2002P019
NEW RIVER

DRAINAGE STATEMENT

Glendale Avenue Bicycle Improvements
New River to 99th Avenue
Glendale Ave. Bridge Over New River
City of Glendale, Arizona

Prepared for The

City of Glendale, Arizona

Prepared By:

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February 2003

A Portion of Section 1, T2N, R1W, G&SRB&M
City of Phoenix, Arizona

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INCA ENGINEERS INC.

DRAINAGE STATEMENT
BICYCLE IMPROVEMENTS TO GLENDALE AVENUE
GLENDALE ARIZONA

Drainage Design
Revised March 11, 2002
Revised February 13, 2003

The selected alternative for the New River shared use path is a cantilevered extension to the north and south sides of the existing bridge using brackets which will be attached to the piers and abutments. The brackets will extend approximately three feet into the 100 year flood water surface of New River. The brackets have been designed to minimize the effect on the flows as established by the Maricopa County Flood Control District.
The canal was modeled using a HEC2 model furnished by the Maricopa County Flood Control District.
The HEC2 proposed model uses the original existing data furnished by The FCDMC as the base with modifications to simulate the effect of the proposed brackets within the floodway at the bridge.

Methodology:
The proposed brackets extend into the floodway approximately three (3) feet and extend upstream at 45 degree three feet at the Q_{100} water surface. The depth of the water at the bridge face is 10.59'. Using this average horizontal length of bracket intrusion (3'/2=1.5') and dividing by the depth of water at the bridge (1.5'/10.59'=0.142'). See Calculation of Intrusion Length (immediately following).
The average intrusion can be considered 0.142'. With a debris factor of 2 the bridge piers and abutments are adjusted by a distance of 0.3' to simulate the intrusion in the model.
A length of 0.3' was added to the bridge width in the model and the same distance was subtracted from the distance between the bridge and the next upstream section.

A comparison of the results of the MCFCD model and the proposed model are as follows:

	River Station	Q_{100}	WS Existing Cond.	WS Proposed Cond.	Difference
Down	84.00	4100	1049.59	1049.59	0.00
Stream	87.00		1050.09	1050.09	0.00
	89.00		1050.47	1050.47	0.00
	94.00		1051.62	1051.62	0.00
	97.00		1052.34	1052.34	0.00
	99.54		1052.73	1052.73	0.00
	99.60		1054.17	1054.17	0.00

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	River Station	Q_{100}	WS Existing Cond.	WS Proposed Cond.	Difference
	100.00		Bridge	Bridge	
	100.40		1056.79	1056.80	+ 0.01
	100.90		1057.82	1052.05	0.00
	103.00		1058.73	1052.90	0.00
	106.00		1059.73	1052.79	0.00
Up	109.00		1060.26	1052.79	0.00
Stream	110.00		1060.33	1054.66	0.00

Conclusion:
As indicated from the HEC2 results the water surface upstream of the crossings will rise only 0.01' only at the upstream bridge section. The effect on the water surface for the Q_{100} storm is insignificant.

INCA Engineers, Inc.

Debbie Wick

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Project Manager

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INCA ENGINEERS INC.

Job No. 69442

Vol./Sheet No. 1 of 1

Contract/Client City of Glendale

Phase/Subject Proposed Bridge Extension - Glendale Ave. Over New River

Design Topic Find average distance to adjust Pier lengths for HEC2

Made By PC Date 2-13-03 Checked By DW Date 2/27/03 Page No.

Given: 1) Q_{100} water Depth at exist. piers From HEC 2 run Furnished by FCDMC. = 10.59'

2) From proposed Bridge Imp. Plan

2.1) Angle of support to Pier Face = 45°

2.2) Max Depth of penetration of support below Q_{100} Water Surface = 3.0' (calculated)

Therefore: x_1 = 3' Max length of Penetration upstream.

x_2 = 1.5' Average length of Penetration upstream,

y_1 = 10.59' Q_{100} water depth upstream FCDMC HEC2,

y_2 = 3' Max depth of Penetration at the piers.

y_3 = 1.5' Avg depth of Penetration at the piers.

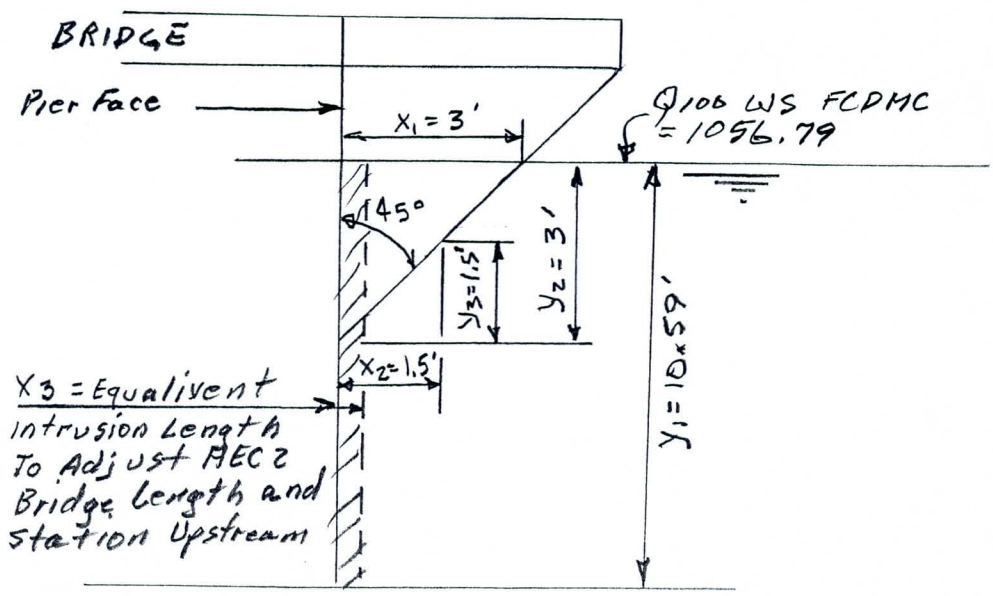
Where: $x_2 = (x_1 \div 2)$

$y_3 = (y_2 \div 2)$

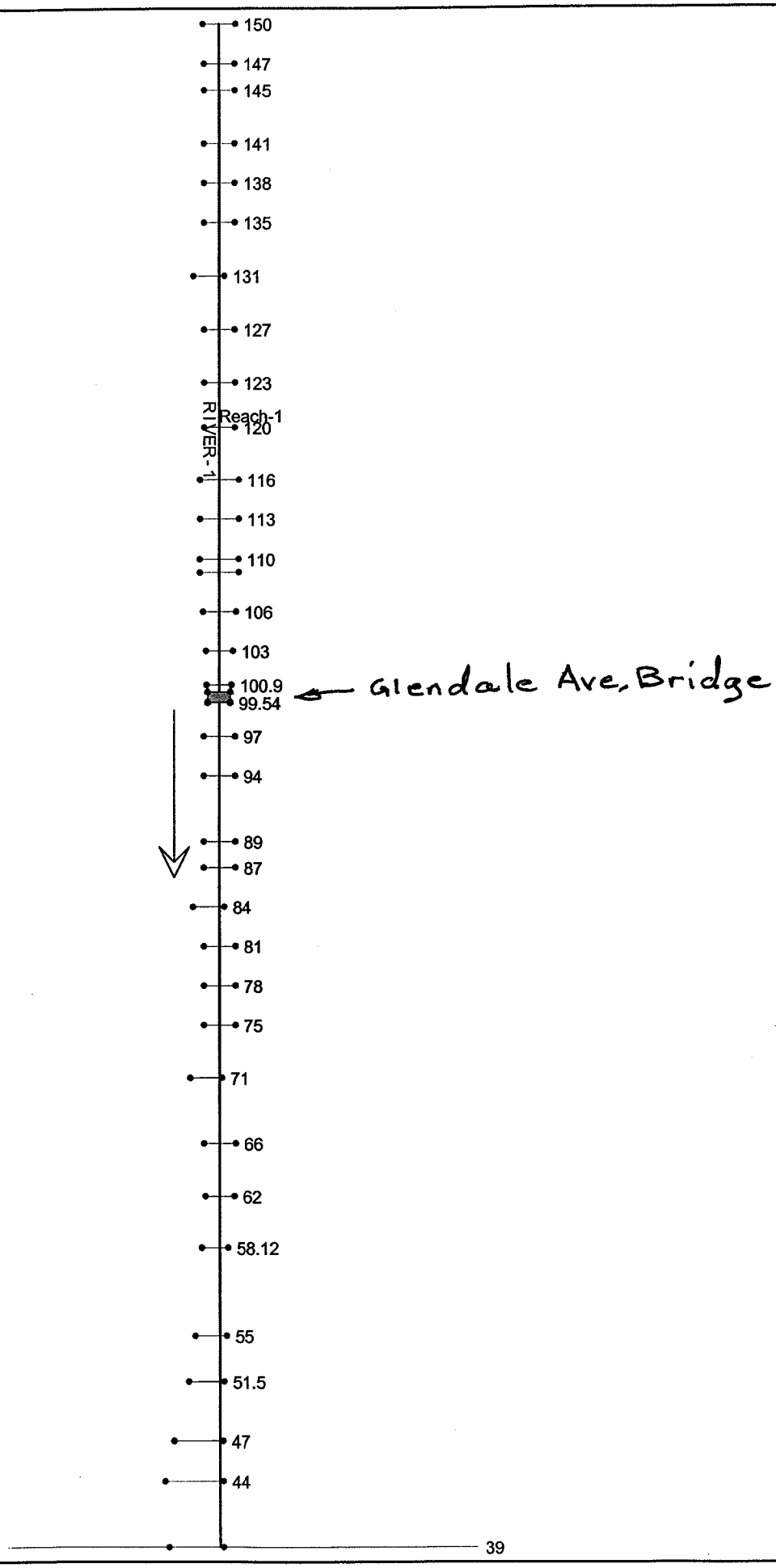
Find: x_3 = Average length to be added to the pier lengths for HEC 2 Proposed condition run.

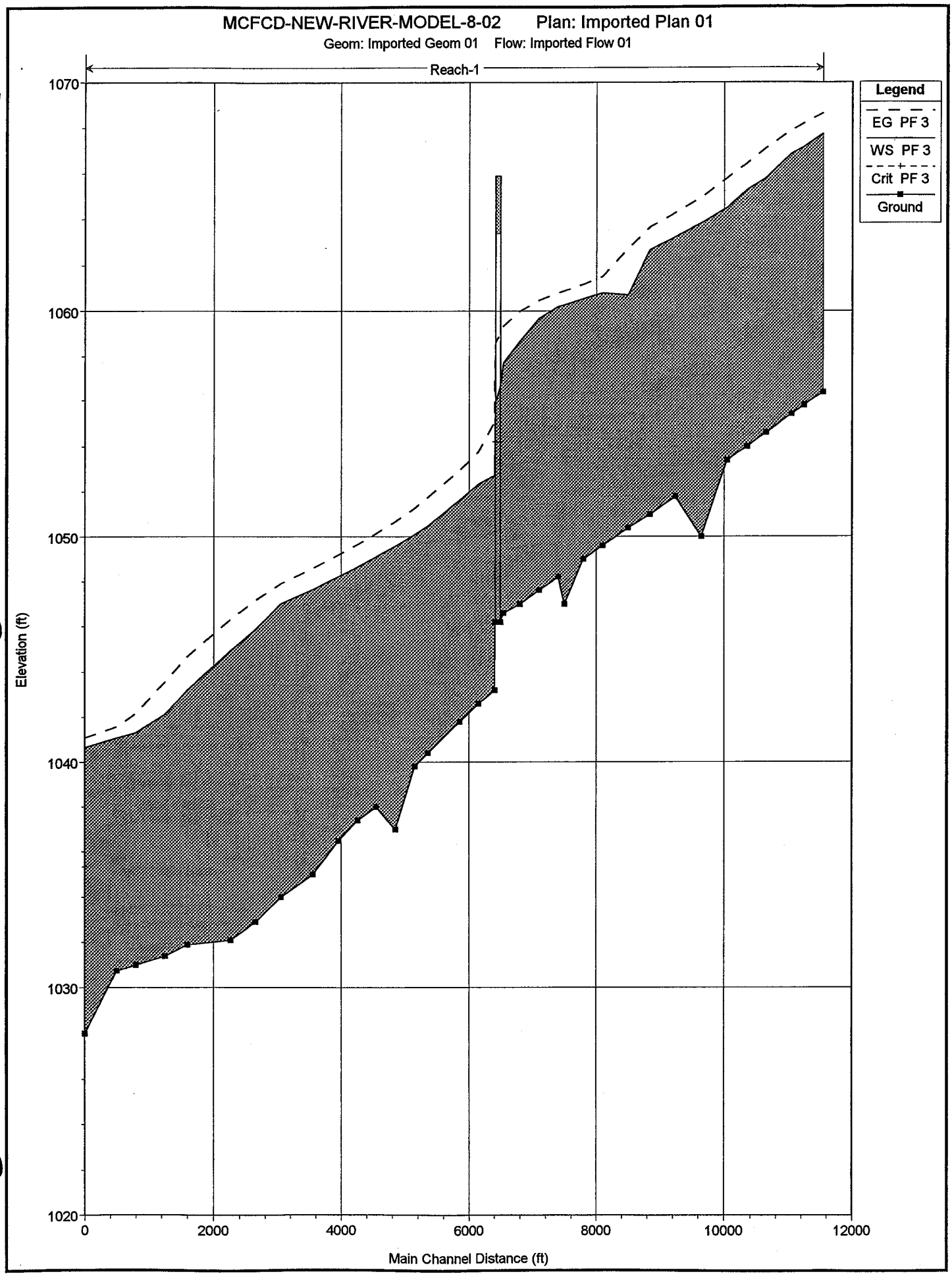
$X_3 = (X_2 \div Y_1) = 0.142'$ x safety (debris factor = 2) = 0.284'

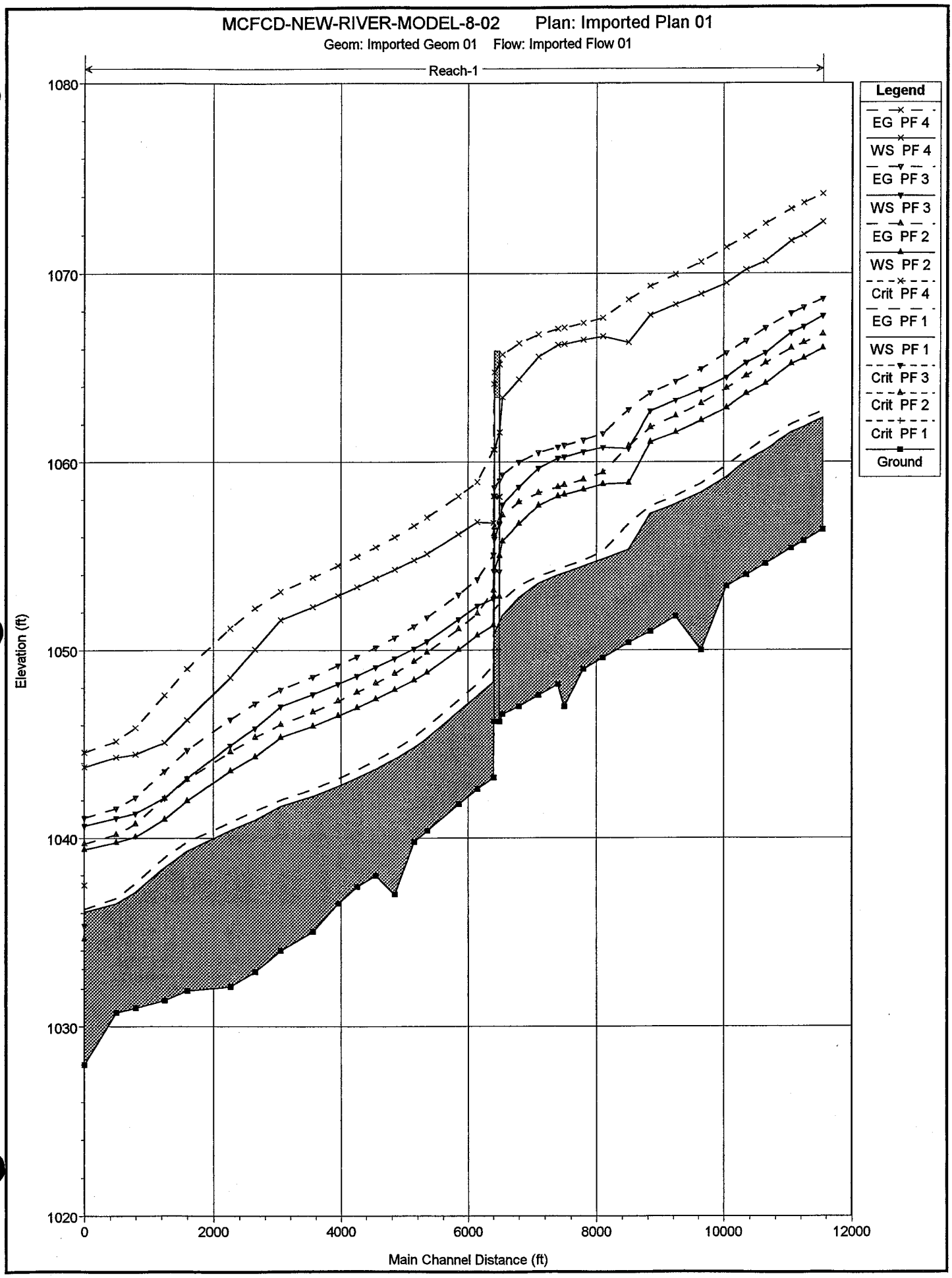
Say 0.3'



APPENDIX A
MCFCD HEC2 MODEL


150
147
145
141
138
135
131
127
123
Reach-1
120
RIVER-1
116
113
110
106
103
100.9
99.54
Glendale Ave. Bridge
97
94
89
87
84
81
78
75
71
66
62
58.12
55
51.5
47
44
39


MCFCD-NEW-RIVER-MODEL-8-02 Plan: Imported Plan 01
Geom: Imported Geom 01 Flow: Imported Flow 01
Reach-1
Legend
EG PF 3
WS PF 3
Crit PF 3
Ground
Elevation (ft)
1070
1060
1050
1040
1030
1020
0
2000
4000
6000
8000
10000
12000
Main Channel Distance (ft)


MCFCD-NEW-RIVER-MODEL-8-02 Plan: Imported Plan 01
Geom: Imported Geom 01 Flow: Imported Flow 01
Reach-1
Legend
EG PF 4
WS PF 4
EG PF 3
WS PF 3
EG PF 2
WS PF 2
Crit PF 4
EG PF 1
WS PF 1
Crit PF 3
Crit PF 2
Crit PF 1
Ground
Elevation (ft)
1080
1070
1060
1050
1040
1030
1020
0
2000
4000
6000
8000
10000
12000
Main Channel Distance (ft)

```
C
C     49
C  39.00      BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
C  39.00      WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
C  39.00      EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
C  39.00      GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBAN
K
C  39.00      PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CON
DITIONS
C  39.00      BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDES
LOPE.
C  44.00      BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
C  44.00      LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTRE
AM
C  44.00      RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 3
62+OR- FEET
C  51.50      LT CHNL BTM WDTH = 225 FT
C  55.00      STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
C  58.12      END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESL
OPE
C  58.12      ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER
AND
C  58.12      CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE
EAST
C  58.12      BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
C  58.12      MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONS
TRUCT
C  58.12      TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
C  62.00      STA. 60+21.80 IS P.O.T.
C  66.00      LT CHNL BTM WDTH = 225 FT.
C  66.00      RT CHNL BTM WDTH = 230 FT.
C  71.00      GRAND DRAIN INLET PER A.D.O.T. PLANS
C  78.00      GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
C  94.00      STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
C  99.54      STA. 99+45.00 IS P.O.T.
C  99.54      LT CHNL BTM WDTH = 157.9 FT.
C  99.54      RT CHNL BTM WDTH = 157.9 FT.
C  99.60      DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
C 100.40      GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
C 100.90      BEGIN CHANNEL BOTTOM TRANSITION
C 100.90      LT CHNL BTM WDTH = 157.9 FT.
C 100.90      RT CHNL BTM WDTH = 157.9 FT.
C 109.00      END CHANNEL BOTTOM TRANSITION
C 109.00      LT CHNL BTM WDTH = 280 FT.
C 109.00      RT CHNL BTM WDTH = 280 FT.
C 116.00      BEGIN CHANNEL BOTTOM TRANSITION
C 116.00      LT CHNL BTM WDTH = 280 FT.
C 116.00      RT CHNL BTM WDTH = 280 FT.
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C 120.00      END CHANNEL BOTTOM TRANSITION
C 120.00      LT CHNL BTM WDTH = 210 FT.
C 120.00      RT CHNL BTM WDTH = 230 FT.
C 145.00      A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHAN
NEL
C 147.00      BEGIN CHANNEL BOTTOM TRANSITION
C 147.00      LT CHNL BTM WDTH = 210 FT.
C 147.00      RT CHNL BTM WDTH = 230 FT.
C 150.00      CHANNEL BOTTOM TAPERS
C 150.00      LT CHNL BTM WDTH = 260 FT.
C 150.00      RT CHNL BTM WDTH = 210 FT.
T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3       10-YEAR EVENT            MODNRO2B
J1     0       2                                                    1
036.06
J2     1       0      -1                                  -1
              0
J3    38      43       1      26       8       4      53      54
NC  .045    .045    .035     0.1     0.3
QT     5   13500   31000   41000   75000   69000
ET  39.0     9.1     9.1     9.1     9.1     9.1
9585.9 10426.1
X1    39      55    9586   10426     270     200     220
GR  1045    5696  1045.6    5736  1045.7    5821    1045    6091
  1044    6506
GR  1042    6631    1041    6751    1040    6856  1038.7    6961
  1038    7116
GR1036.8    7206  1037.3    7556  1036.3    7896  1036.4    8191
1036.4    8366
GR1036.5    8521    1037    8786  1037.7    8991    1038    9271
1039.2    9366
GR  1038    9436    1034    9443  1033.3    9481    1034    9511
  1036    9516
GR  1038    9531    1040    9541    1042    9546  1042.5    9566
1042.5    9586
GR  1036    9593    1034    9599    1032    9606    1030    9621
  1028    9646
GR  1029    9731    1030    9766    1030    9846    1032    9871
  1034    9891
GR1033.5    9911  1032.5    9950  1031.5    9973  1030.5    9994
1030.2   10000
GR1030.5   10042  1031.5   10190  1032.5   10341  1032.9 10405.4
1043.2   10426
GR1044.1   10946  1044.2   11256  1044.5   11511    1045   11571
  1046   12881
NC  .045    .045    .035     0.2     0.4
```

```
X1 44.00      16  9485.8 10384.1     500     500     500
GR1044.9  9485.8 1030.75  9514.1 1030.75    9573  1031.5    9575
1032.0    9625
GR1032.0    9753  1032.0    9815  1034.0    9863  1034.0    9917
1032.0    9988
GR1031.8   10000  1032.0   10033  1034.0   10233 1035.06   10362
1044.0   10383
GR1045.1 10384.1
X1 47.00      14     596    1357     300     300     300
GR1045.0     596  1031.0     624  1031.0     682  1034.0     690
1034.0     740
GR1034.0     835  1034.0     897  1032.9    1000  1034.0    1099
1034.0    1184
GR1034.0    1194  1035.6    1336  1044.0    1356  1045.0    1357
X1 51.50      13   760.8  1309.7     450     450     450
GR1045.7   760.8  1031.4   789.4  1031.4   877.8  1034.0     883
1034.0     907
GR1034.0     962  1034.0     985  1033.9    1000  1034.0    1042
1035.3    1205
GR1036.0    1300  1040.0    1304  1045.7  1309.7
X1  55.0      10     260   741.3     350     350     350
GR  1047     260  1031.9     290  1031.9     450  1036.6    472.
1036.2     500
GR1036.0     525  1034.6     663  1034.3     716  1035.7     730
1047.0   741.3
X1 58.12      10     758    1163     662     662     662
GR1049.1     758  1032.1     775  1032.1    1000  1032.1    1009
1036.6    1018
GR1036.0    1110  1036.0    1126  1038.0    1148  1040.0    1154
1049.0    1163
X1 62.00      14   256.6   703.5     388     388     388
GR1050.4   256.6  1032.9   291.6  1032.9     412  1038.0     422
1037.5     468
GR1036.8     500  1036.0     531  1035.3    550.  1036.0     580
1038.0     600
GR1039.0     627  1032.9     639  1032.9     686  1050.4   703.5
X1  66.0      14   257.2   747.8     400     400     400
GR1051.8   257.2    1034   292.8    1034     397  1036.0     399
1035.6     430
GR1036.0     470  1038.0     510  1038.0     527  1035.0     531
1035.0     670
GR1038.0     676  1034.0     692  1034.0     730  1051.8   747.8
X1  71.0      16   258.5   746.1     500     500     500
GR1051.5   258.5  1035.0   291.5    1035     310   1036.     342
1040.0     352
GR  1040     372    1039     420    1036     425    1036     445
1036.0     460
GR1035.4     470  1035.4     525    1037     535  1035.4     545
```

```
1035.4      730
GR1051.5    746.1
X1  75.0       13    258.4    746.6      400      400      400
GR1053.1    258.4   1036.5    291.6   1036.5      395   1036.5      405
1036.5      460
GR1036.5      465   1036.5      470   1036.5      635     1040      660
  1040    690.5
GR1036.5    697.5   1036.5      730   1053.1    746.6
X1  78.0       24    258.9    746.1     300.     300.     300.
GR1053.5    258.9   1037.4    291.1   1037.4      320   1037.4      355
1037.4      370
GR1037.4      390   1037.4      415   1037.4      430   1037.4      460
1037.4      475
GR1037.4      500   1037.4      528   1037.4    546.8     1039      550
  1038      560
GR1037.4      595   1037.4      606   1037.4    629.8   1038.5      632
1038.0      653
GR1037.8      680   1037.4      681   1037.4      730   1053.5    746.1
X1  81.0       18      259      745      300      300      300
GR  1054      259     1038      290   1038.0      291   1038.0      320
1038.0      355
GR1038.0      390   1038.0      400   1038.0      440   1038.0      450
1038.0      460
GR1038.0      550   1038.0      565   1038.0      588   1040.0      626
  1039      634
GR  1038      650     1038      730   1054.0      745
X1  84.0       21    259.5    745.4      300      300      300
GR1054.5    259.5     1039    290.5     1039      320     1037      325
  1037      355
GR  1039      360     1039      375     1039      385     1039      395
  1039      415
GR  1039      450     1039      500     1039      530     1039      625
1039.5      626
GR1039.0      639   1039.0      651   1039.0      688   1039.0      690
  1039      730
GR1054.5    745.4
X1  87.0       12    259.8    745.2      300      300      300
GR1055.0    259.8   1039.8    290.2   1039.8      455   1039.8      470
1039.8      545
GR1039.8      560   1039.8      610   1039.8      630   1039.8      650
1039.8      680
GR1039.8      730   1055.0    745.2
X1  89.0       12      260      745      200      200      200
GR1055.4      260   1040.4      290   1040.4      320   1040.4    323.2
1042.0      410
GR1040.4    413.2   1040.4      500   1040.4      620   1040.4      690
1040.4      710
GR1040.4      730   1055.4      745
```

```
X1 94.0        13   260.4   744.6     500     500     500
GR1056.4   260.4  1041.8   289.6  1041.8     340  1044.0     344
1042.0     359
GR1041.9     380  1042.0     405  1041.8     406  1041.8     500
1041.8     640
GR1041.8     680  1041.8     730  1056.4   744.6
NC  .035    .035    .035     0.3     0.5
X1  97.0       16   260.5   744.5     300     300     300
GR1057.1   260.5  1042.6   289.5  1042.6     320  1042.6     370
1042.6     380
GR1042.6     405  1042.6     476  1044.0     479  1043.8     500
1044.0     545
GR1046.0     555  1042.6     562  1042.6     650  1042.6     675
1042.6     730
GR1057.1   744.5
NC  .035    .035    .035
X1 99.54       5.   325.1   674.9    254.    254.    254.
GR1063.5   325.1  1043.2  325.15  1043.2    500.  1043.2  674.85
1063.5   674.9

*  DOWNSTREAM GLENDALE AVENUE BRIDGE

NC .025    .025    .025     0.3     0.5
X1  99.6       28   325.1   674.9      6.      6.      6.
X2                     0  1063.4  1065.9                     1.33
X3    10
GR1063.8  325.10  1046.2  325.15  1046.2  363.70  1063.4  363.75
1063.4  368.75
GR1046.2  368.80  1046.2  417.20  1063.4  417.25  1063.4  422.25
1046.2  422.30
GR1046.2  470.70  1063.4  470.75  1063.4  475.75  1046.2  475.80
1046.2  524.20
GR1063.4  524.25  1063.4  529.25  1046.2  529.30  1046.2  577.70
1063.4  577.75
GR1063.4  582.75  1046.2  582.80  1046.2  631.20  1063.4  631.25
1063.4  636.25
GR1046.2  636.30  1046.2  674.85  1063.6  674.90

*  UPSTREAM GLENDALE AVENUE BRIDGE - NORMAL BRIDGE MODEL
*  BOTTOM EL LOWERED FROM 1046.5 TO 1046.2 TO REFLECT SURVEY BY IN
CA ENGINEERS

X1 100.4       28   325.1   674.9     80.     80.     80.
X2                     0  1063.4  1065.9                     1.33
X3    10                                                   1065.9
1065.9
GR1063.6  325.10  1046.2  325.15  1046.2  363.70  1063.4  363.75
1063.4  368.75
```

```
GR1046.2  368.80  1046.2  417.20  1063.4  417.25  1063.4  422.25
1046.2  422.30
GR1046.2  470.70  1063.4  470.75  1063.4  475.75  1046.2  475.80
1046.2  524.20
GR1063.4  524.25  1063.4  529.25  1046.2  529.30  1046.2  577.70
1063.4  577.75
GR1063.4  582.75  1046.2  582.80  1046.2  631.20  1063.4  631.25
1063.4  636.25
GR1046.2  636.30  1046.2  674.85  1063.6  674.90

NC  .035    .035    .035
X1100.90       5  308.15  691.85      50      50      50
GR1063.6  308.15  1046.6  325.15  1046.6     500  1046.6  674.85
1063.6  691.85
X1 103.0      14   292.0   708.0    260.    260.    260.
GR1065.4   292.0    1047   328.8    1047     370  1047.0     380
1047.0     382
GR1047.0     490  1047.0     500  1047.0     553  1047.0     606
1047.0     640
GR1047.0     657    1047     659    1047   689.6  1065.4   708.0
NC  .035    .035    .035    0.1     0.3
X1 106.0       8   246.4   753.6     300     300     300
GR1066.4   246.4  1047.6   284.0  1047.6     412  1047.6     500
1047.6     685
GR1047.6     710  1047.6   734.8  1066.4   753.6
X1 109.0      11   201.3   798.7     300     300     300
GR1066.9   201.3  1048.2   238.7  1048.2   451.4  1050.0     455
1048.2     480
GR1050.0     503  1051.0     510  1050.0     515  1048.2   518.6
1048.2     780
GR1066.9   798.7
X1 110.0      12   201.3   798.5     100     100     100
GR1066.9   201.3  1048.4   238.7  1048.4   432.8    1051     438
  1051     485
GR  1047     505  1048.4     515  1048.4     550  1048.4     565
1048.4     734
GR1048.4     780  1066.9   798.5
X1 113.0      16   201.8   798.2     300     300     300
GR1067.2   201.8    1049   238.2    1049     401  1051.3     404
1049.0     435
GR1049.0     465  1050.0     473  1049.0     475  1049.0     500
  1049     535
GR  1049     580  1049.0     595  1049.0     620  1049.0     685
1049.0     780
GR1067.2   798.2
X1 116.0      13   202.3   797.7     240     340     300
GR1067.3   202.3  1049.6   237.7  1049.6   366.2  1054.0     375
1054.0     378
```

```
GR1049.6   386.8  1049.6    500.  1049.6   579.2  1056.0     592
1058.0     603
GR1049.6   619.8  1049.6    780  1067.3   797.7
X1 120.0      10   273.3  746.7     327     497     400
GR1067.1   273.3  1050.4  306.7  1050.4     500  1050.4   506.6
1056.7     520
GR1057.8     600  1056.8    645  1050.4   658.6  1050.4     730
1067.1   746.7
X1 123.0      11   272.2  747.8     342     342     342
GR1068.8   272.2    1051  307.8    1051     315    1051     370
  1051     400
GR1051.0     500    1051    610    1051     630    1051     680
  1051     730
GR1068.8   747.8
X1 127.0      10     273    747     400     400     400
GR1068.8     273  1051.8    307  1051.8     345  1051.8     400
1051.8     450
GR1051.8     500  1051.8    650  1051.8     665  1051.8     730
1068.8     747
X1 131.0      14   273.2  746.8     400     400     400
GR1069.4   273.2  1052.6  306.8  1052.6     351    1050     356
  1052     365
GR  1054     395    1054    430  1052.6     445    1054   497.2
1052.6     500
GR1052.6     530  1052.6    666  1052.6     730  1069.4   746.8
X1135.00      12   273.5  746.3     400     400     400
GR1069.6   273.5  1053.4  306.5  1053.4     330  1058.4     340
1058.2     412
GR1059.2     412  1053.4  423.6  1053.4     500  1053.4     502
1053.4     680
GR1053.4     730  1069.9  746.3
X1 138.0      15   274.4  745.6     300     300     300
GR1069.6   274.4    1054  305.6    1054     350    1059     360
  1058     405
GR  1054     413    1054    440    1054     460    1054     475
  1054     500
GR  1054     590    1054    615    1054     640    1054     730
1069.6   745.6
X1141.00      15   273.6  746.4     300     300     300
GR1071.0   273.6  1054.6  306.3  1054.6   328.8  1058.2     336
1058.7     370
GR1054.6   379.4  1054.6    403  1060.0     415  1061.5     435
1060.0     454
GR1054.6     474  1054.6    500  1054.6     560  1054.6     730
1071.0   746.4
X1 145.0      10   273.4  746.6     400     400     400
GR  1072   273.4  1055.4  306.6  1055.4     320  1055.4     340
1055.4     370
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GR1055.4      505  1055.4      515  1055.4      525  1055.4      730
1077.0    746.6
X1 147.0       13   273.4    746.6      200      200      200
GR1072.4    273.4  1055.8    306.6  1055.8      340  1055.8      370
1055.8      430
GR1055.8      440  1055.8      470  1055.8      500  1055.8      505
1055.8      560
GR1055.8      635  1055.8      730  1072.4    746.6
X1 150.0        6   223.4    726.6      350      260      300
GR  1073    223.4  1056.4    256.6  1056.4      355  1056.4      400
1056.4      710
GR  1073    726.6
EJ
T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3       50-YEAR EVENT          MODNRO2B
J1      0       3                                                   1
039.39
J2      2       0      -1                                  -1
             0
T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3       100-YEAR EVENT         MODNRO2B
J1      0       4                                                   1
040.66
J2      3       0      -1                                  -1
             0
T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3       500-YEAR EVENT         MODNRO2B
J1      0       5                                                   1
043.78
J2      4       0      -1                                  -1
             0
ER
```

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1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES            *
*  U.S. ARMY CORPS OF ENGINEERS       *
 *                                          *
*  HYDROLOGIC ENGINEERING CENTER      *
 *  Version   4.6.2;  May 1991              *
*  609 SECOND STREET, SUITE D         *
 *                                          *
*  DAVIS, CALIFORNIA 95616-4687       *
 *  RUN DATE    05AUG02    TIME   13:51:46  *
*          (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
    05AUG02      13:51:46
PAGE    1
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THIS RUN EXECUTED 05AUG02    13:51:46
 ************************************
  HEC-2 WATER SURFACE PROFILES

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


 T3       10-YEAR EVENT           MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS
Q         WSEL      FQ

        0         2
1036.06

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC
IBW       CHNIM      ITRACE
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       1         0        -1                                          -1
0


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1         26          8          4
53         54

 NC     .045       .045       .035        0.1        0.3
 QT        5      13500      31000      41000      75000      69000
 ET     39.0        9.1        9.1        9.1        9.1        9.1
9585.9     10426.1
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING
CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
 X1       39         55       9586      10426        270        200
220
 GR     1045       5696     1045.6       5736     1045.7       5821
1045       6091       1044       6506
 GR     1042       6631       1041       6751       1040       6856
1038.7       6961       1038       7116
 GR   1036.8       7206     1037.3       7556     1036.3       7896
1036.4       8191     1036.4       8366
 GR   1036.5       8521       1037       8786     1037.7       8991
1038       9271     1039.2       9366
 GR     1038       9436       1034       9443     1033.3       9481
1034       9511       1036       9516
 GR     1038       9531       1040       9541       1042       9546
1042.5       9566     1042.5       9586
 GR     1036       9593       1034       9599       1032       9606
1030       9621       1028       9646
 GR     1029       9731       1030       9766       1030       9846
1032       9871       1034       9891
 GR   1033.5       9911     1032.5       9950     1031.5       9973
1030.5       9994     1030.2      10000
 GR   1030.5      10042     1031.5      10190     1032.5      10341
1032.9     10405.4     1043.2      10426
 GR   1044.1      10946     1044.2      11256     1044.5      11511
1045      11571       1046      12881

 NC     .045       .045       .035        0.2        0.4
              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362
+OR- FEET
 X1    44.00         16     9485.8    10384.1        500        500
500
 GR   1044.9     9485.8    1030.75     9514.1    1030.75       9573
1031.5       9575     1032.0       9625
 GR   1032.0       9753     1032.0       9815     1034.0       9863
1034.0       9917     1032.0       9988
 GR   1031.8      10000     1032.0      10033     1034.0      10233
1035.06      10362      1044.0      10383
 GR   1045.1    10384.1
1
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 X1    47.00          14         596        1357          300          300
300
 GR   1045.0         596      1031.0         624       1031.0          682
1034.0          690       1034.0          740
 GR   1034.0         835      1034.0         897       1032.9         1000
1034.0         1099       1034.0         1184
 GR   1034.0        1194      1035.6        1336       1044.0         1356
1045.0         1357

                LT CHNL BTM WDTH = 225 FT
 X1    51.50          13       760.8      1309.7          450          450
450
 GR   1045.7       760.8      1031.4       789.4       1031.4        877.8
1034.0          883       1034.0          907
 GR   1034.0         962      1034.0         985       1033.9         1000
1034.0         1042       1035.3         1205
 GR   1036.0        1300      1040.0        1304       1045.7       1309.7

                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
 X1     55.0          10         260       741.3          350          350
350
 GR     1047         260      1031.9         290       1031.9          450
1036.6         472.       1036.2          500
 GR   1036.0         525      1034.6         663       1034.3          716
1035.7          730       1047.0        741.3

                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
 X1    58.12          10         758       1163          662          662
662
 GR   1049.1         758      1032.1         775       1032.1         1000
1032.1         1009       1036.6         1018
 GR   1036.0        1110      1036.0        1126       1038.0         1148
1040.0         1154       1049.0         1163

                STA. 60+21.80 IS P.O.T.
 X1    62.00          14       256.6       703.5          388          388
388
 GR   1050.4       256.6      1032.9       291.6       1032.9          412
1038.0          422       1037.5          468
 GR   1036.8         500      1036.0         531       1035.3         550.
1036.0          580       1038.0          600
 GR   1039.0         627      1032.9         639       1032.9          686
1050.4        703.5

                LT CHNL BTM WDTH = 225 FT.
                RT CHNL BTM WDTH = 230 FT.
 X1     66.0          14       257.2       747.8          400          400
400
 GR   1051.8       257.2       1034       292.8        1034          397
1036.0          399       1035.6          430
 GR   1036.0         470      1038.0         510       1038.0          527
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1035.0          531       1035.0          670
 GR   1038.0          676      1034.0          692       1034.0          730
1051.8        747.8

                GRAND DRAIN INLET PER A.D.O.T. PLANS
 X1      71.0          16       258.5       746.1          500          500
500
 GR   1051.5       258.5      1035.0       291.5         1035          310
1036.          342       1040.0          352
 GR     1040          372        1039          420         1036          425
1036          445       1036.0          460
 GR   1035.4          470      1035.4          525         1037          535
1035.4          545       1035.4          730
 GR   1051.5       746.1

 X1      75.0          13       258.4       746.6          400          400
400
 GR   1053.1       258.4      1036.5       291.6       1036.5          395
1036.5          405       1036.5          460
 GR   1036.5          465      1036.5          470       1036.5          635
1040          660          1040        690.5
 GR   1036.5       697.5      1036.5          730       1053.1        746.6
1
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                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
 X1      78.0          24       258.9       746.1         300.         300.
300.
 GR   1053.5       258.9      1037.4       291.1       1037.4          320
1037.4          355       1037.4          370
 GR   1037.4          390      1037.4          415       1037.4          430
1037.4          460       1037.4          475
 GR   1037.4          500      1037.4          528       1037.4        546.8
1039          550          1038          560
 GR   1037.4          595      1037.4          606       1037.4        629.8
1038.5          632       1038.0          653
 GR   1037.8          680      1037.4          681       1037.4          730
1053.5        746.1

 X1      81.0          18         259         745          300          300
300
 GR     1054          259        1038          290       1038.0          291
1038.0          320       1038.0          355
 GR   1038.0          390      1038.0          400       1038.0          440
1038.0          450       1038.0          460
 GR   1038.0          550      1038.0          565       1038.0          588
1040.0          626          1039          634
 GR     1038          650        1038          730       1054.0          745

 X1      84.0          21       259.5       745.4          300          300
300
 GR   1054.5       259.5        1039       290.5         1039          320
1037          325          1037          355
 GR     1039          360        1039          375         1039          385
1039          395          1039          415
 GR     1039          450        1039          500         1039          530
1039          625       1039.5          626
 GR   1039.0          639      1039.0          651       1039.0          688
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1039.0          690         1039          730
 GR   1054.5       745.4

 X1     87.0          12       259.8       745.2          300          300
300
 GR   1055.0       259.8      1039.8       290.2       1039.8          455
1039.8          470       1039.8          545
 GR   1039.8         560      1039.8         610       1039.8          630
1039.8          650       1039.8          680
 GR   1039.8         730      1055.0       745.2

 X1     89.0          12         260         745          200          200
200
 GR   1055.4         260      1040.4         290       1040.4          320
1040.4        323.2       1042.0          410
 GR   1040.4       413.2      1040.4         500       1040.4          620
1040.4          690       1040.4          710
 GR   1040.4         730      1055.4         745

              STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
 X1    94.0           13       260.4       744.6          500          500
500
 GR   1056.4       260.4      1041.8       289.6       1041.8          340
1044.0          344       1042.0          359
 GR   1041.9         380      1042.0         405       1041.8          406
1041.8          500       1041.8          640
 GR   1041.8         680      1041.8         730       1056.4        744.6

 NC     .035        .035        .035         0.3          0.5
 X1     97.0          16       260.5       744.5          300          300
300
 GR   1057.1       260.5      1042.6       289.5       1042.6          320
1042.6          370       1042.6          380
 GR   1042.6         405      1042.6         476       1044.0          479
1043.8          500       1044.0          545
 GR   1046.0         555      1042.6         562       1042.6          650
1042.6          675       1042.6          730
 GR   1057.1       744.5

 NC     .035        .035        .035
              STA. 99+45.00 IS P.O.T.
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
 X1    99.54           5.       325.1       674.9         254.         254.
254.
 GR   1063.5       325.1      1043.2      325.15       1043.2         500.
1043.2       674.85       1063.5        674.9

    DOWNSTREAM GLENDALE AVENUE BRIDGE

1
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 NC     .025        .025        .025         0.3          0.5
              DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
 X1     99.6          28       325.1       674.9           6.           6.
6.
 X2                                 0      1063.4       1065.9
```

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1.33
 X3        10
 GR   1063.8      325.10      1046.2      325.15       1046.2       363.70
1063.4       363.75       1063.4       368.75
 GR   1046.2      368.80      1046.2      417.20       1063.4       417.25
1063.4       422.25       1046.2       422.30
 GR   1046.2      470.70      1063.4      470.75       1063.4       475.75
1046.2       475.80       1046.2       524.20
 GR   1063.4      524.25      1063.4      529.25       1046.2       529.30
1046.2       577.70       1063.4       577.75
 GR   1063.4      582.75      1046.2      582.80       1046.2       631.20
1063.4       631.25       1063.4       636.25
 GR   1046.2      636.30      1046.2      674.85       1063.6       674.90

    UPSTREAM GLENDALE AVENUE BRIDGE - NORMAL BRIDGE MODEL
    BOTTOM EL LOWERED FROM 1046.5 TO 1046.2 TO REFLECT SURVEY BY INCA
ENGINEERS


              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
 X1    100.4          28       325.1       674.9          80.          80.
80.
 X2                                0      1063.4       1065.9
1.33
 X3        10
1065.9       1065.9
 GR   1063.6      325.10      1046.2      325.15       1046.2       363.70
1063.4       363.75       1063.4       368.75
 GR   1046.2      368.80      1046.2      417.20       1063.4       417.25
1063.4       422.25       1046.2       422.30
 GR   1046.2      470.70      1063.4      470.75       1063.4       475.75
1046.2       475.80       1046.2       524.20
 GR   1063.4      524.25      1063.4      529.25       1046.2       529.30
1046.2       577.70       1063.4       577.75
 GR   1063.4      582.75      1046.2      582.80       1046.2       631.20
1063.4       631.25       1063.4       636.25
 GR   1046.2      636.30      1046.2      674.85       1063.6       674.90


 NC      .035        .035        .035
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
 X1   100.90           5      308.15      691.85           50           50
50
 GR   1063.6      308.15      1046.6      325.15       1046.6          500
1046.6       674.85       1063.6       691.85

 X1    103.0          14       292.0       708.0         260.         260.
260.
 GR   1065.4       292.0        1047       328.8         1047          370
1047.0          380       1047.0          382
 GR   1047.0         490      1047.0         500       1047.0          553
1047.0          606       1047.0          640
 GR   1047.0         657        1047         659         1047        689.6
1065.4        708.0

 NC      .035        .035        .035       0.1         0.3
 X1    106.0           8       246.4       753.6          300          300
300
 GR   1066.4       246.4      1047.6       284.0       1047.6          412
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1047.6          500       1047.6          685
 GR   1047.6         710      1047.6       734.8       1066.4        753.6

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
 X1    109.0          11       201.3       798.7          300          300
300
 GR   1066.9       201.3      1048.2       238.7       1048.2        451.4
1050.0          455       1048.2          480
 GR   1050.0         503      1051.0         510       1050.0          515
1048.2        518.6       1048.2          780
 GR   1066.9       798.7
1
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 X1    110.0          12       201.3       798.5          100          100
100
 GR   1066.9       201.3      1048.4       238.7       1048.4        432.8
1051          438         1051          485
 GR     1047         505      1048.4         515       1048.4          550
1048.4          565       1048.4          734
 GR   1048.4         780      1066.9       798.5

 X1    113.0          16       201.8       798.2          300          300
300
 GR   1067.2       201.8        1049       238.2        1049          401
1051.3          404       1049.0          435
 GR   1049.0         465      1050.0         473       1049.0          475
1049.0          500         1049          535
 GR     1049         580      1049.0         595       1049.0          620
1049.0          685       1049.0          780
 GR   1067.2       798.2

                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
 X1    116.0          13       202.3       797.7          240          340
300
 GR   1067.3       202.3      1049.6       237.7       1049.6        366.2
1054.0          375       1054.0          378
 GR   1049.6       386.8      1049.6        500.       1049.6        579.2
1056.0          592       1058.0          603
 GR   1049.6       619.8      1049.6         780       1067.3        797.7

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
 X1    120.0          10       273.3       746.7          327          497
400
 GR   1067.1       273.3      1050.4       306.7       1050.4          500
1050.4        506.6       1056.7          520
 GR   1057.8         600      1056.8         645       1050.4        658.6
1050.4          730       1067.1        746.7

 X1    123.0          11       272.2       747.8          342          342
342
 GR   1068.8       272.2        1051       307.8        1051          315
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1051          370         1051          400
 GR   1051.0         500        1051         610         1051          630
1051          680         1051          730
 GR   1068.8       747.8

 X1    127.0          10         273         747          400          400
400
 GR   1068.8         273      1051.8         307       1051.8          345
1051.8          400       1051.8          450
 GR   1051.8         500      1051.8         650       1051.8          665
1051.8          730       1068.8          747

 X1    131.0          14       273.2       746.8          400          400
400
 GR   1069.4       273.2      1052.6       306.8       1052.6          351
1050          356         1052          365
 GR     1054         395        1054         430       1052.6          445
1054        497.2       1052.6          500
 GR   1052.6         530      1052.6         666       1052.6          730
1069.4        746.8

 X1   135.00          12       273.5       746.3          400          400
400
 GR   1069.6       273.5      1053.4       306.5       1053.4          330
1058.4          340       1058.2          412
 GR   1059.2         412      1053.4       423.6       1053.4          500
1053.4          502       1053.4          680
 GR   1053.4         730      1069.9       746.3

 X1    138.0          15       274.4       745.6          300          300
300
 GR   1069.6       274.4        1054       305.6         1054          350
1059          360         1058          405
 GR     1054         413        1054         440         1054          460
1054          475         1054          500
 GR     1054         590        1054         615         1054          640
1054          730       1069.6        745.6
1
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 X1   141.00          15       273.6       746.4          300          300
300
 GR   1071.0       273.6      1054.6       306.3       1054.6        328.8
1058.2          336       1058.7          370
 GR   1054.6       379.4      1054.6         403       1060.0          415
1061.5          435       1060.0          454
 GR   1054.6         474      1054.6         500       1054.6          560
1054.6          730       1071.0        746.4

                A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
 X1    145.0          10       273.4       746.6          400          400
400
 GR     1072       273.4      1055.4       306.6       1055.4          320
1055.4          340       1055.4          370
 GR   1055.4         505      1055.4         515       1055.4          525
1055.4          730       1077.0        746.6

                BEGIN CHANNEL BOTTOM TRANSITION
```

```
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
 X1    147.0          13      273.4      746.6          200          200
200
 GR   1072.4      273.4     1055.8      306.6      1055.8          340
1055.8          370      1055.8         430
 GR   1055.8        440     1055.8        470      1055.8          500
1055.8          505      1055.8         560
 GR   1055.8        635     1055.8        730      1072.4        746.6

                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
 X1    150.0           6      223.4      726.6          350          260
300
 GR     1073      223.4     1056.4      256.6      1056.4          355
1056.4          400      1056.4         710
 GR     1073      726.6
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

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=
840.199
                BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
                WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
                EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
                GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
                PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING
CONDITIONS
                BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
     39.000      8.06   1036.06   1033.00       .00   1036.23       .17
.00       .00   1042.50
    13500.0        .0   13500.0        .0        .0    4052.5        .0
.0        .0   1043.20
        .00       .00      3.33       .00      .000      .035      .000
.000   1028.00   9592.94
    .000732      270.      220.      200.         0        13         0
.00    818.79  10411.72


 CCHV=     .200 CEHV=     .400
```

```
 *SECNO 44.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
.66

                BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
                LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
                RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362
+OR- FEET
     44.000       5.78   1036.53   1034.71       .00   1036.81       .27
.53        .04   1044.90
    13500.0         .0   13500.0        .0        .0    3218.1        .0
41.7        9.7   1045.10
        .03        .00      4.20       .00      .000      .035      .000
.000   1030.75   9502.54
    .001693       500.      500.      500.         2        11         0
.00    862.92  10365.46


 *SECNO 47.000
     47.000       6.11   1037.11   1036.01       .00   1037.59       .48
.70        .08   1045.00
    13500.0         .0   13500.0        .0        .0    2437.9        .0
61.2       15.1   1045.00
        .05        .00      5.54       .00      .000      .035      .000
.000   1031.00    611.78
    .003408       300.      300.      300.         2        10         0
.00    727.82   1339.60


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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 51.500
                LT CHNL BTM WDTH = 225 FT
     51.500       7.04   1038.44   1036.76       .00   1038.98       .54
1.37        .02   1045.70
    13500.0         .0   13500.0        .0        .0    2295.5        .0
85.7       21.6   1045.70
        .07        .00      5.88       .00      .000      .035      .000
.000   1031.40    775.32
    .002720       450.      450.      450.         2        15         0
.00    527.12   1302.44


 *SECNO 55.000
                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000       7.40   1039.30   1037.03       .00   1039.79       .50
.81        .01   1047.00
```

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    13500.0          .0   13500.0          .0          .0    2384.8          .0
104.5       25.6   1047.00
        .09          .00       5.66        .00       .000       .035       .000
.000   1031.90    275.30
    .001993       350.       350.       350.          2         19          0
.00    458.29    733.60


 *SECNO 58.120
                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120       8.31   1040.41   1037.01        .00   1040.84        .43
1.03        .01   1049.10
    13500.0          .0   13500.0          .0          .0    2566.3          .0
142.1       32.0   1049.00
        .12          .00       5.26        .00       .000       .035       .000
.000   1032.10    766.69
    .001257       662.       662.       662.          2         17          0
.00    387.72   1154.41


 *SECNO 62.000
                STA. 60+21.80 IS P.O.T.
     62.000       8.05   1040.95   1038.33        .00   1041.45        .50
.58         .03   1050.40
    13500.0          .0   13500.0          .0          .0    2374.5          .0
164.1       35.6   1050.40
        .14          .00       5.69        .00       .000       .035       .000
.000   1032.90    275.50
    .001818       388.       388.       388.          2         14          0
.00    418.55    694.05


 *SECNO 66.000
                LT CHNL BTM WDTH = 225 FT.
                RT CHNL BTM WDTH = 230 FT.
     66.000       7.69   1041.69   1038.21        .00   1042.02        .33
.53         .03   1051.80
    13500.0          .0   13500.0          .0          .0    2937.1          .0
188.5       39.6   1051.80
        .16          .00       4.60        .00       .000       .035       .000
.000   1034.00    277.42
    .001013       400.       400.       400.          2         11          0
.00    460.27    737.69


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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
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     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT
CORAR      TOPWID     ENDST


 *SECNO 71.000
                GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000       7.23   1042.23   1039.00        .00   1042.62        .39
.58        .02   1051.50
    13500.0         .0   13500.0        .0        .0    2709.9         .0
220.9       44.9   1051.50
        .19         .00      4.98       .00      .000      .035      .000
.000   1035.00    277.04
    .001317       500.      500.      500.         2        11         0
.00    459.79    736.83


 *SECNO 75.000
     75.000       6.27   1042.77   1039.82        .00   1043.17        .41
.55        .01   1053.10
    13500.0         .0   13500.0        .0        .0    2642.9         .0
245.5       49.1   1053.10
        .21         .00      5.11       .00      .000      .035      .000
.000   1036.50    279.07
    .001416       400.      400.      400.         2        11         0
.00    457.20    736.27


 *SECNO 78.000
                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000       5.80   1043.20   1040.60        .00   1043.64        .44
.45        .01   1053.50
    13500.0         .0   13500.0        .0        .0    2538.3         .0
263.3       52.3   1053.50
        .23         .00      5.32       .00      .000      .035      .000
.000   1037.40    279.50
    .001613       300.      300.      300.         2         8         0
.00    456.29    735.80


 *SECNO 81.000
     81.000       5.69   1043.69   1041.19        .00   1044.14        .46
.50        .01   1054.00
    13500.0         .0   13500.0        .0        .0    2490.6         .0
280.6       55.4   1054.00
        .25         .00      5.42       .00      .000      .035      .000
.000   1038.00    278.98
    .001716       300.      300.      300.         2        11         0
.00    456.35    735.33


 *SECNO 84.000
     84.000       7.21   1044.21   1041.89        .00   1044.70        .49
.55        .01   1054.50
    13500.0         .0   13500.0        .0        .0    2397.9         .0
297.4       58.5   1054.50
        .26         .00      5.63       .00      .000      .035      .000
.000   1037.00    280.08
    .001942       300.      300.      300.         2        15         0
.00    455.10    735.18
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 *SECNO 87.000
     87.000       5.02   1044.82   1042.87        .00   1045.38        .56
.65        .03   1055.00
    13500.0         .0   13500.0        .0        .0    2244.4         .0
313.4       61.7   1055.00
        .27        .00      6.01       .00      .000      .035       .000
.000   1039.80    280.17
    .002412       300.      300.      300.         2        14          0
.00    454.85    735.02


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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 89.000
     89.000       4.91   1045.31   1043.62        .00   1045.93        .63
.53        .03   1055.40
    13500.0         .0   13500.0        .0        .0    2122.8         .0
323.5       63.8   1055.40
        .28        .00      6.36       .00      .000      .035       .000
.000   1040.40    280.19
    .002906       200.      200.      200.         2        14          0
.00    454.72    734.91


 *SECNO 94.000
               STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000       4.94   1046.74   1044.92        .00   1047.33        .60
1.39        .01   1056.40
    13500.0         .0   13500.0        .0        .0    2180.8         .0
348.2       69.0   1056.40
        .31        .00      6.19       .00      .000      .035       .000
.000   1041.80    279.73
    .002662       500.      500.      500.         2        14          0
.00    455.21    734.94


 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000       4.96   1047.56   1045.93        .00   1048.20        .64
.85        .02   1057.10
    13500.0         .0   13500.0        .0        .0    2102.9         .0
362.9       72.1   1057.10
        .32        .00      6.42       .00      .000      .035       .000
.000   1042.60    279.56
    .003013       300.      300.      300.         0        14          0
.00    455.41    734.97
```

```
 *SECNO 99.540
                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
     99.540       5.09   1048.29   1046.79        .00   1049.19        .90
.86        .13   1063.50
    13500.0         .0   13500.0        .0        .0    1777.5         .0
374.2       74.5   1063.50
        .33        .00      7.60       .00      .000      .035      .000
.000   1043.20    325.14
    .003804       254.      254.      254.         0        15         0
.00    349.73    674.86


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS

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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


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1063.80 ELREA=
1063.60

               DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       3.79   1049.99   1049.99        .00   1051.92       1.94
.03        .52   1063.80
    13500.0         .0   13500.0        .0        .0    1209.0         .0
374.4       74.5   1063.60
        .33        .00     11.17       .00      .000      .025      .000
.000   1046.20    325.14
    .007334         6.        6.        6.         0        12         0
.00    319.25    674.86


 *SECNO 100.400

 3265 DIVIDED FLOW
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 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
1.72

 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=
1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
    100.400       5.37   1051.57   1049.99       .00   1052.53       .96
.32       .29   1063.60
    13500.0        .0   13500.0        .0        .0    1713.2        .0
377.1      75.1   1063.60
        .33       .00      7.88       .00      .000      .025      .000
.000   1046.20    325.13
    .002478       80.       80.       80.         4        12         0
.00    319.32    674.87


 *SECNO 100.900
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
    100.900       5.34   1051.94   1050.17       .00   1052.72       .79
.14       .05   1063.60
    13500.0        .0   13500.0        .0        .0    1895.1        .0
379.2      75.5   1063.60
        .33       .00      7.12       .00      .000      .035      .000
.000   1046.60    319.81
    .003129       50.       50.       50.         2        14         0
.00    360.38    680.19


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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 103.000
    103.000       5.84   1052.84   1050.49       .00   1053.45       .61
.67       .05   1065.40
    13500.0        .0   13500.0        .0        .0    2158.8        .0
391.3      77.7   1065.40
        .34       .00      6.25       .00      .000      .035      .000
.000   1047.00    317.12
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    .002156       260.       260.       260.          2         14          0
.00     378.32     695.44


 CCHV=      .100 CEHV=      .300
 *SECNO 106.000
    106.000       5.99   1053.59   1050.61        .00   1053.96        .37
.49        .02   1066.40
    13500.0         .0   13500.0         .0         .0    2752.6         .0
408.2       80.6   1066.40
        .36        .00       4.90        .00       .000       .035       .000
.000   1047.60     272.03
    .001273       300.       300.       300.          2         11          0
.00     468.76     740.79


 *SECNO 109.000
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    109.000       5.83   1054.03   1051.01        .00   1054.31        .29
.35        .01   1066.90
    13500.0         .0   13500.0         .0         .0    3126.9         .0
428.4       84.2   1066.90
        .38        .00       4.32        .00       .000       .035       .000
.000   1048.20     227.05
    .001053       300.       300.       300.          2         14          0
.00     558.78     785.83


 *SECNO 110.000
    110.000       7.12   1054.12   1051.29        .00   1054.43        .31
.11        .01   1066.90
    13500.0         .0   13500.0         .0         .0    3012.8         .0
435.5       85.4   1066.90
        .39        .00       4.48        .00       .000       .035       .000
.000   1047.00     227.13
    .001191       100.       100.       100.          2         19          0
.00     558.59     785.72


 *SECNO 113.000
    113.000       5.48   1054.48   1051.75        .00   1054.80        .32
.37        .00   1067.20
    13500.0         .0   13500.0         .0         .0    2970.6         .0
456.1       89.3   1067.20
        .40        .00       4.54        .00       .000       .035       .000
.000   1049.00     227.24
    .001247       300.       300.       300.          2         18          0
.00     558.24     785.48


 *SECNO 116.000

 3265 DIVIDED FLOW

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                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    116.000       5.26   1054.86   1052.46       .00   1055.26       .39
.43       .02   1067.30
    13500.0        .0   13500.0        .0        .0    2685.2        .0
475.6      93.1   1067.30
        .42        .00      5.03       .00      .000      .035      .000
.000   1049.60    227.18
    .001679      240.      300.      340.         2        11         0
.00    538.54    785.26


 *SECNO 120.000

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
.51

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    120.000       4.95   1055.35   1054.56       .00   1056.73      1.38
1.18       .30   1067.10
    13500.0        .0   13500.0        .0        .0    1432.3        .0
494.5      96.9   1067.10
        .43        .00      9.43       .00      .000      .035      .000
.000   1050.40    296.80
    .006476      327.      400.      497.         2        15         0
.00    307.21    734.95


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
2.28

    123.000       6.27   1057.27   1054.14       .00   1057.65       .39
.82       .10   1068.80
    13500.0        .0   13500.0        .0        .0    2703.0        .0
510.7      99.9   1068.80
        .45        .00      4.99       .00      .000      .035      .000
.000   1051.00    295.27
    .001249      342.      342.      342.         2        14         0
.00    440.99    736.26


 *SECNO 127.000
    127.000       5.98   1057.78   1054.94       .00   1058.20       .43
.54       .01   1068.80
    13500.0        .0   13500.0        .0        .0    2578.7        .0
535.0     103.9   1068.80
        .47        .00      5.24       .00      .000      .035      .000
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.000   1051.80    295.06
    .001460      400.      400.      400.         2         8         0
.00    440.91    735.97


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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 131.000
    131.000      8.39   1058.39   1055.91       .00   1058.88       .49
.65        .02   1069.40
    13500.0        .0   13500.0        .0        .0    2410.8        .0
557.9     108.0   1069.40
        .49       .00      5.60       .00      .000      .035      .000
.000   1050.00    295.22
    .001832      400.      400.      400.         2         5         0
.00    440.57    735.79


 *SECNO 135.000

 3265 DIVIDED FLOW

    135.000      5.79   1059.19   1057.07       .00   1059.84       .65
.92        .05   1069.60
    13500.0        .0   13500.0        .0        .0    2093.4        .0
578.5     112.0   1069.90
        .51       .00      6.45       .00      .000      .035      .000
.000   1053.40    294.70
    .002956      400.      400.      400.         2        14         0
.00    441.02    735.72


 *SECNO 138.000
    138.000      6.06   1060.06   1057.46       .00   1060.56       .50
.71        .01   1069.60
    13500.0        .0   13500.0        .0        .0    2385.0        .0
594.0     115.1   1069.60
        .53       .00      5.66       .00      .000      .035      .000
.000   1054.00    293.47
    .001916      300.      300.      300.         2        14         0
.00    442.59    736.06


 *SECNO 141.000

 3265 DIVIDED FLOW

    141.000      6.04   1060.64   1058.51       .00   1061.26       .62
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.67        .04    1071.00
    13500.0         .0   13500.0         .0         .0     2134.9         .0
609.5      118.0    1071.00
        .54         .00       6.32       .00       .000       .035       .000
.000    1054.60     294.25
    .002595       300.       300.       300.          2         14          0
.00     419.48     736.04


 *SECNO 145.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
1.42

              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000       6.20   1061.60   1058.54        .00    1061.99        .39
.71        .02    1072.00
    13500.0         .0   13500.0         .0         .0     2678.4         .0
631.6      122.0    1077.00
        .56         .00       5.04       .00       .000       .035       .000
.000    1055.40     294.20
    .001287       400.       400.       400.          2         11          0
.00     440.57     734.76


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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 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000       6.05   1061.85   1058.95        .00    1062.27        .41
.27        .01    1072.40
    13500.0         .0   13500.0         .0         .0     2618.8         .0
643.8      124.0    1072.40
        .57         .00       5.16       .00       .000       .035       .000
.000    1055.80     294.49
    .001390       200.       200.       200.          2          8          0
.00     441.57     736.06


 *SECNO 150.000
              CHANNEL BOTTOM TAPERS
              LT CHNL BTM WDTH = 260 FT.
              RT CHNL BTM WDTH = 210 FT.
    150.000       5.90   1062.30   1059.39        .00    1062.68        .38
.41        .00    1073.00
    13500.0         .0   13500.0         .0         .0     2725.7         .0
```

```
662.2      127.1    1073.00
        .59        .00       4.95        .00       .000       .035       .000
.000    1056.40    244.81
    .001324       350.       300.       260.          2          8          0
.00     471.09    715.90


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 T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
 T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3       50-YEAR EVENT           MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS
Q          WSEL      FQ

        0         3
1039.39

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC
IBW        CHNIM      ITRACE

       2         0        -1                                        -1
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

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=
840.199
               BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
               WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
               EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
               GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
               PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING
CONDITIONS
               BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
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```
     39.000      11.39   1039.39   1034.59   1036.06   1039.71       .32
.00        .00   1042.50
    31000.0         .0   31000.0        .0        .0    6796.1        .0
.0         .0   1043.20
        .00        .00      4.56       .00      .000      .035      .000
.000   1028.00   9589.35
    .000703       270.      220.      200.         0        13         0
.00    829.03  10418.38


 CCHV=      .200 CEHV=      .400
 *SECNO 44.000
                BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
                LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
                RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362
+OR- FEET
     44.000       9.03   1039.78   1036.19   1036.53   1040.19       .41
.44        .03   1044.90
    31000.0         .0   31000.0        .0        .0    6040.1        .0
73.7        9.8   1045.10
        .03        .00      5.13       .00      .000      .035      .000
.000   1030.75   9496.05
    .001121       500.      500.      500.         2        14         0
.00    877.03  10373.08


 *SECNO 47.000
     47.000       9.06   1040.06   1037.55   1037.11   1040.76       .71
.46        .12   1045.00
    31000.0         .0   31000.0        .0        .0    4596.3        .0
110.3       15.4   1045.00
        .04        .00      6.74       .00      .000      .035      .000
.000   1031.00    605.90
    .002227       300.      300.      300.         0        19         0
.00    740.69   1346.59


 *SECNO 51.500
                LT CHNL BTM WDTH = 225 FT
     51.500       9.59   1040.99   1038.80   1038.44   1042.11      1.12
1.18        .17   1045.70
    31000.0         .0   31000.0        .0        .0    3650.0        .0
152.9       22.0   1045.70
        .05        .00      8.49       .00      .000      .035      .000
.000   1031.40    770.22
    .003129       450.      450.      450.         2        15         0
.00    534.77   1304.99


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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
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CORAR     TOPWID    ENDST


 *SECNO 55.000
                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      10.09   1041.99   1039.28   1039.30   1043.12       1.13
1.01        .00   1047.00
    31000.0         .0   31000.0        .0        .0    3630.4        .0
182.1       26.0   1047.00
        .07         .00      8.54       .00      .000      .035      .000
.000   1031.90    269.95
    .002663       350.      350.      350.         2        15         0
.00    466.34    736.29


 *SECNO 58.120
                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120      11.46   1043.56   1039.60   1040.41   1044.60       1.03
1.46        .02   1049.10
    31000.0         .0   31000.0        .0        .0    3799.0        .0
238.6       32.5   1049.00
        .09         .00      8.16       .00      .000      .035      .000
.000   1032.10    763.54
    .001847       662.      662.      662.         2        15         0
.00    394.03   1157.56


 *SECNO 62.000
                STA. 60+21.80 IS P.O.T.
     62.000      11.43   1044.33   1040.78   1040.95   1045.36       1.03
.76         .00   1050.40
    31000.0         .0   31000.0        .0        .0    3804.6        .0
272.5       36.2   1050.40
        .10         .00      8.15       .00      .000      .035      .000
.000   1032.90    268.75
    .002068       388.      388.      388.         2        19         0
.00    428.68    697.43


 *SECNO 66.000
                LT CHNL BTM WDTH = 225 FT.
                RT CHNL BTM WDTH = 230 FT.
     66.000      11.35   1045.35   1040.48   1041.69   1046.04        .69
.62         .07   1051.80
    31000.0         .0   31000.0        .0        .0    4643.0        .0
311.2       40.3   1051.80
        .12         .00      6.68       .00      .000      .035      .000
.000   1034.00    270.09
    .001206       400.      400.      400.         2        11         0
.00    471.26    741.35


 *SECNO 71.000
                GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000      10.96   1045.96   1041.53   1042.23   1046.72        .76
.65         .03   1051.50
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    31000.0          .0   31000.0          .0          .0    4445.5          .0
363.4       45.7   1051.50
        .14          .00      6.97        .00       .000       .035       .000
.000   1035.00    269.58
    .001386       500.      500.       500.          2         11          0
.00    470.98    740.56


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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 75.000
     75.000      10.01   1046.51   1042.18   1042.77   1047.29        .78
.57        .01   1053.10
    31000.0          .0   31000.0          .0          .0    4376.8          .0
403.9       50.0   1053.10
        .15          .00      7.08        .00       .000       .035       .000
.000   1036.50    271.58
    .001445       400.      400.       400.          2         11          0
.00    468.44    740.01


 *SECNO 78.000
                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000       9.54   1046.94   1042.85   1043.20   1047.76        .82
.45        .02   1053.50
    31000.0          .0   31000.0          .0          .0    4265.2          .0
433.7       53.2   1053.50
        .16          .00      7.27        .00       .000       .035       .000
.000   1037.40    272.03
    .001568       300.      300.       300.          0         11          0
.00    467.51    739.54


 *SECNO 81.000
     81.000       9.41   1047.41   1043.45   1043.69   1048.25        .84
.48        .01   1054.00
    31000.0          .0   31000.0          .0          .0    4203.8          .0
462.8       56.5   1054.00
        .18          .00      7.37        .00       .000       .035       .000
.000   1038.00    271.79
    .001641       300.      300.       300.          1         11          0
.00    467.02    738.81


 *SECNO 84.000
     84.000      10.89   1047.89   1044.16   1044.21   1048.78        .89
.51        .02   1054.50
    31000.0          .0   31000.0          .0          .0    4090.2          .0
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491.4       59.7    1054.50
        .19        .00       7.58        .00       .000       .035       .000
.000   1037.00    272.73
    .001794       300.       300.       300.          0         15          0
.00    466.10    738.83


 *SECNO 87.000
     87.000       8.62   1048.42   1045.12   1044.82   1049.40        .98
.58        .04   1055.00
    31000.0         .0   31000.0        .0        .0    3898.7         .0
518.9       62.9   1055.00
        .20        .00       7.95        .00       .000       .035       .000
.000   1039.80    272.98
    .002096       300.       300.       300.          1         11          0
.00    465.64    738.61


 *SECNO 89.000
     89.000       8.41   1048.81   1045.87   1045.31   1049.89       1.07
.45        .04   1055.40
    31000.0         .0   31000.0        .0        .0    3733.0         .0
536.4       65.0   1055.40
        .20        .00       8.30        .00       .000       .035       .000
.000   1040.40    273.19
    .002421       200.       200.       200.          0         14          0
.00    465.22    738.41


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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 94.000
                STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000       8.23   1050.03   1047.17   1046.74   1051.12       1.09
1.23        .01   1056.40
    31000.0         .0   31000.0        .0        .0    3697.5         .0
579.1       70.4   1056.40
        .22        .00       8.38        .00       .000       .035       .000
.000   1041.80    273.14
    .002500       500.       500.       500.          2         14          0
.00    465.10    738.23


 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000       8.19   1050.79   1048.18   1047.56   1051.95       1.16
.79        .04   1057.10
    31000.0         .0   31000.0        .0        .0    3579.2         .0
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604.1       73.6   1057.10
        .23        .00       8.66        .00       .000       .035       .000
.000   1042.60    273.14
    .002790       300.       300.       300.          1         14          0
.00    465.04    738.18


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
     99.540       8.11   1051.31   1049.43   1048.29   1053.17       1.85
.87        .34   1063.50
    31000.0         .0   31000.0         .0         .0    2837.6         .0
622.8       75.9   1063.50
        .24        .00      10.92        .00       .000       .035       .000
.000   1043.20    325.13
    .004313       254.       254.       254.          2         15          0
.00    349.74    674.87


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
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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=      1063.80 ELREA=
1063.60

                DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       6.63   1052.83   1052.83   1049.99   1056.16       3.33
.03        .74   1063.80
    31000.0         .0   31000.0         .0         .0    2116.2         .0
623.2       76.0   1063.60
```

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        .24        .00      14.65        .00       .000       .025       .000
.000   1046.20    325.13
    .006851        6.         6.         6.          0         15          0
.00    319.37    674.87


 *SECNO 100.400

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
1.55


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=
1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
    100.400       8.89   1055.09   1052.83   1051.57   1056.94       1.85
.34        .45   1063.60
    31000.0         .0   31000.0        .0        .0    2841.0        .0
627.7       76.6   1063.60
        .24        .00      10.91        .00       .000       .025       .000
.000   1046.20    325.12
    .002834       80.        80.        80.         5         15          0
.00    319.46    674.88


 *SECNO 100.900

 3301 HV CHANGED MORE THAN HVINS

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
    100.900       9.29   1055.89   1052.79   1051.94   1057.23       1.34
.14        .15   1063.60
    31000.0         .0   31000.0        .0        .0    3333.7        .0
631.3       77.0   1063.60
        .24        .00       9.30        .00       .000       .035       .000
.000   1046.60    315.86
    .002613       50.        50.        50.         3         19          0
.00    368.27    684.14


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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 103.000
    103.000       9.79   1056.79   1053.05   1052.84   1057.90       1.10
.60        .07   1065.40
    31000.0         .0   31000.0        .0        .0    3677.9         .0
652.2       79.2   1065.40
        .25         .00      8.43       .00      .000      .035      .000
.000   1047.00    309.21
    .002022       260.      260.      260.         2        14         0
.00    390.18    699.39


 CCHV=      .100 CEHV=      .300
 *SECNO 106.000
    106.000      10.12   1057.72   1052.83   1053.59   1058.39       .67
.45        .04   1066.40
    31000.0         .0   31000.0        .0        .0    4716.2         .0
681.1       82.2   1066.40
        .26         .00      6.57       .00      .000      .035      .000
.000   1047.60    263.76
    .001163       300.      300.      300.         2        11         0
.00    481.16    744.92


 *SECNO 109.000
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    109.000      10.02   1058.22   1052.97   1054.03   1058.71       .50
.30        .02   1066.90
    31000.0         .0   31000.0        .0        .0    5489.9         .0
716.2       85.9   1066.90
        .28         .00      5.65       .00      .000      .035      .000
.000   1048.20    218.69
    .000881       300.      300.      300.         1        14         0
.00    571.32    790.01


 *SECNO 110.000
    110.000      11.29   1058.29   1053.26   1054.12   1058.81       .52
.09        .01   1066.90
    31000.0         .0   31000.0        .0        .0    5368.3         .0
728.7       87.2   1066.90
        .28         .00      5.77       .00      .000      .035      .000
.000   1047.00    218.70
    .000949       100.      100.      100.         2        14         0
.00    571.19    789.89


 *SECNO 113.000
    113.000       9.57   1058.57   1053.71   1054.48   1059.11       .54
.29        .01   1067.20
    31000.0         .0   31000.0        .0        .0    5276.3         .0
765.4       91.1   1067.20
        .30         .00      5.88       .00      .000      .035      .000
.000   1049.00    219.07
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    .001003       300.       300.       300.          0         18          0
.00     570.50     789.57


 *SECNO 116.000
                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
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


    116.000       9.25    1058.85    1054.54    1054.86    1059.47        .62
.34        .03    1067.30
    31000.0         .0    31000.0         .0         .0     4904.4         .0
800.4       95.0    1067.30
        .31        .00       6.32        .00       .000       .035       .000
.000    1049.60     219.18
    .001292       240.       300.       340.          0         11          0
.00     570.07     789.26


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


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

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    120.000       8.50    1058.90    1057.98    1055.35    1060.85       1.95
.98        .40    1067.10
    31000.0         .0    31000.0         .0         .0     2767.3         .0
835.6       99.7    1067.10
        .32        .00      11.20        .00       .000       .035       .000
.000    1050.40     289.68
    .006311       327.       400.       497.          2         15          0
.00     448.83     738.51


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
2.16
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    123.000      10.06   1061.06   1056.46   1057.27   1061.83        .77
.86        .12   1068.80
    31000.0         .0   31000.0        .0        .0    4400.5         .0
863.8     103.2   1068.80
        .33        .00      7.04       .00      .000      .035       .000
.000   1051.00    287.67
    .001351       342.      342.      342.         2        14          0
.00    452.39    740.06


 *SECNO 127.000
    127.000       9.80   1061.60   1057.25   1057.78   1062.41        .81
.56        .01   1068.80
    31000.0         .0   31000.0        .0        .0    4284.8         .0
903.7     107.4   1068.80
        .35        .00      7.23       .00      .000      .035       .000
.000   1051.80    287.42
    .001476       400.      400.      400.         2        11          0
.00    452.37    739.79


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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 131.000
    131.000      12.18   1062.18   1058.22   1058.39   1063.07        .89
.64        .02   1069.40
    31000.0         .0   31000.0        .0        .0    4099.2         .0
942.2     111.6   1069.40
        .36        .00      7.56       .00      .000      .035       .000
.000   1050.00    287.66
    .001714       400.      400.      400.         1        15          0
.00    451.92    739.57


 *SECNO 135.000
    135.000       9.45   1062.85   1059.78   1059.19   1063.93       1.07
.80        .06   1069.60
    31000.0         .0   31000.0        .0        .0    3726.1         .0
978.1     115.7   1069.90
        .38        .00      8.32       .00      .000      .035       .000
.000   1053.40    287.25
    .002372       400.      400.      400.         2        11          0
.00    452.09    739.34


 *SECNO 138.000
    138.000       9.63   1063.63   1059.99   1060.06   1064.57        .94
```

```
.63        .01   1069.60
    31000.0        .0   31000.0        .0        .0    3984.7        .0
1004.6     118.8   1069.60
        .39       .00      7.78       .00      .000      .035      .000
.000   1054.00    286.33
    .001896      300.      300.      300.         2        14         0
.00    453.30    739.63


 *SECNO 141.000
    141.000      9.57   1064.17   1061.13   1060.64   1065.26      1.09
.64        .04   1071.00
    31000.0        .0   31000.0        .0        .0    3703.2        .0
1031.1     121.9   1071.00
        .40       .00      8.37       .00      .000      .035      .000
.000   1054.60    287.22
    .002425      300.      300.      300.         2        14         0
.00    452.36    739.57


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000      9.82   1065.22   1060.86   1061.60   1066.03       .81
.74        .03   1072.00
    31000.0        .0   31000.0        .0        .0    4290.8        .0
1067.8     126.1   1077.00
        .41       .00      7.22       .00      .000      .035      .000
.000   1055.40    286.96
    .001465      400.      400.      400.         2        11         0
.00    450.58    737.55


 *SECNO 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000      9.71   1065.51   1061.25   1061.85   1066.33       .83
.30        .00   1072.40
    31000.0        .0   31000.0        .0        .0    4250.2        .0
1087.4     128.2   1072.40
        .42       .00      7.29       .00      .000      .035      .000
.000   1055.80    287.19
    .001517      200.      200.      200.         2        11         0
.00    452.51    739.70


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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 150.000
                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
    150.000       9.64   1066.04   1061.61   1062.30   1066.77       .73
.43        .01   1073.00
    31000.0        .0   31000.0        .0        .0    4508.5        .0
1117.6     131.4   1073.00
        .43       .00      6.88       .00      .000      .035      .000
.000   1056.40    237.33
    .001355      350.      300.      260.         2        11         0
.00    482.31    719.64


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 T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
 T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3      100-YEAR EVENT         MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS
Q         WSEL      FQ

        0         4
1040.66

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC
IBW       CHNIM      ITRACE

       3         0        -1                                        -1
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 3

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=
840.199
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```
                BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
                WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
                EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
                GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
                PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING
CONDITIONS
                BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
     39.000      12.66   1040.66   1035.33   1036.06   1041.08       .42
.00       .00   1042.50
    41000.0        .0   41000.0        .0        .0    7851.4        .0
.0        .0   1043.20
        .00       .00      5.22       .00      .000      .035      .000
.000   1028.00   9587.98
    .000765      270.      220.      200.         0        13         0
.00    832.94  10420.92


 CCHV=      .200 CEHV=      .400
 *SECNO 44.000
                BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
                LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
                RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362
+OR- FEET
     44.000      10.32   1041.07   1036.92   1036.53   1041.57       .51
.46       .03   1044.90
    41000.0        .0   41000.0        .0        .0    7176.3        .0
86.2       9.8   1045.10
        .02       .00      5.71       .00      .000      .035      .000
.000   1030.75   9493.46
    .001114      500.      500.      500.         2        11         0
.00    882.65  10376.11


 *SECNO 47.000
     47.000      10.31   1041.31   1038.34   1037.11   1042.16       .85
.45       .14   1045.00
    41000.0        .0   41000.0        .0        .0    5533.1        .0
130.0      15.5   1045.00
        .04       .00      7.41       .00      .000      .035      .000
.000   1031.00    603.38
    .002122      300.      300.      300.         2        19         0
.00    746.21   1349.59


 *SECNO 51.500

 3301 HV CHANGED MORE THAN HVINS

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                LT CHNL BTM WDTH = 225 FT
     51.500      10.73   1042.14   1039.77   1038.44   1043.57      1.44
1.17       .23   1045.70
    41000.0        .0   41000.0        .0        .0    4264.7        .0
180.6      22.1   1045.70
        .05       .00      9.61       .00      .000      .035      .000
.000   1031.40    767.93
    .003291      450.      450.      450.         2        15         0
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```
.00     538.21    1306.14


 *SECNO 55.000
                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      11.29   1043.19   1040.35   1039.30   1044.67       1.49
1.08        .02    1047.00
    41000.0         .0   41000.0        .0        .0    4191.3        .0
214.6       26.1    1047.00
        .06         .00      9.78       .00      .000      .035      .000
.000    1031.90     267.57
    .002921       350.      350.      350.         2        15         0
.00     469.92     737.49


 *SECNO 58.120
                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120      12.84   1044.94   1040.79   1040.41   1046.32       1.38
1.63        .02    1049.10
    41000.0         .0   41000.0        .0        .0    4342.1        .0
279.4       32.7    1049.00
        .08         .00      9.44       .00      .000      .035      .000
.000    1032.10     762.16
    .002096       662.      662.      662.         2        15         0
.00     396.78    1158.94


 *SECNO 62.000
                STA. 60+21.80 IS P.O.T.
     62.000      12.95   1045.85   1041.92   1040.95   1047.16       1.31
.83         .01    1050.40
    41000.0         .0   41000.0        .0        .0    4462.3        .0
318.6       36.4    1050.40
        .09         .00      9.19       .00      .000      .035      .000
.000    1032.90     265.70
    .002162       388.      388.      388.         2        19         0
.00     433.26     698.95


 *SECNO 66.000
                LT CHNL BTM WDTH = 225 FT.
                RT CHNL BTM WDTH = 230 FT.
     66.000      13.01   1047.01   1041.58   1041.69   1047.90        .89
.65         .09    1051.80
    41000.0         .0   41000.0        .0        .0    5430.7        .0
364.1       40.6    1051.80
        .10         .00      7.55       .00      .000      .035      .000
.000    1034.00     266.77
    .001272       400.      400.      400.         2        11         0
.00     476.25     743.02


 *SECNO 71.000
                GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000      12.65   1047.65   1042.62   1042.23   1048.60        .95
.67         .03    1051.50
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    41000.0         .0   41000.0         .0         .0    5244.6         .0
425.3       46.1   1051.50
        .12        .00      7.82        .00       .000       .035       .000
.000   1035.00    266.20
    .001421       500.      500.       500.          2         11          0
.00    476.04    742.25


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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 75.000
     75.000      11.71   1048.21   1043.26   1042.77   1049.18        .97
.58        .01   1053.10
    41000.0         .0   41000.0         .0         .0    5177.0         .0
473.2       50.4   1053.10
        .14        .00      7.92        .00       .000       .035       .000
.000   1036.50    268.18
    .001469       400.      400.       400.          2         11          0
.00    473.53    741.71


 *SECNO 78.000
                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000      11.24   1048.64   1043.94   1043.20   1049.66       1.02
.46        .02   1053.50
    41000.0         .0   41000.0         .0         .0    5068.0         .0
508.5       53.7   1053.50
        .15        .00      8.09        .00       .000       .035       .000
.000   1037.40    268.61
    .001570       300.      300.       300.          0         11          0
.00    472.63    741.24


 *SECNO 81.000
     81.000      11.11   1049.11   1044.54   1043.69   1050.15       1.04
.48        .01   1054.00
    41000.0         .0   41000.0         .0         .0    5001.6         .0
543.1       56.9   1054.00
        .16        .00      8.20        .00       .000       .035       .000
.000   1038.00    268.50
    .001636       300.      300.       300.          0         11          0
.00    471.90    740.40


 *SECNO 84.000
     84.000      12.59   1049.59   1045.23   1044.21   1050.68       1.09
.51        .02   1054.50
    41000.0         .0   41000.0         .0         .0    4886.9         .0
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577.2       60.2   1054.50
        .17        .00       8.39        .00       .000       .035       .000
.000   1037.00    269.33
    .001764       300.       300.       300.          0         19          0
.00    471.19    740.52


 *SECNO 87.000
     87.000      10.29   1050.09   1046.21   1044.82   1051.28       1.19
.57        .04   1055.00
    41000.0         .0   41000.0         .0         .0    4686.7         .0
610.2       63.4   1055.00
        .18        .00       8.75        .00       .000       .035       .000
.000   1039.80    269.61
    .002019       300.       300.       300.          0          8          0
.00    470.69    740.30


 *SECNO 89.000
     89.000      10.07   1050.47   1046.95   1045.31   1051.75       1.28
.43        .04   1055.40
    41000.0         .0   41000.0         .0         .0    4511.7         .0
631.3       65.6   1055.40
        .18        .00       9.09        .00       .000       .035       .000
.000   1040.40    269.86
    .002291       200.       200.       200.          0         14          0
.00    470.22    740.07


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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


 *SECNO 94.000
                STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000       9.82   1051.62   1048.25   1046.74   1052.94       1.32
1.18        .02   1056.40
    41000.0         .0   41000.0         .0         .0    4438.9         .0
682.6       71.0   1056.40
        .20        .00       9.24        .00       .000       .035       .000
.000   1041.80    269.96
    .002417       500.       500.       500.          2         14          0
.00    469.85    739.82


 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000       9.74   1052.34   1049.26   1047.56   1053.75       1.41
.76        .04   1057.10
    41000.0         .0   41000.0         .0         .0    4304.9         .0
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712.8       74.2   1057.10
        .21        .00       9.52        .00       .000       .035       .000
.000   1042.60    270.04
    .002680       300.       300.       300.          1         14          0
.00    469.69    739.73


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
     99.540       9.53   1052.73   1050.70   1048.29   1055.08       2.35
.86        .47   1063.50
    41000.0         .0   41000.0        .0        .0    3334.2         .0
735.0       76.6   1063.50
        .21        .00      12.30        .00       .000       .035       .000
.000   1043.20    325.13
    .004453       254.       254.       254.          2         15          0
.00    349.75    674.87


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=    0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 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=      1063.80 ELREA=
1063.60

               DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       7.97   1054.17   1054.17   1049.99   1058.20       4.03
.03        .84   1063.80
    41000.0         .0   41000.0        .0        .0    2545.5         .0
735.4       76.7   1063.60
```

```
        .21        .00      16.11        .00       .000       .025       .000
.000   1046.20    325.13
    .006872         6.         6.         6.          0         12          0
.00    319.42    674.87


 *SECNO 100.400

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
1.52


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=
1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
    100.400      10.59   1056.79   1054.17   1051.57   1059.07       2.28
.35       .52   1063.60
    41000.0         .0   41000.0        .0        .0    3380.4         .0
740.9      77.2   1063.60
        .21        .00      12.13        .00       .000       .025       .000
.000   1046.20    325.12
    .002976        80.        80.        80.         6         12          0
.00    319.53    674.88


 *SECNO 100.900

 3301 HV CHANGED MORE THAN HVINS

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
    100.900      11.22   1057.82   1054.05   1051.94   1059.41       1.59
.13       .21   1063.60
    41000.0         .0   41000.0        .0        .0    4049.5         .0
745.1      77.6   1063.60
        .22        .00      10.12        .00       .000       .035       .000
.000   1046.60    313.93
    .002437        50.        50.        50.         3         19          0
.00    372.14    686.07


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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
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     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR
WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT
CORAR      TOPWID     ENDST


 *SECNO 103.000
    103.000      11.73    1058.73    1054.27    1052.84    1060.06      1.32
.56        .08    1065.40
    41000.0         .0    41000.0        .0         .0     4439.5        .0
770.5       79.9    1065.40
        .22         .00       9.24       .00       .000       .035      .000
.000    1047.00    305.34
    .001934       260.       260.       260.          2         14         0
.00     396.00    701.33


 CCHV=      .100 CEHV=      .300
 *SECNO 106.000

 3301 HV CHANGED MORE THAN HVINS

    106.000      12.13    1059.73    1053.89    1053.59    1060.54       .81
.43        .05    1066.40
    41000.0         .0    41000.0        .0         .0     5690.8        .0
805.4       83.0    1066.40
        .23         .00       7.20       .00       .000       .035      .000
.000    1047.60    259.73
    .001110       300.       300.       300.          2         11         0
.00     487.20    746.93


 *SECNO 109.000
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    109.000      12.06    1060.26    1053.94    1054.03    1060.85       .59
.28        .02    1066.90
    41000.0         .0    41000.0        .0         .0     6668.1        .0
847.9       86.6    1066.90
        .25         .00       6.15       .00       .000       .035      .000
.000    1048.20    214.58
    .000820       300.       300.       300.          2         11         0
.00     577.48    792.06


 *SECNO 110.000
    110.000      13.33    1060.33    1054.21    1054.12    1060.94       .61
.08        .01    1066.90
    41000.0         .0    41000.0        .0         .0     6536.7        .0
863.1       88.0    1066.90
        .25         .00       6.27       .00       .000       .035      .000
.000    1047.00    214.59
    .000876       100.       100.       100.          2         14         0
.00     577.34    791.93


 *SECNO 113.000
    113.000      11.58    1060.58    1054.67    1054.48    1061.21       .63
.27        .01    1067.20
    41000.0         .0    41000.0        .0         .0     6431.6        .0
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907.7       91.9   1067.20
        .27        .00       6.37        .00       .000       .035       .000
.000   1049.00    215.04
    .000923       300.       300.       300.          0         14          0
.00    576.54    791.58


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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 116.000
                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    116.000      11.23   1060.83   1055.54   1054.86   1061.55        .72
.31        .03   1067.30
    41000.0         .0   41000.0        .0        .0    6039.2         .0
950.7       95.9   1067.30
        .28        .00       6.79        .00       .000       .035       .000
.000   1049.60    215.22
    .001148       240.       300.       340.          1          8          0
.00    576.02    791.24


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


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

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    120.000      10.34   1060.74   1059.08   1055.35   1062.76       2.02
.82        .39   1067.10
    41000.0         .0   41000.0        .0        .0    3597.5         .0
994.9      100.6   1067.10
        .29        .00      11.40        .00       .000       .035       .000
.000   1050.40    286.00
    .004694       327.       400.       497.          2         15          0
.00    454.35    740.35


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS
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 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
1.81

    123.000      11.69   1062.69   1057.57   1057.27   1063.67       .99
.81        .10   1068.80
    41000.0         .0   41000.0        .0        .0    5141.8        .0
1029.2     104.2   1068.80
        .30        .00      7.97       .00      .000      .035      .000
.000   1051.00    284.41
    .001431       342.      342.      342.         2        14         0
.00    457.28    741.69


 *SECNO 127.000
    127.000      11.45   1063.25   1058.37   1057.78   1064.28      1.03
.59        .01   1068.80
    41000.0         .0   41000.0        .0        .0    5040.3        .0
1076.0     108.4   1068.80
        .31        .00      8.13       .00      .000      .035      .000
.000   1051.80    284.10
    .001529       400.      400.      400.         3        11         0
.00    457.35    741.45


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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 131.000
    131.000      13.85   1063.85   1059.33   1058.39   1064.95      1.11
.65        .02   1069.40
    41000.0         .0   41000.0        .0        .0    4858.3        .0
1121.4     112.6   1069.40
        .33        .00      8.44       .00      .000      .035      .000
.000   1050.00    284.31
    .001732       400.      400.      400.         0        15         0
.00    456.93    741.24


 *SECNO 135.000
    135.000      11.10   1064.50   1060.89   1059.19   1065.80      1.30
.79        .06   1069.60
    41000.0         .0   41000.0        .0        .0    4475.0        .0
1164.3     116.8   1069.90
        .34        .00      9.16       .00      .000      .035      .000
.000   1053.40    283.89
    .002293       400.      400.      400.         0        11         0
.00    457.07    740.96
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 *SECNO 138.000
    138.000      11.28   1065.28   1061.09   1060.06   1066.44       1.16
.62        .01   1069.60
    41000.0         .0   41000.0        .0        .0    4734.2         .0
1196.0     120.0   1069.60
        .35        .00      8.66       .00      .000      .035       .000
.000   1054.00    283.04
    .001900       300.      300.      300.         2        14          0
.00    458.24    741.28


 *SECNO 141.000
    141.000      11.20   1065.80   1062.26   1060.64   1067.12       1.32
.63        .05   1071.00
    41000.0         .0   41000.0        .0        .0    4444.1         .0
1227.6     123.1   1071.00
        .36        .00      9.23       .00      .000      .035       .000
.000   1054.60    283.97
    .002349       300.      300.      300.         2        14          0
.00    457.23    741.20


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000      11.47   1066.87   1061.98   1061.60   1067.90       1.03
.75        .03   1072.00
    41000.0         .0   41000.0        .0        .0    5039.7         .0
1271.1     127.3   1077.00
        .37        .00      8.14       .00      .000      .035       .000
.000   1055.40    283.65
    .001524       400.      400.      400.         2        11          0
.00    455.16    738.82


 *SECNO 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000      11.37   1067.17   1062.37   1061.85   1068.21       1.04
.31        .00   1072.40
    41000.0         .0   41000.0        .0        .0    5007.8         .0
1294.2     129.4   1072.40
        .38        .00      8.19       .00      .000      .035       .000
.000   1055.80    283.86
    .001563       200.      200.      200.         2        11          0
.00    457.51    741.37


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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
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CORAR     TOPWID    ENDST


 *SECNO 150.000
                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
    150.000      11.35   1067.75   1062.67   1062.30   1068.66        .92
.44        .01   1073.00
    41000.0         .0   41000.0        .0        .0    5338.4         .0
1329.8     132.6   1073.00
        .39        .00      7.68       .00      .000      .035      .000
.000   1056.40    233.90
    .001372       350.      300.      260.         2        11         0
.00    487.44    721.35


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 T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC
8/5/02 CWR)
 T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3      500-YEAR EVENT          MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS
Q         WSEL      FQ

        0         5
1043.78

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC
IBW       CHNIM      ITRACE

       4         0        -1                                        -1
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 4

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000
```

```
 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=
840.199
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING
CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
     39.000     15.78   1043.78   1037.45   1036.06   1044.58       .80
.00       .00   1042.50
    75000.0        .0   75000.0        .0        .1   10464.0        .1
.0        .0   1043.20
        .00       .21      7.17       .01      .045      .035      .045
.000   1028.00   9585.90
    .000996      270.      220.      200.         0        13         0
.00    840.20  10426.10


 CCHV=     .200 CEHV=     .400
 *SECNO 44.000
              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362
+OR- FEET
     44.000     13.54   1044.29   1038.94   1036.53   1045.16       .87
.56       .03   1044.90
    75000.0        .0   75000.0        .0        .0   10039.3        .0
117.7      10.0   1045.10
        .02       .00      7.47       .00      .000      .035      .000
.000   1030.75   9487.03
    .001245      500.      500.      500.         1        11         0
.00    896.26  10383.29


 *SECNO 47.000

 3301 HV CHANGED MORE THAN HVINS

     47.000     13.46   1044.46   1040.63   1037.11   1045.86      1.40
.49       .21   1045.00
    75000.0        .0   75000.0        .0        .0    7908.6        .0
179.5      15.7   1045.00
        .03       .00      9.48       .00      .000      .035      .000
.000   1031.00    597.07
    .002215      300.      300.      300.         2        19         0
.00    759.39   1356.46


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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
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     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT
CORAR      TOPWID     ENDST


 *SECNO 51.500

 3301 HV CHANGED MORE THAN HVINS

                LT CHNL BTM WDTH = 225 FT
     51.500      13.67   1045.07   1042.61   1038.44   1047.62       2.54
1.30        .46   1045.70
    75000.0         .0   75000.0        .0        .0    5859.9         .0
250.6       22.4   1045.70
        .04         .00     12.80       .00      .000      .035      .000
.000   1031.40    762.05
    .003919       450.      450.      450.         2        15         0
.00    547.03   1309.08


 *SECNO 55.000
                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      14.40   1046.30   1043.47   1039.30   1049.02       2.72
1.33        .07   1047.00
    75000.0         .0   75000.0        .0        .0    5667.8         .0
296.9       26.5   1047.00
        .04         .00     13.23       .00      .000      .035      .000
.000   1031.90    261.39
    .003689       350.      350.      350.         2        15         0
.00    479.21    740.60


 *SECNO 58.120
                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120      16.44   1048.54   1044.28   1040.41   1051.15       2.61
2.11        .02   1049.10
    75000.0         .0   75000.0        .0        .0    5785.9         :0
383.9       33.2   1049.00
        .06         .00     12.96       .00      .000      .035      .000
.000   1032.10    758.56
    .002785       662.      662.      662.         2        15         0
.00    403.99   1162.54


 *SECNO 62.000
                STA. 60+21.80 IS P.O.T.
     62.000      17.14   1050.04   1045.26   1040.95   1052.23       2.20
1.00        .08   1050.40
    75000.0         .0   75000.0        .0        .0    6301.5         .0
437.8       37.0   1050.40
        .07         .00     11.90       .00      .000      .035      .000
.000   1032.90    257.33
    .002396       388.      388.      388.         2        15         0
.00    445.81    703.14


 *SECNO 66.000
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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

                LT CHNL BTM WDTH = 225 FT.
                RT CHNL BTM WDTH = 230 FT.
     66.000      17.61   1051.61   1044.67   1041.69   1053.10       1.49
.73        .14   1051.80
    75000.0         .0   75000.0        .0        .0    7651.8         .0
501.8       41.3   1051.80
        .08        .00      9.80       .00      .000      .035       .000
.000   1034.00    257.57
    .001420       400.      400.      400.         2        14          0
.00    490.04    747.61


 *SECNO 71.000
 3280 CROSS SECTION     71.00 EXTENDED       .80 FEET

                GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000      17.30   1052.30   1045.71   1042.23   1053.86       1.56
.73        .03   1051.50
    75000.0         .0   75000.0        .0        .0    7492.5         .0
588.8       46.9   1051.50
        .09        .00     10.01       .00      .000      .035       .000
.000   1035.00    258.50
    .001511       500.      500.      500.         2        14          0
.00    487.60    746.10


 *SECNO 75.000
     75.000      16.40   1052.90   1046.43   1042.77   1054.48       1.58
.61        .01   1053.10
    75000.0         .0   75000.0        .0        .0    7425.3         .0
657.2       51.4   1053.10
        .10        .00     10.10       .00      .000      .035       .000
.000   1036.50    258.82
    .001547       400.      400.      400.         0        11          0
.00    487.57    746.39


 *SECNO 78.000
                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000      15.95   1053.35   1047.10   1043.20   1054.97       1.63
.47        .02   1053.50
    75000.0         .0   75000.0        .0        .0    7326.0         .0
708.0       54.8   1053.50
```

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        .11        .00      10.24        .00       .000       .035       .000
.000   1037.40    259.20
    .001612       300.       300.       300.          1         11          0
.00    486.75    745.95


 *SECNO 81.000
     81.000      15.82   1053.82   1047.65   1043.69   1055.47       1.66
.49        .01   1054.00
    75000.0         .0   75000.0         .0         .0    7262.5         .0
758.3       58.1   1054.00
        .12        .00      10.33        .00       .000       .035       .000
.000   1038.00    259.35
    .001653       300.       300.       300.          0         14          0
.00    485.48    744.83


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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 84.000
     84.000      17.29   1054.29   1048.37   1044.21   1056.01       1.71
.51        .02   1054.50
    75000.0         .0   75000.0         .0         .0    7142.0         .0
807.9       61.5   1054.50
        .13        .00      10.50        .00       .000       .035       .000
.000   1037.00    259.90
    .001747       300.       300.       300.          1         19          0
.00    485.31    745.20


 *SECNO 87.000
     87.000      14.98   1054.78   1049.34   1044.82   1056.60       1.82
.55        .04   1055.00
    75000.0         .0   75000.0         .0         .0    6924.4         .0
856.3       64.8   1055.00
        .14        .00      10.83        .00       .000       .035       .000
.000   1039.80    260.24
    .001928       300.       300.       300.          2         11          0
.00    484.74    744.98


 *SECNO 89.000
     89.000      14.72   1055.12   1050.08   1045.31   1057.05       1.93
.40        .04   1055.40
    75000.0         .0   75000.0         .0         .0    6729.3         .0
887.7       67.0   1055.40
        .14        .00      11.15        .00       .000       .035       .000
.000   1040.40    260.56
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    .002119       200.       200.       200.          2         14          0
.00    484.16    744.72


 *SECNO 94.000
                STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000      14.37   1056.17   1051.38   1046.74   1058.17       2.00
1.09        .03   1056.40
    75000.0         .0   75000.0         .0        .0    6607.2         .0
964.2       72.6   1056.40
        .15        .00     11.35        .00      .000      .035       .000
.000   1041.80    260.87
    .002248       500.       500.       500.          2         14          0
.00    483.50    744.37


 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000      14.22   1056.82   1052.39   1047.56   1058.92       2.10
.70        .05   1057.10
    75000.0         .0   75000.0         .0        .0    6444.1         .0
1009.1       75.9   1057.10
        .16        .00     11.64        .00      .000      .035       .000
.000   1042.60    261.06
    .002445       300.       300.       300.          0         14          0
.00    483.16    744.22


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
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                RT CHNL BTM WDTH = 157.9 FT.
     99.540      13.57   1056.77   1054.42   1048.29   1060.65       3.87
.84        .88   1063.50
    75000.0         .0   75000.0         .0        .0    4749.0         .0
1041.8       78.3   1063.50
        .16        .00     15.79        .00      .000      .035       .000
.000   1043.20    325.12
    .004718       254.       254.       254.          2         15          0
.00    349.77    674.88


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40
```

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1063.80 ELREA= 1063.60

DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE

```
     99.600      11.92   1058.12   1058.12   1049.99   1064.15      6.02
.03      1.08   1063.80
    75000.0         .0   75000.0        .0        .0    3808.1        .0
1042.4      78.4   1063.60
        .16        .00     19.69       .00      .000      .025      .000
.000   1046.20    325.12
    .007054         6.        6.        6.         0        16         0
.00    319.58    674.88
```

*SECNO 100.400

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

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

3370 NORMAL BRIDGE, NRD= 0 MIN ELTRD= 1065.90 MAX ELLC= 1063.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1065.90 ELREA= 1065.90

GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

```
    100.400      15.49   1061.69   1058.12   1051.57   1065.26      3.57
.38       .74   1063.60
    75000.0         .0   75000.0        .0        .0    4944.4        .0
1050.4      79.0   1063.60
        .17        .00     15.17       .00      .000      .025      .000
.000   1046.20    325.11
    .003364        80.       80.       80.        14        16         0
.00    319.73    674.89
```

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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 100.900

 3301 HV CHANGED MORE THAN HVINS

                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
    100.900      16.90   1063.50   1057.73   1051.94   1065.78      2.28
.13       .39   1063.60
    75000.0        .0   75000.0        .0        .0    6194.8        .0
1056.8      79.4   1063.60
        .17       .00     12.11       .00      .000      .035      .000
.000   1046.60    308.25
    .002088       50.       50.       50.         3        15         0
.00    383.50    691.75


 *SECNO 103.000
    103.000      17.47   1064.47   1057.82   1052.84   1066.38      1.91
.49       .11   1065.40
    75000.0        .0   75000.0        .0        .0    6760.0        .0
1095.5      81.8   1065.40
        .17       .00     11.09       .00      .000      .035      .000
.000   1047.00    293.86
    .001704      260.      260.      260.         2        14         0
.00    413.20    707.07


 CCHV=      .100 CEHV=      .300
 *SECNO 106.000

 3301 HV CHANGED MORE THAN HVINS

    106.000      18.06   1065.66   1056.98   1053.59   1066.83      1.17
.38       .07   1066.40
    75000.0        .0   75000.0        .0        .0    8632.0        .0
1148.5      84.9   1066.40
        .18       .00      8.69       .00      .000      .035      .000
.000   1047.60    247.88
    .000981      300.      300.      300.         2        11         0
.00    504.99    752.86


 *SECNO 109.000
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    109.000      18.07   1066.27   1056.66   1054.03   1067.11       .84
.25       .03   1066.90
    75000.0        .0   75000.0        .0        .0   10195.1        .0
1213.3      88.7   1066.90
        .19       .00      7.36       .00      .000      .035      .000
.000   1048.20    202.56
    .000700      300.      300.      300.         2        14         0
.00    595.52    798.07


 *SECNO 110.000
    110.000      19.33   1066.33   1056.96   1054.12   1067.19       .86
.07       .01   1066.90
    75000.0        .0   75000.0        .0        .0   10055.5        .0
```

```
1236.5       90.1   1066.90
        .20        .00       7.46        .00       .000       .035       .000
.000   1047.00    202.46
    .000733       100.       100.       100.          2         11          0
.00    595.47    797.93


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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 113.000
    113.000      17.54   1066.54   1057.40   1054.48   1067.42        .89
.22        .01   1067.20
    75000.0         .0   75000.0        .0        .0    9921.7         .0
1305.3       94.2   1067.20
        .21        .00       7.56        .00       .000       .035       .000
.000   1049.00    203.12
    .000764       300.       300.       300.          0         14          0
.00    594.43    797.54


 *SECNO 116.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    116.000      17.12   1066.72   1058.35   1054.86   1067.70        .97
.25        .03   1067.30
    75000.0         .0   75000.0        .0        .0    9481.3         .0
1372.1       98.3   1067.30
        .22        .00       7.91        .00       .000       .035       .000
.000   1049.60    203.45
    .000896       240.       300.       340.          2          8          0
.00    593.67    797.12


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =
.58

              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    120.000      16.00   1066.40   1062.26   1055.35   1068.66       2.26
.58        .39   1067.10
    75000.0         .0   75000.0        .0        .0    6213.7         .0
```

```
1444.2      103.2    1067.10
        .23        .00      12.07        .00       .000       .035       .000
.000    1050.40     274.70
    .002692       327.       400.       497.          2         19          0
.00     471.31     746.00


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS

    123.000      16.84    1067.84    1060.78    1057.27    1069.38       1.54
.65        .07    1068.80
    75000.0         .0    75000.0         .0         .0     7540.5         .0
1498.2      106.9    1068.80
        .24        .00       9.95        .00       .000       .035       .000
.000    1051.00     274.10
    .001409       342.       342.       342.          2         14          0
.00     472.75     746.85


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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 127.000
    127.000      16.59    1068.39    1061.60    1057.78    1069.97       1.58
.58        .01    1068.80
    75000.0         .0    75000.0         .0         .0     7428.3         .0
1566.9      111.2    1068.80
        .25        .00      10.10        .00       .000       .035       .000
.000    1051.80     273.83
    .001481       400.       400.       400.          2         11          0
.00     472.76     746.59


 *SECNO 131.000
    131.000      18.95    1068.95    1062.56    1058.39    1070.62       1.67
.62        .03    1069.40
    75000.0         .0    75000.0         .0         .0     7235.1         .0
1634.3      115.5    1069.40
        .26        .00      10.37        .00       .000       .035       .000
.000    1050.00     274.08
    .001620       400.       400.       400.          1         15          0
.00     472.27     746.36


 *SECNO 135.000
    135.000      16.11    1069.51    1064.10    1059.19    1071.40       1.89
.72        .07    1069.60
```

```
    75000.0          .0   75000.0          .0          .0     6805.5          .0
1698.7      119.9   1069.90
        .27        .00      11.02        .00       .000       .035       .000
.000   1053.40    273.68
    .001997       400.       400.       400.          2         11          0
.00    472.24    745.92


 *SECNO 138.000
 3280 CROSS SECTION    138.00 EXTENDED       .61 FEET

    138.000     16.21   1070.21   1064.29   1060.06   1071.98       1.77
.57        .01   1069.60
    75000.0          .0   75000.0          .0          .0     7029.8          .0
1746.4      123.1   1069.60
        .28        .00      10.67        .00       .000       .035       .000
.000   1054.00    274.40
    .001785       300.       300.       300.          2         14          0
.00    471.20    745.60


 *SECNO 141.000
    141.000     16.07   1070.67   1065.46   1060.64   1072.61       1.94
.58        .05   1071.00
    75000.0          .0   75000.0          .0          .0     6704.6          .0
1793.7      126.4   1071.00
        .29        .00      11.19        .00       .000       .035       .000
.000   1054.60    274.26
    .002098       300.       300.       300.          2         14          0
.00    471.80    746.07


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000     16.31   1071.71   1065.17   1061.60   1073.36       1.65
.72        .03   1072.00
    75000.0          .0   75000.0          .0          .0     7275.2          .0
1857.8      130.7   1077.00
        .30        .00      10.31        .00       .000       .035       .000
.000   1055.40    273.97
    .001573       400.       400.       400.          2         14          0
.00    468.56    742.54


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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 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
```

```
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    147.000      16.22   1072.02   1065.56   1061.85   1073.68      1.66
.32        .00   1072.40
    75000.0         .0   75000.0        .0        .0    7263.1        .0
1891.2     132.8   1072.40
        .30        .00     10.33       .00      .000      .035      .000
.000   1055.80    274.16
    .001592      200.      200.      200.         2        14         0
.00    472.07    746.22


 *SECNO 150.000
                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
    150.000      16.30   1072.70   1065.77   1062.30   1074.14      1.44
.44        .02   1073.00
    75000.0         .0   75000.0        .0        .0    7791.5        .0
1943.1     136.2   1073.00
        .31        .00      9.63       .00      .000      .035      .000
.000   1056.40    223.99
    .001366      350.      300.      260.         2        11         0
.00    502.32    726.31


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 ************************************
  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


 10-YEAR EVENT

 SUMMARY PRINTOUT


       SECNO        Q        CWSEL      VCH      DEPTH    TOPWID     SSTA
ENDST

       39.000  13500.00   1036.06      3.33      8.06    818.79
9592.94  10411.72
       39.000  31000.00   1039.39      4.56     11.39    829.03
9589.35  10418.38
       39.000  41000.00   1040.66      5.22     12.66    832.94
9587.98  10420.92
       39.000  75000.00   1043.78      7.17     15.78    840.20
```

9585.90 10426.10

*	44.000	13500.00	1036.53	4.20	5.78	862.92	9502.54	10365.46
	44.000	31000.00	1039.78	5.13	9.03	877.03	9496.05	10373.08
	44.000	41000.00	1041.07	5.71	10.32	882.65	9493.46	10376.11
	44.000	75000.00	1044.29	7.47	13.54	896.26	9487.03	10383.29
	47.000	13500.00	1037.11	5.54	6.11	727.82	611.78	1339.60
	47.000	31000.00	1040.06	6.74	9.06	740.69	605.90	1346.59
	47.000	41000.00	1041.31	7.41	10.31	746.21	603.38	1349.59
	47.000	75000.00	1044.46	9.48	13.46	759.39	597.07	1356.46
	51.500	13500.00	1038.44	5.88	7.04	527.12	775.32	1302.44
	51.500	31000.00	1040.99	8.49	9.59	534.77	770.22	1304.99
	51.500	41000.00	1042.14	9.61	10.73	538.21	767.93	1306.14
	51.500	75000.00	1045.07	12.80	13.67	547.03	762.05	1309.08
	55.000	13500.00	1039.30	5.66	7.40	458.29	275.30	733.60
	55.000	31000.00	1041.99	8.54	10.09	466.34	269.95	736.29
	55.000	41000.00	1043.19	9.78	11.29	469.92	267.57	737.49
	55.000	75000.00	1046.30	13.23	14.40	479.21	261.39	740.60
	58.120	13500.00	1040.41	5.26	8.31	387.72	766.69	1154.41
	58.120	31000.00	1043.56	8.16	11.46	394.03	763.54	1157.56
	58.120	41000.00	1044.94	9.44	12.84	396.78	762.16	1158.94
	58.120	75000.00	1048.54	12.96	16.44	403.99	758.56	1162.54
	62.000	13500.00	1040.95	5.69	8.05	418.55	275.50	694.05
	62.000	31000.00	1044.33	8.15	11.43	428.68	268.75	697.43
	62.000	41000.00	1045.85	9.19	12.95	433.26	265.70	698.95
	62.000	75000.00	1050.04	11.90	17.14	445.81	257.33	703.14

SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
66.000	13500.00	1041.69	4.60	7.69	460.27	277.42	737.69
66.000	31000.00	1045.35	6.68	11.35	471.26	270.09	741.35
66.000	41000.00	1047.01	7.55	13.01	476.25	266.77	743.02
66.000	75000.00	1051.61	9.80	17.61	490.04	257.57	747.61
71.000	13500.00	1042.23	4.98	7.23	459.79	277.04	736.83
71.000	31000.00	1045.96	6.97	10.96	470.98	269.58	740.56
71.000	41000.00	1047.65	7.82	12.65	476.04	266.20	742.25
71.000	75000.00	1052.30	10.01	17.30	487.60	258.50	746.10
75.000	13500.00	1042.77	5.11	6.27	457.20	279.07	736.27
75.000	31000.00	1046.51	7.08	10.01	468.44	271.58	740.01
75.000	41000.00	1048.21	7.92	11.71	473.53	268.18	741.71
75.000	75000.00	1052.90	10.10	16.40	487.57	258.82	746.39
78.000	13500.00	1043.20	5.32	5.80	456.29	279.50	735.80
78.000	31000.00	1046.94	7.27	9.54	467.51	272.03	739.54
78.000	41000.00	1048.64	8.09	11.24	472.63	268.61	741.24
78.000	75000.00	1053.35	10.24	15.95	486.75	259.20	745.95
81.000	13500.00	1043.69	5.42	5.69	456.35	278.98	735.33
81.000	31000.00	1047.41	7.37	9.41	467.02	271.79	738.81
81.000	41000.00	1049.11	8.20	11.11	471.90	268.50	740.40
81.000	75000.00	1053.82	10.33	15.82	485.48	259.35	744.83
84.000	13500.00	1044.21	5.63	7.21	455.10	280.08	735.18
84.000	31000.00	1047.89	7.58	10.89	466.10	272.73	738.83
84.000	41000.00	1049.59	8.39	12.59	471.19	269.33	740.52
84.000	75000.00	1054.29	10.50	17.29	485.31	259.90	745.20
87.000	13500.00	1044.82	6.01	5.02	454.85	280.17	735.02
87.000	31000.00	1048.42	7.95	8.62	465.64	272.98	738.61

	87.000	41000.00	1050.09	8.75	10.29	470.69	269.61 740.30
	87.000	75000.00	1054.78	10.83	14.98	484.74	260.24 744.98
	89.000	13500.00	1045.31	6.36	4.91	454.72	280.19 734.91
	89.000	31000.00	1048.81	8.30	8.41	465.22	273.19 738.41
	89.000	41000.00	1050.47	9.09	10.07	470.22	269.86 740.07
	89.000	75000.00	1055.12	11.15	14.72	484.16	260.56 744.72
	94.000	13500.00	1046.74	6.19	4.94	455.21	279.73 734.94
	94.000	31000.00	1050.03	8.38	8.23	465.10	273.14 738.23
	94.000	41000.00	1051.62	9.24	9.82	469.85	269.96 739.82
	94.000	75000.00	1056.17	11.35	14.37	483.50	260.87 744.37
	97.000	13500.00	1047.56	6.42	4.96	455.41	279.56 734.97
	97.000	31000.00	1050.79	8.66	8.19	465.04	273.14 738.18
	97.000	41000.00	1052.34	9.52	9.74	469.69	270.04 739.73
	97.000	75000.00	1056.82	11.64	14.22	483.16	261.06 744.22

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	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA ENDST
	99.540	13500.00	1048.29	7.60	5.09	349.73	325.14 674.86
	99.540	31000.00	1051.31	10.92	8.11	349.74	325.13 674.87
	99.540	41000.00	1052.73	12.30	9.53	349.75	325.13 674.87
	99.540	75000.00	1056.77	15.79	13.57	349.77	325.12 674.88
*	99.600	13500.00	1049.99	11.17	3.79	319.25	325.14 674.86
*	99.600	31000.00	1052.83	14.65	6.63	319.37	325.13 674.87
*	99.600	41000.00	1054.17	16.11	7.97	319.42	325.13 674.87
*	99.600	75000.00	1058.12	19.69	11.92	319.58	325.12 674.88
*	100.400	13500.00	1051.57	7.88	5.37	319.32	325.13 674.87
*	100.400	31000.00	1055.09	10.91	8.89	319.46	

325.12 674.88
* 100.400 41000.00 1056.79 12.13 10.59 319.53
325.12 674.88
* 100.400 75000.00 1061.69 15.17 15.49 319.73
325.11 674.89

100.900 13500.00 1051.94 7.12 5.34 360.38
319.81 680.19
100.900 31000.00 1055.89 9.30 9.29 368.27
315.86 684.14
100.900 41000.00 1057.82 10.12 11.22 372.14
313.93 686.07
100.900 75000.00 1063.50 12.11 16.90 383.50
308.25 691.75

103.000 13500.00 1052.84 6.25 5.84 378.32
317.12 695.44
103.000 31000.00 1056.79 8.43 9.79 390.18
309.21 699.39
103.000 41000.00 1058.73 9.24 11.73 396.00
305.34 701.33
103.000 75000.00 1064.47 11.09 17.47 413.20
293.86 707.07

106.000 13500.00 1053.59 4.90 5.99 468.76
272.03 740.79
106.000 31000.00 1057.72 6.57 10.12 481.16
263.76 744.92
106.000 41000.00 1059.73 7.20 12.13 487.20
259.73 746.93
106.000 75000.00 1065.66 8.69 18.06 504.99
247.88 752.86

109.000 13500.00 1054.03 4.32 5.83 558.78
227.05 785.83
109.000 31000.00 1058.22 5.65 10.02 571.32
218.69 790.01
109.000 41000.00 1060.26 6.15 12.06 577.48
214.58 792.06
109.000 75000.00 1066.27 7.36 18.07 595.52
202.56 798.07

110.000 13500.00 1054.12 4.48 7.12 558.59
227.13 785.72
110.000 31000.00 1058.29 5.77 11.29 571.19
218.70 789.89
110.000 41000.00 1060.33 6.27 13.33 577.34
214.59 791.93
110.000 75000.00 1066.33 7.46 19.33 595.47
202.46 797.93

113.000 13500.00 1054.48 4.54 5.48 558.24
227.24 785.48
113.000 31000.00 1058.57 5.88 9.57 570.50
219.07 789.57
113.000 41000.00 1060.58 6.37 11.58 576.54
215.04 791.58
113.000 75000.00 1066.54 7.56 17.54 594.43
203.12 797.54

116.000 13500.00 1054.86 5.03 5.26 538.54

227.18 785.26
116.000 31000.00 1058.85 6.32 9.25 570.07
219.18 789.26
116.000 41000.00 1060.83 6.79 11.23 576.02
215.22 791.24
116.000 75000.00 1066.72 7.91 17.12 593.67
203.45 797.12

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SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
* 120.000	13500.00	1055.35	9.43	4.95	307.21	296.80	734.95
* 120.000	31000.00	1058.90	11.20	8.50	448.83	289.68	738.51
* 120.000	41000.00	1060.74	11.40	10.34	454.35	286.00	740.35
* 120.000	75000.00	1066.40	12.07	16.00	471.31	274.70	746.00
* 123.000	13500.00	1057.27	4.99	6.27	440.99	295.27	736.26
* 123.000	31000.00	1061.06	7.04	10.06	452.39	287.67	740.06
* 123.000	41000.00	1062.69	7.97	11.69	457.28	284.41	741.69
123.000	75000.00	1067.84	9.95	16.84	472.75	274.10	746.85
127.000	13500.00	1057.78	5.24	5.98	440.91	295.06	735.97
127.000	31000.00	1061.60	7.23	9.80	452.37	287.42	739.79
127.000	41000.00	1063.25	8.13	11.45	457.35	284.10	741.45
127.000	75000.00	1068.39	10.10	16.59	472.76	273.83	746.59
131.000	13500.00	1058.39	5.60	8.39	440.57	295.22	735.79
131.000	31000.00	1062.18	7.56	12.18	451.92	287.66	739.57
131.000	41000.00	1063.85	8.44	13.85	456.93	284.31	741.24
131.000	75000.00	1068.95	10.37	18.95	472.27	274.08	746.36
135.000	13500.00	1059.19	6.45	5.79	441.02	294.70	735.72
135.000	31000.00	1062.85	8.32	9.45	452.09	287.25	739.34
135.000	41000.00	1064.50	9.16	11.10	457.07	283.89	740.96
135.000	75000.00	1069.51	11.02	16.11	472.24	273.68	745.92

```
      138.000  13500.00   1060.06      5.66      6.06    442.59
293.47    736.06
      138.000  31000.00   1063.63      7.78      9.63    453.30
286.33    739.63
      138.000  41000.00   1065.28      8.66     11.28    458.24
283.04    741.28
      138.000  75000.00   1070.21     10.67     16.21    471.20
274.40    745.60

      141.000  13500.00   1060.64      6.32      6.04    419.48
294.25    736.04
      141.000  31000.00   1064.17      8.37      9.57    452.36
287.22    739.57
      141.000  41000.00   1065.80      9.23     11.20    457.23
283.97    741.20
      141.000  75000.00   1070.67     11.19     16.07    471.80
274.26    746.07

 *    145.000  13500.00   1061.60      5.04      6.20    440.57
294.20    734.76
      145.000  31000.00   1065.22      7.22      9.82    450.58
286.96    737.55
      145.000  41000.00   1066.87      8.14     11.47    455.16
283.65    738.82
      145.000  75000.00   1071.71     10.31     16.31    468.56
273.97    742.54

      147.000  13500.00   1061.85      5.16      6.05    441.57
294.49    736.06
      147.000  31000.00   1065.51      7.29      9.71    452.51
287.19    739.70
      147.000  41000.00   1067.17      8.19     11.37    457.51
283.86    741.37
      147.000  75000.00   1072.02     10.33     16.22    472.07
274.16    746.22

      150.000  13500.00   1062.30      4.95      5.90    471.09
244.81    715.90
      150.000  31000.00   1066.04      6.88      9.64    482.31
237.33    719.64
      150.000  41000.00   1067.75      7.68     11.35    487.44
233.90    721.35
      150.000  75000.00   1072.70      9.63     16.30    502.32
223.99    726.31

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PAGE   50


  SUMMARY OF ERRORS AND SPECIAL NOTES


 WARNING SECNO=      44.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 CAUTION SECNO=      99.600  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      99.600  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      99.600  PROFILE=  2  CRITICAL DEPTH ASSUMED
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 CAUTION SECNO=      99.600  PROFILE=  2  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      99.600  PROFILE=  3  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      99.600  PROFILE=  3  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      99.600  PROFILE=  4  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      99.600  PROFILE=  4  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=     100.400  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     100.400  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     100.400  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     100.400  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=     120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     120.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     120.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     120.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=     123.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     123.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=     123.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=     145.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
```

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 CAUTION SECNO=     99.600  PROFILE=  2  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     99.600  PROFILE=  3  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     99.600  PROFILE=  3  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     99.600  PROFILE=  4  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     99.600  PROFILE=  4  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=    100.400  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    100.400  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    100.400  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    100.400  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=    120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    120.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    120.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    120.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=    123.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    123.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
 WARNING SECNO=    123.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE

 WARNING SECNO=    145.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE
ACCEPTABLE RANGE
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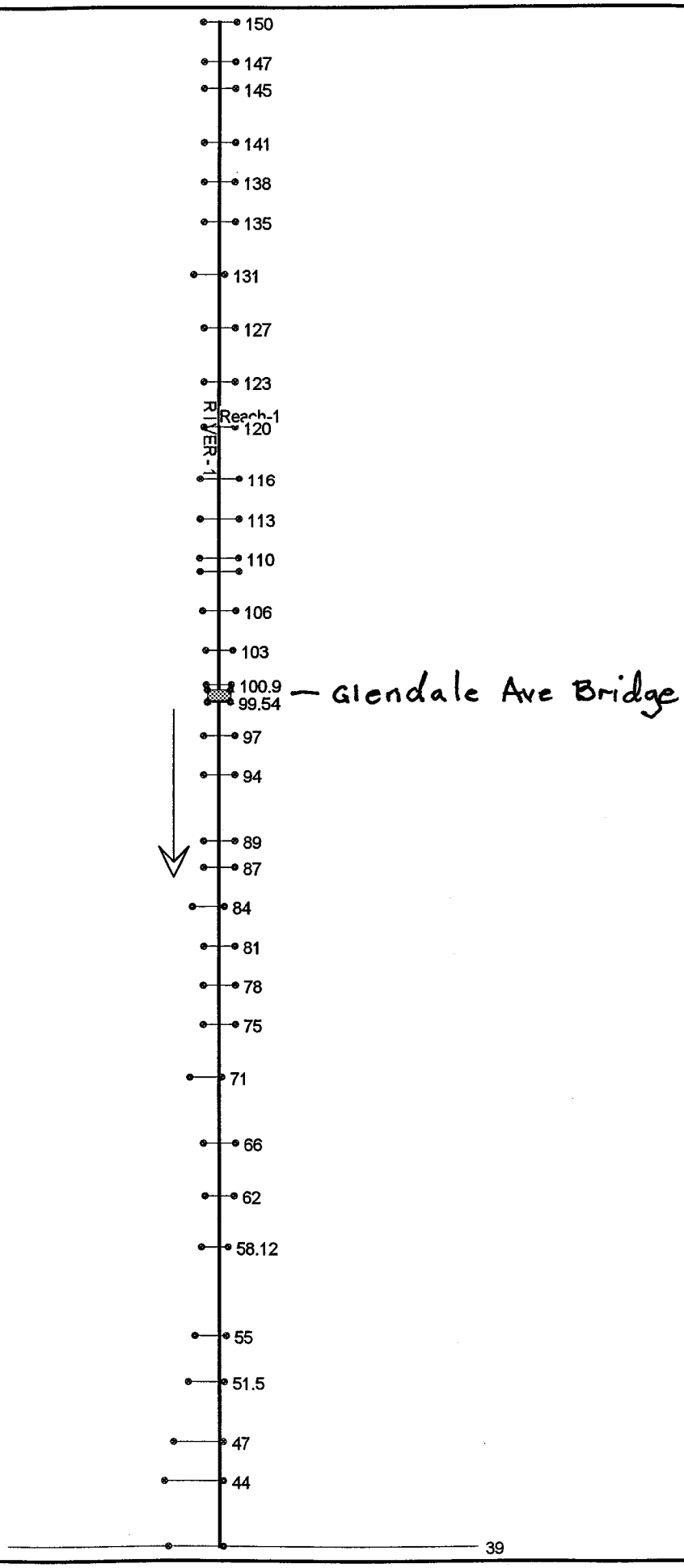
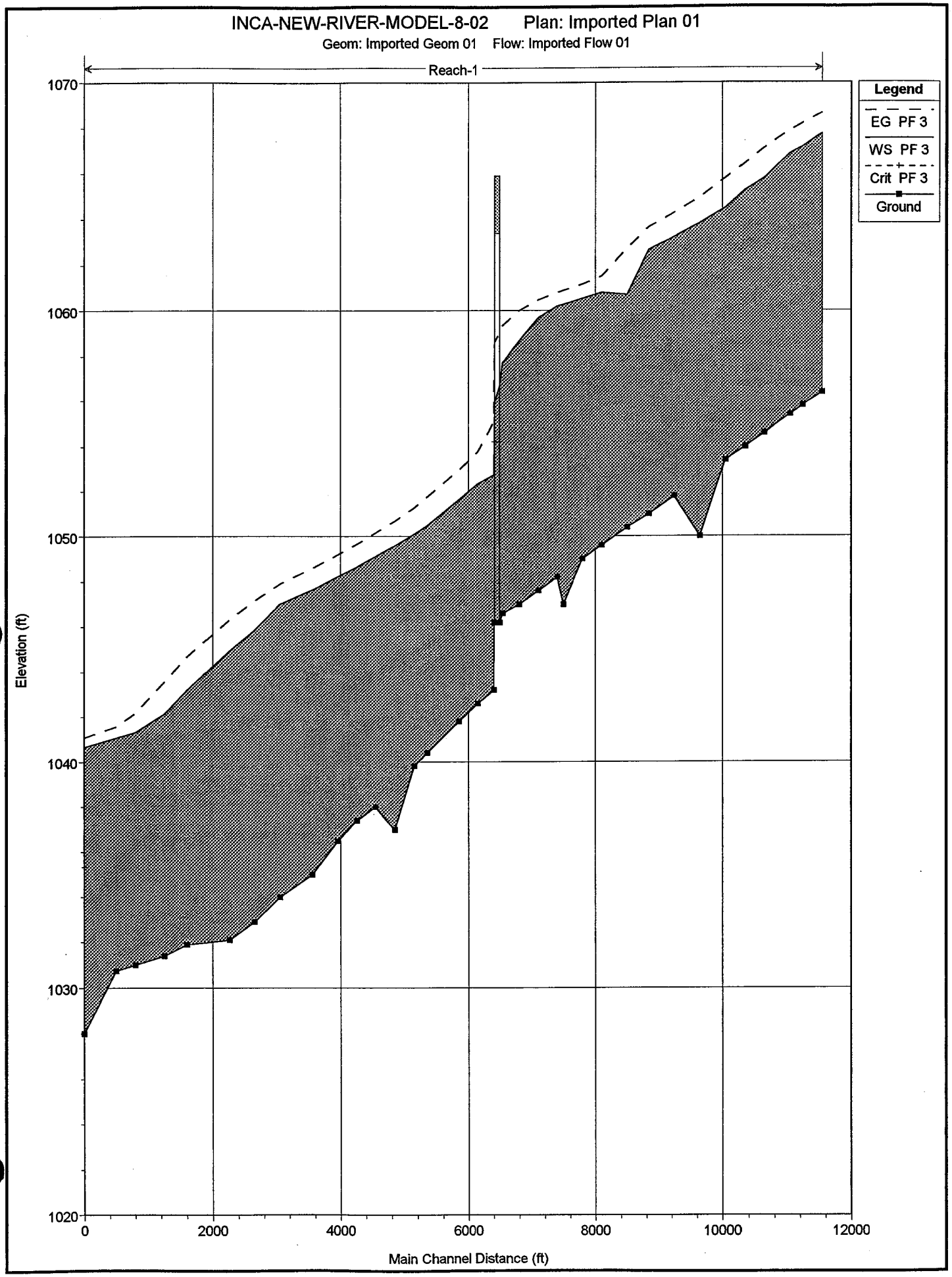
APPENDIX B
PROPOSED HEC2 MODEL


150
147
145
141
138
135
131
127
123
Reach-1
120
RIVER-1
116
113
110
106
103
100.9
99.54
— Glendale Ave Bridge
97
94
89
87
84
81
78
75
71
66
62
58.12
55
51.5
47
44
39


INCA-NEW-RIVER-MODEL-8-02 Plan: Imported Plan 01
Geom: Imported Geom 01 Flow: Imported Flow 01
Reach-1
Legend
EG PF 3
WS PF 3
Crit PF 3
Ground
Elevation (ft)
1070
1060
1050
1040
1030
1020
0
2000
4000
6000
8000
10000
12000
Main Channel Distance (ft)

```
C
C      49
C   39.00      BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
C   39.00      WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
C   39.00      EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
C   39.00      GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
C   39.00      PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
C   39.00      BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
C   44.00      BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
C   44.00      LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
C   44.00      RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
C   51.50      LT CHNL BTM WDTH = 225 FT
C   55.00      STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
C   58.12      END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
C   58.12      ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
C   58.12      CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
C   58.12      BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
C   58.12      MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
C   58.12      TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
C   62.00      STA. 60+21.80 IS P.O.T.
C   66.00      LT CHNL BTM WDTH = 225 FT.
C   66.00      RT CHNL BTM WDTH = 230 FT.
C   71.00      GRAND DRAIN INLET PER A.D.O.T. PLANS
C   78.00      GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
C   94.00      STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
C   99.54      STA. 99+45.00 IS P.O.T.
C   99.54      LT CHNL BTM WDTH = 157.9 FT.
C   99.54      RT CHNL BTM WDTH = 157.9 FT.
C   99.60      DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
C  100.40      GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
C  100.90      BEGIN CHANNEL BOTTOM TRANSITION
C  100.90      LT CHNL BTM WDTH = 157.9 FT.
C  100.90      RT CHNL BTM WDTH = 157.9 FT.
C  109.00      END CHANNEL BOTTOM TRANSITION
C  109.00      LT CHNL BTM WDTH = 280 FT.
C  109.00      RT CHNL BTM WDTH = 280 FT.
C  116.00      BEGIN CHANNEL BOTTOM TRANSITION
C  116.00      LT CHNL BTM WDTH = 280 FT.
C  116.00      RT CHNL BTM WDTH = 280 FT.
C  120.00      END CHANNEL BOTTOM TRANSITION
C  120.00      LT CHNL BTM WDTH = 210 FT.
C  120.00      RT CHNL BTM WDTH = 230 FT.
C  145.00      A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
C  147.00      BEGIN CHANNEL BOTTOM TRANSITION
C  147.00      LT CHNL BTM WDTH = 210 FT.
C  147.00      RT CHNL BTM WDTH = 230 FT.
C  150.00      CHANNEL BOTTOM TAPERS
C  150.00      LT CHNL BTM WDTH = 260 FT.
C  150.00      RT CHNL BTM WDTH = 210 FT.
T1       NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
T2       NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3       10-YEAR EVENT           MODNRO2B
J1     0       2                                                  1036.06
J2     1       0      -1                              -1                        0
J3    38      43       1      26       8       4      53      54
NC  .045    .045    .035     0.1     0.3
QT     5   13500   31000   41000   75000   69000
```

ET	39.0	9.1	9.1	9.1	9.1	9.1		9585.9	10426.1
X1	39	55	9586	10426	270	200	220		
GR	1045	5696	1045.6	5736	1045.7	5821	1045	6091	1044	6506
GR	1042	6631	1041	6751	1040	6856	1038.7	6961	1038	7116
GR	1036.8	7206	1037.3	7556	1036.3	7896	1036.4	8191	1036.4	8366
GR	1036.5	8521	1037	8786	1037.7	8991	1038	9271	1039.2	9366
GR	1038	9436	1034	9443	1033.3	9481	1034	9511	1036	9516
GR	1038	9531	1040	9541	1042	9546	1042.5	9566	1042.5	9586
GR	1036	9593	1034	9599	1032	9606	1030	9621	1028	9646
GR	1029	9731	1030	9766	1030	9846	1032	9871	1034	9891
GR	1033.5	9911	1032.5	9950	1031.5	9973	1030.5	9994	1030.2	10000
GR	1030.5	10042	1031.5	10190	1032.5	10341	1032.9	10405.4	1043.2	10426
GR	1044.1	10946	1044.2	11256	1044.5	11511	1045	11571	1046	12881
NC	.045	.045	.035	0.2	0.4					
X1	44.00	16	9485.8	10384.1	500	500	500			
GR	1044.9	9485.8	1030.75	9514.1	1030.75	9573	1031.5	9575	1032.0	9625
GR	1032.0	9753	1032.0	9815	1034.0	9863	1034.0	9917	1032.0	9988
GR	1031.8	10000	1032.0	10033	1034.0	10233	1035.06	10362	1044.0	10383
GR	1045.1	10384.1								
X1	47.00	14	596	1357	300	300	300			
GR	1045.0	596	1031.0	624	1031.0	682	1034.0	690	1034.0	740
GR	1034.0	835	1034.0	897	1032.9	1000	1034.0	1099	1034.0	1184
GR	1034.0	1194	1035.6	1336	1044.0	1356	1045.0	1357		
X1	51.50	13	760.8	1309.7	450	450	450			
GR	1045.7	760.8	1031.4	789.4	1031.4	877.8	1034.0	883	1034.0	907
GR	1034.0	962	1034.0	985	1033.9	1000	1034.0	1042	1035.3	1205
GR	1036.0	1300	1040.0	1304	1045.7	1309.7				
X1	55.0	10	260	741.3	350	350	350			
GR	1047	260	1031.9	290	1031.9	450	1036.6	472.	1036.2	500
GR	1036.0	525	1034.6	663	1034.3	716	1035.7	730	1047.0	741.3
X1	58.12	10	758	1163	662	662	662			
GR	1049.1	758	1032.1	775	1032.1	1000	1032.1	1009	1036.6	1018
GR	1036.0	1110	1036.0	1126	1038.0	1148	1040.0	1154	1049.0	1163
X1	62.00	14	256.6	703.5	388	388	388			
GR	1050.4	256.6	1032.9	291.6	1032.9	412	1038.0	422	1037.5	468
GR	1036.8	500	1036.0	531	1035.3	550.	1036.0	580	1038.0	600
GR	1039.0	627	1032.9	639	1032.9	686	1050.4	703.5		
X1	66.0	14	257.2	747.8	400	400	400			
GR	1051.8	257.2	1034	292.8	1034	397	1036.0	399	1035.6	430
GR	1036.0	470	1038.0	510	1038.0	527	1035.0	531	1035.0	670
GR	1038.0	676	1034.0	692	1034.0	730	1051.8	747.8		
X1	71.0	16	258.5	746.1	500	500	500			
GR	1051.5	258.5	1035.0	291.5	1035	310	1036.	342	1040.0	352
GR	1040	372	1039	420	1036	425	1036	445	1036.0	460
GR	1035.4	470	1035.4	525	1037	535	1035.4	545	1035.4	730
GR	1051.5	746.1								
X1	75.0	13	258.4	746.6	400	400	400			
GR	1053.1	258.4	1036.5	291.6	1036.5	395	1036.5	405	1036.5	460
GR	1036.5	465	1036.5	470	1036.5	635	1040	660	1040	690.5
GR	1036.5	697.5	1036.5	730	1053.1	746.6				
X1	78.0	24	258.9	746.1	300.	300.	300.			
GR	1053.5	258.9	1037.4	291.1	1037.4	320	1037.4	355	1037.4	370
GR	1037.4	390	1037.4	415	1037.4	430	1037.4	460	1037.4	475
GR	1037.4	500	1037.4	528	1037.4	546.8	1039	550	1038	560
GR	1037.4	595	1037.4	606	1037.4	629.8	1038.5	632	1038.0	653
GR	1037.8	680	1037.4	681	1037.4	730	1053.5	746.1		
X1	81.0	18	259	745	300	300	300			

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GR  1054     259    1038     290  1038.0     291  1038.0     320  1038.0     355
GR1038.0     390  1038.0     400  1038.0     440  1038.0     450  1038.0     460
GR1038.0     550  1038.0     565  1038.0     588  1040.0     626    1039     634
GR  1038     650    1038     730  1054.0     745
X1  84.0      21   259.5   745.4     300     300     300
GR1054.5   259.5    1039   290.5    1039     320    1037     325    1037     355
GR  1039     360    1039     375    1039     385    1039     395    1039     415
GR  1039     450    1039     500    1039     530    1039     625  1039.5     626
GR1039.0     639  1039.0     651  1039.0     688  1039.0     690    1039     730
GR1054.5   745.4
X1  87.0      12   259.8   745.2     300     300     300
GR1055.0   259.8  1039.8   290.2  1039.8     455  1039.8     470  1039.8     545
GR1039.8     560  1039.8     610  1039.8     630  1039.8     650  1039.8     680
GR1039.8     730  1055.0   745.2
X1  89.0      12     260     745     200     200     200
GR1055.4     260  1040.4     290  1040.4     320  1040.4   323.2  1042.0     410
GR1040.4   413.2  1040.4     500  1040.4     620  1040.4     690  1040.4     710
GR1040.4     730  1055.4     745
X1 94.0       13   260.4   744.6     500     500     500
GR1056.4   260.4  1041.8   289.6  1041.8     340  1044.0     344  1042.0     359
GR1041.9     380  1042.0     405  1041.8     406  1041.8     500  1041.8     640
GR1041.8     680  1041.8     730  1056.4   744.6
NC  .035    .035    .035     0.3     0.5
X1  97.0      16   260.5   744.5     300     300     300
GR1057.1   260.5  1042.6   289.5  1042.6     320  1042.6     370  1042.6     380
GR1042.6     405  1042.6     476  1044.0     479  1043.8     500  1044.0     545
GR1046.0     555  1042.6     562  1042.6     650  1042.6     675  1042.6     730
GR1057.1   744.5
NC  .035    .035    .035
X1 99.54      5.   325.1   674.9    254.    254.    254.
GR1063.5   325.1  1043.2  325.15  1043.2    500.  1043.2  674.85  1063.5   674.9

*  DOWNSTREAM GLENDALE AVENUE BRIDGE

NC .025    .025    .025     0.3     0.5
X1  99.6      28   325.1   674.9      6.      6.      6.
X2                    0  1063.4  1065.9                    1.33
X3    10
GR1063.8  325.10  1046.2  325.15  1046.2  363.70  1063.4  363.75  1063.4  368.75
GR1046.2  368.80  1046.2  417.20  1063.4  417.25  1063.4  422.25  1046.2  422.30
GR1046.2  470.70  1063.4  470.75  1063.4  475.75  1046.2  475.80  1046.2  524.20
GR1063.4  524.25  1063.4  529.25  1046.2  529.30  1046.2  577.70  1063.4  577.75
GR1063.4  582.75  1046.2  582.80  1046.2  631.20  1063.4  631.25  1063.4  636.25
GR1046.2  636.30  1046.2  674.85  1063.6  674.90

*  UPSTREAM GLENDALE AVENUE BRIDGE - NORMAL BRIDGE MODEL
*  BOTTOM EL LOWERED FROM 1046.5 TO 1046.2 TO REFLECT SURVEY BY INCA ENGINEERS

X1 100.4      28   325.1   674.9    80.3    80.3    80.3
X2                    0  1063.4  1065.9                    1.33
X3    10                                                 1065.9  1065.9
GR1063.6  325.10  1046.2  325.15  1046.2  363.70  1063.4  363.75  1063.4  368.75
GR1046.2  368.80  1046.2  417.20  1063.4  417.25  1063.4  422.25  1046.2  422.30
GR1046.2  470.70  1063.4  470.75  1063.4  475.75  1046.2  475.80  1046.2  524.20
GR1063.4  524.25  1063.4  529.25  1046.2  529.30  1046.2  577.70  1063.4  577.75
GR1063.4  582.75  1046.2  582.80  1046.2  631.20  1063.4  631.25  1063.4  636.25
GR1046.2  636.30  1046.2  674.85  1063.6  674.90
```

NC .035	.035	.035							
X1100.90	5	308.15	691.85	49.7	49.7	49.7			
GR1063.6	308.15	1046.6	325.15	1046.6	500	1046.6	674.85	1063.6	691.85
X1 103.0	14	292.0	708.0	260.	260.	260.			
GR1065.4	292.0	1047	328.8	1047	370	1047.0	380	1047.0	382
GR1047.0	490	1047.0	500	1047.0	553	1047.0	606	1047.0	640
GR1047.0	657	1047	659	1047	689.6	1065.4	708.0		
NC .035	.035	.035	0.1	0.3					
X1 106.0	8	246.4	753.6	300	300	300			
GR1066.4	246.4	1047.6	284.0	1047.6	412	1047.6	500	1047.6	685
GR1047.6	710	1047.6	734.8	1066.4	753.6				
X1 109.0	11	201.3	798.7	300	300	300			
GR1066.9	201.3	1048.2	238.7	1048.2	451.4	1050.0	455	1048.2	480
GR1050.0	503	1051.0	510	1050.0	515	1048.2	518.6	1048.2	780
GR1066.9	798.7								
X1 110.0	12	201.3	798.5	100	100	100			
GR1066.9	201.3	1048.4	238.7	1048.4	432.8	1051	438	1051	485
GR 1047	505	1048.4	515	1048.4	550	1048.4	565	1048.4	734
GR1048.4	780	1066.9	798.5						
X1 113.0	16	201.8	798.2	300	300	300			
GR1067.2	201.8	1049	238.2	1049	401	1051.3	404	1049.0	435
GR1049.0	465	1050.0	473	1049.0	475	1049.0	500	1049	535
GR 1049	580	1049.0	595	1049.0	620	1049.0	685	1049.0	780
GR1067.2	798.2								
X1 116.0	13	202.3	797.7	240	340	300			
GR1067.3	202.3	1049.6	237.7	1049.6	366.2	1054.0	375	1054.0	378
GR1049.6	386.8	1049.6	500.	1049.6	579.2	1056.0	592	1058.0	603
GR1049.6	619.8	1049.6	780	1067.3	797.7				
X1 120.0	10	273.3	746.7	327	497	400			
GR1067.1	273.3	1050.4	306.7	1050.4	500	1050.4	506.6	1056.7	520
GR1057.8	600	1056.8	645	1050.4	658.6	1050.4	730	1067.1	746.7
X1 123.0	11	272.2	747.8	342	342	342			
GR1068.8	272.2	1051	307.8	1051	315	1051	370	1051	400
GR1051.0	500	1051	610	1051	630	1051	680	1051	730
GR1068.8	747.8								
X1 127.0	10	273	747	400	400	400			
GR1068.8	273	1051.8	307	1051.8	345	1051.8	400	1051.8	450
GR1051.8	500	1051.8	650	1051.8	665	1051.8	730	1068.8	747
X1 131.0	14	273.2	746.8	400	400	400			
GR1069.4	273.2	1052.6	306.8	1052.6	351	1050	356	1052	365
GR 1054	395	1054	430	1052.6	445	1054	497.2	1052.6	500
GR1052.6	530	1052.6	666	1052.6	730	1069.4	746.8		
X1135.00	12	273.5	746.3	400	400	400			
GR1069.6	273.5	1053.4	306.5	1053.4	330	1058.4	340	1058.2	412
GR1059.2	412	1053.4	423.6	1053.4	500	1053.4	502	1053.4	680
GR1053.4	730	1069.9	746.3						
X1 138.0	15	274.4	745.6	300	300	300			
GR1069.6	274.4	1054	305.6	1054	350	1059	360	1058	405
GR 1054	413	1054	440	1054	460	1054	475	1054	500
GR 1054	590	1054	615	1054	640	1054	730	1069.6	745.6
X1141.00	15	273.6	746.4	300	300	300			
GR1071.0	273.6	1054.6	306.3	1054.6	328.8	1058.2	336	1058.7	370
GR1054.6	379.4	1054.6	403	1060.0	415	1061.5	435	1060.0	454
GR1054.6	474	1054.6	500	1054.6	560	1054.6	730	1071.0	746.4
X1 145.0	10	273.4	746.6	400	400	400			
GR 1072	273.4	1055.4	306.6	1055.4	320	1055.4	340	1055.4	370
GR1055.4	505	1055.4	515	1055.4	525	1055.4	730	1077.0	746.6

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X1 147.0       13   273.4   746.6     200     200     200
GR1072.4   273.4  1055.8   306.6  1055.8     340  1055.8     370  1055.8     430
GR1055.8     440  1055.8     470  1055.8     500  1055.8     505  1055.8     560
GR1055.8     635  1055.8     730  1072.4   746.6
X1 150.0       6   223.4   726.6     350     260     300
GR  1073   223.4  1056.4   256.6  1056.4     355  1056.4     400  1056.4     710
GR  1073   726.6
EJ
T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3      50-YEAR EVENT          MODNRO2B
J1     0       3                                                1039.39
J2     2       0      -1                              -1                      0
T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3      100-YEAR EVENT         MODNRO2B
J1     0       4                                                1040.66
J2     3       0      -1                              -1                      0
T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
T3      500-YEAR EVENT         MODNRO2B
J1     0       5                                                1043.78
J2     4       0      -1                              -1                      0
ER
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1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES            *
*  U.S. ARMY CORPS OF ENGINEERS       *
 *                                          *
*  HYDROLOGIC ENGINEERING CENTER      *
 *  Version   4.6.2;  May 1991              *
*  609 SECOND STREET, SUITE D         *
 *                                          *
*  DAVIS, CALIFORNIA 95616-4687       *
 *  RUN DATE    12AUG02    TIME   16:09:29  *
*          (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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1

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PAGE 1

THIS

RUN EXECUTED 12AUG02 16:09:29

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

 Version   4.6.2;  May 1991
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 T3      10-YEAR EVENT           MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL
FQ

        0         2                                                                  1036.06

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM
ITRACE

       1         0        -1                                       -1
0

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43         1         26         8         4         53         54

 NC     .045       .045       .035       0.1       0.3
 QT        5      13500      31000      41000     75000     69000
 ET     39.0        9.1        9.1        9.1       9.1       9.1
9585.9     10426.1
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
 X1       39         55       9586      10426       270       200       220
 GR     1045       5696     1045.6       5736    1045.7      5821      1045
6091       1044       6506
 GR     1042       6631       1041       6751      1040      6856    1038.7
6961       1038       7116
 GR   1036.8       7206     1037.3       7556    1036.3      7896    1036.4
8191     1036.4       8366
 GR   1036.5       8521       1037       8786    1037.7      8991      1038
9271     1039.2       9366
 GR     1038       9436       1034       9443    1033.3      9481      1034
9511       1036       9516
 GR     1038       9531       1040       9541      1042      9546    1042.5
9566     1042.5       9586
 GR     1036       9593       1034       9599      1032      9606      1030
9621       1028       9646
 GR     1029       9731       1030       9766      1030      9846      1032
9871       1034       9891
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 GR   1033.5       9911     1032.5       9950      1031.5        9973      1030.5
9994      1030.2       10000
 GR   1030.5      10042     1031.5      10190      1032.5       10341      1032.9
10405.4      1043.2       10426
 GR   1044.1      10946     1044.2      11256      1044.5       11511        1045
11571        1046       12881

 NC     .045       .045       .035        0.2        0.4
              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
 X1    44.00         16     9485.8    10384.1        500         500         500
 GR   1044.9     9485.8    1030.75     9514.1     1030.75        9573      1031.5
9575      1032.0        9625
 GR   1032.0       9753     1032.0       9815      1034.0        9863      1034.0
9917      1032.0        9988
 GR   1031.8      10000     1032.0      10033      1034.0       10233     1035.06
10362      1044.0       10383
 GR   1045.1    10384.1
1
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 X1    47.00         14        596       1357        300         300         300
 GR   1045.0        596     1031.0        624      1031.0         682      1034.0
690      1034.0        740
 GR   1034.0        835     1034.0        897      1032.9        1000      1034.0
1099      1034.0        1184
 GR   1034.0       1194     1035.6       1336      1044.0        1356      1045.0
1357

              LT CHNL BTM WDTH = 225 FT
 X1    51.50         13      760.8     1309.7        450         450         450
 GR   1045.7      760.8     1031.4      789.4      1031.4       877.8      1034.0
883      1034.0        907
 GR   1034.0        962     1034.0        985      1033.9        1000      1034.0
1042      1035.3        1205
 GR   1036.0       1300     1040.0       1304      1045.7      1309.7

              STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
 X1     55.0         10        260      741.3        350         350         350
 GR     1047        260     1031.9        290      1031.9         450      1036.6
472.      1036.2        500
 GR   1036.0        525     1034.6        663      1034.3         716      1035.7
730      1047.0       741.3

              END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
              ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
              CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
              BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
              MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
              TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
 X1    58.12         10        758       1163        662         662         662
 GR   1049.1        758     1032.1        775      1032.1        1000      1032.1
1009      1036.6        1018
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 GR   1036.0       1110     1036.0       1126      1038.0        1148      1040.0
1154      1049.0        1163

              STA. 60+21.80 IS P.O.T.
 X1    62.00         14      256.6      703.5         388         388         388
 GR   1050.4      256.6     1032.9      291.6      1032.9         412      1038.0
422      1037.5         468
 GR   1036.8        500     1036.0        531      1035.3        550.      1036.0
580      1038.0         600
 GR   1039.0        627     1032.9        639      1032.9         686      1050.4
703.5

              LT CHNL BTM WDTH = 225 FT.
              RT CHNL BTM WDTH = 230 FT.
 X1     66.0         14      257.2      747.8         400         400         400
 GR   1051.8      257.2       1034      292.8        1034         397      1036.0
399      1035.6         430
 GR   1036.0        470     1038.0        510      1038.0         527      1035.0
531      1035.0         670
 GR   1038.0        676     1034.0        692      1034.0         730      1051.8
747.8

              GRAND DRAIN INLET PER A.D.O.T. PLANS
 X1     71.0         16      258.5      746.1         500         500         500
 GR   1051.5      258.5     1035.0      291.5        1035         310       1036.
342      1040.0         352
 GR     1040        372       1039        420        1036         425        1036
445      1036.0         460
 GR   1035.4        470     1035.4        525        1037         535      1035.4
545      1035.4         730
 GR   1051.5      746.1

 X1     75.0         13      258.4      746.6         400         400         400
 GR   1053.1      258.4     1036.5      291.6      1036.5         395      1036.5
405      1036.5         460
 GR   1036.5        465     1036.5        470      1036.5         635        1040
660        1040       690.5
 GR   1036.5      697.5     1036.5        730      1053.1       746.6
1
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              GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
 X1     78.0         24      258.9      746.1        300.        300.        300.
 GR   1053.5      258.9     1037.4      291.1      1037.4         320      1037.4
355      1037.4         370
 GR   1037.4        390     1037.4        415      1037.4         430      1037.4
460      1037.4         475
 GR   1037.4        500     1037.4        528      1037.4       546.8        1039
550        1038         560
 GR   1037.4        595     1037.4        606      1037.4       629.8      1038.5
632      1038.0         653
 GR   1037.8        680     1037.4        681      1037.4         730      1053.5
746.1
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 X1     81.0          18         259         745         300         300         300
 GR     1054         259        1038         290      1038.0         291      1038.0
320      1038.0          355
 GR   1038.0         390      1038.0         400      1038.0         440      1038.0
450      1038.0          460
 GR   1038.0         550      1038.0         565      1038.0         588      1040.0
626        1039          634
 GR     1038         650        1038         730      1054.0         745

 X1     84.0          21       259.5       745.4         300         300         300
 GR   1054.5       259.5        1039       290.5        1039         320        1037
325        1037          355
 GR     1039         360        1039         375        1039         385        1039
395        1039          415
 GR     1039         450        1039         500        1039         530        1039
625      1039.5          626
 GR   1039.0         639      1039.0         651      1039.0         688      1039.0
690        1039          730
 GR   1054.5       745.4

 X1     87.0          12       259.8       745.2         300         300         300
 GR   1055.0       259.8      1039.8       290.2      1039.8         455      1039.8
470      1039.8          545
 GR   1039.8         560      1039.8         610      1039.8         630      1039.8
650      1039.8          680
 GR   1039.8         730      1055.0       745.2

 X1     89.0          12         260         745         200         200         200
 GR   1055.4         260      1040.4         290      1040.4         320      1040.4
323.2      1042.0          410
 GR   1040.4       413.2      1040.4         500      1040.4         620      1040.4
690      1040.4          710
 GR   1040.4         730      1055.4         745

              STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
 X1    94.0           13       260.4       744.6         500         500         500
 GR   1056.4       260.4      1041.8       289.6      1041.8         340      1044.0
344      1042.0          359
 GR   1041.9         380      1042.0         405      1041.8         406      1041.8
500      1041.8          640
 GR   1041.8         680      1041.8         730      1056.4       744.6

 NC     .035        .035        .035         0.3         0.5
 X1     97.0          16       260.5       744.5         300         300         300
 GR   1057.1       260.5      1042.6       289.5      1042.6         320      1042.6
370      1042.6          380
 GR   1042.6         405      1042.6         476      1044.0         479      1043.8
500      1044.0          545
 GR   1046.0         555      1042.6         562      1042.6         650      1042.6
675      1042.6          730
 GR   1057.1       744.5

 NC     .035        .035        .035
              STA. 99+45.00 IS P.O.T.
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
 X1    99.54           5.       325.1       674.9         254.        254.        254.
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 GR   1063.5      325.1     1043.2     325.15      1043.2        500.      1043.2
674.85      1063.5       674.9

    DOWNSTREAM GLENDALE AVENUE BRIDGE

1
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 NC    .025       .025       .025         0.3         0.5
              DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
 X1     99.6         28      325.1      674.9          6.          6.          6.
 X2                                 0     1063.4      1065.9
1.33
 X3       10
 GR   1063.8     325.10     1046.2     325.15      1046.2      363.70      1063.4
363.75      1063.4      368.75
 GR   1046.2     368.80     1046.2     417.20      1063.4      417.25      1063.4
422.25      1046.2      422.30
 GR   1046.2     470.70     1063.4     470.75      1063.4      475.75      1046.2
475.80      1046.2      524.20
 GR   1063.4     524.25     1063.4     529.25      1046.2      529.30      1046.2
577.70      1063.4      577.75
 GR   1063.4     582.75     1046.2     582.80      1046.2      631.20      1063.4
631.25      1063.4      636.25
 GR   1046.2     636.30     1046.2     674.85      1063.6      674.90

    UPSTREAM GLENDALE AVENUE BRIDGE - NORMAL BRIDGE MODEL
    BOTTOM EL LOWERED FROM 1046.5 TO 1046.2 TO REFLECT SURVEY BY INCA ENGINEERS


              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
 X1    100.4         28      325.1      674.9       80.3        80.3        80.3
 X2                                 0     1063.4      1065.9
1.33
 X3       10
1065.9      1065.9
 GR   1063.6     325.10     1046.2     325.15      1046.2      363.70      1063.4
363.75      1063.4      368.75
 GR   1046.2     368.80     1046.2     417.20      1063.4      417.25      1063.4
422.25      1046.2      422.30
 GR   1046.2     470.70     1063.4     470.75      1063.4      475.75      1046.2
475.80      1046.2      524.20
 GR   1063.4     524.25     1063.4     529.25      1046.2      529.30      1046.2
577.70      1063.4      577.75
 GR   1063.4     582.75     1046.2     582.80      1046.2      631.20      1063.4
631.25      1063.4      636.25
 GR   1046.2     636.30     1046.2     674.85      1063.6      674.90


 NC     .035       .035       .035
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
 X1   100.90          5     308.15     691.85          50          50          50
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 GR   1063.6     308.15     1046.6     325.15     1046.6        500      1046.6
674.85      1063.6      691.85

 X1    103.0        14      292.0      708.0       260.       260.        260.
 GR   1065.4     292.0       1047      328.8       1047        370      1047.0
380      1047.0         382
 GR   1047.0       490     1047.0        500     1047.0        553      1047.0
606      1047.0         640
 GR   1047.0       657       1047        659       1047      689.6      1065.4
708.0

 NC     .035      .035       .035       0.1        0.3
 X1    106.0         8      246.4      753.6        300        300        300
 GR   1066.4     246.4     1047.6      284.0     1047.6        412      1047.6
500      1047.6         685
 GR   1047.6       710     1047.6      734.8     1066.4      753.6

              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
 X1    109.0        11      201.3      798.7        300        300        300
 GR   1066.9     201.3     1048.2      238.7     1048.2      451.4      1050.0
455      1048.2         480
 GR   1050.0       503     1051.0        510     1050.0        515      1048.2
518.6      1048.2         780
 GR   1066.9     798.7
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 X1    110.0        12      201.3      798.5        100        100        100
 GR   1066.9     201.3     1048.4      238.7     1048.4      432.8       1051
438        1051         485
 GR     1047       505     1048.4        515     1048.4        550      1048.4
565      1048.4         734
 GR   1048.4       780     1066.9      798.5

 X1    113.0        16      201.8      798.2        300        300        300
 GR   1067.2     201.8       1049      238.2       1049        401      1051.3
404      1049.0         435
 GR   1049.0       465     1050.0        473     1049.0        475      1049.0
500        1049         535
 GR     1049       580     1049.0        595     1049.0        620      1049.0
685      1049.0         780
 GR   1067.2     798.2

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
 X1    116.0        13      202.3      797.7        240        340        300
 GR   1067.3     202.3     1049.6      237.7     1049.6      366.2      1054.0
375      1054.0         378
 GR   1049.6     386.8     1049.6       500.     1049.6      579.2      1056.0
592      1058.0         603
 GR   1049.6     619.8     1049.6        780     1067.3      797.7
```

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 210 FT.
RT CHNL BTM WDTH = 230 FT.

```
 X1    120.0          10       273.3       746.7         327          497          400
 GR   1067.1       273.3      1050.4       306.7      1050.4          500       1050.4
506.6      1056.7          520
 GR   1057.8         600      1056.8         645      1050.4        658.6       1050.4
730      1067.1        746.7

 X1    123.0          11       272.2       747.8         342          342          342
 GR   1068.8       272.2        1051       307.8        1051          315         1051
370        1051          400
 GR   1051.0         500        1051         610        1051          630         1051
680        1051          730
 GR   1068.8       747.8

 X1    127.0          10         273         747         400          400          400
 GR   1068.8         273      1051.8         307      1051.8          345       1051.8
400      1051.8          450
 GR   1051.8         500      1051.8         650      1051.8          665       1051.8
730      1068.8          747

 X1    131.0          14       273.2       746.8         400          400          400
 GR   1069.4       273.2      1052.6       306.8      1052.6          351         1050
356        1052          365
 GR     1054         395        1054         430      1052.6          445         1054
497.2      1052.6          500
 GR   1052.6         530      1052.6         666      1052.6          730       1069.4
746.8

 X1   135.00          12       273.5       746.3         400          400          400
 GR   1069.6       273.5      1053.4       306.5      1053.4          330       1058.4
340      1058.2          412
 GR   1059.2         412      1053.4       423.6      1053.4          500       1053.4
502      1053.4          680
 GR   1053.4         730      1069.9       746.3

 X1    138.0          15       274.4       745.6         300          300          300
 GR   1069.6       274.4        1054       305.6        1054          350         1059
360        1058          405
 GR     1054         413        1054         440        1054          460         1054
475        1054          500
 GR     1054         590        1054         615        1054          640         1054
730      1069.6        745.6
1
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 X1   141.00          15       273.6       746.4         300          300          300
 GR   1071.0       273.6      1054.6       306.3      1054.6        328.8       1058.2
336      1058.7          370
 GR   1054.6       379.4      1054.6         403      1060.0          415       1061.5
435      1060.0          454
```

```
 GR   1054.6        474     1054.6        500      1054.6         560      1054.6
730      1071.0       746.4

              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
 X1    145.0         10      273.4      746.6         400         400         400
 GR     1072      273.4     1055.4      306.6      1055.4         320      1055.4
340      1055.4         370
 GR   1055.4        505     1055.4        515      1055.4         525      1055.4
730      1077.0       746.6

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
 X1    147.0         13      273.4      746.6         200         200         200
 GR   1072.4      273.4     1055.8      306.6      1055.8         340      1055.8
370      1055.8         430
 GR   1055.8        440     1055.8        470      1055.8         500      1055.8
505      1055.8         560
 GR   1055.8        635     1055.8        730      1072.4       746.6

              CHANNEL BOTTOM TAPERS
              LT CHNL BTM WDTH = 260 FT.
              RT CHNL BTM WDTH = 210 FT.
 X1    150.0          6      223.4      726.6         350         260         300
 GR     1073      223.4     1056.4      256.6      1056.4         355      1056.4
400      1056.4         710
 GR     1073      726.6
1
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL
QLOSS     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

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=      840.199
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
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```
     39.000       8.06   1036.06   1033.00       .00   1036.23       .17       .00
.00   1042.50
    13500.0         .0   13500.0        .0        .0    4052.5        .0        .0
.0   1043.20
        .00        .00      3.33       .00      .000      .035      .000      .000
1028.00   9592.94
    .000732       270.      220.      200.         0        13         0       .00
818.79  10411.72


 CCHV=     .200 CEHV=     .400
 *SECNO 44.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .66

              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
     44.000       5.78   1036.53   1034.71       .00   1036.81       .27       .53
.04   1044.90
    13500.0         .0   13500.0        .0        .0    3218.1        .0      41.7
9.7   1045.10
        .03        .00      4.20       .00      .000      .035      .000      .000
1030.75   9502.54
    .001693       500.      500.      500.         2        11         0       .00
862.92  10365.46


 *SECNO 47.000
     47.000       6.11   1037.11   1036.01       .00   1037.59       .48       .70
.08   1045.00
    13500.0         .0   13500.0        .0        .0    2437.9        .0      61.2
15.1   1045.00
        .05        .00      5.54       .00      .000      .035      .000      .000
1031.00    611.78
    .003408       300.      300.      300.         2        10         0       .00
727.82   1339.60


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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 51.500
              LT CHNL BTM WDTH = 225 FT
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     51.500       7.04   1038.44   1036.76       .00   1038.98       .54       1.37
.02   1045.70
    13500.0        .0   13500.0        .0        .0    2295.5        .0       85.7
21.6   1045.70
        .07       .00      5.88       .00      .000      .035      .000       .000
1031.40    775.32
    .002720      450.      450.      450.         2        15         0        .00
527.12   1302.44


 *SECNO 55.000
              STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000       7.40   1039.30   1037.03       .00   1039.79       .50        .81
.01   1047.00
    13500.0        .0   13500.0        .0        .0    2384.8        .0      104.5
25.6   1047.00
        .09       .00      5.66       .00      .000      .035      .000       .000
1031.90    275.30
    .001993      350.      350.      350.         2        19         0        .00
458.29    733.60


 *SECNO 58.120
              END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
              ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
              CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
              BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
              MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
              TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120       8.31   1040.41   1037.01       .00   1040.84       .43       1.03
.01   1049.10
    13500.0        .0   13500.0        .0        .0    2566.3        .0      142.1
32.0   1049.00
        .12       .00      5.26       .00      .000      .035      .000       .000
1032.10    766.69
    .001257      662.      662.      662.         2        17         0        .00
387.72   1154.41


 *SECNO 62.000
              STA. 60+21.80 IS P.O.T.
     62.000       8.05   1040.95   1038.33       .00   1041.45       .50        .58
.03   1050.40
    13500.0        .0   13500.0        .0        .0    2374.5        .0      164.1
35.6   1050.40
        .14       .00      5.69       .00      .000      .035      .000       .000
1032.90    275.50
    .001818      388.      388.      388.         2        14         0        .00
418.55    694.05


 *SECNO 66.000
              LT CHNL BTM WDTH = 225 FT.
              RT CHNL BTM WDTH = 230 FT.
     66.000       7.69   1041.69   1038.21       .00   1042.02       .33        .53
.03   1051.80
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    13500.0         .0   13500.0         .0         .0    2937.1         .0     188.5
39.6   1051.80
        .16        .00      4.60        .00       .000      .035       .000      .000
1034.00    277.42
    .001013       400.      400.       400.          2        11          0       .00
460.27    737.69


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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 71.000
              GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000       7.23   1042.23   1039.00        .00   1042.62        .39        .58
.02   1051.50
    13500.0         .0   13500.0         .0         .0    2709.9         .0     220.9
44.9   1051.50
        .19        .00      4.98        .00       .000      .035       .000      .000
1035.00    277.04
    .001317       500.      500.       500.          2        11          0       .00
459.79    736.83


 *SECNO 75.000
     75.000       6.27   1042.77   1039.82        .00   1043.17        .41        .55
.01   1053.10
    13500.0         .0   13500.0         .0         .0    2642.9         .0     245.5
49.1   1053.10
        .21        .00      5.11        .00       .000      .035       .000      .000
1036.50    279.07
    .001416       400.      400.       400.          2        11          0       .00
457.20    736.27


 *SECNO 78.000
              GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000       5.80   1043.20   1040.60        .00   1043.64        .44        .45
.01   1053.50
    13500.0         .0   13500.0         .0         .0    2538.3         .0     263.3
52.3   1053.50
        .23        .00      5.32        .00       .000      .035       .000      .000
1037.40    279.50
    .001613       300.      300.       300.          2         8          0       .00
456.29    735.80
```

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 *SECNO 81.000
     81.000       5.69   1043.69   1041.19       .00   1044.14       .46       .50
.01   1054.00
    13500.0         .0   13500.0        .0        .0    2490.6        .0     280.6
55.4   1054.00
        .25        .00      5.42       .00      .000      .035      .000      .000
1038.00    278.98
    .001716      300.      300.      300.         2        11         0       .00
456.35    735.33


 *SECNO 84.000
     84.000       7.21   1044.21   1041.89       .00   1044.70       .49       .55
.01   1054.50
    13500.0         .0   13500.0        .0        .0    2397.9        .0     297.4
58.5   1054.50
        .26        .00      5.63       .00      .000      .035      .000      .000
1037.00    280.08
    .001942      300.      300.      300.         2        15         0       .00
455.10    735.18


 *SECNO 87.000
     87.000       5.02   1044.82   1042.87       .00   1045.38       .56       .65
.03   1055.00
    13500.0         .0   13500.0        .0        .0    2244.4        .0     313.4
61.7   1055.00
        .27        .00      6.01       .00      .000      .035      .000      .000
1039.80    280.17
    .002412      300.      300.      300.         2        14         0       .00
454.85    735.02


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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 89.000
     89.000       4.91   1045.31   1043.62       .00   1045.93       .63       .53
.03   1055.40
    13500.0         .0   13500.0        .0        .0    2122.8        .0     323.5
63.8   1055.40
        .28        .00      6.36       .00      .000      .035      .000      .000
1040.40    280.19
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    .002906      200.      200.      200.         2        14         0       .00
454.72    734.91


 *SECNO 94.000
                STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000      4.94   1046.74   1044.92       .00   1047.33       .60      1.39
.01   1056.40
    13500.0        .0   13500.0        .0        .0    2180.8        .0     348.2
69.0   1056.40
        .31       .00      6.19       .00      .000      .035      .000      .000
1041.80    279.73
    .002662      500.      500.      500.         2        14         0       .00
455.21    734.94


 CCHV=     .300 CEHV=     .500
 *SECNO 97.000
     97.000      4.96   1047.56   1045.93       .00   1048.20       .64       .85
.02   1057.10
    13500.0        .0   13500.0        .0        .0    2102.9        .0     362.9
72.1   1057.10
        .32       .00      6.42       .00      .000      .035      .000      .000
1042.60    279.56
    .003013      300.      300.      300.         0        14         0       .00
455.41    734.97


 *SECNO 99.540
                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
     99.540      5.09   1048.29   1046.79       .00   1049.19       .90       .86
.13   1063.50
    13500.0        .0   13500.0        .0        .0    1777.5        .0     374.2
74.5   1063.50
        .33       .00      7.60       .00      .000      .035      .000      .000
1043.20    325.14
    .003804      254.      254.      254.         0        15         0       .00
349.73    674.86


 CCHV=     .300 CEHV=     .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS

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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


 3370 NORMAL BRIDGE, NRD=    0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1063.80 ELREA=      1063.60

              DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       3.79   1049.99   1049.99       .00   1051.92       1.94       .03
.52   1063.80
    13500.0        .0   13500.0        .0        .0    1209.0        .0      374.4
74.5   1063.60
        .33       .00     11.17       .00      .000      .025      .000      .000
1046.20    325.14
    .007334        6.        6.        6.         0        12         0       .00
319.25    674.86


 *SECNO 100.400

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.72


 3370 NORMAL BRIDGE, NRD=    0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=      1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
    100.400       5.37   1051.57   1049.99       .00   1052.53       .96       .32
.29   1063.60
    13500.0        .0   13500.0        .0        .0    1713.8        .0      377.1
75.1   1063.60
        .33       .00      7.88       .00      .000      .025      .000      .000
1046.20    325.13
    .002475       80.       80.       80.         4        12         0       .00
319.32    674.87


 *SECNO 100.900
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
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```
                RT CHNL BTM WDTH = 157.9 FT.
    100.900       5.34   1051.94   1050.17       .00   1052.73       .79       .14
.05   1063.60
    13500.0        .0   13500.0        .0        .0    1895.5        .0     379.2
75.5   1063.60
        .33       .00      7.12       .00      .000      .035      .000      .000
1046.60    319.81
    .003126       50.       50.       50.         2        14         0       .00
360.38    680.19


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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 103.000
    103.000       5.84   1052.84   1050.49       .00   1053.45       .61       .67
.05   1065.40
    13500.0        .0   13500.0        .0        .0    2159.0        .0     391.3
77.7   1065.40
        .34       .00      6.25       .00      .000      .035      .000      .000
1047.00    317.12
    .002155      260.      260.      260.         2        14         0       .00
378.33    695.44


 CCHV=     .100 CEHV=     .300
 *SECNO 106.000
    106.000       5.99   1053.59   1050.61       .00   1053.96       .37       .49
.02   1066.40
    13500.0        .0   13500.0        .0        .0    2752.6        .0     408.2
80.6   1066.40
        .36       .00      4.90       .00      .000      .035      .000      .000
1047.60    272.03
    .001273      300.      300.      300.         2        11         0       .00
468.76    740.79


 *SECNO 109.000
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    109.000       5.83   1054.03   1051.01       .00   1054.32       .29       .35
.01   1066.90
    13500.0        .0   13500.0        .0        .0    3127.2        .0     428.5
84.2   1066.90
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        .38        .00       4.32        .00       .000       .035       .000       .000
1048.20    227.05
    .001053      300.       300.       300.          2         14          0        .00
558.78    785.83


 *SECNO 110.000
    110.000       7.12   1054.12   1051.29        .00   1054.43        .31        .11
.01   1066.90
    13500.0         .0   13500.0        .0         .0    3018.7         .0      435.5
85.4   1066.90
        .39        .00       4.47        .00       .000       .035       .000       .000
1047.00    227.11
    .001183      100.       100.       100.          1         19          0        .00
558.62    785.73


 *SECNO 113.000
    113.000       5.48   1054.48   1051.74        .00   1054.80        .32        .36
.00   1067.20
    13500.0         .0   13500.0        .0         .0    2969.9         .0      456.1
89.3   1067.20
        .40        .00       4.55        .00       .000       .035       .000       .000
1049.00    227.24
    .001248      300.       300.       300.          2         18          0        .00
558.24    785.48


 *SECNO 116.000

 3265 DIVIDED FLOW

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              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    116.000       5.26   1054.86   1052.46        .00   1055.25        .39        .43
.02   1067.30
    13500.0         .0   13500.0        .0         .0    2684.8         .0      475.6
93.1   1067.30
        .42        .00       5.03        .00       .000       .035       .000       .000
1049.60    227.18
    .001679      240.       300.       340.          2         11          0        .00
538.53    785.26


 *SECNO 120.000

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS
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 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .51

              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    120.000      4.95   1055.35   1054.56       .00   1056.73      1.38      1.18
.30   1067.10
    13500.0        .0   13500.0        .0        .0    1432.1        .0     494.5
96.9   1067.10
        .43       .00      9.43       .00      .000      .035      .000      .000
1050.40    296.80
    .006479      327.      400.      497.         2        15         0       .00
307.21    734.95


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.28

    123.000      6.27   1057.27   1054.14       .00   1057.65       .39       .82
.10   1068.80
    13500.0        .0   13500.0        .0        .0    2703.1        .0     510.7
99.9   1068.80
        .45       .00      4.99       .00      .000      .035      .000      .000
1051.00    295.27
    .001249      342.      342.      342.         2        14         0       .00
440.99    736.26


 *SECNO 127.000
    127.000      5.98   1057.78   1054.94       .00   1058.20       .43       .54
.01   1068.80
    13500.0        .0   13500.0        .0        .0    2578.8        .0     535.0
103.9   1068.80
        .47       .00      5.23       .00      .000      .035      .000      .000
1051.80    295.06
    .001459      400.      400.      400.         2         8         0       .00
440.91    735.97


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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 131.000
   131.000      8.39   1058.39   1055.91       .00   1058.88       .49       .65
.02   1069.40
   13500.0        .0   13500.0        .0        .0    2410.8        .0     557.9
108.0   1069.40
       .49       .00      5.60       .00      .000      .035      .000      .000
1050.00    295.22
   .001832      400.      400.      400.         2         5         0       .00
440.57    735.79


*SECNO 135.000

3265 DIVIDED FLOW

   135.000      5.79   1059.19   1057.07       .00   1059.84       .65       .92
.05   1069.60
   13500.0        .0   13500.0        .0        .0    2093.4        .0     578.6
112.0   1069.90
       .51       .00      6.45       .00      .000      .035      .000      .000
1053.40    294.70
   .002956      400.      400.      400.         2        14         0       .00
441.02    735.72


*SECNO 138.000
   138.000      6.06   1060.06   1057.46       .00   1060.56       .50       .71
.01   1069.60
   13500.0        .0   13500.0        .0        .0    2385.0        .0     594.0
115.1   1069.60
       .53       .00      5.66       .00      .000      .035      .000      .000
1054.00    293.47
   .001916      300.      300.      300.         2        14         0       .00
442.59    736.06


*SECNO 141.000

3265 DIVIDED FLOW

   141.000      6.04   1060.64   1058.51       .00   1061.26       .62       .67
.04   1071.00
   13500.0        .0   13500.0        .0        .0    2134.9        .0     609.6
118.0   1071.00
       .54       .00      6.32       .00      .000      .035      .000      .000
1054.60    294.25
   .002595      300.      300.      300.         2        14         0       .00
419.48    736.04


*SECNO 145.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

          A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
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    145.000       6.20   1061.60   1058.54       .00   1061.99       .39       .71
.02   1072.00
    13500.0        .0   13500.0        .0        .0    2678.4        .0     631.7
122.0   1077.00
        .56       .00      5.04       .00      .000      .035      .000      .000
1055.40    294.20
    .001287      400.      400.      400.         2        11         0       .00
440.57    734.76


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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 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000       6.05   1061.85   1058.95       .00   1062.27       .41       .27
.01   1072.40
    13500.0        .0   13500.0        .0        .0    2618.8        .0     643.8
124.0   1072.40
        .57       .00      5.16       .00      .000      .035      .000      .000
1055.80    294.49
    .001390      200.      200.      200.         2         8         0       .00
441.57    736.06


 *SECNO 150.000
              CHANNEL BOTTOM TAPERS
              LT CHNL BTM WDTH = 260 FT.
              RT CHNL BTM WDTH = 210 FT.
    150.000       5.90   1062.30   1059.39       .00   1062.68       .38       .41
.00   1073.00
    13500.0        .0   13500.0        .0        .0    2725.7        .0     662.2
127.2   1073.00
        .59       .00      4.95       .00      .000      .035      .000      .000
1056.40    244.81
    .001324      350.      300.      260.         2         8         0       .00
471.09    715.90


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 T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
 T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3      50-YEAR EVENT          MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL
FQ

        0         3                                                                  1039.39

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM
ITRACE

       2         0        -1                                        -1
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

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=      840.199
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
     39.000     11.39   1039.39   1034.59   1036.06   1039.71       .32       .00
.00   1042.50
    31000.0        .0   31000.0        .0        .0    6796.1        .0        .0
.0   1043.20
        .00       .00      4.56       .00      .000      .035      .000      .000
1028.00   9589.35
    .000703      270.      220.      200.         0        13         0       .00
829.03  10418.38


 CCHV=     .200 CEHV=     .400
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 *SECNO 44.000
              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
     44.000       9.03   1039.78   1036.19   1036.53   1040.19       .41       .44
.03   1044.90
    31000.0        .0   31000.0        .0        .0    6040.1        .0      73.7
9.8   1045.10
        .03       .00      5.13       .00      .000      .035      .000      .000
1030.75   9496.05
    .001121      500.      500.      500.         2        14         0       .00
877.03  10373.08


 *SECNO 47.000
     47.000       9.06   1040.06   1037.55   1037.11   1040.76       .71       .46
.12   1045.00
    31000.0        .0   31000.0        .0        .0    4596.3        .0     110.3
15.4   1045.00
        .04       .00      6.74       .00      .000      .035      .000      .000
1031.00    605.90
    .002227      300.      300.      300.         0        19         0       .00
740.69   1346.59


 *SECNO 51.500
              LT CHNL BTM WDTH = 225 FT
     51.500       9.59   1040.99   1038.80   1038.44   1042.11      1.12      1.18
.17   1045.70
    31000.0        .0   31000.0        .0        .0    3650.0        .0     152.9
22.0   1045.70
        .05       .00      8.49       .00      .000      .035      .000      .000
1031.40    770.22
    .003129      450.      450.      450.         2        15         0       .00
534.77   1304.99


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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 55.000
              STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      10.09   1041.99   1039.28   1039.30   1043.12      1.13      1.01
.00   1047.00
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    31000.0        .0   31000.0        .0        .0    3630.4        .0     182.1
26.0   1047.00
        .07       .00      8.54       .00      .000      .035      .000      .000
1031.90    269.95
    .002663      350.      350.      350.         2        15         0       .00
466.34    736.29


 *SECNO 58.120
              END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
              ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
              CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
              BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
              MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
              TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120     11.46   1043.56   1039.60   1040.41   1044.60      1.03      1.46
.02   1049.10
    31000.0        .0   31000.0        .0        .0    3799.0        .0     238.6
32.5   1049.00
        .09       .00      8.16       .00      .000      .035      .000      .000
1032.10    763.54
    .001847      662.      662.      662.         2        15         0       .00
394.03   1157.56


 *SECNO 62.000
              STA. 60+21.80 IS P.O.T.
     62.000     11.43   1044.33   1040.78   1040.95   1045.36      1.03       .76
.00   1050.40
    31000.0        .0   31000.0        .0        .0    3804.6        .0     272.5
36.2   1050.40
        .10       .00      8.15       .00      .000      .035      .000      .000
1032.90    268.75
    .002068      388.      388.      388.         2        19         0       .00
428.68    697.43


 *SECNO 66.000
              LT CHNL BTM WDTH = 225 FT.
              RT CHNL BTM WDTH = 230 FT.
     66.000     11.35   1045.35   1040.48   1041.69   1046.04       .69       .62
.07   1051.80
    31000.0        .0   31000.0        .0        .0    4643.0        .0     311.2
40.3   1051.80
        .12       .00      6.68       .00      .000      .035      .000      .000
1034.00    270.09
    .001206      400.      400.      400.         2        11         0       .00
471.26    741.35


 *SECNO 71.000
              GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000     10.96   1045.96   1041.53   1042.23   1046.72       .76       .65
.03   1051.50
    31000.0        .0   31000.0        .0        .0    4445.5        .0     363.4
45.7   1051.50
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        .14       .00       6.97       .00       .000       .035       .000       .000
1035.00    269.58
    .001386      500.       500.       500.         2         11          0        .00
470.98    740.56


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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 75.000
     75.000     10.01   1046.51   1042.18   1042.77   1047.29       .78       .57
.01   1053.10
    31000.0        .0   31000.0        .0        .0    4376.8        .0     403.9
50.0   1053.10
        .15       .00       7.08       .00       .000       .035       .000       .000
1036.50    271.58
    .001445      400.       400.       400.         2         11          0        .00
468.44    740.01


 *SECNO 78.000
                GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000      9.54   1046.94   1042.85   1043.20   1047.76       .82       .45
.02   1053.50
    31000.0        .0   31000.0        .0        .0    4265.2        .0     433.7
53.2   1053.50
        .16       .00       7.27       .00       .000       .035       .000       .000
1037.40    272.03
    .001568      300.       300.       300.         0         11          0        .00
467.51    739.54


 *SECNO 81.000
     81.000      9.41   1047.41   1043.45   1043.69   1048.25       .84       .48
.01   1054.00
    31000.0        .0   31000.0        .0        .0    4203.8        .0     462.8
56.5   1054.00
        .18       .00       7.37       .00       .000       .035       .000       .000
1038.00    271.79
    .001641      300.       300.       300.         1         11          0        .00
467.02    738.81


 *SECNO 84.000
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     84.000      10.89    1047.89    1044.16    1044.21    1048.78        .89        .51
.02   1054.50
    31000.0         .0    31000.0         .0         .0     4090.2         .0      491.4
59.7   1054.50
        .19        .00       7.58        .00       .000       .035       .000       .000
1037.00    272.73
    .001794       300.       300.       300.          0         15          0        .00
466.10    738.83


 *SECNO 87.000
     87.000       8.62    1048.42    1045.12    1044.82    1049.40        .98        .58
.04   1055.00
    31000.0         .0    31000.0         .0         .0     3898.7         .0      518.9
62.9   1055.00
        .20        .00       7.95        .00       .000       .035       .000       .000
1039.80    272.98
    .002096       300.       300.       300.          1         11          0        .00
465.64    738.61


 *SECNO 89.000
     89.000       8.41    1048.81    1045.87    1045.31    1049.89       1.07        .45
.04   1055.40
    31000.0         .0    31000.0         .0         .0     3733.0         .0      536.4
65.0   1055.40
        .20        .00       8.30        .00       .000       .035       .000       .000
1040.40    273.19
    .002421       200.       200.       200.          0         14          0        .00
465.22    738.41


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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 94.000
              STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000       8.23    1050.03    1047.17    1046.74    1051.12       1.09       1.23
.01   1056.40
    31000.0         .0    31000.0         .0         .0     3697.5         .0      579.1
70.4   1056.40
        .22        .00       8.38        .00       .000       .035       .000       .000
1041.80    273.14
    .002500       500.       500.       500.          2         14          0        .00
465.10    738.23
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 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000       8.19    1050.79    1048.18    1047.56    1051.95       1.16        .79
.04   1057.10
    31000.0         .0    31000.0         .0         .0     3579.2         .0      604.1
73.6   1057.10
        .23        .00       8.66        .00       .000       .035       .000       .000
1042.60    273.14
    .002790       300.       300.       300.          1         14          0        .00
465.04    738.18


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

                STA. 99+45.00 IS P.O.T.
                LT CHNL BTM WDTH = 157.9 FT.
                RT CHNL BTM WDTH = 157.9 FT.
     99.540       8.11    1051.31    1049.43    1048.29    1053.17       1.85        .87
.34   1063.50
    31000.0         .0    31000.0         .0         .0     2837.6         .0      622.8
75.9   1063.50
        .24        .00      10.92        .00       .000       .035       .000       .000
1043.20    325.13
    .004313       254.       254.       254.          2         15          0        .00
349.74    674.87


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
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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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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1063.80 ELREA=      1063.60

              DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       6.63   1052.83   1052.83   1049.99   1056.16      3.33       .03
.74   1063.80
    31000.0         .0   31000.0        .0        .0    2116.2        .0     623.2
76.0   1063.60
        .24        .00     14.65       .00      .000      .025      .000      .000
1046.20    325.13
    .006851         6.        6.        6.         0        15         0       .00
319.37    674.87


*SECNO 100.400

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.56


3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=      1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
    100.400       8.90   1055.10   1052.83   1051.57   1056.94      1.85       .34
.45   1063.60
    31000.0         .0   31000.0        .0        .0    2841.8        .0     627.7
76.6   1063.60
        .24        .00     10.91       .00      .000      .025      .000      .000
1046.20    325.12
    .002831        80.       80.       80.         5        15         0       .00
319.46    674.88


*SECNO 100.900

3301 HV CHANGED MORE THAN HVINS

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
    100.900       9.29   1055.89   1052.79   1051.94   1057.23      1.34       .14
.15   1063.60
    31000.0         .0   31000.0        .0        .0    3334.3        .0     631.3
77.0   1063.60
        .24        .00      9.30       .00      .000      .035      .000      .000
1046.60    315.86
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    .002612        50.        50.        50.          3         19          0        .00
368.28    684.14


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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 103.000
    103.000       9.79    1056.79    1053.05    1052.84    1057.90       1.10        .59
.07   1065.40
    31000.0         .0    31000.0         .0         .0     3678.3         .0      652.2
79.2   1065.40
        .25        .00       8.43        .00       .000       .035       .000       .000
1047.00    309.21
    .002022       260.       260.       260.          2         14          0        .00
390.19    699.40


 CCHV=     .100 CEHV=     .300
 *SECNO 106.000
    106.000      10.12    1057.72    1052.83    1053.59    1058.39        .67        .45
.04   1066.40
    31000.0         .0    31000.0         .0         .0     4716.8         .0      681.1
82.2   1066.40
        .26        .00       6.57        .00       .000       .035       .000       .000
1047.60    263.76
    .001163       300.       300.       300.          2         11          0        .00
481.17    744.92


 *SECNO 109.000
              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    109.000      10.02    1058.22    1052.97    1054.03    1058.71        .50        .30
.02   1066.90
    31000.0         .0    31000.0         .0         .0     5490.2         .0      716.3
85.9   1066.90
        .28        .00       5.65        .00       .000       .035       .000       .000
1048.20    218.68
    .000881       300.       300.       300.          1         14          0        .00
571.32    790.01


 *SECNO 110.000
```

```
    110.000      11.29   1058.29   1053.26   1054.12   1058.81       .52       .09
.01   1066.90
    31000.0         .0   31000.0        .0        .0    5368.7        .0     728.7
87.2   1066.90
        .28        .00      5.77       .00      .000      .035      .000      .000
1047.00    218.70
    .000949       100.      100.      100.         2        14         0       .00
571.19    789.89


 *SECNO 113.000
    113.000       9.57   1058.57   1053.73   1054.48   1059.11       .54       .29
.01   1067.20
    31000.0         .0   31000.0        .0        .0    5276.5        .0     765.4
91.1   1067.20
        .30        .00      5.88       .00      .000      .035      .000      .000
1049.00    219.07
    .001003       300.      300.      300.         0        14         0       .00
570.50    789.57


 *SECNO 116.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
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


    116.000       9.25   1058.85   1054.54   1054.86   1059.47       .62       .34
.03   1067.30
    31000.0         .0   31000.0        .0        .0    4904.6        .0     800.5
95.0   1067.30
        .31        .00      6.32       .00      .000      .035      .000      .000
1049.60    219.18
    .001292       240.      300.      340.         0        11         0       .00
570.08    789.26


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =    .45
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```
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    120.000       8.50   1058.90   1057.98   1055.35   1060.85      1.95       .98
.40   1067.10
    31000.0        .0   31000.0        .0        .0    2767.4        .0     835.7
99.7   1067.10
        .32       .00     11.20       .00      .000      .035      .000      .000
1050.40    289.68
    .006310      327.      400.      497.         2        15         0       .00
448.83    738.51


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.16

    123.000      10.06   1061.06   1056.46   1057.27   1061.83       .77       .86
.12   1068.80
    31000.0        .0   31000.0        .0        .0    4400.5        .0     863.8
103.2   1068.80
        .33       .00      7.04       .00      .000      .035      .000      .000
1051.00    287.67
    .001351      342.      342.      342.         2        14         0       .00
452.39    740.06


 *SECNO 127.000
    127.000       9.80   1061.60   1057.25   1057.78   1062.41       .81       .56
.01   1068.80
    31000.0        .0   31000.0        .0        .0    4284.8        .0     903.7
107.4   1068.80
        .35       .00      7.23       .00      .000      .035      .000      .000
1051.80    287.42
    .001476      400.      400.      400.         2        11         0       .00
452.37    739.79


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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 131.000
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    131.000      12.18   1062.18   1058.22   1058.39   1063.07       .89       .64
.02   1069.40
    31000.0         .0   31000.0        .0        .0    4099.2        .0     942.2
111.6   1069.40
        .36        .00      7.56       .00      .000      .035      .000      .000
1050.00    287.66
    .001714      400.      400.      400.         1        15         0       .00
451.92    739.57


 *SECNO 135.000
    135.000       9.45   1062.85   1059.78   1059.19   1063.93      1.07       .80
.06   1069.60
    31000.0         .0   31000.0        .0        .0    3726.3        .0     978.1
115.7   1069.90
        .38        .00      8.32       .00      .000      .035      .000      .000
1053.40    287.25
    .002372      400.      400.      400.         2        11         0       .00
452.09    739.34


 *SECNO 138.000
    138.000       9.63   1063.63   1059.99   1060.06   1064.57       .94       .63
.01   1069.60
    31000.0         .0   31000.0        .0        .0    3984.6        .0    1004.7
118.8   1069.60
        .39        .00      7.78       .00      .000      .035      .000      .000
1054.00    286.33
    .001897      300.      300.      300.         2        14         0       .00
453.30    739.63


 *SECNO 141.000
    141.000       9.57   1064.17   1061.13   1060.64   1065.26      1.09       .64
.04   1071.00
    31000.0         .0   31000.0        .0        .0    3703.2        .0    1031.1
121.9   1071.00
        .40        .00      8.37       .00      .000      .035      .000      .000
1054.60    287.22
    .002425      300.      300.      300.         2        14         0       .00
452.36    739.57


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000       9.82   1065.22   1060.86   1061.60   1066.03       .81       .74
.03   1072.00
    31000.0         .0   31000.0        .0        .0    4290.8        .0    1067.8
126.1   1077.00
        .41        .00      7.22       .00      .000      .035      .000      .000
1055.40    286.96
    .001465      400.      400.      400.         2        11         0       .00
450.58    737.55


 *SECNO 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
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                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    147.000       9.71   1065.51   1061.25   1061.85   1066.33       .83       .30
.00   1072.40
    31000.0        .0   31000.0        .0        .0    4250.2        .0    1087.5
128.2   1072.40
        .42       .00      7.29       .00      .000      .035      .000      .000
1055.80    287.19
    .001517      200.      200.      200.         2        11         0       .00
452.51    739.70


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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 150.000
                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
    150.000       9.64   1066.04   1061.61   1062.30   1066.77       .73       .43
.01   1073.00
    31000.0        .0   31000.0        .0        .0    4508.5        .0    1117.6
131.4   1073.00
        .43       .00      6.88       .00      .000      .035      .000      .000
1056.40    237.33
    .001355      350.      300.      260.         2        11         0       .00
482.31    719.64


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 T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
 T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3      100-YEAR EVENT         MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL
FQ

        0         4                                                                1040.66

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM
ITRACE
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       3          0         -1                                        -1
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 3

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=      .100 CEHV=      .300
 *SECNO 39.000

 3470 ENCROACHMENT STATIONS=      9585.9   10426.1  TYPE=       1  TARGET=       840.199
              BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
              WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
              EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
              GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
              PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
              BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
     39.000      12.66   1040.66   1035.33   1036.06   1041.08       .42       .00
.00   1042.50
    41000.0        .0   41000.0        .0        .0    7851.4        .0        .0
.0   1043.20
        .00       .00      5.22       .00      .000      .035      .000      .000
1028.00   9587.98
    .000765      270.      220.      200.         0        13         0       .00
832.94  10420.92


 CCHV=      .200 CEHV=      .400
 *SECNO 44.000
              BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
              LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
              RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
     44.000      10.32   1041.07   1036.92   1036.53   1041.57       .51       .46
.03   1044.90
    41000.0        .0   41000.0        .0        .0    7176.3        .0      86.2
9.8   1045.10
        .02       .00      5.71       .00      .000      .035      .000      .000
1030.75   9493.46
    .001114      500.      500.      500.         2        11         0       .00
882.65  10376.11
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 *SECNO 47.000
     47.000      10.31    1041.31    1038.34    1037.11    1042.16        .85        .45
.14   1045.00
    41000.0         .0    41000.0         .0         .0     5533.1         .0      130.0
15.5   1045.00
        .04        .00       7.41        .00       .000       .035       .000       .000
1031.00    603.38
    .002122       300.       300.       300.          2         19          0        .00
746.21   1349.59


 *SECNO 51.500

 3301 HV CHANGED MORE THAN HVINS

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              LT CHNL BTM WDTH = 225 FT
     51.500      10.73    1042.14    1039.77    1038.44    1043.57       1.44       1.17
.23   1045.70
    41000.0         .0    41000.0         .0         .0     4264.7         .0      180.6
22.1   1045.70
        .05        .00       9.61        .00       .000       .035       .000       .000
1031.40    767.93
    .003291       450.       450.       450.          2         15          0        .00
538.21   1306.14


 *SECNO 55.000
              STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      11.29    1043.19    1040.35    1039.30    1044.67       1.49       1.08
.02   1047.00
    41000.0         .0    41000.0         .0         .0     4191.3         .0      214.6
26.1   1047.00
        .06        .00       9.78        .00       .000       .035       .000       .000
1031.90    267.57
    .002921       350.       350.       350.          2         15          0        .00
469.92    737.49


 *SECNO 58.120
              END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
              ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
              CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
              BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
              MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
              TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120      12.84    1044.94    1040.79    1040.41    1046.32       1.38       1.63
.02   1049.10
    41000.0         .0    41000.0         .0         .0     4342.1         .0      279.4
32.7   1049.00
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        .08       .00       9.44       .00       .000       .035       .000       .000
1032.10    762.16
    .002096      662.       662.       662.         2         15          0        .00
396.78   1158.94


 *SECNO 62.000
              STA. 60+21.80 IS P.O.T.
     62.000     12.95   1045.85   1041.92   1040.95   1047.16       1.31        .83
.01   1050.40
    41000.0        .0   41000.0        .0        .0    4462.3         .0      318.6
36.4   1050.40
        .09       .00       9.19       .00       .000       .035       .000       .000
1032.90    265.70
    .002162      388.       388.       388.         2         19          0        .00
433.26    698.95


 *SECNO 66.000
              LT CHNL BTM WDTH = 225 FT.
              RT CHNL BTM WDTH = 230 FT.
     66.000     13.01   1047.01   1041.58   1041.69   1047.90        .89        .65
.09   1051.80
    41000.0        .0   41000.0        .0        .0    5430.7         .0      364.1
40.6   1051.80
        .10       .00       7.55       .00       .000       .035       .000       .000
1034.00    266.77
    .001272      400.       400.       400.         2         11          0        .00
476.25    743.02


 *SECNO 71.000
              GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000     12.65   1047.65   1042.62   1042.23   1048.60        .95        .67
.03   1051.50
    41000.0        .0   41000.0        .0        .0    5244.6         .0      425.3
46.1   1051.50
        .12       .00       7.82       .00       .000       .035       .000       .000
1035.00    266.20
    .001421      500.       500.       500.         2         11          0        .00
476.04    742.25


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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
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 *SECNO 75.000
     75.000     11.71   1048.21   1043.26   1042.77   1049.18       .97       .58
.01   1053.10
    41000.0        .0   41000.0        .0        .0    5177.0        .0     473.2
50.4   1053.10
        .14       .00      7.92       .00      .000      .035      .000      .000
1036.50    268.18
    .001469      400.      400.      400.         2        11         0       .00
473.53    741.71


 *SECNO 78.000
              GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000     11.24   1048.64   1043.94   1043.20   1049.66      1.02       .46
.02   1053.50
    41000.0        .0   41000.0        .0        .0    5068.0        .0     508.5
53.7   1053.50
        .15       .00      8.09       .00      .000      .035      .000      .000
1037.40    268.61
    .001570      300.      300.      300.         0        11         0       .00
472.63    741.24


 *SECNO 81.000
     81.000     11.11   1049.11   1044.54   1043.69   1050.15      1.04       .48
.01   1054.00
    41000.0        .0   41000.0        .0        .0    5001.6        .0     543.1
56.9   1054.00
        .16       .00      8.20       .00      .000      .035      .000      .000
1038.00    268.50
    .001636      300.      300.      300.         0        11         0       .00
471.90    740.40


 *SECNO 84.000
     84.000     12.59   1049.59   1045.23   1044.21   1050.68      1.09       .51
.02   1054.50
    41000.0        .0   41000.0        .0        .0    4886.9        .0     577.2
60.2   1054.50
        .17       .00      8.39       .00      .000      .035      .000      .000
1037.00    269.33
    .001764      300.      300.      300.         0        19         0       .00
471.19    740.52


 *SECNO 87.000
     87.000     10.29   1050.09   1046.21   1044.82   1051.28      1.19       .57
.04   1055.00
    41000.0        .0   41000.0        .0        .0    4686.7        .0     610.2
63.4   1055.00
        .18       .00      8.75       .00      .000      .035      .000      .000
1039.80    269.61
    .002019      300.      300.      300.         0         8         0       .00
470.69    740.30
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 *SECNO 89.000
     89.000      10.07   1050.47   1046.95   1045.31   1051.75      1.28       .43
.04   1055.40
    41000.0         .0   41000.0        .0        .0    4511.7        .0     631.3
65.6   1055.40
        .18        .00      9.09       .00      .000      .035      .000      .000
1040.40    269.86
    .002291       200.      200.      200.         0        14         0       .00
470.22    740.07


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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


 *SECNO 94.000
              STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000       9.82   1051.62   1048.25   1046.74   1052.94      1.32      1.18
.02   1056.40
    41000.0         .0   41000.0        .0        .0    4438.9        .0     682.6
71.0   1056.40
        .20        .00      9.24       .00      .000      .035      .000      .000
1041.80    269.96
    .002417       500.      500.      500.         2        14         0       .00
469.85    739.82


 CCHV=      .300 CEHV=      .500
 *SECNO 97.000
     97.000       9.74   1052.34   1049.26   1047.56   1053.75      1.41       .76
.04   1057.10
    41000.0         .0   41000.0        .0        .0    4304.9        .0     712.8
74.2   1057.10
        .21        .00      9.52       .00      .000      .035      .000      .000
1042.60    270.04
    .002680       300.      300.      300.         1        14         0       .00
469.69    739.73


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

              STA. 99+45.00 IS P.O.T.
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
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     99.540       9.53   1052.73   1050.70   1048.29   1055.08       2.35        .86
.47   1063.50
    41000.0         .0   41000.0        .0        .0    3334.2         .0      735.0
76.6   1063.50
        .21        .00     12.30       .00      .000      .035       .000       .000
1043.20    325.13
    .004453       254.      254.      254.         2        15          0        .00
349.75    674.87


 CCHV=     .300 CEHV=     .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
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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=      1063.80 ELREA=      1063.60

              DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600       7.97   1054.17   1054.17   1049.99   1058.20       4.03        .03
.84   1063.80
    41000.0         .0   41000.0        .0        .0    2545.5         .0      735.4
76.7   1063.60
        .21        .00     16.11       .00      .000      .025       .000       .000
1046.20    325.13
    .006872         6.        6.        6.         0        12          0        .00
319.42    674.87


 *SECNO 100.400

 3265 DIVIDED FLOW
```

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.52

3370 NORMAL BRIDGE, NRD= 0 MIN ELTRD= 1065.90 MAX ELLC= 1063.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1065.90 ELREA= 1065.90

GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

```
   100.400      10.60   1056.80   1054.17   1051.57   1059.07      2.27       .35
.53   1063.60
   41000.0        .0   41000.0        .0        .0    3387.9        .0     740.9
77.2   1063.60
       .21       .00     12.10       .00      .000      .025      .000      .000
1046.20    325.12
   .002957       80.       80.       80.         5        12         0       .00
319.53    674.88
```

*SECNO 100.900

3301 HV CHANGED MORE THAN HVINS

BEGIN CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 157.9 FT.
RT CHNL BTM WDTH = 157.9 FT.

```
   100.900      11.22   1057.82   1054.05   1051.94   1059.41      1.59       .13
.20   1063.60
   41000.0        .0   41000.0        .0        .0    4049.2        .0     745.2
77.6   1063.60
       .22       .00     10.13       .00      .000      .035      .000      .000
1046.60    313.93
   .002437       50.       50.       50.         3        19         0       .00
372.14    686.07
```

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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
```

*SECNO 103.000

```
   103.000      11.73   1058.73   1054.27   1052.84   1060.06      1.32       .56
.08   1065.40
```

```
    41000.0          .0   41000.0          .0          .0     4439.3          .0      770.5
79.9   1065.40
        .22         .00      9.24         .00       .000       .035        .000       .000
1047.00    305.34
    .001934       260.      260.       260.          2         14           0        .00
396.00    701.33


 CCHV=     .100 CEHV=     .300
 *SECNO 106.000

 3301 HV CHANGED MORE THAN HVINS

    106.000      12.13   1059.73   1053.89   1053.59   1060.54        .81        .43
.05   1066.40
    41000.0          .0   41000.0          .0          .0     5690.7          .0      805.4
83.0   1066.40
        .23         .00      7.20         .00       .000       .035        .000       .000
1047.60    259.73
    .001110       300.      300.       300.          2         11           0        .00
487.20    746.93


 *SECNO 109.000
              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    109.000      12.06   1060.26   1053.94   1054.03   1060.85        .59        .28
.02   1066.90
    41000.0          .0   41000.0          .0          .0     6667.9          .0      847.9
86.6   1066.90
        .25         .00      6.15         .00       .000       .035        .000       .000
1048.20    214.58
    .000820       300.      300.       300.          2         11           0        .00
577.47    792.06


 *SECNO 110.000
    110.000      13.33   1060.33   1054.21   1054.12   1060.94        .61        .08
.01   1066.90
    41000.0          .0   41000.0          .0          .0     6536.6          .0      863.1
88.0   1066.90
        .25         .00      6.27         .00       .000       .035        .000       .000
1047.00    214.59
    .000876       100.      100.       100.          2         14           0        .00
577.34    791.93


 *SECNO 113.000
    113.000      11.58   1060.58   1054.67   1054.48   1061.21        .63        .27
.01   1067.20
    41000.0          .0   41000.0          .0          .0     6431.3          .0      907.8
91.9   1067.20
        .27         .00      6.38         .00       .000       .035        .000       .000
1049.00    215.04
    .000923       300.      300.       300.          0         14           0        .00
576.54    791.58
```

```
     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 116.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    116.000     11.23   1060.83   1055.54   1054.86   1061.55       .72       .31
.03   1067.30
    41000.0        .0   41000.0        .0        .0    6038.9        .0     950.7
95.9   1067.30
        .28       .00      6.79       .00      .000      .035      .000      .000
1049.60    215.22
    .001148      240.      300.      340.         1         8         0       .00
576.01    791.24


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


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

              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    120.000     10.34   1060.74   1059.08   1055.35   1062.76      2.02       .82
.39   1067.10
    41000.0        .0   41000.0        .0        .0    3597.4        .0     994.9
100.6   1067.10
        .29       .00     11.40       .00      .000      .035      .000      .000
1050.40    286.00
    .004695      327.      400.      497.         2        15         0       .00
454.35    740.35


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.81
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    123.000      11.69   1062.69   1057.56   1057.27   1063.67       .99       .81
.10   1068.80
    41000.0         .0   41000.0        .0        .0    5141.6        .0    1029.2
104.2   1068.80
        .30        .00      7.97       .00      .000      .035      .000      .000
1051.00    284.42
    .001431       342.      342.      342.         2        14         0       .00
457.28    741.69


 *SECNO 127.000
    127.000      11.45   1063.25   1058.37   1057.78   1064.28      1.03       .59
.01   1068.80
    41000.0         .0   41000.0        .0        .0    5040.3        .0    1076.0
108.4   1068.80
        .31        .00      8.13       .00      .000      .035      .000      .000
1051.80    284.10
    .001529       400.      400.      400.         3        11         0       .00
457.35    741.45


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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 131.000
    131.000      13.85   1063.85   1059.33   1058.39   1064.95      1.11       .65
.02   1069.40
    41000.0         .0   41000.0        .0        .0    4858.3        .0    1121.4
112.6   1069.40
        .33        .00      8.44       .00      .000      .035      .000      .000
1050.00    284.31
    .001732       400.      400.      400.         0        15         0       .00
456.93    741.24


 *SECNO 135.000
    135.000      11.10   1064.50   1060.89   1059.19   1065.80      1.30       .79
.06   1069.60
    41000.0         .0   41000.0        .0        .0    4475.0        .0    1164.3
116.8   1069.90
        .34        .00      9.16       .00      .000      .035      .000      .000
1053.40    283.89
    .002293       400.      400.      400.         0        11         0       .00
457.07    740.96
```

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 *SECNO 138.000
    138.000     11.28   1065.28   1061.09   1060.06   1066.44      1.16       .62
.01   1069.60
    41000.0        .0   41000.0        .0        .0    4734.2        .0    1196.0
120.0   1069.60
        .35       .00      8.66       .00      .000      .035      .000      .000
1054.00    283.04
    .001900      300.      300.      300.         2        14         0       .00
458.24    741.28


 *SECNO 141.000
    141.000     11.20   1065.80   1062.26   1060.64   1067.12      1.32       .63
.05   1071.00
    41000.0        .0   41000.0        .0        .0    4444.1        .0    1227.6
123.1   1071.00
        .36       .00      9.23       .00      .000      .035      .000      .000
1054.60    283.97
    .002349      300.      300.      300.         2        14         0       .00
457.23    741.20


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000     11.47   1066.87   1061.98   1061.60   1067.90      1.03       .75
.03   1072.00
    41000.0        .0   41000.0        .0        .0    5039.7        .0    1271.2
127.3   1077.00
        .37       .00      8.14       .00      .000      .035      .000      .000
1055.40    283.65
    .001524      400.      400.      400.         2        11         0       .00
455.16    738.82


 *SECNO 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000     11.37   1067.17   1062.37   1061.85   1068.21      1.04       .31
.00   1072.40
    41000.0        .0   41000.0        .0        .0    5007.8        .0    1294.2
129.4   1072.40
        .38       .00      8.19       .00      .000      .035      .000      .000
1055.80    283.86
    .001563      200.      200.      200.         2        11         0       .00
457.51    741.37


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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


 *SECNO 150.000
                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 210 FT.
    150.000     11.35   1067.75   1062.67   1062.30   1068.66       .92       .44
.01   1073.00
    41000.0        .0   41000.0        .0        .0    5338.4        .0    1329.8
132.7   1073.00
        .39       .00      7.68       .00      .000      .035      .000      .000
1056.40    233.90
    .001372      350.      300.      260.         2        11         0       .00
487.44    721.35


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 T1      NEW RIVER: MODIFICATIONS TO GLENDALE AVENUE BRIDGE (FCDMC 8/5/02 CWR)
 T2      NEW RIVER: MODIFIED TO REFLECT NORMAL BRIDGE MODELING
 T3      500-YEAR EVENT         MODNRO2B

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL
FQ

        0         5                                                                  1043.78

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM
ITRACE

       4         0        -1                                       -1
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
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*PROF 4

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 39.000

3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=      840.199
             BEGIN ANALYSIS NEAR THE BETHANY HOME ROAD ALIGNMENT.
             WATER SURFACE UTILIZED FOR THIS ANALYSIS IS BASED ON
             EXISTING CONDTIONS OUTPUT DATA WHICH INCLUDES THE
             GLENDALE MUNICIPAL AIRPORT CHANNELIZATION AND SIDEBANK
             PROTECTION.  CROSS SECTION 39.00 ASSUMES EXISTING CONDITIONS
             BOTTOM CONTOURS WITH EXISTING LEFT BANK NATURAL SIDESLOPE.
    39.000     15.78   1043.78   1037.45   1036.06   1044.58       .80       .00
.00   1042.50
   75000.0        .0   75000.0        .0        .1   10464.0        .1        .0
.0   1043.20
       .00       .21      7.17       .01      .045      .035      .045      .000
1028.00   9585.90
   .000996      270.      220.      200.         0        13         0       .00
840.20  10426.10


CCHV=     .200 CEHV=     .400
*SECNO 44.000
             BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
             LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
             RT CHNL BTM WDTH PER GLENDALE AIRPORT "AS BUILTS" = 362+OR- FEET
    44.000     13.54   1044.29   1038.94   1036.53   1045.16       .87       .56
.03   1044.90
   75000.0        .0   75000.0        .0        .0   10039.3        .0     117.7
10.0   1045.10
       .02       .00      7.47       .00      .000      .035      .000      .000
1030.75   9487.03
   .001245      500.      500.      500.         1        11         0       .00
896.26  10383.29


*SECNO 47.000

3301 HV CHANGED MORE THAN HVINS

    47.000     13.46   1044.46   1040.63   1037.11   1045.86      1.40       .49
.21   1045.00
   75000.0        .0   75000.0        .0        .0    7908.6        .0     179.5
15.7   1045.00
       .03       .00      9.48       .00      .000      .035      .000      .000
1031.00    597.07
   .002215      300.      300.      300.         2        19         0       .00
759.39   1356.46


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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 51.500

 3301 HV CHANGED MORE THAN HVINS

                LT CHNL BTM WDTH = 225 FT
     51.500      13.67    1045.07    1042.61    1038.44    1047.62       2.54       1.30
.46    1045.70
    75000.0         .0    75000.0         .0         .0     5859.9         .0      250.6
22.4    1045.70
        .04        .00      12.80        .00       .000       .035       .000       .000
1031.40     762.05
    .003919       450.       450.       450.          2         15          0        .00
547.03    1309.08


 *SECNO 55.000
                STA. 53+12.97 IS P.O.C. OF CURVE TO THE RIGHT
     55.000      14.40    1046.30    1043.47    1039.30    1049.02       2.72       1.33
.07    1047.00
    75000.0         .0    75000.0         .0         .0     5667.8         .0      296.9
26.5    1047.00
        .04        .00      13.23        .00       .000       .035       .000       .000
1031.90     261.39
    .003689       350.       350.       350.          2         15          0        .00
479.21     740.60


 *SECNO 58.120
                END GLENDALE MUNICIPAL AIRPORT GABION MATTRESS SIDESLOPE
                ALONG NEW RIVER RT BANK, GABION MATRESS TURNS CORNER AND
                CONTINUES NORTHWESTERLY A FEW HUNDRED FEET ALONG THE EAST
                BOUNDARY OF GLENDALE MUNICIPAL AIRPORT.
                MATCH EXISTING GABION MATTRESS-GROUT GABIONS AND CONSTRUCT
                TRANSITION FROM 2:1 TO 1:1 SIDESLOPE IN 75 FT TAPER.
     58.120      16.44    1048.54    1044.28    1040.41    1051.15       2.61       2.11
.02    1049.10
    75000.0         .0    75000.0         .0         .0     5785.9         .0      383.9
33.2    1049.00
        .06        .00      12.96        .00       .000       .035       .000       .000
1032.10     758.56
    .002785       662.       662.       662.          2         15          0        .00
403.99    1162.54


 *SECNO 62.000
```

```
                STA. 60+21.80 IS P.O.T.
     62.000      17.14   1050.04   1045.26   1040.95   1052.23      2.20      1.00
.08   1050.40
    75000.0         .0   75000.0        .0        .0    6301.5        .0     437.8
37.0   1050.40
        .07        .00     11.90       .00      .000      .035      .000      .000
1032.90    257.33
    .002396       388.      388.      388.         2        15         0       .00
445.81    703.14


 *SECNO 66.000
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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

               LT CHNL BTM WDTH = 225 FT.
               RT CHNL BTM WDTH = 230 FT.
     66.000      17.61   1051.61   1044.67   1041.69   1053.10      1.49       .73
.14   1051.80
    75000.0         .0   75000.0        .0        .0    7651.8        .0     501.8
41.3   1051.80
        .08        .00      9.80       .00      .000      .035      .000      .000
1034.00    257.57
    .001420       400.      400.      400.         2        14         0       .00
490.04    747.61


 *SECNO 71.000
 3280 CROSS SECTION      71.00 EXTENDED        .80 FEET

               GRAND DRAIN INLET PER A.D.O.T. PLANS
     71.000      17.30   1052.30   1045.71   1042.23   1053.86      1.56       .73
.03   1051.50
    75000.0         .0   75000.0        .0        .0    7492.5        .0     588.8
46.9   1051.50
        .09        .00     10.01       .00      .000      .035      .000      .000
1035.00    258.50
    .001511       500.      500.      500.         2        14         0       .00
487.60    746.10


 *SECNO 75.000
```

```
     75.000      16.40   1052.90   1046.43   1042.77   1054.48      1.58       .61
.01   1053.10
    75000.0         .0   75000.0        .0        .0    7425.3        .0     657.2
51.4   1053.10
        .10        .00     10.10       .00      .000      .035      .000      .000
1036.50    258.82
    .001547       400.      400.      400.         0        11         0       .00
487.57    746.39


 *SECNO 78.000
              GRAND DRAIN LOW FLOW OUTLET PIPE AT LT SIDESLOPE
     78.000      15.95   1053.35   1047.10   1043.20   1054.97      1.63       .47
.02   1053.50
    75000.0         .0   75000.0        .0        .0    7326.0        .0     708.0
54.8   1053.50
        .11        .00     10.24       .00      .000      .035      .000      .000
1037.40    259.20
    .001612       300.      300.      300.         1        11         0       .00
486.75    745.95


 *SECNO 81.000
     81.000      15.82   1053.82   1047.65   1043.69   1055.47      1.66       .49
.01   1054.00
    75000.0         .0   75000.0        .0        .0    7262.5        .0     758.3
58.1   1054.00
        .12        .00     10.33       .00      .000      .035      .000      .000
1038.00    259.35
    .001653       300.      300.      300.         0        14         0       .00
485.48    744.83


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    12AUG02       16:09:29
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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 84.000
     84.000      17.29   1054.29   1048.37   1044.21   1056.01      1.71       .51
.02   1054.50
    75000.0         .0   75000.0        .0        .0    7142.0        .0     807.9
61.5   1054.50
        .13        .00     10.50       .00      .000      .035      .000      .000
1037.00    259.90
    .001747       300.      300.      300.         1        19         0       .00
485.31    745.20
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 *SECNO 87.000
     87.000     14.98   1054.78   1049.34   1044.82   1056.60      1.82       .55
.04   1055.00
    75000.0        .0   75000.0        .0        .0    6924.4        .0     856.3
64.8   1055.00
        .14       .00     10.83       .00      .000      .035      .000      .000
1039.80    260.24
    .001928      300.      300.      300.         2        11         0       .00
484.74    744.98


 *SECNO 89.000
     89.000     14.72   1055.12   1050.08   1045.31   1057.05      1.93       .40
.04   1055.40
    75000.0        .0   75000.0        .0        .0    6729.3        .0     887.7
67.0   1055.40
        .14       .00     11.15       .00      .000      .035      .000      .000
1040.40    260.56
    .002119      200.      200.      200.         2        14         0       .00
484.16    744.72


 *SECNO 94.000
              STA. 91+49.71 IS P.O.C. OF CURVE TO THE LEFT
     94.000     14.37   1056.17   1051.38   1046.74   1058.17      2.00      1.09
.03   1056.40
    75000.0        .0   75000.0        .0        .0    6607.2        .0     964.2
72.6   1056.40
        .15       .00     11.35       .00      .000      .035      .000      .000
1041.80    260.87
    .002248      500.      500.      500.         2        14         0       .00
483.50    744.37


 CCHV=     .300 CEHV=     .500
 *SECNO 97.000
     97.000     14.22   1056.82   1052.39   1047.56   1058.92      2.10       .70
.05   1057.10
    75000.0        .0   75000.0        .0        .0    6444.1        .0    1009.1
75.9   1057.10
        .16       .00     11.64       .00      .000      .035      .000      .000
1042.60    261.06
    .002445      300.      300.      300.         0        14         0       .00
483.16    744.22


 *SECNO 99.540

 3301 HV CHANGED MORE THAN HVINS

              STA. 99+45.00 IS P.O.T.
              LT CHNL BTM WDTH = 157.9 FT.
1
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                RT CHNL BTM WDTH = 157.9 FT.
     99.540      13.57   1056.77   1054.42   1048.29   1060.65      3.87        .84
.88   1063.50
    75000.0         .0   75000.0        .0        .0    4749.0        .0     1041.8
78.3   1063.50
        .16        .00     15.79       .00      .000      .035      .000      .000
1043.20    325.12
    .004718       254.      254.      254.         2        15         0       .00
349.77    674.88


 CCHV=      .300 CEHV=      .500
 *SECNO 99.600

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=    0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1063.80 ELREA=      1063.60

               DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
     99.600      11.92   1058.12   1058.12   1049.99   1064.15      6.02        .03
1.08   1063.80
    75000.0         .0   75000.0        .0        .0    3808.1        .0     1042.4
78.4   1063.60
        .16        .00     19.69       .00      .000      .025      .000      .000
1046.20    325.12
    .007054         6.        6.        6.         0        16         0       .00
319.58    674.88


 *SECNO 100.400

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


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


 3370 NORMAL BRIDGE, NRD=    0 MIN ELTRD=  1065.90 MAX ELLC=  1063.40


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=      1065.90

              GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
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    100.400      15.49   1061.69   1058.12   1051.57   1065.26      3.57       .38
.74   1063.60
    75000.0         .0   75000.0        .0        .0    4945.4        .0    1050.4
79.0   1063.60
        .17        .00     15.17       .00      .000      .025      .000      .000
1046.20    325.11
    .003362       80.       80.       80.        14        16         0       .00
319.73    674.89


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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 100.900

 3301 HV CHANGED MORE THAN HVINS

              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 157.9 FT.
              RT CHNL BTM WDTH = 157.9 FT.
    100.900      16.91   1063.51   1057.73   1051.94   1065.78      2.28       .13
.39   1063.60
    75000.0         .0   75000.0        .0        .0    6195.6        .0    1056.8
79.4   1063.60
        .17        .00     12.11       .00      .000      .035      .000      .000
1046.60    308.25
    .002088       50.       50.       50.         3        15         0       .00
383.50    691.75


 *SECNO 103.000
    103.000      17.47   1064.47   1057.82   1052.84   1066.38      1.91       .49
.11   1065.40
    75000.0         .0   75000.0        .0        .0    6760.6        .0    1095.5
81.8   1065.40
        .17        .00     11.09       .00      .000      .035      .000      .000
1047.00    293.86
    .001704      260.      260.      260.         2        14         0       .00
413.21    707.07


 CCHV=     .100 CEHV=     .300
 *SECNO 106.000

 3301 HV CHANGED MORE THAN HVINS
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    106.000      18.06   1065.66   1056.98   1053.59   1066.83      1.17       .38
.07   1066.40
    75000.0        .0   75000.0        .0        .0    8632.5        .0    1148.5
84.9   1066.40
        .18       .00      8.69       .00      .000      .035      .000      .000
1047.60    247.87
    .000980      300.      300.      300.         2        11         0       .00
504.99    752.86


 *SECNO 109.000
              END CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 280 FT.
              RT CHNL BTM WDTH = 280 FT.
    109.000      18.07   1066.27   1056.66   1054.03   1067.11       .84       .25
.03   1066.90
    75000.0        .0   75000.0        .0        .0   10195.9        .0    1213.3
88.7   1066.90
        .19       .00      7.36       .00      .000      .035      .000      .000
1048.20    202.55
    .000700      300.      300.      300.         2        14         0       .00
595.52    798.07


 *SECNO 110.000
    110.000      19.33   1066.33   1056.96   1054.12   1067.19       .86       .07
.01   1066.90
    75000.0        .0   75000.0        .0        .0   10056.1        .0    1236.6
90.1   1066.90
        .20       .00      7.46       .00      .000      .035      .000      .000
1047.00    202.46
    .000732      100.      100.      100.         2        11         0       .00
595.47    797.93


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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 113.000
    113.000      17.54   1066.54   1057.40   1054.48   1067.42       .89       .22
.01   1067.20
    75000.0        .0   75000.0        .0        .0    9922.4        .0    1305.4
94.2   1067.20
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        .21        .00       7.56        .00       .000       .035       .000       .000
1049.00    203.11
    .000764      300.       300.       300.          0         14          0        .00
594.43    797.54


 *SECNO 116.000
                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 280 FT.
                RT CHNL BTM WDTH = 280 FT.
    116.000      17.13   1066.73   1058.35   1054.86   1067.70        .97        .25
.03   1067.30
    75000.0         .0   75000.0         .0         .0    9482.0         .0     1372.2
98.3   1067.30
        .22        .00       7.91        .00       .000       .035       .000       .000
1049.60    203.45
    .000896      240.       300.       340.          2          8          0        .00
593.68    797.13


 *SECNO 120.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 210 FT.
                RT CHNL BTM WDTH = 230 FT.
    120.000      16.00   1066.40   1062.26   1055.35   1068.66       2.26        .58
.39   1067.10
    75000.0         .0   75000.0         .0         .0    6214.2         .0     1444.3
103.2   1067.10
        .23        .00      12.07        .00       .000       .035       .000       .000
1050.40    274.69
    .002692      327.       400.       497.          2         19          0        .00
471.31    746.00


 *SECNO 123.000

 3301 HV CHANGED MORE THAN HVINS

    123.000      16.85   1067.85   1060.78   1057.27   1069.38       1.54        .65
.07   1068.80
    75000.0         .0   75000.0         .0         .0    7540.9         .0     1498.3
106.9   1068.80
        .24        .00       9.95        .00       .000       .035       .000       .000
1051.00    274.10
    .001409      342.       342.       342.          2         14          0        .00
472.76    746.85


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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 127.000
    127.000     16.59   1068.39   1061.60   1057.78   1069.97      1.58       .58
.01   1068.80
    75000.0        .0   75000.0        .0        .0    7428.8        .0    1567.0
111.2   1068.80
        .25       .00     10.10       .00      .000      .035      .000      .000
1051.80    273.83
    .001480      400.      400.      400.         2        11         0       .00
472.76    746.59


 *SECNO 131.000
    131.000     18.95   1068.95   1062.56   1058.39   1070.62      1.67       .62
.03   1069.40
    75000.0        .0   75000.0        .0        .0    7235.5        .0    1634.3
115.5   1069.40
        .26       .00     10.37       .00      .000      .035      .000      .000
1050.00    274.08
    .001619      400.      400.      400.         1        15         0       .00
472.28    746.36


 *SECNO 135.000
    135.000     16.11   1069.51   1064.10   1059.19   1071.40      1.89       .72
.07   1069.60
    75000.0        .0   75000.0        .0        .0    6805.7        .0    1698.8
119.9   1069.90
        .27       .00     11.02       .00      .000      .035      .000      .000
1053.40    273.67
    .001997      400.      400.      400.         2        11         0       .00
472.24    745.92


 *SECNO 138.000
 3280 CROSS SECTION    138.00 EXTENDED       .61 FEET

    138.000     16.21   1070.21   1064.29   1060.06   1071.98      1.77       .57
.01   1069.60
    75000.0        .0   75000.0        .0        .0    7029.9        .0    1746.4
123.1   1069.60
        .28       .00     10.67       .00      .000      .035      .000      .000
1054.00    274.40
    .001785      300.      300.      300.         2        14         0       .00
471.20    745.60
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 *SECNO 141.000
    141.000      16.07   1070.67   1065.46   1060.64   1072.61      1.94       .58
.05   1071.00
    75000.0        .0   75000.0        .0        .0    6704.7        .0    1793.7
126.4   1071.00
        .29       .00     11.19       .00      .000      .035      .000      .000
1054.60    274.26
    .002097      300.      300.      300.         2        14         0       .00
471.80    746.07


 *SECNO 145.000
              A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
    145.000      16.31   1071.71   1065.17   1061.60   1073.36      1.65       .72
.03   1072.00
    75000.0        .0   75000.0        .0        .0    7275.2        .0    1857.9
130.7   1077.00
        .30       .00     10.31       .00      .000      .035      .000      .000
1055.40    273.97
    .001573      400.      400.      400.         2        14         0       .00
468.56    742.54


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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 147.000
              BEGIN CHANNEL BOTTOM TRANSITION
              LT CHNL BTM WDTH = 210 FT.
              RT CHNL BTM WDTH = 230 FT.
    147.000      16.22   1072.02   1065.56   1061.85   1073.68      1.66       .32
.00   1072.40
    75000.0        .0   75000.0        .0        .0    7263.4        .0    1891.3
132.8   1072.40
        .30       .00     10.33       .00      .000      .035      .000      .000
1055.80    274.15
    .001591      200.      200.      200.         2        14         0       .00
472.07    746.22


 *SECNO 150.000
              CHANNEL BOTTOM TAPERS
              LT CHNL BTM WDTH = 260 FT.
              RT CHNL BTM WDTH = 210 FT.
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    150.000      16.31   1072.71   1065.77   1062.30   1074.14      1.44       .44
.02   1073.00
    75000.0        .0   75000.0        .0        .0    7791.7        .0    1943.1
136.2   1073.00
        .31       .00      9.63       .00      .000      .035      .000      .000
1056.40    223.99
    .001366      350.      300.      260.         2        11         0       .00
502.32    726.31


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THIS

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RUN EXECUTED 12AUG02    16:09:30
 ************************************
  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

10-YEAR EVENT

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	39.000	13500.00	1036.06	3.33	8.06	818.79	9592.94	10411.72
	39.000	31000.00	1039.39	4.56	11.39	829.03	9589.35	10418.38
	39.000	41000.00	1040.66	5.22	12.66	832.94	9587.98	10420.92
	39.000	75000.00	1043.78	7.17	15.78	840.20	9585.90	10426.10
*	44.000	13500.00	1036.53	4.20	5.78	862.92	9502.54	10365.46
	44.000	31000.00	1039.78	5.13	9.03	877.03	9496.05	10373.08
	44.000	41000.00	1041.07	5.71	10.32	882.65	9493.46	10376.11
	44.000	75000.00	1044.29	7.47	13.54	896.26	9487.03	10383.29
	47.000	13500.00	1037.11	5.54	6.11	727.82	611.78	1339.60
	47.000	31000.00	1040.06	6.74	9.06	740.69	605.90	1346.59
	47.000	41000.00	1041.31	7.41	10.31	746.21	603.38	1349.59
	47.000	75000.00	1044.46	9.48	13.46	759.39	597.07	1356.46
	51.500	13500.00	1038.44	5.88	7.04	527.12	775.32	1302.44
	51.500	31000.00	1040.99	8.49	9.59	534.77	770.22	1304.99
	51.500	41000.00	1042.14	9.61	10.73	538.21	767.93	1306.14
	51.500	75000.00	1045.07	12.80	13.67	547.03	762.05	1309.08

55.000	13500.00	1039.30	5.66	7.40	458.29	275.30	733.60
55.000	31000.00	1041.99	8.54	10.09	466.34	269.95	736.29
55.000	41000.00	1043.19	9.78	11.29	469.92	267.57	737.49
55.000	75000.00	1046.30	13.23	14.40	479.21	261.39	740.60
58.120	13500.00	1040.41	5.26	8.31	387.72	766.69	1154.41
58.120	31000.00	1043.56	8.16	11.46	394.03	763.54	1157.56
58.120	41000.00	1044.94	9.44	12.84	396.78	762.16	1158.94
58.120	75000.00	1048.54	12.96	16.44	403.99	758.56	1162.54
62.000	13500.00	1040.95	5.69	8.05	418.55	275.50	694.05
62.000	31000.00	1044.33	8.15	11.43	428.68	268.75	697.43
62.000	41000.00	1045.85	9.19	12.95	433.26	265.70	698.95
62.000	75000.00	1050.04	11.90	17.14	445.81	257.33	703.14

SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
66.000	13500.00	1041.69	4.60	7.69	460.27	277.42	737.69
66.000	31000.00	1045.35	6.68	11.35	471.26	270.09	741.35
66.000	41000.00	1047.01	7.55	13.01	476.25	266.77	743.02
66.000	75000.00	1051.61	9.80	17.61	490.04	257.57	747.61
71.000	13500.00	1042.23	4.98	7.23	459.79	277.04	736.83
71.000	31000.00	1045.96	6.97	10.96	470.98	269.58	740.56
71.000	41000.00	1047.65	7.82	12.65	476.04	266.20	742.25
71.000	75000.00	1052.30	10.01	17.30	487.60	258.50	746.10
75.000	13500.00	1042.77	5.11	6.27	457.20	279.07	736.27
75.000	31000.00	1046.51	7.08	10.01	468.44	271.58	740.01
75.000	41000.00	1048.21	7.92	11.71	473.53	268.18	741.71
75.000	75000.00	1052.90	10.10	16.40	487.57	258.82	746.39
78.000	13500.00	1043.20	5.32	5.80	456.29	279.50	735.80
78.000	31000.00	1046.94	7.27	9.54	467.51	272.03	739.54
78.000	41000.00	1048.64	8.09	11.24	472.63	268.61	741.24
78.000	75000.00	1053.35	10.24	15.95	486.75	259.20	745.95
81.000	13500.00	1043.69	5.42	5.69	456.35	278.98	735.33
81.000	31000.00	1047.41	7.37	9.41	467.02	271.79	738.81
81.000	41000.00	1049.11	8.20	11.11	471.90	268.50	740.40
81.000	75000.00	1053.82	10.33	15.82	485.48	259.35	744.83
84.000	13500.00	1044.21	5.63	7.21	455.10	280.08	735.18
84.000	31000.00	1047.89	7.58	10.89	466.10	272.73	738.83
84.000	41000.00	1049.59	8.39	12.59	471.19	269.33	740.52
84.000	75000.00	1054.29	10.50	17.29	485.31	259.90	745.20
87.000	13500.00	1044.82	6.01	5.02	454.85	280.17	735.02
87.000	31000.00	1048.42	7.95	8.62	465.64	272.98	738.61
87.000	41000.00	1050.09	8.75	10.29	470.69	269.61	740.30
87.000	75000.00	1054.78	10.83	14.98	484.74	260.24	744.98

89.000	13500.00	1045.31	6.36	4.91	454.72	280.19	734.91
89.000	31000.00	1048.81	8.30	8.41	465.22	273.19	738.41
89.000	41000.00	1050.47	9.09	10.07	470.22	269.86	740.07
89.000	75000.00	1055.12	11.15	14.72	484.16	260.56	744.72
94.000	13500.00	1046.74	6.19	4.94	455.21	279.73	734.94
94.000	31000.00	1050.03	8.38	8.23	465.10	273.14	738.23
94.000	41000.00	1051.62	9.24	9.82	469.85	269.96	739.82
94.000	75000.00	1056.17	11.35	14.37	483.50	260.87	744.37
97.000	13500.00	1047.56	6.42	4.96	455.41	279.56	734.97
97.000	31000.00	1050.79	8.66	8.19	465.04	273.14	738.18
97.000	41000.00	1052.34	9.52	9.74	469.69	270.04	739.73
97.000	75000.00	1056.82	11.64	14.22	483.16	261.06	744.22

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	99.540	13500.00	1048.29	7.60	5.09	349.73	325.14	674.86
	99.540	31000.00	1051.31	10.92	8.11	349.74	325.13	674.87
	99.540	41000.00	1052.73	12.30	9.53	349.75	325.13	674.87
	99.540	75000.00	1056.77	15.79	13.57	349.77	325.12	674.88
*	99.600	13500.00	1049.99	11.17	3.79	319.25	325.14	674.86
*	99.600	31000.00	1052.83	14.65	6.63	319.37	325.13	674.87
*	99.600	41000.00	1054.17	16.11	7.97	319.42	325.13	674.87
*	99.600	75000.00	1058.12	19.69	11.92	319.58	325.12	674.88
*	100.400	13500.00	1051.57	7.88	5.37	319.32	325.13	674.87
*	100.400	31000.00	1055.10	10.91	8.90	319.46	325.12	674.88
*	100.400	41000.00	1056.80	12.10	10.60	319.53	325.12	674.88
*	100.400	75000.00	1061.69	15.17	15.49	319.73	325.11	674.89
	100.900	13500.00	1051.94	7.12	5.34	360.38	319.81	680.19
	100.900	31000.00	1055.89	9.30	9.29	368.28	315.86	684.14
	100.900	41000.00	1057.82	10.13	11.22	372.14	313.93	686.07
	100.900	75000.00	1063.51	12.11	16.91	383.50	308.25	691.75
	103.000	13500.00	1052.84	6.25	5.84	378.33	317.12	695.44
	103.000	31000.00	1056.79	8.43	9.79	390.19	309.21	699.40
	103.000	41000.00	1058.73	9.24	11.73	396.00	305.34	701.33
	103.000	75000.00	1064.47	11.09	17.47	413.21	293.86	707.07
	106.000	13500.00	1053.59	4.90	5.99	468.76	272.03	740.79
	106.000	31000.00	1057.72	6.57	10.12	481.17	263.76	744.92
	106.000	41000.00	1059.73	7.20	12.13	487.20	259.73	746.93
	106.000	75000.00	1065.66	8.69	18.06	504.99	247.87	752.86
	109.000	13500.00	1054.03	4.32	5.83	558.78	227.05	785.83
	109.000	31000.00	1058.22	5.65	10.02	571.32	218.68	790.01
	109.000	41000.00	1060.26	6.15	12.06	577.47	214.58	792.06
	109.000	75000.00	1066.27	7.36	18.07	595.52	202.55	798.07

110.000	13500.00	1054.12	4.47	7.12	558.62	227.11	785.73
110.000	31000.00	1058.29	5.77	11.29	571.19	218.70	789.89
110.000	41000.00	1060.33	6.27	13.33	577.34	214.59	791.93
110.000	75000.00	1066.33	7.46	19.33	595.47	202.46	797.93
113.000	13500.00	1054.48	4.55	5.48	558.24	227.24	785.48
113.000	31000.00	1058.57	5.88	9.57	570.50	219.07	789.57
113.000	41000.00	1060.58	6.38	11.58	576.54	215.04	791.58
113.000	75000.00	1066.54	7.56	17.54	594.43	203.11	797.54
116.000	13500.00	1054.86	5.03	5.26	538.53	227.18	785.26
116.000	31000.00	1058.85	6.32	9.25	570.08	219.18	789.26
116.000	41000.00	1060.83	6.79	11.23	576.01	215.22	791.24
116.000	75000.00	1066.73	7.91	17.13	593.68	203.45	797.13

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
*	120.000	13500.00	1055.35	9.43	4.95	307.21	296.80	734.95
*	120.000	31000.00	1058.90	11.20	8.50	448.83	289.68	738.51
*	120.000	41000.00	1060.74	11.40	10.34	454.35	286.00	740.35
*	120.000	75000.00	1066.40	12.07	16.00	471.31	274.69	746.00
*	123.000	13500.00	1057.27	4.99	6.27	440.99	295.27	736.26
*	123.000	31000.00	1061.06	7.04	10.06	452.39	287.67	740.06
*	123.000	41000.00	1062.69	7.97	11.69	457.28	284.42	741.69
	123.000	75000.00	1067.85	9.95	16.85	472.76	274.10	746.85
	127.000	13500.00	1057.78	5.23	5.98	440.91	295.06	735.97
	127.000	31000.00	1061.60	7.23	9.80	452.37	287.42	739.79
	127.000	41000.00	1063.25	8.13	11.45	457.35	284.10	741.45
	127.000	75000.00	1068.39	10.10	16.59	472.76	273.83	746.59
	131.000	13500.00	1058.39	5.60	8.39	440.57	295.22	735.79
	131.000	31000.00	1062.18	7.56	12.18	451.92	287.66	739.57
	131.000	41000.00	1063.85	8.44	13.85	456.93	284.31	741.24
	131.000	75000.00	1068.95	10.37	18.95	472.28	274.08	746.36
	135.000	13500.00	1059.19	6.45	5.79	441.02	294.70	735.72
	135.000	31000.00	1062.85	8.32	9.45	452.09	287.25	739.34
	135.000	41000.00	1064.50	9.16	11.10	457.07	283.89	740.96
	135.000	75000.00	1069.51	11.02	16.11	472.24	273.67	745.92
	138.000	13500.00	1060.06	5.66	6.06	442.59	293.47	736.06
	138.000	31000.00	1063.63	7.78	9.63	453.30	286.33	739.63
	138.000	41000.00	1065.28	8.66	11.28	458.24	283.04	741.28
	138.000	75000.00	1070.21	10.67	16.21	471.20	274.40	745.60
	141.000	13500.00	1060.64	6.32	6.04	419.48	294.25	736.04
	141.000	31000.00	1064.17	8.37	9.57	452.36	287.22	739.57
	141.000	41000.00	1065.80	9.23	11.20	457.23	283.97	741.20
	141.000	75000.00	1070.67	11.19	16.07	471.80	274.26	746.07

*	145.000	13500.00	1061.60	5.04	6.20	440.57	294.20	734.76
	145.000	31000.00	1065.22	7.22	9.82	450.58	286.96	737.55
	145.000	41000.00	1066.87	8.14	11.47	455.16	283.65	738.82
	145.000	75000.00	1071.71	10.31	16.31	468.56	273.97	742.54
	147.000	13500.00	1061.85	5.16	6.05	441.57	294.49	736.06
	147.000	31000.00	1065.51	7.29	9.71	452.51	287.19	739.70
	147.000	41000.00	1067.17	8.19	11.37	457.51	283.86	741.37
	147.000	75000.00	1072.02	10.33	16.22	472.07	274.15	746.22
	150.000	13500.00	1062.30	4.95	5.90	471.09	244.81	715.90
	150.000	31000.00	1066.04	6.88	9.64	482.31	237.33	719.64
	150.000	41000.00	1067.75	7.68	11.35	487.44	233.90	721.35
	150.000	75000.00	1072.71	9.63	16.31	502.32	223.99	726.31

SUMMARY OF ERRORS AND SPECIAL NOTES

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WARNING SECNO=     44.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     99.600  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     99.600  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     99.600  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     99.600  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     99.600  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     99.600  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     99.600  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     99.600  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=    100.400  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    100.400  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    100.400  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    100.400  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    120.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    120.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    120.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    123.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    123.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    123.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    145.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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