      976    213.9   983.55    213.9      993
GR   205.9      993    205.9     1010    213.9     1010    213.9     1015    215.9     1015
GR   222.0     1026    222.0     1084    221.5     1090    232.0  1090.01
1
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NC       0        0    0.016        0        0
QT       2     2270      450        0        0        0
SB    1.25     1.69      2.6        0       17     3.83   105.36        0   206.49   205.90
X1    9037       16      974     1029       60       60       60      0.0      0.0        0
CI      -1   220.94    0.045        0        0        0   -100.0
X2       0        0        1   214.49    222.5        0        0        0        0        0
BT      15      927    222.6    222.6      935    222.5    222.5      935    222.1    222.1
BT     974    222.6    222.6      983    222.6   214.49      983    223.9   214.49      993
BT   223.9   214.49      993    223.9   206.49     1010    223.9   206.49     1010    223.9
BT  214.49     1014    223.9   214.49     1014    222.5    216.5     1022    222.5    221.0
BT    1029    222.5    222.5     1065    222.5    222.5
GR   233.0      927    222.6   927.01    222.5      935    222.1      935    222.6      974
GR  214.49   982.05   214.49      993   206.49      993   206.49     1010   214.49     1010
GR  214.49     1014    216.5     1014    221.0     1022    222.5     1029    222.5     1065
GR   233.0  1065.01

NC       0        0    0.028        0        0
QT       2     2270      450        0        0        0
X1    9118     27.0    973.0   1025.5       81       81       81      0.0      0.0        0
CI      -1   221.50    0.045        0        0        0   -100.0
X3      10
GR   233.0    927.0    230.0   927.01    227.0   927.02    223.0   927.03    224.0     965.5
GR   224.4    969.5    224.0    973.0    223.0    975.0    222.0    976.8    221.0     978.0
GR   220.0    979.5    215.0    984.5    210.0    990.0    207.0    992.0    205.6    1000.0
GR   207.0   1007.0    210.0   1010.8    215.0   1016.0    220.0   1021.5    223.0    1025.5
GR   223.6   1039.0    223.0   1052.0    220.0   1055.5    221.0   1065.0    222.0    1068.5
GR   222.3   1084.0    233.3  1084.01

NC       0        0        0      0.1     0.35
X1    9318     30.0    979.0   1024.0    200.0    200.0    200.0      0.0      0.0        0
CI      -1   222.87        0        0        0        0   -100.0
X3      10
GR   233.9    929.0    223.9   929.01    224.0    959.5    225.0    964.5    225.6    971.5
GR   225.0    979.0    224.0    982.8    223.0    985.0    220.0    989.0    215.0    991.0
GR   210.0    994.0    208.0    995.0    206.4   1000.0    208.0   1006.0    210.0   1008.0
GR   215.0   1011.0    220.0   1017.0    225.0   1024.0    225.8   1033.0    225.0   1043.0
GR   224.9   1045.0    225.0   1049.0    225.0   1051.0    220.0   1059.5    219.5   1062.0
GR   220.0   1065.0    222.0   1067.0    223.0   1069.0    223.2   1084.5    233.2  1084.51

QT       2     1700      120        0        0        0
X1    9518     27.0    975.1   1025.0    200.0    200.0    200.0      0.0      0.0        0
CI      -1   224.25        0        0        0        0   -100.0
X3      10
GR   235.3    929.5    225.3   929.51    225.0    944.0    226.0    964.5    227.0    971.0
GR   227.1    973.1    227.0    975.1    226.0    978.8    225.0    980.3    220.0    985.0
GR   215.0    990.5    210.0    996.0    207.2   1000.0    208.0   1003.5    210.0   1005.0
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GR	215.0	1008.0	220.0	1013.0	225.0	1019.0	226.0	1021.0	227.0	1025.0
GR	227.2	1034.8	225.0	1054.0	220.0	1061.0	220.0	1067.0	223.0	1071.0
GR	224.5	1084.0	234.5	1084.01						

1

QT	2	1700	110	0	0	0				
X1	9919	29.0	967.8	1030.0	401.0	401.0	401.0	0.0	0.0	0
CI	-1	227.00	0	0	0	0	-100.0			
X3	10									
GR	238.8	933.0	228.8	933.01	228.8	958.0	228.0	967.8	227.0	968.5
GR	226.0	973.0	225.0	975.0	223.0	979.5	220.0	985.5	215.0	992.0
GR	213.0	993.5	212.2	1000.0	213.0	1001.5	214.0	1006.0	215.0	1007.0
GR	220.0	1011.5	225.0	1018.0	227.0	1023.0	229.0	1027.0	230.0	1030.0
GR	230.2	1038.5	230.0	1048.5	225.0	1057.0	223.0	1059.0	223.0	1063.0
GR	225.0	1065.5	227.0	1070.0	227.1	1080.5	237.1	1080.51		
X1	10119	21.0	976.0	1023.0	200.0	200.0	200.0	0.0	0.0	0.0
CI	-1	229.00	0	0	0	0	-100.0			
X3	10									
GR	240.3	934.5	230.3	934.51	230.4	962.0	230.0	976.0	225.0	984.8
GR	220.0	993.5	215.0	1000.0	217.0	1004.0	218.0	1007.5	220.0	1008.5
GR	225.0	1013.0	229.0	1019.5	230.0	1023.0	230.7	1034.0	230.0	1048.0
GR	225.0	1058.0	224.7	1060.5	225.0	1064.0	228.0	1066.0	229.0	1076.0
GR	239.0	1076.01								
X1	10319	32.0	972.5	1028.0	200.0	200.0	200.0	0.0	0.0	0
CI	-1	231.00	0	0	0	0	-100.0			
X3	10									
GR	243.0	948.0	233.0	948.01	232.6	948.02	232.0	972.5	231.0	974.0
GR	230.0	978.0	225.0	990.0	220.0	995.0	219.0	996.0	218.0	998.0
GR	217.8	1000.0	218.0	1001.0	219.0	1002.0	220.0	1003.0	225.0	1010.0
GR	230.0	1019.0	231.0	1021.5	232.0	1024.0	232.8	1028.0	232.9	1034.0
GR	232.8	1043.0	233.0	1054.0	233.0	1055.0	232.0	1056.5	230.0	1058.0
GR	229.0	1060.0	228.6	1062.0	229.0	1064.0	230.0	1065.0	231.0	1067.5
GR	231.0	1070.0	241.0	1070.01						
X1	10720	34.0	981.0	1019.5	401.0	401.0	401.0	0.0	0.0	0
CI	-1	235.00	0	0	0	0	-100.0			
X3	10									
GR	246.0	955.0	236.0	955.01	236.0	964.0	236.0	969.5	237.0	979.0
GR	237.1	981.0	236.0	984.5	235.0	986.5	230.0	993.5	225.0	995.5
GR	221.0	997.0	220.5	1000.0	221.0	1003.5	225.0	1005.0	230.0	1010.5
GR	231.0	1012.0	232.0	1013.5	233.0	1015.0	234.0	1016.0	235.0	1017.0
GR	236.0	1019.5	236.5	1037.0	236.0	1052.5	235.0	1054.5	234.0	1056.0
GR	233.0	1057.0	232.0	1058.5	231.0	1059.0	230.1	1064.0	231.0	1068.0
GR	232.0	1069.0	233.0	1070.0	233.0	1073.5	243.0	1073.51		
X1	11120	32.0	976.0	1028.0	400.0	400.0	400.0	0.0	0.0	0
CI	-1	239.00	0	0	0	0	-100.0			
X3	10									
GR	249.6	949.5	239.6	949.51	240.0	953.5	241.0	970.5	241.3	973.0
GR	241.0	976.0	240.0	978.5	239.0	981.0	238.0	982.0	237.0	983.5
GR	236.0	984.5	235.0	986.0	230.0	992.5	225.0	996.0	222.0	997.0
GR	222.0	1004.0	225.0	1005.0	230.0	1008.5	231.0	1011.5	232.0	1014.0
GR	233.0	1015.0	234.0	1017.0	235.0	1018.0	236.0	1020.0	237.0	1021.5
GR	238.0	1023.0	239.0	1025.5	240.0	1028.0	240.5	1038.5	240.0	1047.5
GR	239.7	1049.0	249.7	1049.01						

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X1	11408	16.0	978.0	1022.3	288.0	288.0	288.0	0.0	0.0	0

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CI      -1    240.00       0       0       0       0    -100.0
X3      10
GR   251.6     941.5   241.6  941.51   241.0   954.5     241.0     973.0     241.0     978.0
GR   240.0     981.5   235.0   990.0   230.0   994.8     226.0    1000.0     230.0    1009.0
GR   235.0    1011.0   240.0  1018.0   241.0  1022.3     241.5    1035.5     241.0    1049.0
GR   251.0   1049.01

NC       0         0       0     0.1    0.35
X1   11558        18     979    1020   149.2   151.2     150.0       0.0       0.0         0
CI      -1    242.00       0       0       0       0    -100.0
X3      10
GR  253.00       951  243.00  951.01  242.80     964    243.00       979    238.47       992
GR  238.47       993  229.22     993  229.22 1011.17    237.22   1011.17    237.22      1013
GR  238.47      1013  238.47    1014  243.00    1020    243.10      1023    242.70      1024
GR  243.10      1032  242.40    1046  253.00 1046.01

NC       0         0   0.016       0       0
QT       2      1640      60       0       0       0
SB    1.25      1.69     2.6       0   18.17    5.00    105.36         0    229.70    229.22
X1   11690        22   976.0  1017.0   129.0   136.3     132.0       0.0       0.0         0
CI      -1    242.60   0.045       0       0       0    -100.0
X2       0         0       1  237.70   243.1       0         0         0         0         0
BT      16       950   244.0  244.00     974   244.0    243.70       976     244.0    243.60
BT     989     244.0  238.95     990   244.0  238.95       990     244.0    237.70      1010
BT   244.0    237.70    1010   244.0  238.95    1011     244.0    238.95      1015     244.0
BT  243.00      1017   244.0  243.80    1018   244.0    243.40      1031     244.0    244.00
BT    1042     244.0  244.00    1074   243.1  243.10      1075     243.5    243.50
GR   254.0       939   244.3  939.01   244.0     950     243.7       974     243.6       976
GR  238.95       989  238.95     990   229.7     990     229.7   1008.17     237.7   1008.17
GR   237.7      1010  238.95    1010  238.95    1011     243.0      1015     243.8      1017
GR   243.4      1018   244.0    1031   244.0    1042     243.1      1074     243.5      1075
GR   243.6      1080   254.0  1080.01
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SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1

*SECNO  .000
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=    1000.0    1016.0  TYPE=      1  TARGET=       16.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      .000     14.03    183.70    183.70    180.00    190.70      7.00       .00       .00 100000.00
    4710.0        .0    4710.0       .0        .0     221.9        .0        .0        .0 100000.00
       .00       .00     21.23       .00      .000      .015      .000      .000    169.67   1000.00
   .005214        0.        0.        0.         0        11         0       .00     16.00   1016.00


*SECNO 384.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       186.71 ELREA=       186.71

   384.000     13.85    185.56    185.56       .00    192.74      7.18      2.03       .00    186.71
    4710.0        .0    4710.0       .0        .0     219.0        .0       1.9        .1    186.71
       .00       .00     21.51       .00      .000      .015      .000      .000    171.71    999.99
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   .005384      374.      384.      394.        2        8        0      .00    16.02   1016.01


*SECNO 434.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      188.36 ELREA=      188.36

   434.000    14.06    186.04    186.04      .00    193.00     6.96      .26      .00   188.36
    4710.0       .0    4710.0       .0       .0     222.5       .0      2.2       .2   188.36
       .01      .00     21.17       .00     .000      .015     .000     .000   171.98   999.99
   .005177      49.       50.       51.        0        5        0      .00    16.02   1016.01


*SECNO 484.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
   19FEB93      14:05:25                                                                          PAGE   12


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      190.00 ELREA=      190.00

   484.000    14.03    186.83    186.83      .00    193.82     7.00      .26      .00   190.00
    4710.0       .0    4710.0       .0       .0     221.9       .0      2.5       .2   190.00
       .01      .00     21.23       .00     .000      .015     .000     .000   172.80   999.99
   .005214      49.       50.       51.       20        5        0      .00    16.02   1016.01


CCHV=     .300 CEHV=     .500
*SECNO 684.000
3280 CROSS SECTION    684.00 EXTENDED      5.19 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.24

   684.000    19.12    195.19       .00       .00    195.87      .68      .15     1.89   190.00
    4710.0    525.6    3658.8     525.6     259.3     491.7    259.3      5.3       .5   190.00
       .02     2.03      7.44      2.03      .035      .015     .035     .000   176.07   950.00
   .000289     200.      200.      200.         5        0        0      .00   126.00   1076.00


*SECNO 726.000
3280 CROSS SECTION    726.00 EXTENDED      3.03 FEET

   726.000    17.92    195.03       .00       .00    196.05     1.02      .01      .17   177.11
    4710.0    324.5    4061.0     324.5     226.4     465.8    226.4      6.2       .6   177.11
       .02     1.43      8.72      1.43      .035      .015     .035     .000   177.11   950.00
   .000165      42.       42.       42.         2        0        0      .00   126.00   1076.00


SPECIAL CULVERT
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SC	CUNO	CUNV	ENTLC	COFQ	RDLEN	RISE	SPAN	CULVLN	CHRT	SCL	ELCHU	ELCHD
	2	.014	.20	2.60	.00	10.00	12.00	274.00	9	2	179.85	177.11

CHART 9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE 2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

*SECNO 1000.000
WATER EL=X5 CARD= 195.200
3280 CROSS SECTION 1000.00 EXTENDED 2.20 FEET

1000.000	15.35	195.20	.00	.00	196.88	1.68	.06	.33	179.85
4710.0	51.1	4325.6	333.3	52.0	399.1	172.0	11.1	1.3	179.85
.02	.98	10.84	1.94	.035	.015	.035	.000	179.85	966.00
.000314	274.	274.	274.	0	0	0	.00	104.00	1070.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1110.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

1110.000	14.89	195.89	.00	.00	197.09	1.20	.06	.15	195.00
4710.0	.0	4655.2	54.8	.0	527.6	38.3	12.6	1.6	195.00
.03	.00	8.82	1.43	.000	.025	.040	.000	181.00	973.01
.001248	111.	110.	108.	3	0	0	.00	84.99	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 198.60 ELREA= 198.60

1514.000	15.25	196.35	.00	.00	197.67	1.32	.54	.04	198.60
4710.0	.0	4710.0	.0	.0	510.5	.0	17.5	2.2	198.60
.04	.00	9.23	.00	.000	.025	.000	.000	181.10	975.88
.001455	418.	404.	390.	2	0	0	.00	49.75	1025.63

*SECNO 1912.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 202.70

1912.000	15.35	197.05	.00	.00	198.22	1.17	.53	.02	203.00
4490.0	.0	4490.0	.0	.0	517.5	.0	22.2	2.7	202.70
.05	.00	8.68	.00	.000	.025	.000	.000	181.70	978.15
.001228	408.	398.	388.	2	0	0	.00	48.10	1026.25

*SECNO 2312.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.00 ELREA= 203.00

2312.000	14.37	197.37	.00	.00	198.99	1.62	.61	.16	204.00
4490.0	.0	4490.0	.0	.0	439.4	.0	26.6	3.1	203.00
.06	.00	10.22	.00	.000	.025	.000	.000	183.00	976.99
.001929	410.	400.	390.	2	0	0	.00	44.88	1021.87

CCHV= .300 CEHV= .500

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2485.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.00 ELREA= 203.00

2485.000	15.90	199.80	199.80	.00	203.50	3.70	.64	1.04	203.00
4490.0	.0	4490.0	.0	.0	290.9	.0	28.1	3.2	203.00
.07	.00	15.44	.00	.000	.025	.000	.000	183.90	978.11
.009691	173.	173.	173.	20	8	0	.00	39.88	1017.99

*SECNO 2515.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2515.000	15.96	199.96	199.96	.00	203.81	3.85	.18	.07	203.00
4490.0	.0	4490.0	.0	.0	285.3	.0	28.3	3.3	203.00
.07	.00	15.74	.00	.000	.016	.000	.000	184.00	979.11
.004005	30.	30.	30.	2	5	0	.00	37.29	1016.41

*SECNO 2530.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2530.000	13.10	201.40	201.40	.00	204.29	2.89	.05	.29	203.00
4490.0	.0	4490.0	.0	.0	329.3	.0	28.4	3.3	203.00
.07	.00	13.63	.00	.000	.016	.000	.000	188.30	965.78
.003130	15.	15.	15.	20	16	0	.00	57.08	1022.87

*SECNO 2712.000

3301 HV CHANGED MORE THAN HVINS

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 204.00 ELREA= 203.00

2712.000	15.42	203.92	.00	.00	205.14	1.23	.36	.50	204.00
4410.0	.0	4362.1	47.9	.0	488.1	33.9	30.2	3.6	203.00
.07	.00	8.94	1.41	.000	.025	.040	.000	188.50	975.91
.001340	182.	182.	182.	3	0	0	.00	81.09	1057.00

CCHV= .100 CEHV= .350
*SECNO 3112.000

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.40 ELREA= 204.00

3112.000	15.01	204.41	.00	.00	205.79	1.38	.59	.05	205.40
4410.0	.0	4364.6	45.4	.0	461.0	27.2	34.8	4.3	204.00
.08	.00	9.47	1.67	.000	.025	.040	.000	189.40	973.83
.001633	400.	400.	400.	2	0	0	.00	81.76	1060.00

*SECNO 3513.000

3265 DIVIDED FLOW

3513.000	14.21	205.01	.00	.00	206.55	1.54	.71	.06	205.00
4350.0	13.9	4263.3	72.7	14.5	423.5	39.8	39.2	5.2	205.00
.10	.96	10.07	1.83	.040	.025	.040	.000	190.80	896.01
.001917	401.	401.	401.	0	0	0	.00	113.71	1080.00

*SECNO 3913.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.80 ELREA= 206.00

3913.000	14.36	205.66	.00	.00	207.54	1.88	.87	.12	205.80
4350.0	.0	4350.0	.0	.0	395.4	.0	43.3	6.0	206.00
.11	.00	11.00	.00	.000	.025	.000	.000	191.30	976.43
.002507	400.	400.	400.	2	0	0	.00	45.06	1021.49

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4313.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.57

4313.000	14.96	207.56	.00	.00	208.27	.71	.61	.12	205.00
4350.0	469.0	3253.3	627.7	211.0	423.8	221.8	49.0	7.0	207.00
.12	2.22	7.68	2.83	.040	.025	.040	.000	192.60	899.01
.001023	400.	400.	400.	6	0	0	.00	189.00	1088.01

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*SECNO 4713.000
  4713.000     15.22    208.02       .00       .00    208.66       .64       .39       .01    206.60
    3850.0     221.7    3056.5     571.8     125.0     429.9     224.5      56.5       8.7    206.00
       .14      1.77      7.11      2.55      .040      .025      .040      .000    192.80    915.03
   .000915      400.      400.      400.         2         0         0       .00    169.98   1085.00


*SECNO 5113.000
  5113.000     13.87    208.37       .00       .00    209.07       .69       .39       .02    207.20
    3540.0     133.1    2947.5     459.4      90.1     405.6     198.2      63.3      10.3    207.00
       .16      1.48      7.27      2.32      .040      .025      .040      .000    194.50    913.52
   .001022      400.      400.      400.         2         0         0       .00    181.48   1095.00


*SECNO 5513.000

3301 HV CHANGED MORE THAN HVINS

  5513.000     12.95    208.55       .00       .00    209.76      1.21       .51       .18    207.00
    3530.0     103.8    3245.1     181.2      67.7     352.8      95.0      68.8      11.9    207.00
       .17      1.53      9.20      1.91      .040      .025      .040      .000    195.60    912.01
   .001643      400.      400.      400.         2         0         0       .00    172.99   1085.00


*SECNO 5914.000
  5914.000     12.57    209.17       .00       .00    210.47      1.30       .68       .03    208.00
    3530.0      19.6    3419.9      90.5      17.8     367.8      61.6      73.3      13.4    208.00
       .18      1.10      9.30      1.47      .040      .025      .040      .000    196.60    932.43
   .001752      401.      401.      401.         2         0         0       .00    153.77   1086.20


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   19FEB93      14:05:25                                                                          PAGE   17


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 6156.000

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      210.00 ELREA=      209.80

  6156.000     11.55    209.35       .00       .00    211.19      1.84       .53       .19    210.00
    3530.0        .0    3530.0        .0        .0     324.2        .0      75.4      14.0    209.80
       .19       .00     10.89       .00      .000      .025      .000      .000    197.80    978.65
   .002856      242.      242.      242.         2         0         0       .00     42.00   1020.64


CCHV=     .300 CEHV=     .500
*SECNO 6307.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6307.000     12.82    211.57    211.57       .00    213.36      1.79       .47       .01    209.75
    3530.0     266.1    3066.2     197.7     104.9     266.9      73.2      76.7      14.3    210.10
       .19      2.54     11.49      2.70      .040      .025      .040      .000    198.75    908.01
   .003386      151.      151.      151.         3        15         0       .00    154.99   1063.00
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SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.58	2.60	.00	20.50	1.50	190.00	.01	199.51	198.75

*SECNO 6388.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.73

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
219.75	214.04	.67	1229.	2250.	190.	193.	209.61	210.61	57.

6388.000	14.85	214.46	.00	.00	215.01	.55	1.65	.00	210.61
3470.0	721.8	2240.5	507.7	368.9	308.7	257.4	78.0	14.6	210.61
.20	1.96	7.26	1.97	.040	.016	.040	.000	199.61	901.01
.000438	81.	81.	81.	2	0	2	.00	169.00	1070.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 6517.000

6517.000	14.85	214.85	.00	.00	215.14	.29	.05	.08	211.30
3470.0	498.4	2445.3	526.3	280.7	491.3	271.4	81.0	15.1	211.50
.21	1.78	4.98	1.94	.040	.025	.040	.000	200.00	908.01
.000380	129.	129.	129.	2	0	0	.00	172.00	1080.00

CCHV= .100 CEHV= .350
*SECNO 6714.000

6714.000	14.60	214.90	.00	.00	215.24	.35	.08	.02	211.00
3470.0	499.7	2345.3	625.0	272.3	417.8	311.1	85.6	16.0	211.00
.22	1.83	5.61	2.01	.040	.025	.040	.000	200.30	898.01
.000475	197.	197.	197.	2	0	0	.00	198.50	1096.50

*SECNO 7115.000

7115.000	14.45	215.05	.00	.00	215.49	.43	.21	.03	213.00
3330.0	369.2	2555.7	405.1	208.8	430.1	223.9	94.2	17.8	212.00
.24	1.77	5.94	1.81	.040	.025	.040	.000	200.60	904.51
.000591	401.	401.	401.	1	0	0	.00	195.50	1100.01

*SECNO 7515.000

7515.000	14.36	215.26	.00	.00	215.76	.51	.25	.03	213.00
3310.0	240.6	2663.3	406.1	155.8	422.9	204.7	101.7	19.6	213.00
.26	1.54	6.30	1.98	.040	.025	.040	.000	200.90	902.52
.000674	400.	400.	400.	0	0	0	.00	197.99	1100.50

*SECNO 7715.000

7715.000	13.71	215.21	.00	.00	216.07	.86	.18	.13	214.00
3310.0	103.2	2921.5	285.3	77.9	369.4	138.5	104.9	20.5	214.00
.27	1.32	7.91	2.06	.040	.025	.040	.000	201.50	900.01
.001284	200.	200.	200.	2	0	0	.00	222.99	1123.00

*SECNO 7916.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 216.00 ELREA= 215.00

7916.000	12.80	214.90	.00	.00	216.82	1.91	.38	.37	216.00
3310.0	.0	3310.0	.0	.0	298.1	.0	106.9	21.1	215.00
.28	.00	11.10	.00	.000	.025	.000	.000	202.10	980.61
.003040	201.	201.	201.	2	0	0	.00	38.75	1019.35

*SECNO 8317.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 219.00 ELREA= 217.00

8317.000	13.95	216.95	.00	.00	217.69	.74	.76	.12	219.00
2300.0	.0	2300.0	.0	.0	334.1	.0	109.8	21.5	217.00
.29	.00	6.88	.00	.000	.025	.000	.000	203.00	978.57
.001107	401.	401.	401.	3	0	0	.00	41.86	1020.43

*SECNO 8717.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.00 ELREA= 221.00

8717.000	13.41	217.41	.00	.00	218.12	.71	.42	.00	221.00
2300.0	.0	2300.0	.0	.0	340.3	.0	112.9	21.9	221.00
.31	.00	6.76	.00	.000	.025	.000	.000	204.00	980.33
.001008	400.	400.	400.	2	0	0	.00	39.07	1019.41

*SECNO 8859.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.00 ELREA= 222.00

8859.000	12.91	217.51	.00	.00	218.29	.78	.15	.03	221.00
2300.0	.0	2300.0	.0	.0	324.4	.0	114.0	22.0	222.00
.31	.00	7.09	.00	.000	.025	.000	.000	204.60	978.74
.001156	142.	142.	142.	2	0	0	.00	38.61	1017.35

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .300 CEHV= .500
*SECNO 8977.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .61

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 222.00 ELREA= 222.00

8977.000	11.59	217.49	.00	.00	218.73	1.24	.21	.23	222.00
2300.0	.0	2300.0	.0	.0	257.3	.0	114.8	22.1	222.00
.32	.00	8.94	.00	.000	.025	.000	.000	205.90	980.20
.003077	118.	118.	118.	2	0	0	.00	37.67	1017.87

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 211.57 , NOT 217.49 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.69	2.60	.00	17.00	3.83	105.36	.00	206.49	205.90

*SECNO 9037.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 4.45

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
229.67	221.45	.00	601.	1673.	105.	105.	214.49	222.50	138.

9037.000	17.37	223.86	.00	.00	224.11	.26	5.38	.00	222.60
2270.0	40.2	2203.1	26.7	69.2	533.6	48.8	115.4	22.2	222.50
.32	.58	4.13	.55	.040	.016	.040	.000	206.49	927.01
.000151	60.	60.	60.	2	0	4	.00	137.99	1065.00

*SECNO 9118.000
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 224.00 ELREA= 223.00

```
 9118.000    18.32   223.92     .00     .00   224.14     .22     .02     .01   224.00
   2270.0       .0   2173.6    96.4      .0    564.4    93.3   116.6    22.5   223.00
      .33      .00     3.85    1.03    .000     .028    .040    .000  205.60   973.16
  .000297      81.      81.     81.       2        0       0     .00  110.84  1084.00


CCHV=     .100 CEHV=     .350
*SECNO 9318.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .52


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      225.00 ELREA=      225.00

 9318.000    17.37   223.77     .00     .00   224.38     .60     .10     .13   225.00
   2270.0       .0   2270.0      .0      .0    364.2      .0   119.0    22.8   225.00
      .34      .00     6.23     .00    .000     .028    .000    .000  206.40   983.30
  .001102     200.     200.    200.       2        0       0     .00   38.99  1022.28


*SECNO 9518.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      227.00 ELREA=      227.00

 9518.000    16.98   224.18     .00     .00   224.58     .41     .19     .02   227.00
   1700.0       .0   1700.0      .0      .0    331.1      .0   120.6    23.0   227.00
      .35      .00     5.13     .00    .000     .028    .000    .000  207.20   981.07
  .000773     200.     200.    200.       2        0       0     .00   36.94  1018.01


*SECNO 9919.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      228.00 ELREA=      230.00

 9919.000    12.26   224.46     .00     .00   225.04     .57     .39     .06   228.00
   1700.0       .0   1700.0      .0      .0    279.6      .0   123.4    23.3   230.00
      .37      .00     6.08     .00    .000     .028    .000    .000  212.20   976.21
  .001298     401.     401.    401.       2        0       0     .00   41.09  1017.30


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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 10119.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      230.00 ELREA=      230.00

10119.000     9.37   224.37   224.37     .00   226.92    2.55     .55     .69   230.00
   1700.0       .0   1700.0      .0      .0    132.6      .0   124.3    23.5   230.00
      .37      .00    12.82     .00    .000     .028    .000    .000  215.00   985.90
  .009194     200.     200.    200.      20       15       0     .00   26.52  1012.43
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*SECNO 10319.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      232.00 ELREA=      232.80

 10319.000     9.47   227.27   227.27      .00   229.63     2.35     1.81      .02   232.00
    1700.0       .0   1700.0       .0       .0    138.1       .0    124.9     23.6   232.80
       .37      .00    12.31      .00     .000     .028     .000     .000   217.80   984.54
   .008880     200.     200.     200.       20        5        0      .00    29.55  1014.09


*SECNO 10720.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      237.10 ELREA=      236.00

 10720.000    10.69   231.19   231.19      .00   234.20     3.01     4.05      .23   237.10
    1700.0       .0   1700.0       .0       .0    122.1       .0    126.1     23.9   236.00
       .38      .00    13.92      .00     .000     .028     .000     .000   220.50   991.84
   .011597     401.     401.     401.        2        8        0      .00    20.45  1012.28


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 11120.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.15


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      241.00 ELREA=      240.00

 11120.000    13.38   235.38      .00      .00   236.28      .90     1.87      .21   241.00
    1700.0       .0   1700.0       .0       .0    223.4       .0    127.7     24.1   240.00
       .40      .00     7.61      .00     .000     .028     .000     .000   222.00   985.43
   .002512     400.     400.     400.        2        0        0      .00    33.33  1018.76


*SECNO 11408.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      241.00 ELREA=      241.00

 11408.000     9.42   235.42   235.42      .00   238.27     2.85     1.28      .68   241.00
    1700.0       .0   1700.0       .0       .0    125.4       .0    128.9     24.3   241.00
       .40      .00    13.55      .00     .000     .028     .000     .000   226.00   989.29
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.009794	288.	288.	288.	4	19	0	.00	22.30	1011.58

CCHV= .100 CEHV= .350
*SECNO 11558.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 243.00 ELREA= 243.00

11558.000	8.43	237.65	.00	.00	239.54	1.89	1.18	.10	243.00
1700.0	.0	1700.0	.0	.0	154.1	.0	129.4	24.4	243.00
.41	.00	11.03	.00	.000	.028	.000	.000	229.22	993.00
.006416	149.	150.	151.	3	0	0	.00	20.00	1013.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 233.41 , NOT 237.65 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	1.69	2.60	.00	18.17	5.00	105.36	.00	229.70	229.22

*SECNO 11690.000

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.92

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
244.01	242.32	.00	15.	1613.	105.	105.	237.70	243.10	26.

11690.000	13.65	243.35	.00	.00	243.81	.45	4.26	.00	243.60
1640.0	.0	1639.8	.2	.0	304.1	1.2	130.1	24.5	243.80
.41	.00	5.39	.17	.000	.016	.040	.000	229.70	976.69
.000389	129.	132.	136.	2	0	3	.00	48.91	1074.64

1
PROFILE FOR STREAM SUB-CRITICAL FLOW M3D2A

PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

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ELEVATION  170.     180.     190.     200.     210.     220.     230.     240.     250.     260.
   SECNO   CUMDIS

     .00     0. I        .  WM   .E       .        .        .        .        .        .        .        L
            50. I        .  WM   .E       .        .        .        .        .        .        .        L
           100. .I       .   WM  . E      .        .        .        .        .        .        .        L
           150. .I       .   WM  . E      .        .        .        .        .        .        .        L
           200. .I       .   WM  . E      .        .        .        .        .        .        .        L
           250. .I       .   WM  . E      .        .        .        .        .        .        .        L
           300. . I      .   W M . E      .        .        .        .        .        .        .        L
           350. . I      .    WM . E      .        .        .        .        .        .        .        L
  384.00   400. . I      .    WL . E      .        .        .        .        .        .        .        .
  434.00   450. . I      .    W L. E      .        .        .        .        .        .        .        .
  484.00   500. .  I     .     W L  E     .        .        .        .        .        .        .        .
           550. C  I     .      WL   E    .        .        .        .        .        .        .        .
           600. C   I    .       LW  E    .        .        .        .        .        .        .        .
           650. C    I   .       L W E    .        .        .        .        .        .        .        .
  684.00   700. C    I   .       L    E   .        .        .        .        .        .        .        .
  726.00   750. C     I  .       . M WE   .        .        .        .        .        .        .        .
           800. C      I .       . M W E  .        .        .        .        .        .        .        .
           850. C      I .       . M W E  .        .        .        .        .        .        .        .
           900. C       I.       . M W E  .        .        .        .        .        .        .        .
           950. C       I.       . M W E  .        .        .        .        .        .        .        .
 1000.00  1000. C        I       . M  WE  .        .        .        .        .        .        .        .
          1050. C        .I    L .    WEM .        .        .        .        .        .        .        .
          1100. C        .I      .  L WE  . M      .        .        .        .        .        .        .
 1110.00  1150. C        .I      .   LWE  . M      .        .        .        .        .        .        .
          1200. C        .I      .    WE  .  M     .        .        .        .        .        .        .
          1250. C        .I      .    W E .  M     .        .        .        .        .        .        .
          1300. C        .I      .    WLE .  M     .        .        .        .        .        .        .
          1350. C        .I      .    WLE .   M    .        .        .        .        .        .        .
          1400. C        .I      .     WE .   M    .        .        .        .        .        .        .
          1450. C        .I      .     WE .    M   .        .        .        .        .        .        .
          1500. C        .I      .     WE .    M   .        .        .        .        .        .        .
 1514.00  1550. C        .I      .     WEL.    M   .        .        .        .        .        .        .
          1600. C        . I     .     WEL.     M  .        .        .        .        .        .        .
          1650. C        . I     .     WE L     M  .        .        .        .        .        .        .
          1700. C        . I     .     WE RL    M  .        .        .        .        .        .        .
          1750. C        . I     .     WE .L     M.        .        .        .        .        .        .
          1800. C        . I     .     WE . L    M.        .        .        .        .        .        .
          1850. C        . I     .     WE . L     M        .        .        .        .        .        .
          1900. C        . I     .     WE .  L    M        .        .        .        .        .        .
 1912.00  1950. C        . I     .     W E.  L    M        .        .        .        .        .        .
          2000. C        . I     .     W E.  L    M        .        .        .        .        .        .
          2050. C        . I     .     W E.  RL   .M       .        .        .        .        .        .
          2100. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
          2150. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
          2200. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
          2250. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
          2300. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
 2312.00  2350. C        .  I    .      WE.  RL   .M       .        .        .        .        .        .
          2400. C        .   I   .      W .E RL   .M       .        .        .        .        .        .
          2450. C        .   I   .       W. ERL   . M      .        .        .        .        .        .
 2485.00  2500. .        .   I   .        W  LE   . M      .        .        .        .        .        .
 2515.00  2550. .        .   I   .        W  LE   . M      .        .        .        .        .        .
 2530.00  2600. .        .      I.        . WL E  . M      .        .        .        .        .        .
          2650. C        .      I.        . WRLE  . M      .        .        .        .        .        .
          2700. C        .      I.        .  WLE  . M      .        .        .        .        .        .
 2712.00  2750. C        .      I.        .  RWE  . M      .        .        .        .        .        .
          2800. C        .      I.        .  RWLE . M      .        .        .        .        .        .
          2850. C        .      I.        .   WLE . M      .        .        .        .        .        .
          2900. C        .      I.        .   WLE . M      .        .        .        .        .        .
          2950. C        .      I.        .   WLE . M      .        .        .        .        .        .
          3000. C        .      I.        .   RWE . M      .        .        .        .        .        .
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         3050. C     .     I     .  RWE  . M    .    .    .    .    .    .
         3100. C     .     I     .  RWE  . M    .    .    .    .    .    .
3112.00  3150. C     .     I     .  RWE  . M    .    .    .    .    .    .
         3200. C     .     I     .  RWE  .  M   .    .    .    .    .    .
         3250. C     .     I     .   WE  .  M   .    .    .    .    .    .
         3300. C     .     I     .   WE  .  M   .    .    .    .    .    .
         3350. C     .     I     .   WE  .  M   .    .    .    .    .    .
         3400. C     .    .I     .   W E .  M   .    .    .    .    .    .
         3450. C     .    .I     .   W E .  M   .    .    .    .    .    .
         3500. C     .    .I     .   W E .   M  .    .    .    .    .    .
3513.00  3550. C     .    .I     .   W E .   M  .    .    .    .    .    .
         3600. C     .    .I     .   W E .   M  .    .    .    .    .    .
         3650. C     .    .I     .   WLE .  M   .    .    .    .    .    .
         3700. C     .    .I     .    WE .  M   .    .    .    .    .    .
         3750. C     .    .I     .    WE .  M   .    .    .    .    .    .
         3800. C     .    .I     .    WE .  M   .    .    .    .    .    .
         3850. C     .    . I    .    W E .  M  .    .    .    .    .    .
         3900. C     .    . I    .    W E .  M  .    .    .    .    .    .
3913.00  3950. C     .    . I    .    W E .  M  .    .    .    .    .    .
         4000. C     .    . I    .    W E .  M  .    .    .    .    .    .
         4050. C     .    . I    .    WRE .  M  .    .    .    .    .    .
         4100. C     .    . I    .    LWE .  M  .    .    .    .    .    .
         4150. C     .    . I    .    LWE .  M  .    .    .    .    .    .
         4200. C     .    . I    .    LWE .  M  .    .    .    .    .    .
         4250. C     .    .  I   .    LWE .  M  .    .    .    .    .    .
         4300. C     .    .  I   .   L RWE.  M  .    .    .    .    .    .
4313.00  4350. C     .    .  I   .   L RWE.  M  .    .    .    .    .    .
         4400. C     .    .  I   .    LRWE.  M  .    .    .    .    .    .
         4450. C     .    .  I   .    LRWE.  M  .    .    .    .    .    .
         4500. C     .    .  I   .    LRWE.  M  .    .    .    .    .    .
         4550. C     .    .  I   .    LRWE.  M  .    .    .    .    .    .
         4600. C     .    .  I   .    LRWE.  M  .    .    .    .    .    .
         4650. C     .    .  I   .     LWE.  M  .    .    .    .    .    .
         4700. C     .    .  I   .    RLWE.  M  .    .    .    .    .    .
4713.00  4750. C     .    .  I   .    RLWE.   M .    .    .    .    .    .
         4800. C     .    .  I   .    RLWE.   M .    .    .    .    .    .
         4850. C     .    .   I  .     LWE.   M .    .    .    .    .    .
         4900. C     .    .   I  .     LWE.   M .    .    .    .    .    .
         4950. C     .    .   I  .     L E.   M .    .    .    .    .    .
         5000. C     .    .   I  .     L E.   M .    .    .    .    .    .
         5050. C     .    .   I  .     L E.    M .    .    .    .    .    .
         5100. C     .    .    I .     L E.    M .    .    .    .    .    .
5113.00  5150. C     .    .    I .     RLE.    M .    .    .    .    .    .
         5200. C     .    .    I .     RLE.    M .    .    .    .    .    .
         5250. C     .    .    I .     L WE    M .    .    .    .    .    .
         5300. C     .    .    I .     L WE     M .    .    .    .    .    .
         5350. C     .    .    I .     L WE     M .    .    .    .    .    .
         5400. C     .    .     I .    L WE     M .    .    .    .    .    .
         5450. C     .    .     I .    L WE     M .    .    .    .    .    .
         5500. C     .    .     I .    L WE      M .    .    .    .    .    .
5513.00  5550. C     .    .     I .    L WE      M .    .    .    .    .    .
         5600. C     .    .     I .    L WE      M .    .    .    .    .    .
         5650. C     .    .     I .     LWE      M .    .    .    .    .    .
         5700. C     .    .     I .     LWE      M .    .    .    .    .    .
         5750. C     .    .     I .     LWE       M .    .    .    .    .    .
         5800. C     .    .      I .    LW.E      M .    .    .    .    .    .
         5850. C     .    .      I .    LW.E      M .    .    .    .    .    .
         5900. C     .    .      I .    LW.E      M .    .    .    .    .    .
5914.00  5950. C     .    .      I .    L WE      M .    .    .    .    .    .
         6000. C     .    .      I .     LWE      M .    .    .    .    .    .
         6050. C     .    .      I .     LWE      M .    .    .    .    .    .
         6100. C     .    .       I .    RWE      M .    .    .    .    .    .
         6150. C     .    .       I .     WE      M .    .    .    .    .    .
6156.00  6200. C     .    .       I .     W E     M .    .    .    .    .    .
         6250. C     .    .       I .     W E      M.    .    .    .    .    .
         6300. C     .    .        I.     LW E     M    .    .    .    .    .
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6307.00 6350. .         .         .        I.        L W E    M         .         .         .         .         .
6388.00 6400. C         .         .        I        .L  E    M         .         .         .         .         .
        6450. C         .         .        I        .L  E    M         .         .         .         .         .
        6500. C         .         .        I        .LR E    M         .         .         .         .         .
6517.00 6550. C         .         .        I        . L E    M         .         .         .         .         .
        6600. C         .         .        I        . L E    M         .         .         .         .         .
        6650. C         .         .        I        .LR WE   M         .         .         .         .         .
        6700. C         .         .       .I        .L  WE   M         .         .         .         .         .
6714.00 6750. C         .         .       .I        .L  WE   M         .         .         .         .         .
        6800. C         .         .       .I        .RL WE   M         .         .         .         .         .
        6850. C         .         .       .I        . L WE   M         .         .         .         .         .
        6900. C         .         .       .I        . L WE   M         .         .         .         .         .
        6950. C         .         .       .I        . L WE   M         .         .         .         .         .
        7000. C         .         .       .I        . RL WE  M         .         .         .         .         .
        7050. C         .         .       .I        . RL WE  M         .         .         .         .         .
        7100. C         .         .       .I        . RL WE  M         .         .         .         .         .
7115.00 7150. C         .         .       .I        . RL WE  M         .         .         .         .         .
        7200. C         .         .       .I        . RL WE  .M        .         .         .         .         .
        7250. C         .         .       .I        . L WE   .M        .         .         .         .         .
        7300. C         .         .       .I        . L WE   .M        .         .         .         .         .
        7350. C         .         .       .I        . L WE   .M        .         .         .         .         .
        7400. C         .         .       .I        . L E  . M         .         .         .         .         .
        7450. C         .         .       .I        . L E  . M         .         .         .         .         .
        7500. C         .         .       .I        . L E  . M         .         .         .         .         .
7515.00 7550. C         .         .       .I        . L E  . M         .         .         .         .         .
        7600. C         .         .       .I        .  L E  . M        .         .         .         .         .
        7650. C         .         .       . I       .  L E  .  M       .         .         .         .         .
        7700. C         .         .       . I       .  L E  .  M       .         .         .         .         .
7715.00 7750. C         .         .       . I       .  L E  .  M       .         .         .         .         .
        7800. C         .         .       . I       .   W E . M        .         .         .         .         .
        7850. C         .         .       . I       .   W E .  M       .         .         .         .         .
        7900. C         .         .       . I       .   WLE .   M      .         .         .         .         .
7916.00 7950. C         .         .       . I       .   WLE .   M      .         .         .         .         .
        8000. C         .         .       .  I      .   WRE .   M      .         .         .         .         .
        8050. C         .         .       .  I      .    WE .    M     .         .         .         .         .
        8100. C         .         .       .  I      .    WE .    M     .         .         .         .         .
        8150. C         .         .       .  I      .    W E.    M     .         .         .         .         .
        8200. C         .         .       .  I      .     WE.    M     .         .         .         .         .
        8250. C         .         .       .  I      .     WEL.   M     .         .         .         .         .
        8300. C         .         .       .  I      .     WEL.   M     .         .         .         .         .
8317.00 8350. C         .         .       .  I      .     WEL.   M     .         .         .         .         .
        8400. C         .         .       .  I      .     WE L    M    .         .         .         .         .
        8450. C         .         .       .   I     .     WE L    M    .         .         .         .         .
        8500. C         .         .       .   I     .     WERL     M   .         .         .         .         .
        8550. C         .         .       .   I     .      ERL     M   .         .         .         .         .
        8600. C         .         .       .   I     .      E RL    M.          .         .         .         .
        8650. C         .         .       .   I     .      E RL    M.          .         .         .         .
        8700. C         .         .       .   I     .      E .L     M          .         .         .         .
8717.00 8750. C         .         .       .   I     .      E .L     M          .         .         .         .
        8800. C         .         .       .    I    .      WE.LR    M          .         .         .         .
        8850. C         .         .       .    I    .      WE.LR    M          .         .         .         .
8859.00 8900. C         .         .       .    I    .      WE.LR    M          .         .         .         .
        8950. C         .         .       .    I    .      WE. L    .M         .         .         .         .
8977.00 9000. C         .         .       .     I   .      WE. L    . M        .         .         .         .
9037.00 9050. C         .         .       .      I  .        . LE   . M        .         .         .         .
        9100. C         .         .       .     I   .        . RE   . M        .         .         .         .
9118.00 9150. C         .         .       .     I   .        . RE   . M        .         .         .         .
        9200. C         .         .       .     I   .         . WE  . M        .         .         .         .
        9250. C         .         .       .     I   .         . WE  . M        .         .         .         .
        9300. C         .         .       .      I  .         . WE  . M        .         .         .         .
9318.00 9350. C         .         .       .      I  .         . WE  .  M       .         .         .         .
        9400. C         .         .       .      I  .         . WEL .  M       .         .         .         .
        9450. C         .         .       .      I  .         . WEL .  M       .         .         .         .
        9500. C         .         .       .      I  .         . WE L .   M     .         .         .         .
9518.00 9550. C         .         .       .       I .         .  E L .   M     .         .         .         .
        9600. C         .         .       .       I .         .  E LR .  M     .         .         .         .
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                9650. C        .         .         .        I.         .   E  L .   M   .         .         .
                9700. C        .         .         .        I.         .   E  L .    M  .         .         .
                9750. C        .         .         .         I         .   E  LR.    M  .         .         .
                9800. C        .         .         .        .I         .   E  LR.    M  .         .         .
                9850. C        .         .         .        .I         .   E  L R     M .         .         .
                9900. C        .         .         .         . I       .   E  L R     M .         .         .
     9919.00    9950. C        .         .         .         . I       .   E  L R     M .         .         .
               10000. C        .         .         .         . I       .   WE  LR      M .         .         .
               10050. C        .         .         .         .  I      .   WE  LR      M .         .         .
               10100. C        .         .         .         .   I     .   W E  L       M.         .         .
    10119.00   10150. .        .         .         .         .   I     .   W E  L       M.         .         .
               10200. .        .         .         .         .    I    .   W  E .L       M         .         .
               10250. .        .         .         .         .     I   .    W  E.LR      M         .         .
               10300. .        .         .         .         .     I   .     W E. L      .M         .         .
    10319.00   10350. .        .         .         .         .      I  .      W E LR     .M         .         .
               10400. .        .         .         .         .      I  .      W .E LR    . M         .         .
               10450. .        .         .         .         .       I.       W.E  L    . M         .         .
               10500. .        .         .         .         .       I.       W. E L    . M         .         .
               10550. .        .         .         .         .       I.        W E  L   . M         .         .
               10600. .        .         .         .         .        I        W  E RL  . M         .         .
               10650. .        .         .         .         .        I        .W E  L  . M         .         .
               10700. .        .         .         .         .        I        .W  E RL . M         .         .
    10720.00   10750. .        .         .         .         .        .I       . W  ERL . M         .         .
               10800. .        .         .         . C       .        .I       . W  E RL .  M       .         .
               10850. .   C    .         .         .         .        .I       .  W E RL .   M      .         .
               10900. C        .         .         .         .        .I       .  W E  RL.    M     .         .
               10950. C        .         .         .         .        . I      .   W E RL.     M    .         .
               11000. C        .         .         .         .        . I      .   W E  RL     M    .         .
               11050. C        .         .         .         .        . I      .    WE  RL      M.  .         .
               11100. C        .         .         .         .        . I      .    WE   RL      M.  .         .
    11120.00   11150. C        .         .         .         .        . I      .     WE  RL      M  .         .
               11200. C        .         .         .         .        . I      .     WE  .L      M  .         .
               11250. C        .         .         .         .        .  I     .     WE  .L      M  .         .
               11300. C        .         .         .         .        .  I     .     W E .L     .M  .         .
               11350. C        .         .         .         .        .   I    .     W E .L     .M  .         .
               11400. .        .         .         .   C     .        .    I   .     W E .L     .M  .         .
    11408.00   11450. .        .         .         .         .        .    I   .     W  E.L     .M  .         .
               11500. C        .         .         .         .        .     I  .     W  E. L    . M  .         .
               11550. C        .         .         .         .        .      I .      W E.  L   . M  .         .
    11558.00   11600. C        .         .         .         .        .       I       W E  L   . M  .         .
               11650. C        .         .         .         .        .       I        WE  L   .  M .         .
    11690.00   11700. C        .         .         .         .        .       I         .  E   .  M .         .
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T1      FERGUSON   GREINER, INC  02-19-92     (FILENAME = T-M3D2A.DAT)
T2      ORIGINAL McDowell BC (1-10X10 & 1-14X10)  with original dirt channel
T3      SUB-CRITICAL M3D2A                  u/s of McDowell Road

J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0       3        0        0   0.00532       0        0        0      180.0     0

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     15       0        0        0        0        0        0        7        0        0
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   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    L-BANK ELEV
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    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      R-BANK ELEV
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*PROF 2

*SECNO  .000
3280 CROSS SECTION       .00 EXTENDED       .79 FEET


3470 ENCROACHMENT STATIONS=     1000.0    1016.0  TYPE=      1  TARGET=       16.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      .000    15.79   185.46   185.20   180.00   192.89     7.43      .00      .00 100000.00
    5470.0       .0   5470.0       .0       .0    250.1       .0       .0       .0 100000.00
      .00      .00    21.87      .00     .000     .015     .000     .000   169.67   1000.00
   .005240       0.       0.       0.        0       11        0      .00    16.00   1016.00


*SECNO 384.000
3280 CROSS SECTION    384.00 EXTENDED      5.67 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.55

   384.000    20.67   192.38   189.78      .00   193.53     1.16      .64      .00   186.71
    5470.0   1009.4   3451.3   1009.4    283.3    328.3    283.3      5.0       .6   186.71
       .01     3.56    10.51     3.56     .035     .015     .035     .000   171.71   950.00
   .000804     374.     384.     394.       12        8        0      .00   116.00  1066.00


*SECNO 434.000
3280 CROSS SECTION    434.00 EXTENDED      2.84 FEET


3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   434.000    19.22   191.20   191.20      .00   193.95     2.75      .06      .00   188.36
    5470.0    502.0   4466.0    502.0    141.9    305.1    141.9      5.9       .7   188.36
       .01     3.54    14.64     3.54     .035     .015     .035     .000   171.98   950.00
   .001861      49.      50.      51.       20       12        0      .00   116.00  1066.00


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    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    L-BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      R-BANK ELEV
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*SECNO 484.000
3280 CROSS SECTION    484.00 EXTENDED      2.45 FEET

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
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3720 CRITICAL DEPTH ASSUMED

484.000	19.65	192.45	192.45	.00	195.42	2.97	.10	.00	190.00
5470.0	406.5	4657.0	406.5	122.7	312.0	122.7	6.6	.8	190.00
.02	3.31	14.92	3.31	.035	.015	.035	.000	172.80	950.00
.001962	49.	50.	51.	20	8	0	.00	116.00	1066.00

CCHV= .300 CEHV= .500
*SECNO 684.000
3280 CROSS SECTION 684.00 EXTENDED 5.29 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.27

684.000	19.23	195.30	.00	.00	196.19	.90	.15	.62	190.00
5470.0	621.5	4227.0	621.5	264.6	494.5	264.6	10.2	1.4	190.00
.02	2.35	8.55	2.35	.035	.015	.035	.000	176.07	950.00
.000379	200.	200.	200.	4	0	0	.00	126.00	1076.00

*SECNO 726.000
3280 CROSS SECTION 726.00 EXTENDED 3.07 FEET

726.000	17.96	195.07	.00	.00	196.44	1.36	.01	.23	177.11
5470.0	381.0	4708.0	381.0	228.8	467.1	228.8	11.1	1.5	177.11
.02	1.67	10.08	1.67	.035	.015	.035	.000	177.11	950.00
.000220	42.	42.	42.	2	0	0	.00	126.00	1076.00

SPECIAL CULVERT

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SC	CUNO	CUNV	ENTLC	COFQ	RDLEN	RISE	SPAN	CULVLN	CHRT	SCL	ELCHU	ELCHD
	2	.014	.20	2.60	.00	10.00	12.00	274.00	9	2	179.85	177.11

CHART 9 - BOX CULVERT WITH FLARED WINGWALL AND INLET TOP EDGE BEVEL
SCALE 2 - WINGWALL FLARED 18 TO 33.7 DEGREES; INLET TOP EDGE BEVEL = 0.083D

5135, EGOC= 208.07 ..MAY BE TOO LARGE IF OUTLET CONTROLS.
*SECNO 1000.000
WATER EL=X5 CARD= 196.900
3280 CROSS SECTION 1000.00 EXTENDED 3.90 FEET

1000.000	17.05	196.90	.00	.00	198.52	1.62	.07	.13	179.85
5470.0	116.8	4811.7	541.4	87.7	443.3	268.9	16.5	2.2	179.85
.03	1.33	10.85	2.01	.035	.015	.035	.000	179.85	966.00
.000274	274.	274.	274.	0	0	0	.00	104.00	1070.00

*SECNO 1110.000
CHIMP CLSTA= 998.51 CELCH= 191.44 BW= 75.51 STCHL= 973.00 STCHR= 1048.51
EXCAVATION DATA
AEX= -213.9SQ-FT VEXR= .0K*CU-YD VEXT= .0K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .21

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 205.00 ELREA= 194.43

1110.000	7.49	198.93	.00	.00	199.01	.08	.03	.46	205.00
1370.0	.0	1299.9	70.1	.0	565.5	44.8	18.3	2.5	194.43
.05	.00	2.30	1.57	.000	.045	.040	.000	191.44	973.00
.000393	111.	110.	108.	3	0	0	.00	85.00	1058.00

CCHV= .100 CEHV= .350
*SECNO 1514.000
CHIMP CLSTA= 1002.01 CELCH= 194.39 BW= 78.01 STCHL= 974.00 STCHR= 1052.01
EXCAVATION DATA
AEX= -324.5SQ-FT VEXR= -4.0K*CU-YD VEXT= -4.0K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .48

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 208.60 ELREA= 197.00

1514.000	4.75	199.14	.00	.00	199.34	.20	.29	.04	208.60
1370.0	.0	1348.1	21.9	.0	370.5	10.7	22.9	3.3	197.00
.08	.00	3.64	2.05	.000	.045	.040	.000	194.39	974.00
.001715	418.	404.	390.	2	0	0	.00	83.00	1057.00

*SECNO 1912.000
CHIMP CLSTA= 1003.20 CELCH= 195.51 BW= 100.00 STCHL= 953.20 STCHR= 1053.20
EXCAVATION DATA
AEX= -106.6SQ-FT VEXR= -3.2K*CU-YD VEXT= -7.2K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 203.47 ELREA= 201.16

1912.000	4.27	199.78	.00	.00	199.89	.11	.54	.01	203.47
1150.0	.0	1150.0	.0	.0	427.1	.0	26.6	4.1	201.16
.12	.00	2.69	.00	.000	.045	.000	.000	195.51	953.20
.001070	408.	398.	388.	2	0	0	.00	100.00	1053.20

*SECNO 2312.000
CHIMP CLSTA= 998.50 CELCH= 194.74 BW= 100.00 STCHL= 948.50 STCHR= 1048.50
EXCAVATION DATA
AEX= 136.8SQ-FT VEXR= .2K*CU-YD VEXT= -7.0K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.45

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      204.45 ELREA=      202.79

  2312.000      5.37    200.11       .00       .00    200.18       .07       .29       .00    204.45
    1150.0        .0    1150.0        .0        .0     537.3        .0      31.0       5.0    202.79
       .17       .00      2.14       .00      .000      .045      .000      .000    194.74    948.50
   .000511      410.      400.      390.         2         0         0       .00    100.00   1048.50


CCHV=     .300 CEHV=     .500
*SECNO 2485.000
CHIMP CLSTA=     998.60 CELCH=     197.14 BW=     100.00 STCHL=     948.60 STCHR=    1048.60
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


EXCAVATION DATA
AEX=     145.1SQ-FT     VEXR=        .9K*CU-YD     VEXT=       -6.1K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .41


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      203.71 ELREA=      202.63

  2485.000      3.08    200.22       .00       .00    200.44       .22       .18       .07    203.71
    1150.0        .0    1150.0        .0        .0     308.0        .0      32.7       5.4    202.63
       .18       .00      3.73       .00      .000      .045      .000      .000    197.14    948.60
   .003091      173.      173.      173.         2         0         0       .00    100.00   1048.60


*SECNO 2515.000
CHIMP CLSTA=     994.50 CELCH=     197.96 BW=     100.00 STCHL=     944.50 STCHR=    1044.50
EXCAVATION DATA
AEX=      78.7SQ-FT     VEXR=        .1K*CU-YD     VEXT=       -6.0K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .63

  2515.000      2.32    200.28       .00       .00    200.66       .38       .14       .08    203.64
    1150.0        .0    1150.0        .0        .0     231.4        .0      32.9       5.5    202.77
       .18       .00      4.97       .00      .000      .045      .000      .000    197.96    944.50
   .007864       30.       30.       30.         0         0         0       .00    100.00   1044.50


*SECNO 2530.000
CHIMP CLSTA=     992.40 CELCH=     198.91 BW=     100.00 STCHL=     942.40 STCHR=    1042.40
EXCAVATION DATA
AEX=     -14.1SQ-FT     VEXR=        .0K*CU-YD     VEXT=       -5.9K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2530.000      1.60    200.51    200.51       .00    201.31       .80       .20       .21    203.27
    1150.0        .0    1150.0        .0        .0     159.7        .0      33.0       5.5    202.95
       .19       .00      7.20       .00      .000      .045      .000      .000    198.91    942.40
   .026546       15.       15.       15.        20        14         0       .00    100.00   1042.40
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 2712.000
CHIMP CLSTA=     998.90 CELCH=     201.20 BW=     100.00 STCHL=     948.90 STCHR=    1048.90
EXCAVATION DATA
AEX=    -228.8SQ-FT     VEXR=       -.8K*CU-YD     VEXT=       -6.8K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.81


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       204.05 ELREA=       202.52

  2712.000      2.23    203.43       .00       .00    203.76       .33      2.30       .14    204.05
    1080.0        .0    1034.8      45.2        .0     222.6      12.5      33.8       6.0    202.52
       .20       .00      4.65      3.62      .000      .045      .040      .000    201.20    948.90
   .007145      182.      182.      182.         4         0         0       .00    108.10   1057.00


CCHV=     .100 CEHV=     .350
*SECNO 3112.000
CHIMP CLSTA=     996.00 CELCH=     202.26 BW=     100.00 STCHL=     952.60 STCHR=    1046.00
EXCAVATION DATA
AEX=    -274.9SQ-FT     VEXR=      -3.7K*CU-YD     VEXT=      -10.5K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.98

  3112.000      2.95    204.95       .00       .00    205.06       .11      1.28       .02    202.26
    1080.0     332.1     676.6      71.3     125.1     251.1      30.2      36.7       7.2    203.67
       .24      2.66      2.69      2.36      .040      .045      .040      .000    202.00    893.51
   .001816      400.      400.      400.         5         0         0       .00    166.49   1060.00


*SECNO 3513.000
CHIMP CLSTA=     998.80 CELCH=     203.35 BW=     100.00 STCHL=     948.80 STCHR=    1048.80
EXCAVATION DATA
AEX=    -239.5SQ-FT     VEXR=      -3.8K*CU-YD     VEXT=      -14.3K*CU-YD

  3513.000      2.44    205.79       .00       .00    205.91       .13       .85       .01    204.81
    1010.0     105.7     720.9     183.4      55.0     244.1      64.0      40.3       8.8    204.55
       .28      1.92      2.95      2.87      .040      .045      .040      .000    203.35    896.01
   .002520      401.      401.      401.         3         0         0       .00    183.99   1080.00


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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 3913.000
CHIMP CLSTA=     999.00 CELCH=     204.04 BW=     100.00 STCHL=     949.00 STCHR=    1049.00
EXCAVATION DATA
AEX=    -241.1SQ-FT     VEXR=      -3.6K*CU-YD     VEXT=      -17.9K*CU-YD
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  3913.000      4.18    206.58       .00       .00    206.66       .08       .75       .00    204.71
    1010.0     180.0     584.4     245.6      89.5     253.9      94.2      44.0      10.5    205.05
       .32      2.01      2.30      2.61      .040      .045      .040      .000    202.40    898.02
   .001433      400.      400.      400.         2         0         0       .00    183.99   1082.00


*SECNO 4313.000
CHIMP CLSTA=    1000.75 CELCH=     204.50 BW=     100.00 STCHL=     950.75 STCHR=    1047.50
EXCAVATION DATA
AEX=    -243.8SQ-FT     VEXR=      -3.6K*CU-YD     VEXT=      -21.5K*CU-YD

  4313.000      4.72    207.02       .00       .00    207.09       .07       .42       .00    204.73
    1010.0     169.5     425.8     414.7     103.2     244.0     164.7      48.3      12.2    204.50
       .38      1.64      1.75      2.52      .040      .045      .040      .000    202.30    899.01
   .000816      400.      400.      400.         2         0         0       .00    189.00   1088.00


*SECNO 4713.000
CHIMP CLSTA=     998.25 CELCH=     205.50 BW=     100.00 STCHL=     948.25 STCHR=    1037.65
EXCAVATION DATA
AEX=    -291.5SQ-FT     VEXR=      -4.0K*CU-YD     VEXT=      -25.4K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .69

  4713.000      4.22    207.42       .00       .00    207.53       .11       .43       .01    205.96
     940.0      90.3     337.8     511.9      49.6     171.9     164.2      52.4      13.9    205.50
       .42      1.82      1.97      3.12      .040      .045      .040      .000    203.20    915.03
   .001492      400.      400.      400.         2         0         0       .00    169.98   1085.00


*SECNO 5113.000
CHIMP CLSTA=     999.50 CELCH=     206.50 BW=     100.00 STCHL=     949.50 STCHR=    1039.50
EXCAVATION DATA
AEX=    -301.0SQ-FT     VEXR=      -4.4K*CU-YD     VEXT=      -29.8K*CU-YD

  5113.000      3.51    208.01       .00       .00    208.08       .07       .55       .00    206.96
     630.0      51.8     204.3     374.0      38.9     136.0     152.5      55.7      15.5    206.50
       .48      1.33      1.50      2.45      .040      .045      .040      .000    204.50    913.52
   .001200      400.      400.      400.         2         0         0       .00    181.48   1095.00


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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 5513.000
CHIMP CLSTA=     999.50 CELCH=     206.50 BW=     100.00 STCHL=     949.50 STCHR=    1049.50
EXCAVATION DATA
AEX=    -220.9SQ-FT     VEXR=      -3.9K*CU-YD     VEXT=      -33.7K*CU-YD

  5513.000      2.08    208.58       .00       .00    208.65       .07       .57       .00    207.59
     620.0      38.3     450.7     131.0      29.6     206.7      61.5      58.6      17.1    207.14
       .53      1.29      2.18      2.13      .040      .045      .040      .000    206.50    912.01
   .001695      400.      400.      400.         1         0         0       .00    172.99   1085.00


*SECNO 5914.000
CHIMP CLSTA=     998.75 CELCH=     207.50 BW=     100.00 STCHL=     948.75 STCHR=    1048.75
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EXCAVATION DATA
AEX= -242.1SQ-FT VEXR= -3.4K*CU-YD VEXT= -37.1K*CU-YD

5914.000	1.92	209.42	.00	.00	209.52	.10	.86	.01	209.04
620.0	6.3	510.6	103.1	8.1	191.7	46.4	61.1	18.7	208.56
.57	.78	2.66	2.22	.040	.045	.040	.000	207.50	916.01
.002828	401.	401.	401.	2	0	0	.00	170.19	1086.20

*SECNO 6156.000
CHIMP CLSTA= 1001.00 CELCH= 208.27 BW= 100.00 STCHL= 951.00 STCHR= 1051.00
EXCAVATION DATA
AEX= -190.7SQ-FT VEXR= -1.9K*CU-YD VEXT= -39.1K*CU-YD

3265 DIVIDED FLOW

6156.000	1.88	210.15	.00	.00	210.28	.13	.75	.01	210.11
620.0	.0	543.7	76.2	.2	188.3	30.9	62.4	19.5	209.30
.60	.15	2.89	2.47	.040	.045	.040	.000	208.27	911.01
.003413	242.	242.	242.	2	0	0	.00	130.89	1075.00

CCHV= .300 CEHV= .500
*SECNO 6307.000
CHIMP CLSTA= 1000.63 CELCH= 209.25 BW= 100.00 STCHL= 950.63 STCHR= 1050.63
EXCAVATION DATA
AEX= -141.4SQ-FT VEXR= -.9K*CU-YD VEXT= -40.0K*CU-YD

6307.000	1.57	210.82	.00	.00	211.00	.18	.69	.03	210.33
620.0	37.7	557.8	24.5	20.5	156.9	9.9	63.1	20.0	210.04
.61	1.83	3.56	2.48	.040	.045	.040	.000	209.25	908.01
.006520	151.	151.	151.	2	0	0	.00	154.99	1063.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	1.58	2.60	.00	20.50	1.50	190.00	.01	199.51	198.75

*SECNO 6388.000
CHIMP CLSTA= 1000.00 CELCH= 210.11 BW= 100.00 STCHL= 950.00 STCHR= 1024.72
EXCAVATION DATA
AEX= -201.6SQ-FT VEXR= -.5K*CU-YD VEXT= -40.5K*CU-YD

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
211.03	211.03	.03	17.	543.	190.	193.	209.61	210.61	31.

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3720 CRITICAL DEPTH ASSUMED

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  6388.000      .83    210.83    210.83       .00    211.18       .35       .94      -.94    210.15
     560.0    132.2     241.8     186.0      29.6      53.8      35.3      63.4      20.3    210.11
       .61     4.47      4.50      5.27      .040      .045      .040      .000    210.00    901.01
   .028809      81.       81.       81.        20        11         0       .00    168.99   1070.00


*SECNO 6517.000
CHIMP CLSTA=    1000.00 CELCH=     210.80 BW=     100.00 STCHL=     950.00 STCHR=    1026.27
EXCAVATION DATA
AEX=    -299.6SQ-FT     VEXR=      -1.2K*CU-YD     VEXT=      -41.7K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.38

  6517.000     1.94    211.94       .00       .00    212.03       .09       .77       .08    210.84
     560.0    113.5     157.7     288.8      53.2      87.1     102.9      63.9      20.8    210.80
       .63     2.13      1.81      2.81      .040      .045      .040      .000    210.00    908.01
   .002518     129.      129.      129.         6         0         0       .00    171.99   1080.00


CCHV=     .100 CEHV=     .350
*SECNO 6714.000
CHIMP CLSTA=     998.25 CELCH=     210.50 BW=     100.00 STCHL=     948.25 STCHR=    1048.25
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


EXCAVATION DATA
AEX=    -211.9SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -43.6K*CU-YD


3265 DIVIDED FLOW

  6714.000     4.75    212.35       .00       .00    212.41       .06       .37       .00    211.14
     560.0     40.5     351.7     167.8      33.6     184.8      70.1      65.1      21.7    210.95
       .66     1.21      1.90      2.39      .040      .045      .040      .000    207.60    903.93
   .001486     197.      197.      197.         4         0         0       .00    190.05   1096.50


*SECNO 7115.000
CHIMP CLSTA=    1000.50 CELCH=     211.50 BW=     100.00 STCHL=     950.50 STCHR=    1050.50
EXCAVATION DATA
AEX=    -227.8SQ-FT     VEXR=      -3.3K*CU-YD     VEXT=      -46.8K*CU-YD


3265 DIVIDED FLOW

  7115.000     5.08    213.18       .00       .00    213.30       .13       .87       .02    212.00
     720.0     96.3     427.3     196.3      46.7     167.1      53.7      67.7      23.4    212.61
       .70     2.06      2.56      3.65      .040      .045      .040      .000    208.10    904.51
   .003092     401.      401.      401.         1         0         0       .00    183.97   1100.00


*SECNO 7515.000
CHIMP CLSTA=    1000.75 CELCH=     212.50 BW=     100.00 STCHL=     950.75 STCHR=    1050.75
EXCAVATION DATA
AEX=    -268.9SQ-FT     VEXR=      -3.7K*CU-YD     VEXT=      -50.5K*CU-YD

  7515.000     5.27    214.17       .00       .00    214.28       .11       .97       .00    213.18
     700.0     59.9     339.5     300.5      40.2     166.9      90.2      70.3      25.1    213.02
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      .74      1.49      2.03      3.33      .040      .045      .040      .000    208.90    902.52
   .001949     400.      400.      400.         2         0         0       .00    197.98   1100.50


*SECNO 7715.000
CHIMP CLSTA=     999.50 CELCH=     213.50 BW=     100.00 STCHL=     949.50 STCHR=    1049.50
EXCAVATION DATA
AEX=    -256.1SQ-FT     VEXR=      -1.9K*CU-YD     VEXT=      -52.5K*CU-YD

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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .62

  7715.000      3.71    214.71       .00       .00    214.90       .19       .59       .03    214.39
     700.0      41.3     320.7     338.0      24.7     121.0      78.8      71.4      26.1    213.97
       .76      1.67      2.65      4.29      .040      .045      .040      .000    211.00    900.01
   .005084      200.      200.      200.         2         0         0       .00    204.33   1123.00


*SECNO 7916.000
CHIMP CLSTA=     998.75 CELCH=     214.00 BW=     100.00 STCHL=     948.75 STCHR=    1048.75
EXCAVATION DATA
AEX=    -169.8SQ-FT     VEXR=      -1.6K*CU-YD     VEXT=      -54.0K*CU-YD

  7916.000      1.77    215.77       .00       .00    215.93       .17      1.03       .00    215.45
     700.0      47.8     608.5      43.7      26.1     177.6      23.7      72.5      27.0    215.08
       .77      1.83      3.43      1.84      .040      .045      .040      .000    214.00    901.51
   .005174      201.      201.      201.         2         0         0       .00    187.49   1089.00


*SECNO 8317.000
CHIMP CLSTA=     996.75 CELCH=     216.00 BW=     100.00 STCHL=     946.75 STCHR=    1046.75
EXCAVATION DATA
AEX=    -174.9SQ-FT     VEXR=      -2.6K*CU-YD     VEXT=      -56.6K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       217.96 ELREA=       217.78

  8317.000      1.67    217.67       .00       .00    217.80       .13      1.86       .00    217.96
     480.0        .0     480.0        .0        .0     167.0        .0      74.3      28.3    217.78
       .81       .00      2.88       .00      .000      .045      .000      .000    216.00    946.75
   .003998      401.      401.      401.         2         0         0       .00    100.00   1046.75


*SECNO 8717.000
CHIMP CLSTA=    1000.25 CELCH=     218.75 BW=     100.00 STCHL=     950.25 STCHR=    1050.25
EXCAVATION DATA
AEX=    -269.4SQ-FT     VEXR=      -3.3K*CU-YD     VEXT=      -59.9K*CU-YD

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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
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Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 220.08 ELREA= 221.00

8717.000	1.26	220.01	.00	.00	220.24	.22	2.41	.03	220.08
480.0	.0	480.0	.0	.0	126.2	.0	75.7	29.2	221.00
.84	.00	3.80	.00	.000	.045	.000	.000	218.75	950.25
.010052	400.	400.	400.	3	0	0	.00	100.00	1050.25

*SECNO 8859.000
CHIMP CLSTA= 999.00 CELCH= 219.72 BW= 100.00 STCHL= 949.00 STCHR= 1049.00
EXCAVATION DATA
AEX= -308.1SQ-FT VEXR= -1.5K*CU-YD VEXT= -61.4K*CU-YD

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.11 ELREA= 222.15

8859.000	1.46	221.18	.00	.00	221.34	.17	1.10	.01	221.11
480.0	1.9	478.1	.0	2.9	146.1	.0	76.1	29.6	222.15
.85	.65	3.27	.00	.040	.045	.000	.000	219.72	905.97
.006151	142.	142.	142.	2	0	0	.00	128.24	1049.00

CCHV= .300 CEHV= .500
*SECNO 8977.000
CHIMP CLSTA= 1001.00 CELCH= 220.53 BW= 100.00 STCHL= 951.00 STCHR= 1051.00
EXCAVATION DATA
AEX= -304.2SQ-FT VEXR= -1.3K*CU-YD VEXT= -62.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 221.86 ELREA= 222.00

8977.000	1.41	221.94	.00	.00	222.12	.18	.77	.01	221.86
480.0	3.2	476.8	.0	3.1	141.0	.0	76.5	29.9	222.00
.86	1.04	3.38	.00	.040	.045	.000	.000	220.53	935.20
.006879	118.	118.	118.	3	0	0	.00	115.80	1051.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.69	2.60	.00	17.00	3.83	105.36	.00	206.49	205.90

*SECNO 9037.000

CHIMP CLSTA= 1001.50 CELCH= 220.94 BW= 100.00 STCHL= 951.50 STCHR= 1051.50
EXCAVATION DATA
AEX= -304.0SQ-FT VEXR= -.7K*CU-YD VEXT= -63.4K*CU-YD

3265 DIVIDED FLOW

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
222.42	222.29	.09	0.	450.	105.	105.	214.49	222.50	0.

9037.000	1.29	222.23	.00	.00	222.42	.19	.30	.00	222.31
450.0	.4	449.6	.0	.7	129.7	.0	76.7	30.1	222.50
.87	.55	3.47	.00	.040	.045	.000	.000	220.94	935.00
.008070	60.	60.	60.	2	0	0	.00	110.65	1051.50

*SECNO 9118.000
CHIMP CLSTA= 999.25 CELCH= 221.50 BW= 100.00 STCHL= 949.25 STCHR= 1049.25
EXCAVATION DATA
AEX= -336.6SQ-FT VEXR= -1.0K*CU-YD VEXT= -64.4K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 223.58 ELREA= 223.13

9118.000	1.36	222.86	.00	.00	223.03	.17	.61	.00	223.58
450.0	.0	450.0	.0	.0	135.2	.0	76.9	30.3	223.13
.87	.00	3.33	.00	.000	.045	.000	.000	221.50	949.25
.007038	81.	81.	81.	1	0	0	.00	100.00	1049.25

CCHV= .100 CEHV= .350
*SECNO 9318.000
CHIMP CLSTA= 1001.50 CELCH= 222.87 BW= 100.00 STCHL= 951.50 STCHR= 1051.50
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= -201.5SQ-FT VEXR= -2.0K*CU-YD VEXT= -66.4K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 223.97 ELREA= 224.71

9318.000	4.73	224.23	.00	.00	224.39	.16	1.36	.00	223.97
450.0	8.9	441.1	.0	6.7	136.4	.0	77.6	30.8	224.71
.89	1.33	3.23	.00	.040	.045	.000	.000	219.50	929.01
.006545	200.	200.	200.	2	0	0	.00	122.49	1051.50

*SECNO 9518.000
CHIMP CLSTA= 1000.05 CELCH= 224.25 BW= 100.00 STCHL= 950.05 STCHR= 1050.05
EXCAVATION DATA
AEX= -205.6SQ-FT VEXR= -1.5K*CU-YD VEXT= -67.9K*CU-YD

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .57

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 225.30 ELREA= 225.45

9518.000	.98	225.23	.00	.00	225.26	.02	.85	.01	225.30
120.0	.0	120.0	.0	.0	98.2	.0	78.1	31.3	225.45
.94	.00	1.22	.00	.000	.045	.000	.000	224.25	950.05
.001439	200.	200.	200.	3	0	0	.00	100.00	1050.05

*SECNO 9919.000
CHIMP CLSTA= 998.90 CELCH= 227.00 BW= 100.00 STCHL= 948.90 STCHR= 1048.90
EXCAVATION DATA
AEX= -298.0SQ-FT VEXR= -3.7K*CU-YD VEXT= -71.6K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 228.80 ELREA= 229.76

9919.000	.33	227.33	227.33	.00	227.50	.17	1.56	.05	228.80
110.0	.0	110.0	.0	.0	33.4	.0	78.7	32.2	229.76
.97	.00	3.29	.00	.000	.045	.000	.000	227.00	948.90
.043360	401.	401.	401.	20	17	0	.00	100.00	1048.90

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10119.000
CHIMP CLSTA= 999.50 CELCH= 229.00 BW= 100.00 STCHL= 949.50 STCHR= 1049.50
EXCAVATION DATA
AEX= -218.6SQ-FT VEXR= -1.9K*CU-YD VEXT= -73.5K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 230.35 ELREA= 229.25

10119.000	.26	229.26	229.26	.00	229.30	.04	.38	.01	230.35
110.0	.0	8.3	101.7	.0	25.5	57.6	79.0	32.7	229.25
1.00	.00	.32	1.77	.000	.045	.040	.000	229.00	949.50
.000597	200.	200.	200.	20	22	0	.00	126.50	1076.00

*SECNO 10319.000
CHIMP CLSTA= 1000.25 CELCH= 231.00 BW= 100.00 STCHL= 950.25 STCHR= 1050.25
EXCAVATION DATA
AEX= -201.4SQ-FT VEXR= -1.6K*CU-YD VEXT= -75.1K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 232.55 ELREA= 232.93

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 10319.000       .33    231.33    231.33       .00    231.50       .17       .38       .04    232.55
     110.0        .0     110.0        .0        .0      33.4        .0      79.3      33.2    232.93
      1.02       .00      3.30       .00      .000      .045      .000      .000    231.00    950.25
   .043386      200.      200.      200.        20        11         0       .00    100.00   1050.25


*SECNO 10720.000
CHIMP CLSTA=    1000.25 CELCH=     235.00 BW=      95.25 STCHL=     955.00 STCHR=    1050.25
EXCAVATION DATA
AEX=    -140.6SQ-FT     VEXR=      -2.5K*CU-YD     VEXT=      -77.6K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.07

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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       246.00 ELREA=       236.07

 10720.000       .68    235.68       .00       .00    235.72       .05      4.21       .01    246.00
     110.0        .0     110.0        .0        .0      64.3        .0      79.7      34.1    236.07
      1.09       .00      1.71       .00      .000      .045      .000      .000    235.00    955.00
   .004613      401.      401.      401.         9         0         0       .00     95.25   1050.25


*SECNO 11120.000
CHIMP CLSTA=    1002.00 CELCH=     239.00 BW=      97.01 STCHL=     952.00 STCHR=    1049.01
EXCAVATION DATA
AEX=    -293.1SQ-FT     VEXR=      -3.2K*CU-YD     VEXT=      -80.8K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .40


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       239.85 ELREA=       249.70

 11120.000       .38    239.38       .00       .00    239.52       .14      3.77       .03    239.85
     110.0        .0     110.0        .0        .0      37.3        .0      80.2      35.0    249.70
      1.12       .00      2.95       .00      .000      .045      .000      .000    239.00    952.00
   .028822      400.      400.      400.         6         0         0       .00     97.01   1049.01


*SECNO 11408.000
CHIMP CLSTA=    1000.15 CELCH=     240.00 BW=      98.86 STCHL=     950.15 STCHR=    1049.01
EXCAVATION DATA
AEX=    -194.5SQ-FT     VEXR=      -2.6K*CU-YD     VEXT=      -83.4K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.92


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       241.20 ELREA=       251.00

 11408.000       .88    240.88       .00       .00    240.90       .03      1.37       .01    241.20
     110.0        .0     110.0        .0        .0      85.6        .0      80.6      35.7    251.00
      1.19       .00      1.28       .00      .000      .045      .000      .000    240.00    950.15
   .001875      288.      288.      288.         6         0         0       .00     98.86   1049.01
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .350
*SECNO 11558.000
CHIMP CLSTA= 999.50 CELCH= 242.00 BW= 95.01 STCHL= 951.00 STCHR= 1046.01
EXCAVATION DATA
AEX= -225.0SQ-FT VEXR= -1.2K*CU-YD VEXT= -84.6K*CU-YD

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 253.00 ELREA= 253.00

11558.000	.35	242.35	242.35	.00	242.52	.17	.77	.05	253.00
110.0	.0	110.0	.0	.0	32.8	.0	80.8	36.0	253.00
1.20	.00	3.35	.00	.000	.045	.000	.000	242.00	951.00
.043001	149.	150.	151.	20	18	0	.00	95.01	1046.01

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.69	2.60	.00	18.17	5.00	105.36	.00	229.70	229.22

*SECNO 11690.000
CHIMP CLSTA= 996.50 CELCH= 242.60 BW= 100.00 STCHL= 946.50 STCHR= 1046.50
EXCAVATION DATA
AEX= -198.9SQ-FT VEXR= -1.0K*CU-YD VEXT= -85.6K*CU-YD

PRESS FLOW BECAUSE EGLWC OF 243.77 EXCEEDS 1.5 DEPTH
6110 EGLWC OF 242.35 LESS THAN XEG OF 242.52
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
242.35	243.77	.12	0.	60.	105.	105.	237.70	243.10	0.

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF

11690.000	.23	242.83	242.82	.00	242.94	.11	5.89	-5.89	244.10
60.0	.0	60.0	.0	.0	22.5	.0	80.9	36.3	243.87
1.21	.00	2.66	.00	.000	.045	.000	.000	242.60	946.50
.047752	129.	132.	136.	20	14	0	.00	100.00	1046.50

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PROFILE FOR STREAM SUB-CRITICAL M3D2A

PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

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ELEVATION  170.     180.     190.     200.     210.     220.     230.     240.     250.     260.
   SECNO   CUMDIS

     .00      0. I        .  MW  . E     .        .        .        .        .        .        .        L
             50. I        .  MCW . E     .        .        .        .        .        .        .        L
            100. .I       .   MCW . E    .        .        .        .        .        .        .        L
            150. .I       .   MCW . E    .        .        .        .        .        .        .        L
            200. .I       .   M CW.  E   .        .        .        .        .        .        .        L
            250. .I       .   M  CW  E   .        .        .        .        .        .        .        L
            300. . I      .    M C.W E   .        .        .        .        .        .        .        L
            350. . I      .    M  C W E  .        .        .        .        .        .        .        L
  384.00    400. . I      .    L  C  WE  .        .        .        .        .        .        .        .
  434.00    450. . I      .      L. W E  .        .        .        .        .        .        .        .
  484.00    500. .  I     .       L  W  E .        .        .        .        .        .        .        .
            550. C  I     .       L  W  E .        .        .        .        .        .        .        .
            600. C   I    .       L   W E .        .        .        .        .        .        .        .
            650. C    I   .       L    WE .        .        .        .        .        .        .        .
  684.00    700. C    I   .       L     WE .        .        .        .        .        .        .        .
  726.00    750. C     I  .        . M  W E .        .        .        .        .        .        .        .
            800. C      I .        .  M  WE .        .        .        .        .        .        .        .
            850. C      I .        .  M  W E .        .        .        .        .        .        .        .
            900. C       I.        .  M  W E .        .        .        .        .        .        .        .
            950. C       I.        .  M   WE .        .        .        .        .        .        .        .
 1000.00   1000. C        I        .  M   W E.        .        .        .        .        .        .        .
           1050. C        .   I R  . L    WE.        .        .        .        .        .        .        .
           1100. C        .        .I R    E.  L     .        .        .        .        .        .        .
 1110.00   1150. C        .        . I  R  E.   ML   .        .        .        .        .        .        .
           1200. C        .        . I  R  E.    ML  .        .        .        .        .        .        .
           1250. C        .        .  I R  E.    ML  .        .        .        .        .        .        .
           1300. C        .        .  I  R E.    M L .        .        .        .        .        .        .
           1350. C        .        .  I  R WE     ML .        .        .        .        .        .        .
           1400. C        .        .   I R WE     M L.        .        .        .        .        .        .
           1450. C        .        .   I  R WE     ML.        .        .        .        .        .        .
           1500. C        .        .   I  R WE     ML.        .        .        .        .        .        .
 1514.00   1550. C        .        .    I R WE     M L.       .        .        .        .        .        .
           1600. C        .        .    I  R E      L.        .        .        .        .        .        .
           1650. C        .        .    I  R E      L.        .        .        .        .        .        .
           1700. C        .        .    I   RE     LM.        .        .        .        .        .        .
           1750. C        .        .    I   RE    L  M.       .        .        .        .        .        .
           1800. C        .        .    I   E    L  M.        .        .        .        .        .        .
           1850. C        .        .     I  E   L   M         .        .        .        .        .        .
           1900. C        .        .     I  ER  L   M         .        .        .        .        .        .
 1912.00   1950. C        .        .     I  ER  L   M         .        .        .        .        .        .
           2000. C        .        .     I  E R L   M         .        .        .        .        .        .
           2050. C        .        .     I  E R L   .M        .        .        .        .        .        .
           2100. C        .        .     I  E R L   .M        .        .        .        .        .        .
           2150. C        .        .    I   E R L   .M        .        .        .        .        .        .
           2200. C        .        .    I   E  RL   .M        .        .        .        .        .        .
           2250. C        .        .    I   E  R L  .M        .        .        .        .        .        .
           2300. C        .        .    I   E  R L  .M        .        .        .        .        .        .
 2312.00   2350. C        .        .    I   WE R L  .M        .        .        .        .        .        .
           2400. C        .        .     I  WE R L  .M        .        .        .        .        .        .
           2450. C        .        .     I  .E RL   . M       .        .        .        .        .        .
 2485.00   2500. C        .        .      I .E RL   . M       .        .        .        .        .        .
 2515.00   2550. C        .        .       I .E RL  . M       .        .        .        .        .        .
 2530.00   2600. .        .        .        I.WERL  . M       .        .        .        .        .        .
           2650. C        .        .         I ERL  . M       .        .        .        .        .        .
           2700. C        .        .         I WEL  . M       .        .        .        .        .        .
 2712.00   2750. C        .        .         . IRE  . M       .        .        .        .        .        .
           2800. C        .        .         . IRE  . M       .        .        .        .        .        .
           2850. C        .        .         . IRE  . M       .        .        .        .        .        .
           2900. C        .        .         . IRWE . M       .        .        .        .        .        .
           2950. C        .        .         . IL E . M       .        .        .        .        .        .
           3000. C        .        .         . ILRE . M       .        .        .        .        .        .
           3050. C        .        .         . ILRE . M       .        .        .        .        .        .
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	3100.	C	.	.	. ILRE	. M	.	.	.	.	.	.	.
3112.00	3150.	C	.	.	. ILRE	. M	.	.	.	.	.	.	.
	3200.	C	.	.	. ILRE	. M	.	.	.	.	.	.	.
	3250.	C	.	.	. IRWE	. M	.	.	.	.	.	.	.
	3300.	C	.	.	. IL E	. M	.	.	.	.	.	.	.
	3350.	C	.	.	. IL E	. M	.	.	.	.	.	.	.
	3400.	C	.	.	. ILRE	. M	.	.	.	.	.	.	.
	3450.	C	.	.	. ILRE	. M	.	.	.	.	.	.	.
	3500.	C	.	.	. ILE	. M	.	.	.	.	.	.	.
3513.00	3550.	C	.	.	. ILE	. M	.	.	.	.	.	.	.
	3600.	C	.	.	. ILE	. M	.	.	.	.	.	.	.
	3650.	C	.	.	. I LE	. M	.	.	.	.	.	.	.
	3700.	C	.	.	. I LWE	. M	.	.	.	.	.	.	.
	3750.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	3800.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	3850.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	3900.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
3913.00	3950.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4000.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4050.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4100.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4150.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4200.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4250.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4300.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
4313.00	4350.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4400.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4450.	C	.	.	. I L WE	. M	.	.	.	.	.	.	.
	4500.	C	.	.	. I RL E	. M	.	.	.	.	.	.	.
	4550.	C	.	.	. I RL E	. M	.	.	.	.	.	.	.
	4600.	C	.	.	. I RL E	. M	.	.	.	.	.	.	.
	4650.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4700.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
4713.00	4750.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4800.	C	.	.	. I L E	. M	.	.	.	.	.	.	.
	4850.	C	.	.	. I RLE	. M	.	.	.	.	.	.	.
	4900.	C	.	.	. I RLE	. M	.	.	.	.	.	.	.
	4950.	C	.	.	. I RLE	. M	.	.	.	.	.	.	.
	5000.	C	.	.	. I RLE	. M	.	.	.	.	.	.	.
	5050.	C	.	.	. I LE	. M	.	.	.	.	.	.	.
	5100.	C	.	.	. I LE	. M	.	.	.	.	.	.	.
5113.00	5150.	C	.	.	. I LE	. M	.	.	.	.	.	.	.
	5200.	C	.	.	. I LE	. M	.	.	.	.	.	.	.
	5250.	C	.	.	. I LWE.	M	.	.	.	.	.	.	.
	5300.	C	.	.	. IRLE.	M	.	.	.	.	.	.	.
	5350.	C	.	.	. IRLE.	M	.	.	.	.	.	.	.
	5400.	C	.	.	. IRLE.	M	.	.	.	.	.	.	.
	5450.	C	.	.	. IRLE.	M	.	.	.	.	.	.	.
	5500.	C	.	.	. ILE.	M	.	.	.	.	.	.	.
5513.00	5550.	C	.	.	. ILE.	M	.	.	.	.	.	.	.
	5600.	C	.	.	. ILE.	M	.	.	.	.	.	.	.
	5650.	C	.	.	. ILE.	M	.	.	.	.	.	.	.
	5700.	C	.	.	. ILE.	M	.	.	.	.	.	.	.
	5750.	C	.	.	. IRE.	M	.	.	.	.	.	.	.
	5800.	C	.	.	. IRWE	M	.	.	.	.	.	.	.
	5850.	C	.	.	. ILE	M	.	.	.	.	.	.	.
	5900.	C	.	.	. ILE	M	.	.	.	.	.	.	.
5914.00	5950.	C	.	.	. ILE	M	.	.	.	.	.	.	.
	6000.	C	.	.	. IRE	M	.	.	.	.	.	.	.
	6050.	C	.	.	. IRE	M	.	.	.	.	.	.	.
	6100.	C	.	.	. IRE	M	.	.	.	.	.	.	.
	6150.	C	.	.	. I E	M	.	.	.	.	.	.	.
6156.00	6200.	C	.	.	. IWE	M	.	.	.	.	.	.	.
	6250.	C	.	.	. IRE	M.	.	.	.	.	.	.	.
	6300.	C	.	.	. IRE	M	.	.	.	.	.	.	.
6307.00	6350.	C	.	.	. IE	M	.	.	.	.	.	.	.

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6388.00 6400.  .    .    .    .    IWE     M    .    .    .    .    .
        6450.  C    .    .    .    ILE     M    .    .    .    .    .
        6500.  C    .    .    .    ILE     M    .    .    .    .    .
6517.00 6550.  C    .    .    .    ILE     M    .    .    .    .    .
        6600.  C    .    .    .    ILE     M    .    .    .    .    .
        6650.  C    .    .    .   I.LWE    M    .    .    .    .    .
        6700.  C    .    .    .   I.L E    M    .    .    .    .    .
6714.00 6750.  C    .    .    .  I .L E   M    .    .    .    .    .
        6800.  C    .    .    .  I .RLE   M    .    .    .    .    .
        6850.  C    .    .    .  I . LE   M    .    .    .    .    .
        6900.  C    .    .    .  I . LE   M    .    .    .    .    .
        6950.  C    .    .    .  I . LE   M    .    .    .    .    .
        7000.  C    .    .    .  I . LE   M    .    .    .    .    .
        7050.  C    .    .    .  I . LE   M    .    .    .    .    .
        7100.  C    .    .    .  I . LWE  M    .    .    .    .    .
7115.00 7150.  C    .    .    .  I . LRE  M    .    .    .    .    .
        7200.  C    .    .    .   I. LRE  .M   .    .    .    .    .
        7250.  C    .    .    .   I.  LE  .M   .    .    .    .    .
        7300.  C    .    .    .   I.  LE  .M   .    .    .    .    .
        7350.  C    .    .    .   I.  LE  .M   .    .    .    .    .
        7400.  C    .    .    .   I.  LE  . M  .    .    .    .    .
        7450.  C    .    .    .   I.  LE  . M  .    .    .    .    .
        7500.  C    .    .    .   I.  LE  . M  .    .    .    .    .
7515.00 7550.  C    .    .    .   I.  RLE . M  .    .    .    .    .
        7600.  C    .    .    .    I  LE  . M  .    .    .    .    .
        7650.  C    .    .    .    I  LE  . M  .    .    .    .    .
        7700.  C    .    .    .   .I  LE  . M  .    .    .    .    .
7715.00 7750.  C    .    .    .   .I  RE  . M  .    .    .    .    .
        7800.  C    .    .    .   . I  E  . M  .    .    .    .    .
        7850.  C    .    .    .   . I LE  .  M .    .    .    .    .
        7900.  C    .    .    .   .  IRE  .   M .    .    .    .    .
7916.00 7950.  C    .    .    .   .  IRE  .   M .    .    .    .    .
        8000.  C    .    .    .   .   IE  .   M .    .    .    .    .
        8050.  C    .    .    .   .   ILE .    M .    .    .    .    .
        8100.  C    .    .    .   .   IRE .    M .    .    .    .    .
        8150.  C    .    .    .   .   I E .    M .    .    .    .    .
        8200.  C    .    .    .   .    IE .    M .    .    .    .    .
        8250.  C    .    .    .   .    IRE .   M .    .    .    .    .
        8300.  C    .    .    .   .    I E .   M .    .    .    .    .
8317.00 8350.  C    .    .    .   .    I E .   M .    .    .    .    .
        8400.  C    .    .    .   .     IEL.     M .    .    .    .    .
        8450.  C    .    .    .   .     I E.     M .    .    .    .    .
        8500.  C    .    .    .   .     I E.      M .    .    .    .    .
        8550.  C    .    .    .   .      IER      M .    .    .    .    .
        8600.  C    .    .    .   .      IWE       M.    .    .    .    .
        8650.  C    .    .    .   .      I ER      M.    .    .    .    .
        8700.  C    .    .    .   .       IER       M    .    .    .    .
8717.00 8750.  C    .    .    .   .       IWE       M    .    .    .    .
        8800.  C    .    .    .   .       I.ER      M    .    .    .    .
        8850.  C    .    .    .   .        IER      M    .    .    .    .
8859.00 8900.  C    .    .    .   .        ILE      M    .    .    .    .
        8950.  C    .    .    .   .        I E      .M   .    .    .    .
8977.00 9000.  C    .    .    .   .        .IE      . M  .    .    .    .
9037.00 9050.  C    .    .    .   .        .I E     .  M .    .    .    .
        9100.  C    .    .    .   .        . IE     .  M .    .    .    .
9118.00 9150.  C    .    .    .   .        . IEL    .  M .    .    .    .
        9200.  C    .    .    .   .        .I  E    .  M .    .    .    .
        9250.  C    .    .    .   .        .I  E    .  M .    .    .    .
        9300.  C    .    .    .   .        I   ER   .  M .    .    .    .
9318.00 9350.  C    .    .    .   .        I   LE   .   M .    .    .    .
        9400.  C    .    .    .   .        .I   E   .   M .    .    .    .
        9450.  C    .    .    .   .        . I  E   .   M .    .    .    .
        9500.  C    .    .    .   .        .  I ER  .    M .    .    .    .
9518.00 9550.  C    .    .    .   .        .   IE   .    M .    .    .    .
        9600.  C    .    .    .   .        .   IE   .    M .    .    .    .
        9650.  C    .    .    .   .        .   IEL  .    M .    .    .    .
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          9700.  C        .        .        .        .        .  EL .    M  .        .        .        .
          9750.  C        .        .        .        .        .  IER .   M  .        .        .        .
          9800.  C        .        .        .        .        .  IEL .   M  .        .        .        .
          9850.  C        .        .        .        .        .  ELR.     M .        .        .        .
          9900.  .        .        .       C.        .        .  WELR     M .        .        .        .
  9919.00 9950.  .        .        .        .        .        .  IELR     M .        .        .        .
         10000.  .        .        .        .        .        .   E L     M .        .        .        .
         10050.  .        .        .        .        .        .  IEL     M .        .        .        .
         10100.  .        .        .        .        .        .   EL      M.        .        .        .
 10119.00 10150.  .        .        .        .        .        .  IEL     M.        .        .        .
         10200.  .        .        .        .        .        .   EL      M        .        .        .
         10250.  .        .        .        .        .        .  IEL      M        .        .        .
         10300.  .        .        .        .        .        .  .EL     .M        .        .        .
 10319.00 10350.  .        .        .        .        .        .  .IEL    .M        .        .        .
         10400.  .        .        .        .  C     .        .  . E RL   . M       .        .        .
         10450.  .  C     .        .        .        .        .  . IER L  . M       .        .        .
         10500.  C        .        .        .        .        .  .  ER  L . M       .        .        .
         10550.  C        .        .        .        .        .  . IER   L M        .        .        .
         10600.  C        .        .        .        .        .  .  ER   .L M       .        .        .
         10650.  C        .        .        .        .        .  .  IER  .  L       .        .        .
         10700.  C        .        .        .        .        .  .   WE  .  M L     .        .        .
 10720.00 10750.  C        .        .        .        .        .  .   IE  .  M  L    .        .        .
         10800.  C        .        .        .        .        .  .    WER .   M L   .        .        .
         10850.  C        .        .        .        .        .  .    IE  R    L    .        .        .
         10900.  C        .        .        .        .        .  .     E  . R L M   .        .        .
         10950.  C        .        .        .        .        .  .     IE . L   M   .        .        .
         11000.  C        .        .        .        .        .  .      E . L  R M  .        .        .
         11050.  C        .        .        .        .        .  .      IE. L    RM .        .        .
         11100.  C        .        .        .        .        .  .       E.L     RM.        .        .
 11120.00 11150.  C        .        .        .        .        .  .       IE        R        .        .
         11200.  C        .        .        .        .        .  .        E        R        .        .
         11250.  C        .        .        .        .        .  .        EL       R        .        .
         11300.  C        .        .        .        .        .  .        WE       .R       .        .
         11350.  C        .        .        .        .        .  .        IE       .R       .        .
         11400.  C        .        .        .        .        .  .        IE       .R       .        .
 11408.00 11450.  C        .        .        .        .        .  .        IEL      .R       .        .
         11500.  C        .        .        .        .        .  .        .IE  L    . R      .        .
         11550.  C        .        .        .        .        .  .        . E     L.  R      .        .
 11558.00 11600.  .        .        .        .        .        .  .        . IE     .  L      .        .
         11650.  .        .        .        .        .        .  .        .  E     L  M      .        .
 11690.00 11700.  .        .        .        .        .        .  .        .  EL    .  M      .        .
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THIS RUN EXECUTED 19FEB93 14:05:33

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 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SUB-CRITICAL FLOW M3D2A

SUMMARY PRINTOUT

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	.000	4710.00	.00	16.00	221.91	21.23	100000.00	100000.00	183.70	169.67

	.000	5470.00	.00	16.00	250.06	21.87	100000.00	100000.00	185.46	169.67
*	384.000	4710.00	384.00	16.02	219.01	21.51	186.71	186.71	185.56	171.71
*	384.000	5470.00	384.00	116.00	894.91	10.51	186.71	186.71	192.38	171.71
*	434.000	4710.00	50.00	16.02	222.51	21.17	188.36	188.36	186.04	171.98
*	434.000	5470.00	50.00	116.00	588.80	14.64	188.36	188.36	191.20	171.98
*	484.000	4710.00	50.00	16.02	221.88	21.23	190.00	190.00	186.83	172.80
*	484.000	5470.00	50.00	116.00	557.36	14.92	190.00	190.00	192.45	172.80
*	684.000	4710.00	200.00	126.00	1010.31	7.44	190.00	190.00	195.19	176.07
*	684.000	5470.00	200.00	126.00	1023.76	8.55	190.00	190.00	195.30	176.07
	726.000	4710.00	42.00	126.00	918.62	8.72	177.11	177.11	195.03	177.11
	726.000	5470.00	42.00	126.00	924.73	10.08	177.11	177.11	195.07	177.11
*	1000.000	4710.00	274.00	104.00	623.04	10.84	179.85	179.85	195.20	179.85
*	1000.000	5470.00	274.00	104.00	799.84	10.85	179.85	179.85	196.90	179.85
*	1110.000	4710.00	110.00	84.99	565.91	8.82	195.00	195.00	195.89	181.00
*	1110.000	1370.00	110.00	85.00	610.23	2.30	205.00	194.43	198.93	191.44
	1514.000	4710.00	404.00	49.75	510.55	9.23	198.60	198.60	196.35	181.10
*	1514.000	1370.00	404.00	83.00	381.16	3.64	208.60	197.00	199.14	194.39
	1912.000	4490.00	398.00	48.10	517.47	8.68	203.00	202.70	197.05	181.70
	1912.000	1150.00	398.00	100.00	427.13	2.69	203.47	201.16	199.78	195.51
	2312.000	4490.00	400.00	44.88	439.44	10.22	204.00	203.00	197.37	183.00
*	2312.000	1150.00	400.00	100.00	537.32	2.14	204.45	202.79	200.11	194.74

	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
*	2485.000	4490.00	173.00	39.88	290.88	15.44	203.00	203.00	199.80	183.90
*	2485.000	1150.00	173.00	100.00	307.96	3.73	203.71	202.63	200.22	197.14
*	2515.000	4490.00	30.00	37.29	285.25	15.74	203.00	203.00	199.96	184.00
*	2515.000	1150.00	30.00	100.00	231.36	4.97	203.64	202.77	200.28	197.96
*	2530.000	4490.00	15.00	57.08	329.34	13.63	203.00	203.00	201.40	188.30
*	2530.000	1150.00	15.00	100.00	159.73	7.20	203.27	202.95	200.51	198.91
*	2712.000	4410.00	182.00	81.09	522.01	8.94	204.00	203.00	203.92	188.50
*	2712.000	1080.00	182.00	108.10	235.07	4.65	204.05	202.52	203.43	201.20
	3112.000	4410.00	400.00	81.76	488.21	9.47	205.40	204.00	204.41	189.40
*	3112.000	1080.00	400.00	166.49	406.40	2.69	202.26	203.67	204.95	202.00
	3513.000	4350.00	401.00	113.71	477.77	10.07	205.00	205.00	205.01	190.80
	3513.000	1010.00	401.00	183.99	363.03	2.95	204.81	204.55	205.79	203.35
	3913.000	4350.00	400.00	45.06	395.43	11.00	205.80	206.00	205.66	191.30
	3913.000	1010.00	400.00	183.99	437.62	2.30	204.71	205.05	206.58	202.40
*	4313.000	4350.00	400.00	189.00	856.56	7.68	205.00	207.00	207.56	192.60
	4313.000	1010.00	400.00	189.00	511.82	1.75	204.73	204.50	207.02	202.30
	4713.000	3850.00	400.00	169.98	779.35	7.11	206.60	206.00	208.02	192.80
*	4713.000	940.00	400.00	169.98	385.66	1.97	205.96	205.50	207.42	203.20
	5113.000	3540.00	400.00	181.48	693.97	7.27	207.20	207.00	208.37	194.50

	5113.000	630.00	400.00	181.48	327.48	1.50	206.96	206.50	208.01	204.50
	5513.000	3530.00	400.00	172.99	515.56	9.20	207.00	207.00	208.55	195.60
	5513.000	620.00	400.00	172.99	297.74	2.18	207.59	207.14	208.58	206.50
	5914.000	3530.00	401.00	153.77	447.17	9.30	208.00	208.00	209.17	196.60
	5914.000	620.00	401.00	170.19	246.21	2.66	209.04	208.56	209.42	207.50
	6156.000	3530.00	242.00	42.00	324.17	10.89	210.00	209.80	209.35	197.80
	6156.000	620.00	242.00	130.89	219.38	2.89	210.11	209.30	210.15	208.27
*	6307.000	3530.00	151.00	154.99	445.04	11.49	209.75	210.10	211.57	198.75
	6307.000	620.00	151.00	154.99	187.31	3.56	210.33	210.04	210.82	209.25
*	6388.000	3470.00	81.00	169.00	935.02	7.26	210.61	210.61	214.46	199.61
*	6388.000	560.00	81.00	168.99	118.59	4.50	210.15	210.11	210.83	210.00
	6517.000	3470.00	129.00	172.00	1043.41	4.98	211.30	211.50	214.85	200.00
*	6517.000	560.00	129.00	171.99	243.15	1.81	210.84	210.80	211.94	210.00
	6714.000	3470.00	197.00	198.50	1001.21	5.61	211.00	211.00	214.90	200.30
	6714.000	560.00	197.00	190.05	288.50	1.90	211.14	210.95	212.35	207.60

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	SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
	7115.000	3330.00	401.00	195.50	862.78	5.94	213.00	212.00	215.05	200.60
	7115.000	720.00	401.00	183.97	267.51	2.56	212.00	212.61	213.18	208.10
	7515.000	3310.00	400.00	197.99	783.43	6.30	213.00	213.00	215.26	200.90
	7515.000	700.00	400.00	197.98	297.27	2.03	213.18	213.02	214.17	208.90
	7715.000	3310.00	200.00	222.99	585.82	7.91	214.00	214.00	215.21	201.50
*	7715.000	700.00	200.00	204.33	224.52	2.65	214.39	213.97	214.71	211.00
*	7916.000	3310.00	201.00	38.75	298.14	11.10	216.00	215.00	214.90	202.10
	7916.000	700.00	201.00	187.49	227.39	3.43	215.45	215.08	215.77	214.00
	8317.000	2300.00	401.00	41.86	334.08	6.88	219.00	217.00	216.95	203.00
	8317.000	480.00	401.00	100.00	166.95	2.88	217.96	217.78	217.67	216.00
	8717.000	2300.00	400.00	39.07	340.32	6.76	221.00	221.00	217.41	204.00
*	8717.000	480.00	400.00	100.00	126.21	3.80	220.08	221.00	220.01	218.75
	8859.000	2300.00	142.00	38.61	324.36	7.09	221.00	222.00	217.51	204.60
	8859.000	480.00	142.00	128.24	149.00	3.27	221.11	222.15	221.18	219.72
*	8977.000	2300.00	118.00	37.67	257.30	8.94	222.00	222.00	217.49	205.90
	8977.000	480.00	118.00	115.80	144.04	3.38	221.86	222.00	221.94	220.53
*	9037.000	2270.00	60.00	137.99	651.64	4.13	222.60	222.50	223.86	206.49
	9037.000	450.00	60.00	110.65	130.38	3.47	222.31	222.50	222.23	220.94
	9118.000	2270.00	81.00	110.84	657.68	3.85	224.00	223.00	223.92	205.60
	9118.000	450.00	81.00	100.00	135.22	3.33	223.58	223.13	222.86	221.50
*	9318.000	2270.00	200.00	38.99	364.20	6.23	225.00	225.00	223.77	206.40
	9318.000	450.00	200.00	122.49	143.12	3.23	223.97	224.71	224.23	219.50
	9518.000	1700.00	200.00	36.94	331.07	5.13	227.00	227.00	224.18	207.20
*	9518.000	120.00	200.00	100.00	98.22	1.22	225.30	225.45	225.23	224.25
	9919.000	1700.00	401.00	41.09	279.63	6.08	228.00	230.00	224.46	212.20

* 9919.000	110.00	401.00	100.00	33.39	3.29	228.80	229.76	227.33	227.00
* 10119.000	1700.00	200.00	26.52	132.63	12.82	230.00	230.00	224.37	215.00
* 10119.000	110.00	200.00	126.50	83.14	.32	230.35	229.25	229.26	229.00
* 10319.000	1700.00	200.00	29.55	138.12	12.31	232.00	232.80	227.27	217.80
* 10319.000	110.00	200.00	100.00	33.38	3.30	232.55	232.93	231.33	231.00
* 10720.000	1700.00	401.00	20.45	122.12	13.92	237.10	236.00	231.19	220.50
* 10720.000	110.00	401.00	95.25	64.32	1.71	246.00	236.07	235.68	235.00
* 11120.000	1700.00	400.00	33.33	223.43	7.61	241.00	240.00	235.38	222.00
* 11120.000	110.00	400.00	97.01	37.30	2.95	239.85	249.70	239.38	239.00

SECNO	Q	XLCH	TOPWID	AREA	VCH	XLBEL	RBEL	CWSEL	ELMIN
* 11408.000	1700.00	288.00	22.30	125.44	13.55	241.00	241.00	235.42	226.00
* 11408.000	110.00	288.00	98.86	85.65	1.28	241.20	251.00	240.88	240.00
11558.000	1700.00	150.00	20.00	154.12	11.03	243.00	243.00	237.65	229.22
* 11558.000	110.00	150.00	95.01	32.80	3.35	253.00	253.00	242.35	242.00
* 11690.000	1640.00	132.00	48.91	305.31	5.39	243.60	243.80	243.35	229.70
* 11690.000	60.00	132.00	100.00	22.53	2.66	244.10	243.87	242.83	242.60

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=      .000  PROFILE=  1  CRITICAL DEPTH ASSUMED

CAUTION SECNO=    384.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    384.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=    384.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    434.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    434.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    434.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=    484.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    484.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    484.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    484.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=    684.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    684.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=   1000.000  PROFILE=  1  WSEL BASED ON X5 CARD
NOTE    SECNO=   1000.000  PROFILE=  2  WSEL BASED ON X5 CARD

WARNING SECNO=   1110.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1110.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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WARNING SECNO=   1514.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   2312.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2485.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2485.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2485.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=   2485.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2515.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2515.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=   2515.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   2530.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   2530.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   2530.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   2530.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   2712.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   2712.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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WARNING SECNO=   3112.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4313.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4713.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   6307.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6307.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   6388.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=   6388.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6388.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   6517.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   7715.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   7916.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   8717.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   8977.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   9037.000  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=   9037.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   9318.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   9518.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   9919.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   9919.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   9919.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10119.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10119.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10119.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=  10119.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10119.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
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CAUTION SECNO=  10119.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10319.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10319.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10319.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=  10319.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10319.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  10319.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  10720.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  10720.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=  10720.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  11120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  11120.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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CAUTION SECNO=  11408.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  11408.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=  11408.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  11558.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  11558.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  11558.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  11690.000  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=  11690.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=  11690.000  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=  11690.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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