LOMR Submittal Package

for the

NEW RIVER CHANNELIZATION

Bethany Home Road to Olive Avenue
FCD Contract No. 91-05

Prepared for:

FLOOD CONTROL DISTRICT
of
MARICOPA COUNTY

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Phoenix, AZ 85009

June 18, 1992

Prepared by:

Coe & Van Loo Consultants, Inc.
4550 North 12th Street
Phoenix, Arizona 85014
(602) 264-6831

CVL

COE & VAN LOO

Land Planning
Civil Engineering
Water Resources Engineering
Transportation Engineering
Environmental Sciences
Computer Services
Landscape Architecture
Surveying

Founded in 1958 by
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June 18, 1992

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009

Attn: Mr. R.W. Shobe, P.E.

Re: CLOMR Submittal Package
New River Channelization
FCD Contract No. 91-05

Dear R.W.:

In fulfillment of Section 2.13 - FEMA Coordination of the Contract Scope of Work, please find enclosed the HEC-2 Input/Output data files, design plans depicting the "as-built" 100-year water surface elevations, and a floppy disk drive with digitial data for the above.

Please note that the above information is provided to assist the District in preparation of a submittal package and is not intended to be adequate to meet all of FEMA's requirements. If you have any questions, please feel free to contact me.

Sincerely,

COE & VAN LOO
Consultants, Inc.

Paul W. R. Hoskin, P.E.
Vice President

PWRH:rbb
Enclosures

Q:\1090\06\ADMIN\003LT.WP5

LOMR Submittal Package

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Purpose

The enclosed technical documentation for a CLOMR is submitted in partial fulfillment of the Contract Scope of Work for the New River Channelization.

The following is a brief description of the relevant section from the Contract Scope of Work:

> **"2.13 FEMA Coordination**
>
> The District will be responsible for preparation and submittal of the CLOMR to the Federal Emergency Management Agency (FEMA).
>
> Following completion of design plans, the Consultant shall assist the District in the preparation of the CLOMR submittal package as listed below:
>
> a) Backwater surface profile analysis using HEC-2 for the 10-, 50-, 100- & 500-year flood events for the New River to account for the levee and channelization "in-place" condition.
>
> Based on the hydraulic analysis furnished by the Consultant, the District will be responsible for preparation of the plan and profiles, submittal of the CLOMR to FEMA and all subsequent review operations."

The information enclosed is intended to be used by the District in the preparation of a submittal package to FEMA for a CLOMR or LOMR, depending upon the timing of the submittal.

Contents of Package

An hydraulic analysis was conducted using the HEC-2 computer model (U.S. Army Corps of Engineers, 1991) to develop water surface profiles for the final channel configuration. Downstream conditions were modeled for existing conditions and the resulting water surface elevations used to model the design condition. All existing channel improvements by the Corps of Engineers and the Glendale Municipal Airport were modeled for the design condition.

The following information is included in this package:

- Downstream Condition HEC-2 Input/Output
- Channel Design HEC-2 Input/Output
- Design Plans showing 100-year water surface following construction completion.
- 5¼" Floppy Disk Drive with HEC-2 Input/Output

Hydrologic Analysis

Hydrology analysis per CVL Report (CVL, Nov. 1986) was approved by FEMA in a letter dated January 13, 1987. The following is a summary of peak discharges used in the Flood Insurance Study performed by CVL (CVL, Dec. 1986):

Table 1: Proposed Peak Discharges - New River
(Discharge in cfs)

	Frequency (years)			
Location	10	50	100	500
(1) Upstream of Agua Fria River	12,500	29,000	39,000	70,000
(2) Downstream of Skunk Creek	13,500	31,000	41,000	75,000

For the purposes of design, the discharges at location (2), as listed above, were used for all hydraulic analyses.

Downstream Hydraulic Conditions

In order to account for the varying downstream conditions, an hydraulic analysis using the HEC-2 computer model (U.S. Army Corps of Engineers, 1991), was developed for the New River from its confluence with the Agua Fria River, upstream to Bethany Home Road. The following conditions were evaluated:

- Camelback Ranch levee in place
- Encroachment to 100-year floodway
- Existing conditions

The water surface elevations, at the downstream project limits (Bethany Home Road approximately) were compared for each of the three scenarios. It was determined that the existing conditions model results in the highest water surface elevation and it was thus used as a basis for all subsequent upstream water surface computations.

It should be noted that the downstream conditions were evaluated using the weir flow option within HEC-2. This approach differs from the method employed in the original Flood Insurance Study (FIS) performed by CVL (CVL, Dec. 1986). For design conditions, the results were felt to be more conservative than the technique used in the FIS. The difference in computed water surface elevations is not significant and is less than 0.5 feet at the downstream end of the channelization project at Section 39.0 (Section 54.0 in original FIS).

Channel Hydraulic Conditions

A CLOMR, submitted in conjunction with the earlier design contract has already been approved by FEMA. The water surface elevations for each studied flood event have changed since that submittal for the following reasons:

- Incorporation of animal ingress/egress ramps. These were modeled assuming a channel sideslope of 2:1 on the one bank rather than 1:1 for the typical cross-section.

- Increased Manning's roughness factor for the channel bed due to areas of undisturbed native vegetation, areas of ponding, reseeding and pole plantings of cottonwoods and willows.

- Widening of the channel banks.

- Incorporation of "Natural Habitat" islands within the channel geometry.

- Downstream conditions which were originally modeled assuming that channel improvements would be in place at the Camelback Ranch project. For the hydraulic modeling upstream, natural conditions were assumed at the downstream end of the project.

- A later version of HEC-2 (U.S. Army Corps of Engineers, 1991) was used.

References

Coe & Van Loo Consulting Engineers, Inc., *Hydrology Update, New River Below Skunk Creek, Maricopa County, Arizona*, November 15, 1986.

Coe & Van Loo Consulting Engineers, Inc., *Flood Insurance Study, New River Below Skunk Creek, Maricopa County, Arizona*, December 30, 1986.

Federal Emergency Management Agency, Letter to Mr. Ashok Patel of CVL accepting hydrology, January 13, 1987.

U.S. Army Corps of Engineers, Hydrologic Engineering Center, *HEC-2 Water Surface Profiles*, Users Manual, September 1990, Computer Program May, 1991.

APPENDIX I: HYDRAULIC ANALYSES

DOWNSTREAM CONDITION HEC-2 INPUT/OUTPUT

```
SF      SPLIT FLOW, FLOW BREAKS OUT TO THE EAST (BETWEEN SECTIONS 2 & 39)
JC      CAMELBACK RANCH UNDEVELOPED
UP     0       0       0       0       0
TW      WEIR FLOW BREAKOUT
WS     2       2       3      -1     2.7
WC     0  1028.3     310    1030
TW      WEIR FLOW BREAKOUT
WS     2       3     6.4      -1     2.7
WC     0    1030     820    1033
TW      WEIR FLOW BREAKOUT
WS     2     6.4    13.2      -1     2.7
WC     0    1033     740    1033
TW      WEIR FLOW BREAKOUT
WS     2    13.2    19.4      -1     2.7
WC     0    1033     660  1034.5
TW      WEIR FLOW BREAKOUT
WS     2    19.4    24.4      -1     2.7
WC     0  1034.5     470  1035.6
TW      WEIR FLOW BREAKOUT
WS     2    24.4    29.0      -1     2.7
WC     0  1035.6     480  1038.7
TW      WEIR FLOW BREAKOUT
WS     2    29.0    36.8      -1     2.7
WC     0  1038.7     750  1044.5
TW      WEIR FLOW BREAKOUT
WS     2    36.8    39.0      -1     2.7
WC     0  1044.5     290  1042.5
NE
T1      NEW RIVER: EXISTING CONDITION RUN WITH WEIR FLOW BREAKOUT
T2      NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO BETHANY HOME ROAD
T3        10 YR EVENT
J1     0       2                0.001                          1027.5
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     1     9.1     9.1     9.1     9.1     9.1                     8088   14959
X1     1    57.0  8510.0 10076.0       0       0       0
GR1031.0  6847.0  1031.0  7088.0  1031.0  7403.0  1030.5  7660.0  1029.8  7951.0
GR1029.5  8333.0  1028.3  8406.0  1027.3  8437.0  1027.5  8510.0  1021.9  8554.0
GR1022.5  8676.0  1021.7  8807.0  1022.4  9013.0  1026.0  9039.0  1026.1  9157.0
GR1024.3  9182.0  1025.7  9232.0  1025.8  9301.0  1022.2  9331.0  1021.5  9422.0
GR1022.9  9533.0  1024.8  9768.0  1024.9  9955.0  1024.6 10000.0  1024.6 10051.0
GR1028.0 10076.0  1028.5 10230.0  1028.6 10424.0  1028.8 10649.0  1027.8 10793.0
GR1024.2 10816.0  1024.2 11100.0  1024.3 11439.0  1024.9 11746.0  1025.2 12071.0
GR1027.1 12168.0  1025.2 12315.0  1027.1 12387.0  1026.4 12409.0  1027.3 12437.0
GR1028.2 12666.0  1028.1 12817.0  1028.1 13108.0  1028.0 13353.0  1028.1 13570.0
GR1028.1 13749.0  1028.1 13943.0  1028.5 14292.0  1028.8 14605.0  1029.7 14727.0
GR1030.3 14757.0  1030.3 14799.0  1028.3 14806.0  1031.9 14825.0  1032.0 14847.0
GR1030.9 14864.0  1032.2 14959.0
ET     2     9.1     9.1     9.1     9.1     9.1                     9729.9   10370
X1     2      27    9730   10260     700    1700    1000
GR  1035    6900    1024    6950  1024.7    7370  1024.8    8000  1025.2    8430
GR  1026    8470  1026.6    8600  1027.1    8700  1026.4    9050  1026.3    9070
GR  1028    9660  1028.3    9730    1028    9800  1027.7    9890    1026    9940
GR  1024    9960    1024   10050    1026   10230    1028   10260    1028   10370
GR  1028   10380  1029.8   10570  1028.5   10750    1030   11000    1030   11500
GR  1032   11510  1033.5   11630
ET     3     9.1     9.1     9.1     9.1     9.1                     9827   10374
X1     3      36    9846   10374     100     300     300
```

GR	1034	5200	1032	5345	1030	5430	1028.7	5460	1026	5770
GR	1024.9	6360	1025.4	6405	1025.3	7135	1025.5	8210	1027	8260
GR	1025.5	8290	1027	8580	1026	8600	1026	8605	1026	9050
GR	1026	9115	1028	9360	1030.0	9827	1030.0	9846	1029.0	9849
GR	1029.0	9872	1029.8	9900	1029.0	9914	1024	9930	1023	9955
GR	1022.2	9960	1022.4	10000	1022.5	10014	1022.8	10060	1023.4	10150
GR	1024.9	10369	1027.5	10374	1029.5	10414	1030.7	10800	1032	11300
GR	1033.5	11720								
ET	6.4	9.1	9.1	9.1	9.1	9.1			9629.9	10445
X1	6.4	37	9630	10445	960	700	700			
GR	1034.3	5570	1034	5730	1032.3	5765	1032	5880	1030	6095
GR	1028	6170	1026	6460	1025.7	7160	1027.2	7220	1027.4	7530
GR	1027	7610	1027.2	7630	1028	7870	1028.3	8750	1028.4	8800
GR	1029.2	9100	1030	9460	1031.3	9500	1032	9600	1033	9630
GR	1032	9645	1030	9750	1029.3	9890	1028	9905	1026	9910
GR	1024	9960	1023.6	10025	1024.5	10165	1025.5	10310	1025.5	10378
GR	1024.5	10429	1028.5	10445	1029.5	10457	1030	10690	1031.2	10900
GR	1032	11060	1034	11360						
ET	13.2	9.1	9.1	9.1	9.1	9.1			9835.9	10443.1
X1	13.2	39	9836	10443	1000	680	680			
GR	1036	6023	1035.7	6123	1035.2	6278	1034	6443	1033	6523
GR	1032	6573	1030	6683	1030.2	6793	1030	7243	1030	7873
GR	1030.5	8043	1031	8203	1032	8703	1033.2	8743	1032	8783
GR	1032	9193	1032	9563	1033	9836	1032.5	9852	1031.5	9868
GR	1030.5	9888	1029.5	9909	1028.5	9929	1027.5	9951	1025.5	9989
GR	1024.9	10000	1026	10087	1026.5	10236	1027.5	10385	1027.6	10405
GR	1029.5	10409	1030.5	10424	1031.5	10443	1033.2	10583	1033.4	10753
GR	1033.6	10938	1033.8	11133	1034	11303	1035.3	11783		
ET	19.4	9.1	9.1	9.1	9.1	9.1			9747	10433.1
X1	19.4	49	9765	10433	660	580	620			
GR	1038	6220	1037.8	6355	1036	6500	1035	6850	1034	6960
GR	1032.3	7130	1032	7235	1032	7390	1032	8000	1033	8030
GR	1034	8060	1034.2	8280	1035	8700	1035	8870	1035.7	8895
GR	1035	8930	1034	9170	1034.1	9200	1034	9680	1035.1	9732
GR	1035.3	9747	1034.5	9750	1034.5	9758	1034.5	9765	1033.5	9844
GR	1032.5	9870	1031.5	9891	1030.5	9911	1029.5	9922	1028.5	9947
GR	1027.5	9974	1026.5	9994	1026.2	10000	1026.5	10047	1027.5	10197
GR	1028.5	10347	1027.5	10407	1028.5	10409	1032.5	10417	1036.5	10425
GR	1040.5	10433	1041.2	10520	1041.8	10720	1042.3	10870	1043.2	11175
GR	1043.8	11360	1044	11680	1044.5	11950	1045	12120		
ET	24.4	9.1	9.1	9.1	9.1	9.1			9787.9	10440.7
X1	24.4	42	9788	10440.6	440	500	500			
GR	1040.6	6263	1040	6433	1040	6435	1039.7	6643	1038	6736
GR	1038	6738	1036	7003	1034	7288	1033.8	7648	1034	7733
GR	1032.9	7753	1034.3	8028	1034.5	8308	1035.3	8613	1036	9008
GR	1035.8	9268	1035.5	9733	1035.6	9788	1034.5	9860	1033.5	9880
GR	1032.5	9900	1031.5	9920	1030.5	9940	1029.5	9960	1028.5	9980
GR	1027.5	10000	1027.2	10014	1028	10066	1029	10214	1030	10365
GR	1030.4	10419.4	1041	10440.6	1041.4	10528	1041.5	10533	1041.6	10558
GR	1041.6	10568	1041.7	10601	1041.7	10618	1044.2	11248	1044.4	11288
GR	1045.7	11868	1045.9	11998						
ET	29.0	9.1	9.1	9.1	9.1	9.1			9664.9	10426.1
X1	29	45	9665	10426	440	460	460			
GR	1042	6215	1043.2	6290	1042.3	6510	1042	6685	1042	6687
GR	1040	6715	1039.3	6820	1038	6865	1037.7	7020	1037.3	7215
GR	1036	7265	1035.7	7515	1034.6	7860	1034.7	8290	1035.5	8640
GR	1036	8800	1036.3	9140	1036.5	9350	1036.4	9440	1036.3	9545
GR	1038	9658	1038.7	9665	1038	9685	1036.8	9750	1036	9815
GR	1036.3	9828	1035.5	9848	1034.5	9868	1033.5	9888	1032.5	9908
GR	1031.5	9928	1030.5	9948	1029.5	9968	1028.5	9988	1028.3	10000

```
GR1028.5   10038  1029.5   10178  1030.5   10337    1031 10405.4  1041.2   10426
GR1041.4   10542  1041.5   10680  1041.9   10880  1042.2   11000  1043.1   11290
ET  36.8     9.1     9.1     9.1     9.1     9.1                   9677 10443.3
X1  36.8      43    9685 10443.2     600     720     780
GR  1042    6860    1040    6905  1039.7    7020  1038.5    7115    1038    7165
GR1037.7    7315    1036    7390  1035.2    7645    1035    7955  1034.8    8110
GR1034.7    8325    1036    8665  1036.5    8705  1037.4    8935  1037.8    9355
GR  1038    9505  1039.1    9525    1038    9540    1038    9600    1040    9605
GR  1041    9610    1041    9615    1041    9625    1041    9635    1041    9645
GR  1040    9665  1044.5    9677  1044.5    9685  1034.5    9720    1030    9755
GR  1028    9760  1027.4    9815  1027.5    9845  1029.5    9935  1029.8   10017
GR1030.5   10116  1031.5   10265  1032.5   10415  1032.6 10422.4    1043 10443.2
GR1043.5   10520  1043.8   10530  1044.5   10550
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
EJ
T1      NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2      NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3        50 YR EVENT
J1    0       3                0.001                          1027.5
J2    2       0      -1                            -1                        0
T1      NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2      NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3       100 YR EVENT
J1    0       4                0.001                          1027.5
J2    3       0      -1                            -1                        0
T1      NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2      NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3      500-YEAR EVENT
J1    0       5                0.001                          1029.0
J2    4       0      -1                            -1                        0
ER
```

```
*****************************************
*  HEC-2 WATER SURFACE PROFILES          *
*                                        *
*  Version   4.6.2;  May 1991            *
*                                        *
*  RUN DATE    17JUN92    TIME   13:44:25 *
*****************************************
```

```
****************************************
*  U.S. ARMY CORPS OF ENGINEERS        *
*  HYDROLOGIC ENGINEERING CENTER       *
*  609 SECOND STREET, SUITE D          *
*  DAVIS, CALIFORNIA 95616-4687        *
*          (916) 756-1104              *
****************************************
```

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

THIS RUN EXECUTED 17JUN92 13:44:25

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

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

SPLIT FLOW BEING PERFORMED

```
SF      SPLIT FLOW, FLOW BREAKS OUT TO THE EAST (BETWEEN SECTIONS 2 & 39)

JC      CAMELBACK RANCH UNDEVELOPED
JP     0       0       0       0       0

TW      WEIR FLOW BREAKOUT
WS     2       2       3      -1     2.7
WC     0  1028.3     310    1030

TW      WEIR FLOW BREAKOUT
WS     2       3     6.4      -1     2.7
WC     0    1030     820    1033

TW      WEIR FLOW BREAKOUT
WS     2     6.4    13.2      -1     2.7
WC     0    1033     740    1033

TW      WEIR FLOW BREAKOUT
WS     2    13.2    19.4      -1     2.7
WC     0    1033     660  1034.5

TW      WEIR FLOW BREAKOUT
WS     2    19.4    24.4      -1     2.7
WC     0  1034.5     470  1035.6

TW      WEIR FLOW BREAKOUT
WS     2    24.4    29.0      -1     2.7
WC     0  1035.6     480  1038.7

TW      WEIR FLOW BREAKOUT
WS     2    29.0    36.8      -1     2.7
WC     0  1038.7     750  1044.5

TW      WEIR FLOW BREAKOUT
WS     2    36.8    39.0      -1     2.7
WC     0  1044.5     290  1042.5
```

T1 NEW RIVER: EXISTING CONDITION RUN WITH WEIR FLOW BREAKOUT
T2 NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO BETHANY HOME ROAD
T3 10 YR EVENT

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2			0.001				1027.5	

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	1	9.1	9.1	9.1	9.1	9.1			8088	14959
X1	1	57.0	8510.0	10076.0	0	0	0			
GR	1031.0	6847.0	1031.0	7088.0	1031.0	7403.0	1030.5	7660.0	1029.8	7951.0
GR	1029.5	8333.0	1028.3	8406.0	1027.3	8437.0	1027.5	8510.0	1021.9	8554.0
GR	1022.5	8676.0	1021.7	8807.0	1022.4	9013.0	1026.0	9039.0	1026.1	9157.0
GR	1024.3	9182.0	1025.7	9232.0	1025.8	9301.0	1022.2	9331.0	1021.5	9422.0
GR	1022.9	9533.0	1024.8	9768.0	1024.9	9955.0	1024.6	10000.0	1024.6	10051.0
GR	1028.0	10076.0	1028.5	10230.0	1028.6	10424.0	1028.8	10649.0	1027.8	10793.0
GR	1024.2	10816.0	1024.2	11100.0	1024.3	11439.0	1024.9	11746.0	1025.2	12071.0
GR	1027.1	12168.0	1025.2	12315.0	1027.1	12387.0	1026.4	12409.0	1027.3	12437.0
GR	1028.2	12666.0	1028.1	12817.0	1028.1	13108.0	1028.0	13353.0	1028.1	13570.0
GR	1028.1	13749.0	1028.1	13943.0	1028.5	14292.0	1028.8	14605.0	1029.7	14727.0
GR	1030.3	14757.0	1030.3	14799.0	1028.3	14806.0	1031.9	14825.0	1032.0	14847.0
GR	1030.9	14864.0	1032.2	14959.0						
ET	2	9.1	9.1	9.1	9.1	9.1			9729.9	10370
X1	2	27	9730	10260	700	1700	1000			
GR	1035	6900	1024	6950	1024.7	7370	1024.8	8000	1025.2	8430
GR	1026	8470	1026.6	8600	1027.1	8700	1026.4	9050	1026.3	9070
GR	1028	9660	1028.3	9730	1028	9800	1027.7	9890	1026	9940
GR	1024	9960	1024	10050	1026	10230	1028	10260	1028	10370
GR	1028	10380	1029.8	10570	1028.5	10750	1030	11000	1030	11500
GR	1032	11510	1033.5	11630						
ET	3	9.1	9.1	9.1	9.1	9.1			9827	10374
X1	3	36	9846	10374	100	300	300			
GR	1034	5200	1032	5345	1030	5430	1028.7	5460	1026	5770
GR	1024.9	6360	1025.4	6405	1025.3	7135	1025.5	8210	1027	8260
GR	1025.5	8290	1027	8580	1026	8600	1026	8605	1026	9050
GR	1026	9115	1028	9360	1030.0	9827	1030.0	9846	1029.0	9849
GR	1029.0	9872	1029.8	9900	1029.0	9914	1024	9930	1023	9955
GR	1022.2	9960	1022.4	10000	1022.5	10014	1022.8	10060	1023.4	10150
GR	1024.9	10369	1027.5	10374	1029.5	10414	1030.7	10800	1032	11300
GR	1033.5	11720								

ET	6.4	9.1	9.1	9.1	9.1	9.1			9629.9	10445
X1	6.4	37	9630	10445	960	700	700			
GR	1034.3	5570	1034	5730	1032.3	5765	1032	5880	1030	6095
GR	1028	6170	1026	6460	1025.7	7160	1027.2	7220	1027.4	7530
GR	1027	7610	1027.2	7630	1028	7870	1028.3	8750	1028.4	8800
GR	1029.2	9100	1030	9460	1031.3	9500	1032	9600	1033	9630
GR	1032	9645	1030	9750	1029.3	9890	1028	9905	1026	9910
GR	1024	9960	1023.6	10025	1024.5	10165	1025.5	10310	1025.5	10378
GR	1024.5	10429	1028.5	10445	1029.5	10457	1030	10690	1031.2	10900
GR	1032	11060	1034	11360						
ET	13.2	9.1	9.1	9.1	9.1	9.1			9835.9	10443.1
X1	13.2	39	9836	10443	1000	680	680			
GR	1036	6023	1035.7	6123	1035.2	6278	1034	6443	1033	6523
GR	1032	6573	1030	6683	1030.2	6793	1030	7243	1030	7873
GR	1030.5	8043	1031	8203	1032	8703	1033.2	8743	1032	8783
GR	1032	9193	1032	9563	1033	9836	1032.5	9852	1031.5	9868
GR	1030.5	9888	1029.5	9909	1028.5	9929	1027.5	9951	1025.5	9989
GR	1024.9	10000	1026	10087	1026.5	10236	1027.5	10385	1027.6	10405
GR	1029.5	10409	1030.5	10424	1031.5	10443	1033.2	10583	1033.4	10753
GR	1033.6	10938	1033.8	11133	1034	11303	1035.3	11783		
ET	19.4	9.1	9.1	9.1	9.1	9.1			9747	10433.1
X1	19.4	49	9765	10433	660	580	620			
GR	1038	6220	1037.8	6355	1036	6500	1035	6850	1034	6960
GR	1032.3	7130	1032	7235	1032	7390	1032	8000	1033	8030
GR	1034	8060	1034.2	8280	1035	8700	1035	8870	1035.7	8895
GR	1035	8930	1034	9170	1034.1	9200	1034	9680	1035.1	9732
GR	1035.3	9747	1034.5	9750	1034.5	9758	1034.5	9765	1033.5	9844
GR	1032.5	9870	1031.5	9891	1030.5	9911	1029.5	9922	1028.5	9947
GR	1027.5	9974	1026.5	9994	1026.2	10000	1026.5	10047	1027.5	10197
GR	1028.5	10347	1027.5	10407	1028.5	10409	1032.5	10417	1036.5	10425
GR	1040.5	10433	1041.2	10520	1041.8	10720	1042.3	10870	1043.2	11175
GR	1043.8	11360	1044	11680	1044.5	11950	1045	12120		
ET	24.4	9.1	9.1	9.1	9.1	9.1			9787.9	10440.7
X1	24.4	42	9788	10440.6	440	500	500			
GR	1040.6	6263	1040	6433	1040	6435	1039.7	6643	1038	6736
GR	1038	6738	1036	7003	1034	7288	1033.8	7648	1034	7733
GR	1032.9	7753	1034.3	8028	1034.5	8308	1035.3	8613	1036	9008
GR	1035.8	9268	1035.5	9733	1035.6	9788	1034.5	9860	1033.5	9880
GR	1032.5	9900	1031.5	9920	1030.5	9940	1029.5	9960	1028.5	9980
GR	1027.5	10000	1027.2	10014	1028	10066	1029	10214	1030	10365
GR	1030.4	10419.4	1041	10440.6	1041.4	10528	1041.5	10533	1041.6	10558
GR	1041.6	10568	1041.7	10601	1041.7	10618	1044.2	11248	1044.4	11288
GR	1045.7	11868	1045.9	11998						
ET	29.0	9.1	9.1	9.1	9.1	9.1			9664.9	10426.1
X1	29	45	9665	10426	440	460	460			
GR	1042	6215	1043.2	6290	1042.3	6510	1042	6685	1042	6687
GR	1040	6715	1039.3	6820	1038	6865	1037.7	7020	1037.3	7215
GR	1036	7265	1035.7	7515	1034.6	7860	1034.7	8290	1035.5	8640
GR	1036	8800	1036.3	9140	1036.5	9350	1036.4	9440	1036.3	9545

GR	1038	9658	1038.7	9665	1038	9685	1036.8	9750	1036	9815
GR	1036.3	9828	1035.5	9848	1034.5	9868	1033.5	9888	1032.5	9908
GR	1031.5	9928	1030.5	9948	1029.5	9968	1028.5	9988	1028.3	10000
GR	1028.5	10038	1029.5	10178	1030.5	10337	1031	10405.4	1041.2	10426
GR	1041.4	10542	1041.5	10680	1041.9	10880	1042.2	11000	1043.1	11290
ET	36.8	9.1	9.1	9.1	9.1	9.1			9677	10443.3
X1	36.8	43	9685	10443.2	600	720	780			
GR	1042	6860	1040	6905	1039.7	7020	1038.5	7115	1038	7165
GR	1037.7	7315	1036	7390	1035.2	7645	1035	7955	1034.8	8110
GR	1034.7	8325	1036	8665	1036.5	8705	1037.4	8935	1037.8	9355
GR	1038	9505	1039.1	9525	1038	9540	1038	9600	1040	9605
GR	1041	9610	1041	9615	1041	9625	1041	9635	1041	9645
GR	1040	9665	1044.5	9677	1044.5	9685	1034.5	9720	1030	9755
GR	1028	9760	1027.4	9815	1027.5	9845	1029.5	9935	1029.8	10017
GR	1030.5	10116	1031.5	10265	1032.5	10415	1032.6	10422.4	1043	10443.2
GR	1043.5	10520	1043.8	10530	1044.5	10550				
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

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

CCHV= .100 CEHV= .300
*SECNO 1.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 8088.0 14959.0 TYPE= 1 TARGET= 6871.000

1.000	4.69	1026.19	1024.55	1026.19	1026.27	.08	.00	.00	1027.50
13202.9	.0	10035.2	3167.7	.0	3989.9	2175.7	.0	.0	1028.00
.00	.00	2.52	1.46	.000	.035	.045	.000	1021.50	8520.29
.000989	0.	0.	0.	0	8	5	.00	2974.78	12352.52

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9729.9 10370.0 TYPE= 1 TARGET= 640.100

2.000	4.74	1028.74	1028.74	1028.74	1029.97	1.24	2.60	.35	1028.30
13202.9	.0	12966.0	237.0	.0	1441.6	81.2	106.4	53.9	1028.00
.03	.04	8.99	2.92	.045	.035	.045	.000	1024.00	9729.90
.011825	700.	1000.	1700.	0	5	0	.00	640.10	10370.00

*SECNO 3.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.72

3470 ENCROACHMENT STATIONS= 9827.0 10374.0 TYPE= 1 TARGET= 547.000

3.000	8.25	1030.45	1026.55	1030.45	1030.72	.27	.65	.10	1030.00
13448.9	4.7	13444.2	.0	8.4	3212.4	.0	122.7	57.9	100000.00
.05	.56	4.19	.00	.045	.035	.000	.000	1022.20	9827.00
.000885	100.	300.	300.	3	11	0	.00	547.00	10374.00

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

*SECNO 6.400

3470 ENCROACHMENT STATIONS= 9629.9 10445.0 TYPE= 1 TARGET= 815.100

6.400	7.53	1031.13	1027.39	1031.13	1031.34	.20	.61	.01	1033.00
13500.0	.0	13500.0	.0	.0	3733.6	.0	178.6	68.4	100000.00
.11	.00	3.62	.00	.000	.035	.000	.000	1023.60	9690.50
.000866	960.	700.	700.	2	14	0	.00	754.50	10445.00

*SECNO 13.200

3470 ENCROACHMENT STATIONS= 9835.9 10443.1 TYPE= 1 TARGET= 607.199

13.200	6.92	1031.82	1029.38	1031.82	1032.20	.38	.81	.05	1033.00
13500.0	.0	13500.0	.0	.0	2714.6	.0	228.9	78.9	1031.50
.15	.00	4.97	.01	.000	.035	.045	.000	1024.90	9862.88
.001756	1000.	680.	680.	2	14	0	.00	580.22	10443.10

*SECNO 19.400

3470 ENCROACHMENT STATIONS= 9747.0 10433.1 TYPE= 1 TARGET= 686.100

19.400	6.68	1032.88	1030.39	1032.88	1033.26	.38	1.06	.00	1034.50
13500.0	.0	13500.0	.0	.0	2717.8	.0	267.6	87.0	1040.50
.18	.00	4.97	.00	.000	.035	.000	.000	1026.20	9860.12
.001662	660.	620.	580.	2	14	0	.00	557.64	10417.76

*SECNO 24.400

3470 ENCROACHMENT STATIONS= 9787.9 10440.7 TYPE= 1 TARGET= 652.800

24.400	6.59	1033.79	1031.84	1033.79	1034.27	.47	.98	.03	1035.60
13500.0	.0	13500.0	.0	.0	2447.0	.0	297.2	93.3	1041.00
.21	.00	5.52	.00	.000	.035	.000	.000	1027.20	9874.13
.002324	440.	500.	500.	2	19	0	.00	552.05	10426.19

*SECNO 29.000

3470 ENCROACHMENT STATIONS= 9664.9 10426.1 TYPE= 1 TARGET= 761.199

29.000	6.52	1034.82	1032.57	1034.82	1035.24	.42	.97	.01	1038.70
13500.0	.0	13500.0	.0	.0	2593.6	.0	323.8	99.2	1041.20
.23	.00	5.21	.00	.000	.035	.000	.000	1028.30	9861.64
.001912	440.	460.	460.	2	14	0	.00	551.47	10413.11

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 36.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.71

3470 ENCROACHMENT STATIONS= 9677.0 10443.3 TYPE= 1 TARGET= 766.300

36.800	8.50	1035.90	1032.45	1035.90	1036.08	.18	.81	.02	1044.50
13500.0	.0	13500.0	.0	.0	3965.0	.0	382.6	110.5	1043.00
.29	.00	3.40	.00	.000	.035	.000	.000	1027.40	9715.12
.000656	600.	780.	720.	3	19	0	.00	713.87	10428.99

*SECNO 39.000

3470 ENCROACHMENT STATIONS= 9585.9 10426.1 TYPE= 1 TARGET= 840.199

39.000	8.06	1036.06	1032.99	1036.06	1036.23	.17	.15	.00	1042.50
13500.0	.0	13500.0	.0	.0	4051.3	.0	402.8	114.4	1043.20
.31	.00	3.33	.00	.000	.035	.000	.000	1028.00	9592.94
.000733	270.	220.	200.	2	14	0	.00	818.78	10411.72

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
245.96	245.97	.01	245.96	245.97	.01	5	1028.738	1030.446	2.000	3.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
51.10	50.94	.32	297.06	296.91	.05	5	1030.446	1031.135	3.000	6.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1031.135	1031.820	6.400	13.200

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1031.820	1032.880	13.200	19.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1032.880	1033.793	19.400	24.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1033.793	1034.818	24.400	29.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1034.818	1035.896	29.000	36.800

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	297.06	296.91	.05	5	1035.896	1036.057	36.800	39.000

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T1      NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2      NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3        50 YR EVENT

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        3                        0.001                                1027.5

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

CCHV= .100 CEHV= .300
*SECNO 1.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 8088.0 14959.0 TYPE= 1 TARGET= 6871.000

1.000	5.56	1027.06	1025.25	1027.06	1027.17	.12	.00	.00	1027.50
22788.1	.0	16265.2	6522.8	.0	5330.3	3493.3	.0	.0	1028.00
.00	.00	3.05	1.87	.000	.035	.045	.000	1021.50	8513.49
.001001	0.	0.	0.	0	14	5	.00	3178.38	12429.39

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9729.9 10370.0 TYPE= 1 TARGET= 640.100

2.000	5.80	1029.80	1029.80	1029.80	1031.57	1.77	2.64	.49	1028.30
22788.1	.1	21778.2	1009.7	.1	2005.1	198.1	156.2	57.8	1028.00
.03	.72	10.86	5.10	.045	.035	.045	.000	1024.00	9729.90
.011106	700.	1000.	1700.	0	8	0	.00	640.10	10370.00

*SECNO 3.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.05

3470 ENCROACHMENT STATIONS= 9827.0 10374.0 TYPE= 1 TARGET= 547.000

3.000	9.79	1031.99	1028.09	1031.99	1032.57	.58	.88	.12	1030.00
24718.7	69.2	24649.5	.0	37.8	4027.9	.0	177.7	61.8	100000.00
.04	1.83	6.12	.00	.045	.035	.000	.000	1022.20	9827.00
.001405	100.	300.	300.	3	5	0	.00	547.00	10374.00

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

*SECNO 6.400

3470 ENCROACHMENT STATIONS= 9629.9 10445.0 TYPE= 1 TARGET= 815.100

6.400	9.49	1033.09	1029.01	1033.09	1033.51	.42	.92	.02	1033.00
27344.7	.0	27344.7	.0	.0	5288.8	.0	253.0	72.8	100000.00
.08	.01	5.17	.00	.045	.035	.000	.000	1023.60	9629.90
.001236	960.	700.	700.	2	11	0	.00	815.10	10445.00

*SECNO 13.200

3470 ENCROACHMENT STATIONS= 9835.9 10443.1 TYPE= 1 TARGET= 607.199

13.200	9.05	1033.95	1031.27	1033.95	1034.73	.77	1.11	.11	1033.00
28164.2	.0	28164.1	.1	.1	3991.3	.2	325.4	83.9	1031.50
.11	.02	7.06	.33	.045	.035	.045	.000	1024.90	9835.90
.002246	1000.	680.	680.	2	14	0	.00	607.20	10443.10

*SECNO 19.400

3470 ENCROACHMENT STATIONS= 9747.0 10433.1 TYPE= 1 TARGET= 686.100

19.400	9.17	1035.37	1032.39	1035.37	1036.12	.76	1.40	.00	1034.50
29710.6	19.7	29690.9	.0	14.4	4252.0	.0	384.2	93.0	1040.50
.13	1.37	6.98	.00	.045	.035	.000	.000	1026.20	9747.00
.002255	660.	620.	580.	2	19	0	.00	675.73	10422.73

*SECNO 24.400

3470 ENCROACHMENT STATIONS= 9787.9 10440.7 TYPE= 1 TARGET= 652.800

24.400	9.31	1036.51	1033.92	1036.51	1037.39	.88	1.23	.04	1035.60
30770.1	.0	30770.1	.0	.1	4092.0	.0	432.2	100.6	1041.00
.15	.02	7.52	.00	.045	.035	.000	.000	1027.20	9787.90
.002672	440.	500.	500.	2	19	0	.00	643.72	10431.62

*SECNO 29.000

3470 ENCROACHMENT STATIONS= 9664.9 10426.1 TYPE= 1 TARGET= 761.199

29.000	9.51	1037.81	1034.69	1037.81	1038.56	.75	1.16	.01	1038.70
31000.0	.0	31000.0	.0	.0	4466.9	.0	477.4	107.8	1041.20
.17	.00	6.94	.00	.000	.035	.000	.000	1028.30	9695.37
.002368	440.	460.	460.	2	19	0	.00	723.78	10419.15

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 36.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.78

3470 ENCROACHMENT STATIONS= 9677.0 10443.3 TYPE= 1 TARGET= 766.300

36.800	11.78	1039.18	1034.15	1039.18	1039.55	.37	.96	.04	1044.50
31000.0	.0	31000.0	.0	.0	6339.4	.0	574.1	120.9	1043.00
.21	.00	4.89	.00	.000	.035	.000	.000	1027.40	9703.62
.000750	600.	780.	720.	3	19	0	.00	731.94	10435.56

*SECNO 39.000

3470 ENCROACHMENT STATIONS= 9585.9 10426.1 TYPE= 1 TARGET= 840.199

39.000	11.39	1039.39	1034.63	1039.39	1039.72	.32	.16	.00	1042.50
31000.0	.0	31000.0	.0	.0	6798.9	.0	607.3	124.8	1043.20
.23	.00	4.56	.00	.000	.035	.000	.000	1028.00	9589.35
.000702	270.	220.	200.	2	11	0	.00	829.04	10418.39

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1930.64	1935.44	.25	1930.64	1935.44	.25	7	1029.801	1031.990	2.000	3.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2625.95	2605.06	.80	4556.59	4540.49	.35	7	1031.990	1033.091	3.000	6.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
819.49	820.20	.09	5376.08	5360.70	.29	7	1033.091	1033.953	6.400	13.200

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1546.42	1547.61	.08	6922.50	6908.30	.21	7	1033.953	1035.367	13.200	19.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1059.51	1061.75	.21	7982.01	7970.05	.15	7	1035.367	1036.509	19.400	24.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
229.92	226.70	1.41	8211.93	8196.75	.19	7	1036.509	1037.808	24.400	29.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	8211.93	8196.75	.19	7	1037.808	1039.180	29.000	36.800

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	8211.93	8196.75	.19	7	1039.180	1039.393	36.800	39.000

T1 NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2 NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3 100 YR EVENT

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	4			0.001				1027.5	

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

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

CCHV= .100 CEHV= .300
*SECNO 1.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 8088.0 14959.0 TYPE= 1 TARGET= 6871.000

1.000	5.76	1027.26	1025.35	1027.26	1027.39	.13	.00	.00	1027.50
25407.7	.0	17904.8	7502.8	.0	5651.9	3830.9	.0	.0	1028.00
.00	.00	3.17	1.96	.000	.035	.045	.000	1021.50	8511.87
.001000	0.	0.	0.	0	14	5	.00	3198.08	12435.82

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9729.9 10370.0 TYPE= 1 TARGET= 640.100

2.000	6.06	1030.06	1030.06	1030.06	1031.96	1.90	2.64	.53	1028.30
25407.7	.1	24153.9	1253.6	.2	2143.5	226.8	168.7	58.1	1028.00
.03	.72	11.27	5.53	.045	.035	.045	.000	1024.00	9729.90
.010937	700.	1000.	1700.	0	8	0	.00	640.10	10370.00

*SECNO 3.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.93

3470 ENCROACHMENT STATIONS= 9827.0 10374.0 TYPE= 1 TARGET= 547.000

3.000	10.14	1032.34	1028.43	1032.34	1033.02	.67	.93	.12	1030.00
27875.5	94.0	27781.5	.0	44.5	4215.5	.0	191.4	62.2	100000.00
.04	2.11	6.59	.00	.045	.035	.000	.000	1022.20	9827.00
.001535	100.	300.	300.	3	8	0	.00	547.00	10374.00

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

*SECNO 6.400

3470 ENCROACHMENT STATIONS= 9629.9 10445.0 TYPE= 1 TARGET= 815.100

6.400	9.94	1033.54	1029.74	1033.54	1034.04	.49	1.00	.02	1033.00
31902.4	.0	31902.4	.0	.1	5656.0	.0	271.2	73.2	100000.00
.08	.01	5.64	.00	.045	.035	.000	.000	1023.60	9629.90
.001346	960.	700.	700.	2	14	0	.00	815.10	10445.00

*SECNO 13.200

3470 ENCROACHMENT STATIONS= 9835.9 10443.1 TYPE= 1 TARGET= 607.199

13.200	9.55	1034.45	1031.84	1034.45	1035.42	.97	1.24	.14	1033.00
33939.0	.0	33938.8	.1	.1	4292.8	.3	348.9	84.3	1031.50
.10	.34	7.91	.35	.045	.035	.045	.000	1024.90	9835.90
.002558	1000.	680.	680.	2	19	0	.00	607.20	10443.10

*SECNO 19.400

3470 ENCROACHMENT STATIONS= 9747.0 10433.1 TYPE= 1 TARGET= 686.100

19.400	9.83	1036.03	1033.15	1036.03	1037.00	.97	1.58	.00	1034.50
37182.9	56.1	37126.8	.0	26.4	4691.8	.0	413.0	93.4	1040.50
.12	2.13	7.91	.00	.045	.035	.000	.000	1026.20	9747.00
.002548	660.	620.	580.	2	15	0	.00	677.06	10424.06

*SECNO 24.400

3470 ENCROACHMENT STATIONS= 9787.9 10440.7 TYPE= 1 TARGET= 652.800

24.400	10.09	1037.29	1034.88	1037.29	1038.45	1.16	1.39	.06	1035.60
39780.3	.1	39780.3	.0	.2	4596.3	.0	466.4	101.0	1041.00
.14	.38	8.65	.00	.045	.035	.000	.000	1027.20	9787.90
.003043	440.	500.	500.	2	15	0	.00	645.28	10433.18

*SECNO 29.000

3470 ENCROACHMENT STATIONS= 9664.9 10426.1 TYPE= 1 TARGET= 761.199

29.000	10.51	1038.81	1035.63	1038.81	1039.77	.96	1.29	.02	1038.70
40999.2	.0	40999.2	.0	.0	5217.3	.0	518.3	108.4	1041.20
.15	.02	7.86	.00	.045	.035	.000	.000	1028.30	9664.90
.002617	440.	460.	460.	2	15	0	.00	756.29	10421.19

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 36.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.75

3470 ENCROACHMENT STATIONS= 9677.0 10443.3 TYPE= 1 TARGET= 766.300

36.800	13.00	1040.40	1034.96	1040.40	1040.90	.50	1.08	.05	1044.50
41000.0	.0	41000.0	.0	.0	7234.7	.0	629.7	121.8	1043.00
.19	.00	5.67	.00	.000	.035	.000	.000	1027.40	9699.36
.000855	600.	780.	720.	3	19	0	.00	738.63	10437.99

*SECNO 39.000

3470 ENCROACHMENT STATIONS= 9585.9 10426.1 TYPE= 1 TARGET= 840.199

39.000	12.66	1040.66	1035.37	1040.66	1041.08	.42	.18	.01	1042.50
41000.0	.0	41000.0	.0	.0	7850.3	.0	667.8	125.7	1043.20
.20	.00	5.22	.00	.000	.035	.000	.000	1028.00	9587.98
.000766	270.	220.	200.	2	11	0	.00	832.93	10420.92

39.00 69,000 SPF
1043.32
41,000 1040.66 100-YR
DS 1 2/N

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2467.87	2468.48	.02	2467.87	2468.48	.02	10	1030.062	1032.344	2.000	3.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
4026.88	4026.90	.00	6494.76	6495.38	.01	10	1032.344	1033.542	3.000	6.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2036.58	2037.46	.04	8531.33	8532.84	.02	10	1033.542	1034.450	6.400	13.200

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
3243.94	3245.52	.05	11775.27	11778.36	.03	10	1034.450	1036.032	13.200	19.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2597.40	2597.71	.01	14372.67	14376.08	.02	10	1036.032	1037.291	19.400	24.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1218.89	1218.85	.00	15591.56	15594.93	.02	10	1037.291	1038.811	24.400	29.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.79	.79	.06	15592.34	15595.71	.02	10	1038.811	1040.397	29.000	36.800

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	15592.34	15595.71	.02	10	1040.397	1040.658	36.800	39.000

T1 NEW RIVER: CHANNELIZATION LEAVING MOST OF BOTTOM NATURAL
T2 NEW RIVER: AGUA FRIA RIVER CONFLUENCE TO GRAND AVE.
T3 500-YEAR EVENT

	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
J1	0	5			0.001				1029.0	

	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
J2	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

CCHV=     .100 CEHV=     .300
*SECNO 1.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     8088.0   14959.0  TYPE=      1  TARGET=     6871.000
     1.000      6.26   1027.76   1025.72   1027.75   1027.90       .15       .00       .00   1027.50
   32068.7      14.8   21982.2   10071.7      29.2    6423.9    4669.0        .0        .0   1028.00
       .00       .51      3.42      2.16      .045      .035      .045      .000   1021.50   8422.86
   .000989        0.        0.        0.         0        11         4       .00   3411.15  12553.08

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9729.9   10370.0  TYPE=      1  TARGET=      640.100
     2.000      6.69   1030.69   1030.69   1030.68   1032.89      2.20      2.62       .62   1028.30
   32068.7        .2   30157.7    1910.8        .2    2477.8     296.2     199.3      61.2   1028.00
       .03       .71     12.17      6.45      .045      .035      .045      .000   1024.00   9729.90
   .010517      700.     1000.     1700.         0         8         0       .00    640.10  10370.00

*SECNO 3.000

3301 HV CHANGED MORE THAN HVINS

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

3470 ENCROACHMENT STATIONS=     9827.0   10374.0  TYPE=      1  TARGET=      547.000
     3.000     10.96   1033.16   1029.54   1033.14   1034.07       .92      1.05       .13   1030.00
   35918.6     165.1   35753.5        .0      59.9    4643.7        .0     224.9      65.3 100000.00
       .04      2.75      7.70       .00      .045      .035      .000      .000   1022.20   9827.00
   .001845      100.      300.      300.         3         8         0       .00    547.00  10374.00
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SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 6.400
3280 CROSS SECTION      6.40 EXTENDED       .58 FEET


3470 ENCROACHMENT STATIONS=     9629.9   10445.0  TYPE=      1  TARGET=      815.100
     6.400     10.98   1034.58   1030.85   1034.56   1035.29       .71      1.20       .02   1033.00
   44084.2        .0   44084.1       .0        .2    6502.1        .0     315.1      76.3 100000.00
       .07       .27      6.78       .00      .045      .035      .000      .000   1023.60   9629.90
   .001618      960.      700.      700.         2        14         0       .00    815.10  10445.00


*SECNO 13.200
3280 CROSS SECTION     13.20 EXTENDED       .26 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9835.9   10443.1  TYPE=      1  TARGET=      607.199
    13.200     10.66   1035.56   1033.30   1035.55   1037.14      1.58      1.58       .26   1033.00
   50053.3        .1   50053.0       .2        .3    4965.4        .4     404.6      87.4   1031.50
       .08       .40     10.08       .41      .045      .035      .045      .000   1024.90   9835.90
   .003425      1000.      680.      680.         2        15         0       .00    607.20  10443.10


*SECNO 19.400

3470 ENCROACHMENT STATIONS=     9747.0   10433.1  TYPE=      1  TARGET=      686.100
    19.400     11.40   1037.60   1035.13   1037.60   1039.21      1.60      2.06       .01   1034.50
   58518.5     206.5   58312.0        .0      54.7    5730.2        .0     481.2      96.5   1040.50
       .10      3.78     10.18       .00      .045      .035      .000      .000   1026.20   9747.00
   .003250      660.      620.      580.         2        15         0       .00    680.21  10427.21


*SECNO 24.400

3470 ENCROACHMENT STATIONS=     9787.9   10440.7  TYPE=      1  TARGET=      652.800
    24.400     11.90   1039.10   1037.00   1039.10   1041.14      2.04      1.80       .13   1035.60
   66137.8        .2   66137.6        .0        .3    5769.0        .0     547.5     104.2   1041.00
       .11       .44     11.46       .00      .045      .035      .000      .000   1027.20   9787.90
   .003976      440.      500.      500.         2        15         0       .00    648.91  10436.81
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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 29.000

3470 ENCROACHMENT STATIONS=     9664.9   10426.1  TYPE=      1  TARGET=      761.199
   29.000     12.80   1041.10   1038.46   1041.10   1042.80      1.70      1.63       .03   1038.70
  72732.0        .1   72732.0        .0        .2    6944.1        .0     614.6     111.6   1041.20
      .13       .39     10.47       .00      .045      .035      .000      .000   1028.30   9664.90
  .003204      440.      460.      460.         2        15         0       .00    760.89  10425.79

*SECNO 36.800

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.67

3470 ENCROACHMENT STATIONS=     9677.0   10443.3  TYPE=      1  TARGET=      766.300
   36.800     15.94   1043.34   1037.29   1043.34   1044.32       .98      1.44       .07   1044.50
  74763.6        .0   74763.6        .0        .0    9432.5        .0     761.2     125.2   1043.00
      .15       .00      7.93       .01      .000      .035      .045      .000   1027.40   9689.06
  .001210      600.      780.      720.         3        15         0       .00    754.24  10443.30

*SECNO 39.000

3470 ENCROACHMENT STATIONS=     9585.9   10426.1  TYPE=      1  TARGET=      840.199
   39.000     15.78   1043.78   1037.45   1043.78   1044.57       .80       .24       .02   1042.50
  75000.0        .0   75000.0        .0        .1   10461.0        .1     811.4     129.2   1043.20
      .16       .21      7.17       .01      .045      .035      .045      .000   1028.00   9585.90
  .000997      270.      220.      200.         2        14         0       .00    840.20  10426.10
```

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
3849.87	3876.33	.68	3849.87	3876.33	.68	9	1030.693	1033.155	2.000	3.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
8165.57	8176.88	.14	12015.44	12053.21	.31	9	1033.155	1034.580	3.000	6.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
5969.12	5986.31	.29	17984.57	18039.52	.31	9	1034.580	1035.558	6.400	13.200

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
8465.21	8497.55	.38	26449.78	26537.07	.33	9	1035.558	1037.604	13.200	19.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
7619.32	7620.24	.01	34069.09	34157.31	.26	9	1037.604	1039.101	19.400	24.400

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
6594.24	6599.25	.08	40663.34	40756.56	.23	9	1039.101	1041.101	24.400	29.000

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2031.59	2032.24	.03	42694.93	42788.80	.22	9	1041.101	1043.340	29.000	36.800

TW WEIR FLOW BREAKOUT

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
236.37	236.68	.13	42931.29	43025.48	.22	9	1043.340	1043.776	36.800	39.000

THIS RUN EXECUTED 17JUN92 13:44:50

****
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 YR EVENT

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	1.000	13202.94	1026.19	2.52	4.69	2974.78	8520.29	12352.52
	1.000	22788.07	1027.06	3.05	5.56	3178.38	8513.49	12429.39
	1.000	25407.65	1027.26	3.17	5.76	3198.08	8511.87	12435.82
	1.000	32068.71	1027.76	3.42	6.26	3411.15	8422.86	12553.08
*	2.000	13202.94	1028.74	8.99	4.74	640.10	9729.90	10370.00
*	2.000	22788.07	1029.80	10.86	5.80	640.10	9729.90	10370.00
*	2.000	25407.65	1030.06	11.27	6.06	640.10	9729.90	10370.00
*	2.000	32068.71	1030.69	12.17	6.69	640.10	9729.90	10370.00
*	3.000	13448.90	1030.45	4.19	8.25	547.00	9827.00	10374.00
*	3.000	24718.71	1031.99	6.12	9.79	547.00	9827.00	10374.00
*	3.000	27875.53	1032.34	6.59	10.14	547.00	9827.00	10374.00
*	3.000	35918.58	1033.16	7.70	10.96	547.00	9827.00	10374.00
	6.400	13500.00	1031.13	3.62	7.53	754.50	9690.50	10445.00
	6.400	27344.66	1033.09	5.17	9.49	815.10	9629.90	10445.00
	6.400	31902.41	1033.54	5.64	9.94	815.10	9629.90	10445.00
	6.400	44084.15	1034.58	6.78	10.98	815.10	9629.90	10445.00
	13.200	13500.00	1031.82	4.97	6.92	580.22	9862.88	10443.10
	13.200	28164.15	1033.95	7.06	9.05	607.20	9835.90	10443.10
	13.200	33938.99	1034.45	7.91	9.55	607.20	9835.90	10443.10
	13.200	50053.28	1035.56	10.08	10.66	607.20	9835.90	10443.10
	19.400	13500.00	1032.88	4.97	6.68	557.64	9860.12	10417.76
	19.400	29710.57	1035.37	6.98	9.17	675.73	9747.00	10422.73
	19.400	37182.93	1036.03	7.91	9.83	677.06	9747.00	10424.06
	19.400	58518.48	1037.60	10.18	11.40	680.21	9747.00	10427.21
	24.400	13500.00	1033.79	5.52	6.59	552.05	9874.13	10426.19
	24.400	30770.08	1036.51	7.52	9.31	643.72	9787.90	10431.62
	24.400	39780.32	1037.29	8.65	10.09	645.28	9787.90	10433.18
	24.400	66137.80	1039.10	11.46	11.90	648.91	9787.90	10436.81

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	29.000	13500.00	1034.82	5.21	6.52	551.47	9861.64	10413.11
	29.000	31000.00	1037.81	6.94	9.51	723.78	9695.37	10419.15
	29.000	40999.21	1038.81	7.86	10.51	756.29	9664.90	10421.19
	29.000	72732.05	1041.10	10.47	12.80	760.89	9664.90	10425.79
*	36.800	13500.00	1035.90	3.40	8.50	713.87	9715.12	10428.99
*	36.800	31000.00	1039.18	4.89	11.78	731.94	9703.62	10435.56
*	36.800	41000.00	1040.40	5.67	13.00	738.63	9699.36	10437.99
*	36.800	74763.63	1043.34	7.93	15.94	754.24	9689.06	10443.30
	39.000	13500.00	1036.06	3.33	8.06	818.78	9592.94	10411.72
	39.000	31000.00	1039.39	4.56	11.39	829.04	9589.35	10418.39
	39.000	41000.00	1040.66	5.22	12.66	832.93	9587.98	10420.92
	39.000	75000.00	1043.78	7.17	15.78	840.20	9585.90	10426.10

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=     2.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     2.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     2.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     2.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     2.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     2.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     2.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     2.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=     3.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     3.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     3.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     3.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    36.800  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    36.800  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    36.800  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    36.800  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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APPENDIX II: HYDRAULIC ANALYSES

CHANNEL DESIGN HEC-2 INPUT/OUTPUT

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C      79
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.
C 155.00   CHANNEL BOTTOM TAPERS
C 155.00   LT CHNL BTM WDTH = 260 FT.
C 155.00   RT CHNL BTM WDTH = 170 FT.
C 158.00   END CHANNEL BOTTOM TRANSITION
C 158.00   LT CHNL BTM WDTH = 162.5 FT.
C 158.00   RT CHNL BTM WDTH = 162.5 FT.
C 159.45   DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE
C 160.25   NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
C 162.00   BEGIN CHANNEL BOTTOM TRANSITION
C 162.00   LT CHNL BTM WDTH = 162.5 FT.
C 162.00   RT CHNL BTM WDTH = 162.5 FT.
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C 165.00     END CHANNEL BOTTOM TRANSITION
C 165.00     LT CHNL BTM WDTH = 300 FT.
C 165.00     RT CHNL BTM WDTH = 250 FT.
C 170.00     BEGIN CHANNEL BOTTOM TRANSITION
C 170.00     LT CHNL BTM WDTH = 300 FT.
C 170.00     RT CHNL BTM WDTH = 250 FT.
C 173.00     END CHNL BTM TRANSITION RT.
C 173.00     RT CHNL BTM WDTH = 157 FT.
C 177.00     BEGIN CHNL BTM TRANSITION RT.
C 177.00     RT CHNL BTM WDTH = 157 FT.
C 179.00     END CHNL BTM TRANSITION LT.
C 179.00     LT CHNL BTM WDTH = 175 FT.
C 181.00     END CHNL BTM TRANSITION RT.
C 181.00     RT CHNL BTM WDTH = 260 FT.
C 193.00     STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.
C 197.00     BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
C 197.00     TO MATCH PAST DEIGN CROSS SECTIONS.
C 201.10     DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE
C 201.90     99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
C 212.60     DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE
C 213.50     OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVENUE
T3      10-YEAR EVENT              NRO2B
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
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
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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
    .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
    .025    .025    .025     0.3     0.5
    99.6      5.   325.1   674.9      6.      6.      6.
X3    10
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GR1063.8	325.1	1046.2	325.15	1046.2	500.	1046.2	674.85	1063.8	674.9
SB 0.9	1.56	2.9	358	349.74	32.	5378.3	0	1046.5	1046.2
X1 100.4	5.	325.1	674.9	80.	80.	80.			
X2		1.	1063.4	1065.9			1.33		
X3 10							1065.9	1065.9	
GR1063.6	325.1	1046.5	325.15	1046.5	500.00	1046.5	674.85	1063.6	674.9
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

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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
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
X1155.00      15   224.1   685.9     585     460     500
GR1073.3   224.1  1057.4   255.9  1057.4   382.8  1065.0     398  1064.0     404
GR1062.0     412  1061.4     450  1062.0     488  1063.0     500  1064.0     505
GR1066.0     511  1057.4   528.2  1057.4     600  1057.4     670  1073.3   685.9
NC  .035    .035    .035      .3      .5
X1158.00      5     319   679.5     360     265     300
GR1076.5    319.  1058.0   356.0  1058.0     500  1058.0   662.5  1075.0   679.5
X1159.45      5.    319.    681.     245     245     245
X3    10                                          1077.46 1077.46
GR1076.8    319.  1058.3   337.5  1058.3    500.  1058.3   662.5  1076.8    681.
GB  1.05    1.56     2.9    388.    325.      28    6034    1.00 1058.46  1058.3
X1160.25      5.    319.    681.     80.     80.     80.
X2                     1. 1077.46   1082.                   1.33
X3    10                                          1082.00 1082.00
GR 1077.    319. 1058.46   337.5 1058.46    500. 1058.46   662.5  1077.0    681.
X1 162.0      12   319.3   680.7     175     175     175
GR1077.0   319.3  1058.8   337.5  1058.8     350  1058.8     400  1058.8    420.
GR1058.8     440  1058.8    460.  1058.8    480.  1058.8     500  1058.8     600
GR1058.8   662.5  1077.0   680.7
X1165.00      10   189.2   769.4     300     300     300
GR1078.8   189.2   1068.   210.8  1068.0   227.8  1068.0     245  1068.0     305
GR1068.2     370  1059.4   387.6  1059.4     500  1059.4     750  1078.8   769.4
X1 168.0      12     190   768.9     300     300     300
GR1079.0    190.    1069     210    1069   225.2    1069     243    1068     254
GR1067.8     278    1068     295  1069.5     380  1060.1   398.8  1060.1     500
GR1060.1     750  1079.0   768.9
NC  .035    .035    .035      .1      .3
X1 170.0      12   190.8   768.6    200.    200.    200.
GR1079.2   190.8   1070.   209.2    1070   240.2    1070     260    1069     262
GR1068.4     295    1068     366  1070.0     377  1060.6   395.8  1060.6     500
GR1060.6     750  1079.2   768.6
X1 173.0      12   224.1   674.6     300     300     300
GR1079.0   224.1   1072.   238.1    1072   268.8  1072.0     290    1070     302
GR  1068     312    1068     380    1069     385  1061.4   400.2  1061.4     500
GR1061.4     657  1079.0   674.6
X1 176.0      12   265.9   674.4     300     300     300
GR1079.6   265.9   1068.   289.1  1068.0     327    1068.     339    1068     404
GR1062.2     416  1062.2     450  1062.2     475  1062.2     500  1062.2     550
GR1062.2     657  1079.6   674.4
X1177.00       5   279.1   675.1     100     100     100
GR1080.5   279.1  1062.4     297  1062.4    500.  1062.4     657  1080.5   675.1
X1179.00       5   306.8   726.7     200     200     200
GR1081.0   306.8  1062.8   343.3  1062.8     500  1062.8   708.5  1081.0   726.7
X1 181.0       5   306.7   778.3     200     200     200
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NC  .035    .035    .035
X1 183.0      12   307.5   777.5     200     200     200
GR1081.3   307.5  1063.8   342.5  1063.8   397.6    1073     416    1072     439
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GR1063.8     760  1081.3   777.5
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X1 188.0      12     307     778    500.    500.    500.
GR1083.0     307.    1065    343    1065     500   1065.0    513    1073    529
GR1072.1     530   1072.7    575   1072.0    643   1070.5   660.   1065.0    671
GR1065.0     760   1083.0    778
X1 193.0      12    307.2   777.8   500.    500.    500.
GR1084.0    307.2  1066.2   342.8  1066.2  489.4    1074     505   1072.0    540
GR1071.4     560   1072.0    585   1074.0    620   1066.2  635.6  1066.2    700
GR1066.2     760   1084.0   777.8
X1197.00      13    307.6   777.4    400    400     400
GR1084.6    307.6  1067.2   342.4  1067.2  409.4   1074.0    423   1072.0    500
GR1072.0     610   1074.0    613   1076.0    617   1076.0    627   1075.8    640
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NC  .035    .035    .035    0.3     0.5
X1199.00      5.    317.5   728.5    200    200     100.
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X1201.10      5.    324.5   675.5    210.   210.    210.
X3    10
GR1086.7    324.5  1068.2    343.  1068.2    500.  1068.2   657.   1086.7  675.5
SB  1.05    1.56     2.9    376.    314.     21.    5763    1.00   1068.4 1068.2
X1201.90      5.    324.5   675.5    80.    80.     80.
X2                    1.   1086.7  1091.8                   1.33
X3    10                                                 1091.80 1091.80
GR1086.9    324.5  1068.4    343.  1068.4    500.  1068.4   657.   1086.9  675.5
X1204.00      5.    324.5   675.5    210.   210.    210.
GR1087.4    324.5  1068.9    343.  1068.9    500.  1068.9   657.   1087.4  675.5
NC  .035    .035    .035    0.3     0.5
X1209.30      5.    325.    675.    530.    530.    530.           9.59
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NC  .035    .035    .035    0.3     0.5
X1 212.6      5.    357.4   642.6   330.    330.    330.
X3    10
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SB  1.05    1.56     2.9    300.    248     18.5   4481.6   1.00   1071.5  1071.0
X1 213.5    5.      357.9   642.1    90.     90.     90.
X2                    1.   1089.6  1095.                    1.33
X3    10                                                 1095.00 1095.00
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NC  .045    .045    .035    0.1     0.3
X1 213.7     5.0    347.1   652.9    20.0    20.0    20.0
GR1095.0    347.1  1073.0   369.1  1073.0   500.0  1073.0  630.9   1096.2  652.9
X1 217.5      5.    305.    690.    380.    380.    380.
GR1096.0     305.  1074.2   326.8  1074.2    500.  1074.2  667.2   1097.0   690.
X1 221.1     5.0    295.0   695.0   360.0   360.0   360.0
GR1096.6    295.0  1075.3   316.3  1075.3   500.0  1075.3  672.3   1098.0  695.0
X1 227.5      11    245.    755.    640     640     640
GR1099.0     245.  1077.1   268.0  1077.1   334.0  1077.1   400.   1077.1   466.
GR1077.1     500.  1077.1    532.  1077.1    598.  1077.1   664.   1077.1   733.
GR1099.0     755.
X1233.55       5    270.    730.    580.    580.    580.
GR1101.7     270.  1079.0   292.7  1079.0    500.  1079.0  707.4   1101.6  730.0
X1238.66       5     330     670     516     516     516
GR1103.3     330   1080.6   352.9  1080.6    500   1080.6  646.7   1103.7   670
X1238.69     5.0    325.0   665.0    3.0     3.0     3.0
GR1103.4    325.0  1083.6   344.8  1083.6   500.0  1083.6  644.7   1103.9  665.0
NC 0.035   0.035    .035     .1      .3
X1 242.        5     325     675     331     331     331
GR 1104.     325. 1084.45  344.55 1084.45    500  1084.45 655.45   1104.0   675
X1 247.        5     325     675     500     500     500
GR1104.5     325. 1085.67  343.83 1085.67    500  1085.67 656.17   1104.5  675.0
NC  .045    .045    .035     .1      .3
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X1 270.5     46.   9793.  10175.    338.    338.    338.
CI 9955.  1086.5 555.035      1.      1.   -365.
X3   10.                   9750.
GR1128.2   8815.   1120.   8816.   1120.   9304.  1106.2   9305.   1106.   9360.
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GR1105.7   9640.   1120.   9641.   1120.   9714.  1105.6   9715.   1106.   9775.
GR 1108.   9793.   1093.   9805.   1093.   9813.   1092.   9820.   1092.   9830.
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GR 1090.   9903.   1089.   9906.   1088.   9943.   1088.   9968.   1087.   9975.
GR 1088.  10012.   1087.  10028.   1086.  10035.  1085.3  10045.   1086.  10055.
GR 1087.  10085.   1089.  10115.   1085.  10132.   1090.  10142.   1091.  10158.
GR 1107.  10175.  1107.6  10192.   1106.  10200.  1107.2  10210.  1107.1  10213.
GR 1110.  10218.
X1 273.5     41.   9750.  10125.    315.    310.    310.
CI 9919.  1087.2 310.035      1.      1.   -375.
X3   10.                   9640.
GR1108.3   9010.   1120.   9011.   1120.   9239.  1107.8   9240.  1107.1   9270.
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GR 1091.   9860.   1092.   9880.   1091.   9891.   1090.   9896.   1088.   9910.
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GR 1095.  10105.   1095.  10113.   1108.  10125.   1106.  10153.   1108.  10160.
GR 1111.  10160.
X1 277.9     39.   9910.  10137.    420.    420.    420.
CI 9927.  1088.3 420.035      1.      1.   -360.
X3   10.
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GR 1091.   9973.   1090.   9976.   1089.   9982.   1088.   9985.   1089.  10005.
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GR 1090.  10116.  1108.5  10137.  1108.5  10155.   1112.  10155.
X1 281.8     29.   9888.  10117.    410.    410.    410.
CI 9932.  1089.2 410.035      1.      1.   -330.
X3   10.
GR1113.6   9440.  1110.8   9440.   1110.   9455.   1120.   9456.   1120.   9550.
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GR 1092.   9904.  1091.2   9910.   1092.   9917.  1092.6   9965.   1092.  10005.
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NC                            .3      .5
X1  288.     30.0   9873.  10145.    600.    600.    600.
CI 9988.  1092.2 600.035      1.      1.   -274.
X3   10.
X4 1.0      1112.  10145.
GR 1117.   9545.  1114.1   9545.   1114.   9550.  1110.6   9710.   1112.   9790.
GR 1114.   9835.   1113.   9845.   1111.   9855.   1111.   9873.   1098.   9886.
GR 1097.   9907.   1096.   9934.   1095.   9937.   1094.   9978.  1093.7  10017.
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GR1096.8  10100.   1094.  10103.   1098.  10113.   1099.  10119.   1099.  10133.
GR1109.5  10143.  1109.5  10158.   1112.  10160.   1112.  10175.   1112.  10200.
X1  290.      6.   9865.  10136.    220.    160.    200.
                                          .01
X3   10.                                        1117.8  1117.8
GR1117.8   9865.  1108.8   9865.    1093   9865.  1093.3  10136.  1108.8  10136.
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GR1117.8  10136.
SB    .9    1.56     2.9            271.    10.5   4974.          1093.7  1093.3
X1  291.      6.    9865.  10136.    77.     77.     77.
X2                    1.   1114.1  1119.1
X3   10.                                                  1117.8  1117.8
BT    2.   9865.   1118.1  1112.8  10136.  1118.1  1112.8
GR 1116.   9865.   1108.8   9865.   1093.   9865.   1093.7  10136.  1108.8  10136.
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NC .035    .035    .035     .1      .3
X1  293.      8.    9870.  10144.   200.    200.    200.
CI10007.   1094. 200.035      1.      1.   -231.
GR1115.6   9852.   1115.6   9870.   1094.   9892.   1094.   10123.   1115.  10144.
GR 1115.  10162.   1119.   10168.   1119.3  10258.
X1  297.      6.    9865.  10150.   400.    400.    400.
CI10006.  1096.1 400.035      1.      1.   -246.
GR1116.5   9847.   1116.   9865.   1096.   9885.   1096.   10131.   1115.  10150.
GR1116.   10190.
X1  302.      6.    9882.  10118.   530.    530.    530.
CI 9999.  1098.2 530.035      1.      1.   -197.
GR 1117.   9830.   1116.   9882.   1098.2  9900.   1098.2  10097.   1119.5 10118.
GR 1119.  10136.
X1  305.      6.    9901.  10110.   280.    280.    280.
CI 9992.  1099.5 280.035      1.      1.   -188.
GR1118.3   9818.   1116.   9901.   1099.5  9917.   1099.5  10090.   1119.5 10110.
GR1119.2  10128.
X1306.75      6.    9911.  10123.   215.    215.    215.
CI 9959.  1100.3 215.035      1.      1.   -289.
GR 1116.   9781.   1116.   9911.   1100.3  9927.   1100.3  10103.   1120.  10123.
GR 1129.  10175.
X1  310.      6.    9852.  10148.   320.    320.    320.
CI 9965.  1101.6 320.035      1.      1.   -330.
GR 1117.   9780.   1116.   9852.   1101.6  9866.   1101.6  10129.   1121.  10148.
GR 1118.  10185.
X1 313.2      6.    9820.  10180.   315.    315.    315.
CI10000.   1103. 315.035      1.      1.   -330.
GR 1117.   9800.   1117.   9820.   1109.   9834.   1103.   10162.   1121.3 10180.
GR 1121.  10198.
X1  318.      6.    9820.  10180.   500.    500.    500.
CI10000.  1105.1 500.035      1.      1.   -330.
GR 1123.   9800.   1120.   9820.   1105.1  9835.   1105.1  10162.   1123.  10180.
GR 1123.  10198.
X1320.05      6.    9820.  10180.   290.    290.    290.
CI10000.   1106. 290.035      1.      1.   -330.
GR 1125.   9800.   1125.   9820.   1106.   9839.   1106.   10161.   1125.  10180.
GR 1125.  10200.
X1  328.      6.    9823.  10173.   640.    640.    640.
CI10000.  1109.1 640.035      1.      1.   -330.
GR 1127.   9800.   1127.   9823.   1109.1  9838.   1109.1  10162.   1127.  10173.
GR 1127.  10200.
X1  330.      6.    9820.  10180.   175.    175.    175.
CI10000.  1110.1 175.035      1.      1.   -330.
GR1127.5   9800.   1127.5   9820.   1110.1  9837.   1110.1  10163.   1127.5 10180.
GR1127.5  10200.
X1  334.      6.    9820.  10180.   420.    420.    420.
CI10000.   1112. 420.035      1.      1.   -330.
GR 1129.   9800.   1129.   9820.   1112.   9837.   1112.   10163.   1129.  10180.
GR 1129.  10200.
NC  .045    .045    .035     .2      .4
X1  343.     19.    9870.  10155.    900     900     900
CI10025.  1115.7 900.035      1.      1.   -330.
```

```
X3   10.
GR 1132.   9861.  1135.2   9870.   1132.   9880.   1122.   9905.   1120.   9915.
GR 1120.   9950.  1119.1   9975.   1120.   9985.   1120.  10015.   1118.  10070.
GR  1116  10090.  1115.7  10100.   1116.  10110.   1118.  10122.   1132.  10147.
GR1132.5  10155.   1132.  10160.   1132.  10345.   1134.  10365.
X1 344.9      4.   9823.  10178.    110.    260.    190.
CI                                          .01
X3   10.
GR 1132.   9823.  1116.3   9835.  1116.3  10165.   1132.  10178.
EJ
T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3      50-YEAR EVENT             NRO2B
J1     0       3                                                1039.39
J2     2       0      -1                              -1                      0
T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3      100-YEAR EVENT            NRO2B
J1     0       4                                                1040.66
J2     3       0      -1                              -1                      0
T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3      500-YEAR EVENT            NRO2B
J1     0       5                                                1043.78
J2     4       0      -1                              -1                      0
ER
```

```
*****************************************
*  HEC-2 WATER SURFACE PROFILES         *
*                                       *
*  Version   4.6.2;  May 1991           *
*                                       *
*  RUN DATE    17JUN92    TIME   14:14:15 *
*****************************************
```

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****************************************
*  U.S. ARMY CORPS OF ENGINEERS        *
*  HYDROLOGIC ENGINEERING CENTER       *
*  609 SECOND STREET, SUITE D          *
*  DAVIS, CALIFORNIA 95616-4687        *
*          (916) 756-1104              *
****************************************
```

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

THIS RUN EXECUTED 17JUN92 14:14:16

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

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

T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVENUE
T3      10-YEAR EVENT              NRO2B

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
T    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.
    39       55     9586    10426      270      200      220
  1045     5696   1045.6     5736   1045.7     5821     1045     6091     1044     6506
GR 1042    6631     1041     6751     1040     6856   1038.7     6961     1038     7116
1036.8     7206   1037.3     7556   1036.3     7896   1036.4     8191   1036.4     8366
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
  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
1030.5    10042   1031.5    10190   1032.5    10341   1032.9   10405.4   1043.2    10426
1044.1    10946   1044.2    11256   1044.5    11511     1045    11571     1046    12881

  .045     .045     .035      0.2      0.4
          BEGIN CHANNELIZATION AND SIDEBANK PROTECTION DEGIGN.
          LT CHNL BTM WDTH = 500 FEET - MATCH EXISTING DOWNSTREAM
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                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

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    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
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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

              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   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
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```
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

NC    .025      .025      .025       0.3       0.5
             DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
X1    99.6        5.     325.1     674.9        6.        6.        6.
X3      10
GR   1063.8     325.1    1046.2    325.15    1046.2      500.    1046.2    674.85    1063.8     674.9

SB     0.9      1.56       2.9       358    349.74       32.    5378.3         0    1046.5    1046.2
             GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
X1   100.4        5.     325.1     674.9       80.       80.       80.
X2                          1.    1063.4    1065.9                          1.33
X3      10                                                              1065.9    1065.9
GR   1063.6     325.1    1046.5    325.15    1046.5    500.00    1046.5    674.85    1063.6     674.9

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    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

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
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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
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

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                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

                CHANNEL BOTTOM TAPERS
                LT CHNL BTM WDTH = 260 FT.
                RT CHNL BTM WDTH = 170 FT.
X1   155.00        15      224.1     685.9       585       460       500
GR   1073.3     224.1     1057.4     255.9    1057.4     382.8    1065.0       398    1064.0       404
GR   1062.0       412     1061.4       450    1062.0       488    1063.0       500    1064.0       505
GR   1066.0       511     1057.4     528.2    1057.4       600    1057.4       670    1073.3     685.9

NC     .035      .035       .035        .3        .5
                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 162.5 FT.
                RT CHNL BTM WDTH = 162.5 FT.
X1   158.00         5       319     679.5       360       265       300
GR   1076.5      319.     1058.0     356.0    1058.0       500    1058.0     662.5    1075.0     679.5

                DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE
X1   159.45        5.       319.      681.       245       245       245
X3       10                                                                 1077.46   1077.46
GR   1076.8      319.     1058.3     337.5    1058.3      500.    1058.3     662.5    1076.8      681.

SB     1.05      1.56       2.9      388.      325.        28      6034      1.00   1058.46    1058.3
                NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
X1   160.25        5.       319.      681.       80.       80.       80.
X2                            1.   1077.46     1082.                          1.33
X3       10                                                                 1082.00   1082.00
GR    1077.      319.    1058.46     337.5   1058.46      500.   1058.46     662.5    1077.0      681.

                BEGIN CHANNEL BOTTOM TRANSITION
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                LT CHNL BTM WDTH = 162.5 FT.
                RT CHNL BTM WDTH = 162.5 FT.
X1    162.0       12      319.3     680.7      175       175       175
GR   1077.0    319.3     1058.8     337.5   1058.8       350    1058.8       400    1058.8      420.
GR   1058.8      440     1058.8      460.   1058.8      480.    1058.8       500    1058.8       600
GR   1058.8    662.5     1077.0     680.7

                END CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 300 FT.
                RT CHNL BTM WDTH = 250 FT.
X1   165.00       10      189.2     769.4      300       300       300
GR   1078.8    189.2      1068.     210.8   1068.0     227.8    1068.0       245    1068.0       305
GR   1068.2      370     1059.4     387.6   1059.4       500    1059.4       750    1078.8     769.4

X1    168.0       12       190     768.9      300       300       300
GR   1079.0     190.      1069       210     1069     225.2      1069       243      1068       254
GR   1067.8      278      1068       295   1069.5       380    1060.1     398.8    1060.1       500
GR   1060.1      750    1079.0     768.9

NC     .035     .035      .035        .1       .3
                BEGIN CHANNEL BOTTOM TRANSITION
                LT CHNL BTM WDTH = 300 FT.
                RT CHNL BTM WDTH = 250 FT.
X1    170.0       12     190.8     768.6      200.      200.      200.
GR   1079.2    190.8      1070.     209.2     1070     240.2      1070       260      1069       262
GR   1068.4      295      1068       366   1070.0       377    1060.6     395.8    1060.6       500
GR   1060.6      750    1079.2     768.6

                END CHNL BTM TRANSITION RT.
                RT CHNL BTM WDTH = 157 FT.
X1    173.0       12     224.1     674.6      300       300       300
GR   1079.0    224.1      1072.     238.1     1072     268.8    1072.0       290      1070       302
GR     1068      312      1068       380     1069       385    1061.4     400.2    1061.4       500
GR   1061.4      657    1079.0     674.6

X1    176.0       12     265.9     674.4      300       300       300
GR   1079.6    265.9      1068.     289.1   1068.0       327     1068.       339      1068       404
GR   1062.2      416    1062.2       450   1062.2       475    1062.2       500    1062.2       550
GR   1062.2      657    1079.6     674.4

                BEGIN CHNL BTM TRANSITION RT.
                RT CHNL BTM WDTH = 157 FT.
X1   177.00        5     279.1     675.1      100       100       100
GR   1080.5    279.1    1062.4       297   1062.4      500.    1062.4       657    1080.5     675.1

                END CHNL BTM TRANSITION LT.
                LT CHNL BTM WDTH = 175 FT.
X1   179.00        5     306.8     726.7      200       200       200
GR   1081.0    306.8    1062.8     343.3   1062.8       500    1062.8     708.5    1081.0     726.7
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                END CHNL BTM TRANSITION RT.
                RT CHNL BTM WDTH = 260 FT.
X1    181.0        5     306.7    778.3      200      200      200
GR   1081.6    306.7    1063.3    343.3   1063.3      500   1063.3      760   1081.6    778.3

NC     .035     .035      .035
X1    183.0       12     307.5    777.5      200      200      200
GR   1081.3    307.5    1063.8    342.5   1063.8    397.6     1073      416     1072      439
GR   1071.8      492    1071.5      500   1070.0      540   1071.0      599   1063.8    613.4
GR   1063.8      760    1081.3    777.5

X1    188.0       12       307      778     500.     500.     500.
GR   1083.0     307.      1065      343     1065      500   1065.0      513     1073      529
GR   1072.1      530    1072.7      575   1072.0      643   1070.5     660.   1065.0      671
GR   1065.0      760    1083.0      778

                STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.
X1    193.0       12     307.2    777.8     500.     500.     500.
GR   1084.0    307.2    1066.2    342.8   1066.2    489.4     1074      505   1072.0      540
GR   1071.4      560    1072.0      585   1074.0      620   1066.2    635.6   1066.2      700
GR   1066.2      760    1084.0    777.8

                BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
                TO MATCH PAST DEIGN CROSS SECTIONS.
X1   197.00       13     307.6    777.4      400      400      400
GR   1084.6    307.6    1067.2    342.4   1067.2    409.4   1074.0      423   1072.0      500
GR   1072.0      610    1074.0      613   1076.0      617   1076.0      627   1075.8      640
GR   1067.2    657.2    1067.2      760   1084.6    777.4

NC     .035     .035      .035      0.3      0.5
X1   199.00       5.     317.5    728.5      200      200     100.
GR   1086.2    317.5    1067.7      336   1067.7      500   1067.7     710.   1086.2    728.5

                DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE
X1   201.10       5.     324.5    675.5     210.     210.     210.
X3       10
GR   1086.7    324.5    1068.2      343.   1068.2     500.   1068.2     657.   1086.7    675.5

SB    1.05      1.56       2.9     376.     314.      21.     5763     1.00   1068.4   1068.2
                99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
X1   201.90       5.     324.5    675.5      80.      80.      80.
X2                          1.   1086.7   1091.8                       1.33
X3       10                                                        1091.80  1091.80
GR   1086.9    324.5    1068.4      343.   1068.4     500.   1068.4     657.   1086.9    675.5

X1   204.00       5.     324.5    675.5     210.     210.     210.
GR   1087.4    324.5    1068.9      343.   1068.9     500.   1068.9     657.   1087.4    675.5
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NC    .035     .035     .035     0.3      0.5
X1    209.30   5.       325.     675.     530.     530.     530.                9.59
GR    1078.6   325.     1060.6   343.     1060.6   500.     1060.6   657.     1078.6   675.

NC    .035     .035     .035     0.3      0.5
            DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE
X1    212.6    5.       357.4    642.6    330.     330.     330.
X3    10
GR    1089.6   357.4    1071.    376      1071.0   500.     1071.0   624      1089.6   642.6

SB    1.05     1.56     2.9      300.     248      18.5     4481.6   1.00     1071.5   1071.0
            OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
X1    213.5    5.       357.9    642.1    90.      90.      90.
X2                      1.       1089.6   1095.                      1.33
X3    10                                                            1095.00  1095.00
GR    1089.6   357.9    1071.5   376.     1071.5   500.     1071.5   624.     1089.6   642.1

NC    .045     .045     .035     0.1      0.3
X1    213.7    5.0      347.1    652.9    20.0     20.0     20.0
GR    1095.0   347.1    1073.0   369.1    1073.0   500.0    1073.0   630.9    1096.2   652.9

X1    217.5    5.       305.     690.     380.     380.     380.
GR    1096.0   305.     1074.2   326.8    1074.2   500.     1074.2   667.2    1097.0   690.

X1    221.1    5.0      295.0    695.0    360.0    360.0    360.0
GR    1096.6   295.0    1075.3   316.3    1075.3   500.0    1075.3   672.3    1098.0   695.0

X1    227.5    11       245.     755.     640      640      640
GR    1099.0   245.     1077.1   268.0    1077.1   334.0    1077.1   400.     1077.1   466.
GR    1077.1   500.     1077.1   532.     1077.1   598.     1077.1   664.     1077.1   733.
GR    1099.0   755.

X1    233.55   5        270.     730.     580.     580.     580.
GR    1101.7   270.     1079.0   292.7    1079.0   500.     1079.0   707.4    1101.6   730.0

X1    238.66   5        330      670      516      516      516
GR    1103.3   330      1080.6   352.9    1080.6   500      1080.6   646.7    1103.7   670

X1    238.69   5.0      325.0    665.0    3.0      3.0      3.0
GR    1103.4   325.0    1083.6   344.8    1083.6   500.0    1083.6   644.7    1103.9   665.0

NC    0.035    0.035    .035     .1       .3
X1    242.     5        325      675      331      331      331
GR    1104.    325.     1084.45  344.55   1084.45  500      1084.45  655.45   1104.0   675

X1    247.     5        325      675      500      500      500
GR    1104.5   325.     1085.67  343.83   1085.67  500      1085.67  656.17   1104.5   675.0
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NC	.045	.045	.035	.1	.3					
X1	270.5	46.	9793.	10175.	338.	338.	338.			
CI	9955.	1086.5	555.035	1.	1.	-365.				
X3	10.			9750.						
GR	1128.2	8815.	1120.	8816.	1120.	9304.	1106.2	9305.	1106.	9360.
GR	1106.3	9400.	1120.	9401.	1120.	9559.	1106.2	9560.	1105.8	9610.
GR	1105.7	9640.	1120.	9641.	1120.	9714.	1105.6	9715.	1106.	9775.
GR	1108.	9793.	1093.	9805.	1093.	9813.	1092.	9820.	1092.	9830.
GR	1092.	9850.	1095.	9863.	1093.	9873.	1089.	9885.	1097.	9895.
GR	1090.	9903.	1089.	9906.	1088.	9943.	1088.	9968.	1087.	9975.
GR	1088.	10012.	1087.	10028.	1086.	10035.	1085.3	10045.	1086.	10055.
GR	1087.	10085.	1089.	10115.	1085.	10132.	1090.	10142.	1091.	10158.
GR	1107.	10175.	1107.6	10192.	1106.	10200.	1107.2	10210.	1107.1	10213.
GR	1110.	10218.								
X1	273.5	41.	9750.	10125.	315.	310.	310.			
CI	9919.	1087.2	310.035	1.	1.	-375.				
X3	10.			9640.						
GR	1108.3	9010.	1120.	9011.	1120.	9239.	1107.8	9240.	1107.1	9270.
GR	1107.5	9315.	1120.	9316.	1120.	9489.	1107.1	9490.	1106.7	9520.
GR	1106.1	9560.	1120.	9561.	1120.	9609.	1109.	9640.	1106.	9640.
GR	1106.1	9700.	1106.8	9730.	1106.6	9750.	1105.2	9760.	1105.2	9770.
GR	1106.	9805.	1105.	9815.	1100.	9825.	1095.	9840.	1092.	9846.
GR	1091.	9860.	1092.	9880.	1091.	9891.	1090.	9896.	1088.	9910.
GR	1087.6	9965.	1088.	10015.	1086.4	10065.	1088.	10083.	1090.	10087.
GR	1095.	10105.	1095.	10113.	1108.	10125.	1106.	10153.	1108.	10160.
GR	1111.	10160.								
X1	277.9	39.	9910.	10137.	420.	420.	420.			
CI	9927.	1088.3	420.035	1.	1.	-360.				
X3	10.									
GR	1109.3	9070.	1108.5	9120.	1109.3	9170.	1120.	9171.	1120.	9329.
GR	1109.	9330.	1108.1	9380.	1109.	9400.	1120.	9401.	1120.	9459.
GR	1109.	9460.	1108.	9500.	1107.1	9630.	1106.	9700.	1106.	9780.
GR	1107.	9810.	1106.	9857.	1106.	9858.	1106.	9859.	1106.	9860.
GR	1105.5	9888.	1105.5	9910.	1091.	9925.	1091.	9938.	1092.	9945.
GR	1091.	9973.	1090.	9976.	1089.	9982.	1088.	9985.	1089.	10005.
GR	1069.	10015.	1088.	10045.	1089.	10055.	1089.	10080.	1090.	10092.
GR	1090.	10116.	1108.5	10137.	1108.5	10155.	1112.	10155.		
X1	281.8	29.	9888.	10117.	410.	410.	410.			
CI	9932.	1089.2	410.035	1.	1.	-330.				
X3	10.									
GR	1113.6	9440.	1110.8	9440.	1110.	9455.	1120.	9456.	1120.	9550.
GR	1109.2	9551.	1108.5	9770.	1109.	9850.	1106.	9868.	1108.	9888.
GR	1092.	9904.	1091.2	9910.	1092.	9917.	1092.6	9965.	1092.	10005.
GR	1091.	10015.	1090.	10020.	1089.	10020.	1087.5	10033.	1089.	10037.
GR	1090.	10040.	1094.	10058.	1095.	10074.	1095.	10082.	1095.	10102.
GR	1109.7	10117.	1109.7	10135.	1109.7	10140.	1113.	10140.		

NC				.3	.5					
X1	288.	30.0	9873.	10145.	600.	600.	600.			
CI	9988.	1092.2	600.035	1.	1.	-274.				
X3	10.									
X4	1.0	1112.	10145.							
GR	1117.	9545.	1114.1	9545.	1114.	9550.	1110.6	9710.	1112.	9790.
GR	1114.	9835.	1113.	9845.	1111.	9855.	1111.	9873.	1098.	9886.
GR	1097.	9907.	1096.	9934.	1095.	9937.	1094.	9978.	1093.7	10017.
GR	1094.	10042.	1095.	10053.	1096.	10065.	1097.	10070.	1097.	10097.
GR	1096.8	10100.	1094.	10103.	1098.	10113.	1099.	10119.	1099.	10133.
GR	1109.5	10143.	1109.5	10158.	1112.	10160.	1112.	10175.	1112.	10200.
X1	290.	6.	9865.	10136.	220.	160.	200.			
CI						.01				
X3	10.						1117.8	1117.8		
GR	1117.8	9865.	1108.8	9865.	1093	9865.	1093.3	10136.	1108.8	10136.
GR	1117.8	10136.								
SB	.9	1.56	2.9		271.	10.5	4974.		1093.7	1093.3
X1	291.	6.	9865.	10136.	77.	77.	77.			
X2			1.	1114.1	1119.1					
X3	10.							1117.8	1117.8	
BT	2.	9865.	1118.1	1112.8	10136.	1118.1	1112.8			
GR	1116.	9865.	1108.8	9865.	1093.	9865.	1093.7	10136.	1108.8	10136.
GR	1116.	10136.								
NC	.035	.035	.035	.1	.3					
X1	293.	8.	9870.	10144.	200.	200.	200.			
CI	10007.	1094.	200.035	1.	1.	-231.				
GR	1115.6	9852.	1115.6	9870.	1094.	9892.	1094.	10123.	1115.	10144.
GR	1115.	10162.	1119.	10168.	1119.3	10258.				
X1	297.	6.	9865.	10150.	400.	400.	400.			
CI	10006.	1096.1	400.035	1.	1.	-246.				
GR	1116.5	9847.	1116.	9865.	1096.	9885.	1096.	10131.	1115.	10150.
GR	1116.	10190.								
X1	302.	6.	9882.	10118.	530.	530.	530.			
CI	9999.	1098.2	530.035	1.	1.	-197.				
GR	1117.	9830.	1116.	9882.	1098.2	9900.	1098.2	10097.	1119.5	10118.
GR	1119.	10136.								
X1	305.	6.	9901.	10110.	280.	280.	280.			
CI	9992.	1099.5	280.035	1.	1.	-188.				
GR	1118.3	9818.	1116.	9901.	1099.5	9917.	1099.5	10090.	1119.5	10110.
GR	1119.2	10128.								
X1	306.75	6.	9911.	10123.	215.	215.	215.			
CI	9959.	1100.3	215.035	1.	1.	-289.				
GR	1116.	9781.	1116.	9911.	1100.3	9927.	1100.3	10103.	1120.	10123.
GR	1129.	10175.								

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X1    310.       6.      9852.    10148.      320.      320.      320.
CI   9965.    1101.6   320.035       1.        1.     -330.
GR   1117.    9780.     1116.     9852.    1101.6     9866.    1101.6    10129.     1121.    10148.
GR   1118.   10185.

X1   313.2       6.      9820.    10180.      315.      315.      315.
CI  10000.    1103.   315.035       1.        1.     -330.
GR   1117.    9800.     1117.     9820.     1109.     9834.     1103.    10162.    1121.3    10180.
GR   1121.   10198.

X1    318.       6.      9820.    10180.      500.      500.      500.
CI  10000.    1105.1   500.035       1.        1.     -330.
GR   1123.    9800.     1120.     9820.    1105.1     9835.    1105.1    10162.     1123.    10180.
GR   1123.   10198.

X1  320.05       6.      9820.    10180.      290.      290.      290.
CI  10000.    1106.   290.035       1.        1.     -330.
GR   1125.    9800.     1125.     9820.     1106.     9839.     1106.    10161.     1125.    10180.
GR   1125.   10200.

X1    328.       6.      9823.    10173.      640.      640.      640.
CI  10000.    1109.1   640.035       1.        1.     -330.
GR   1127.    9800.     1127.     9823.    1109.1     9838.    1109.1    10162.     1127.    10173.
GR   1127.   10200.

X1    330.       6.      9820.    10180.      175.      175.      175.
CI  10000.    1110.1   175.035       1.        1.     -330.
GR  1127.5    9800.    1127.5     9820.    1110.1     9837.    1110.1    10163.    1127.5    10180.
GR  1127.5   10200.

X1    334.       6.      9820.    10180.      420.      420.      420.
CI  10000.    1112.   420.035       1.        1.     -330.
GR   1129.    9800.     1129.     9820.     1112.     9837.     1112.    10163.     1129.    10180.
GR   1129.   10200.

NC    .045     .045      .035       .2        .4
X1    343.      19.     9870.    10155.      900       900       900
CI  10025.    1115.7   900.035       1.        1.     -330.
X3     10.
GR   1132.    9861.    1135.2     9870.     1132.     9880.     1122.     9905.     1120.     9915.
GR   1120.    9950.    1119.1     9975.     1120.     9985.     1120.    10015.     1118.    10070.
GR    1116   10090.    1115.7    10100.     1116.    10110.     1118.    10122.     1132.    10147.
GR  1132.5   10155.     1132.    10160.     1132.    10345.     1134.    10365.

X1   344.9       4.      9823.    10178.      110.      260.      190.
CI                                                     .01
X3     10.
GR   1132.    9823.    1116.3     9835.    1116.3    10165.     1132.    10178.
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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 10-YR

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

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
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

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

*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
 .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

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1063.80 ELREA=      1063.80
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DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE

99.600	3.58	1049.78	1049.78	.00	1051.59	1.81	.03	.46	1063.80
13500.0	.0	13500.0	.0	.0	1250.8	.0	374.4	74.5	1063.80
.33	.00	10.79	.00	.000	.025	.000	.000	1046.20	325.14
.006193	6.	6.	6.	0	19	0	.00	349.72	674.86

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1049.04 , NOT 1049.78 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	358.00	349.74	32.00	5378.30	.00	1046.50	1046.20

*SECNO 100.400

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.78

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1050.18 BRIDGE VELOCITY= 11.09 CALCULATED CHANNEL AREA= 1169.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1052.47	.00	0.	13500.	5378.	5370.	1063.40	1065.90	0.

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

GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

100.400	5.07	1051.57	.00	.00	1052.47	.90	.88	.00	1063.60
13500.0	.0	13500.0	.0	.0	1772.3	.0	377.2	75.2	1063.60
.33	.00	7.62	.00	.000	.025	.000	.000	1046.50	325.14
.001960	80.	80.	80.	0	0	0	.00	349.73	674.86

*SECNO 100.900

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

100.900	5.17	1051.77	1050.16	.00	1052.61	.84	.13	.02	1063.60
13500.0	.0	13500.0	.0	.0	1835.2	.0	379.3	75.6	1063.60
.33	.00	7.36	.00	.000	.035	.000	.000	1046.60	319.98
.003476	50.	50.	50.	0	19	0	.00	360.04	680.02

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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 103.000
 103.000     5.78   1052.78   1050.49       .00   1053.40       .62       .72       .07   1065.40
 13500.0       .0   13500.0       .0       .0    2134.6       .0     391.1      77.8   1065.40
     .34      .00      6.32      .00      .000      .035      .000      .000   1047.00    317.24
 .002236     260.      260.      260.        2        14         0       .00    378.13    695.38


CCHV=     .100 CEHV=     .300
*SECNO 106.000
 106.000     5.95   1053.55   1050.61       .00   1053.92       .38       .50       .02   1066.40
 13500.0       .0   13500.0       .0       .0    2733.2       .0     407.9      80.7   1066.40
     .36      .00      4.94      .00      .000      .035      .000      .000   1047.60    272.11
 .001303     300.      300.      300.        2        11         0       .00    468.64    740.75


*SECNO 109.000
            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 280 FT.
            RT CHNL BTM WDTH = 280 FT.
 109.000     5.79   1053.99   1051.01       .00   1054.29       .29       .35       .01   1066.90
 13500.0       .0   13500.0       .0       .0    3109.3       .0     428.0      84.2   1066.90
     .38      .00      4.34      .00      .000      .035      .000      .000   1048.20    227.11
 .001073     300.      300.      300.        2        14         0       .00    558.68    785.79


*SECNO 110.000
 110.000     7.09   1054.09   1051.29       .00   1054.41       .32       .11       .01   1066.90
 13500.0       .0   13500.0       .0       .0    2996.2       .0     435.0      85.5   1066.90
     .39      .00      4.51      .00      .000      .035      .000      .000   1047.00    227.19
 .001213     100.      100.      100.        2        19         0       .00    558.50    785.69


*SECNO 113.000
 113.000     5.46   1054.46   1051.75       .00   1054.78       .32       .37       .00   1067.20
 13500.0       .0   13500.0       .0       .0    2957.7       .0     455.5      89.4   1067.20
     .40      .00      4.56      .00      .000      .035      .000      .000   1049.00    227.28
 .001265     300.      300.      300.        2        18         0       .00    558.17    785.46


*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     5.24   1054.84   1052.46      .00   1055.24      .40      .44      .02   1067.30
  13500.0      .0   13500.0       .0       .0    2675.8       .0    474.9     93.1   1067.30
      .42     .00      5.05      .00     .000      .035     .000     .000  1049.60    227.21
  .001698    240.     300.     340.        2        11        0      .00   538.41    785.24

*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     4.94   1055.34   1054.56      .00   1056.73     1.38     1.19      .30   1067.10
  13500.0      .0   13500.0       .0       .0    1429.8       .0    493.8     97.0   1067.10
      .43     .00      9.44      .00     .000      .035     .000     .000  1050.40    296.81
  .006512    327.     400.     497.        2        15        0      .00   307.15    734.94

*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      .83      .10   1068.80
  13500.0      .0   13500.0       .0       .0    2702.7       .0    510.0     99.9   1068.80
      .45     .00      5.00      .00     .000      .035     .000     .000  1051.00    295.28
  .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    2578.4       .0    534.2    104.0   1068.80
      .47     .00      5.24      .00     .000      .035     .000     .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	2410.6	.0	557.1	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	440.56	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	2093.3	.0	577.8	112.1	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	2384.9	.0	593.2	115.1	1069.60
.52	.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	608.8	118.1	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	2678.3	.0	630.9	122.1	1077.00
.56	.00	5.04	.00	.000	.035	.000	.000	1055.40	294.20
.001288	400.	400.	400.	2	11	0	.00	440.56	734.76

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	643.1	124.1	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	661.5	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

*SECNO 155.000

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

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

CHANNEL BOTTOM TAPERS
LT CHNL BTM WDTH = 260 FT.
RT CHNL BTM WDTH = 170 FT.

155.000	5.65	1063.05	1061.80	.00	1063.98	.93	1.14	.17	1073.30
13500.0	.0	13500.0	.0	.0	1740.8	.0	687.1	132.2	1073.30
.61	.00	7.75	.00	.000	.035	.000	.000	1057.40	244.60
.004808	585.	500.	460.	2	15	0	.00	400.68	675.65

CCHV= .300 CEHV= .500
*SECNO 158.000

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

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.44

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 162.5 FT.
RT CHNL BTM WDTH = 162.5 FT.

158.000	6.30	1064.30	1061.89	.00	1065.02	.71	.97	.07	1076.50
13500.0	.0	13500.0	.0	.0	1991.9	.0	700.0	134.7	1075.00
.62	.00	6.78	.00	.000	.035	.000	.000	1058.00	343.39
.002314	360.	300.	265.	2	14	0	.00	325.41	668.80

*SECNO 159.450

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1077.46 ELREA= 1077.46

DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE

159.450	6.67	1064.97	1062.04	.00	1065.54	.58	.49	.04	1076.80
13500.0	.0	13500.0	.0	.0	2211.0	.0	711.8	136.6	1076.80
.63	.00	6.11	.00	.000	.035	.000	.000	1058.30	330.83
.001729	245.	245.	245.	2	14	0	.00	338.33	669.17

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	388.00	325.00	28.00	6034.00	1.00	1058.46	1058.30

*SECNO 160.250
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1064.90 BRIDGE VELOCITY= 6.83 CALCULATED CHANNEL AREA= 1953.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1065.69	.14	0.	13500.	6034.	6004.	1077.46	1082.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1082.00 ELREA= 1082.00

NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

160.250	6.64	1065.10	.00	.00	1065.69	.58	.14	.00	1077.00
13500.0	.0	13500.0	.0	.0	2202.7	.0	715.8	137.2	1077.00
.63	.00	6.13	.00	.000	.035	.000	.000	1058.46	330.87
.001751	80.	80.	80.	0	0	0	.00	338.26	669.13

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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 162.000
            BEGIN CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 162.5 FT.
            RT CHNL BTM WDTH = 162.5 FT.
 162.000     6.61   1065.41   1062.55      .00   1066.00      .59       .31       .00   1077.00
 13500.0      .0   13500.0       .0       .0    2190.7       .0     724.7     138.6   1077.00
     .64     .00      6.16      .00     .000      .035     .000      .000   1058.80    330.89
 .001782    175.     175.      175.        0        11        0       .00    338.21    669.11


*SECNO 165.000
            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 300 FT.
            RT CHNL BTM WDTH = 250 FT.
 165.000     6.64   1066.04   1062.88      .00   1066.51      .46       .47       .04   1078.80
 13500.0      .0   13500.0       .0       .0    2473.9       .0     740.7     141.0   1078.80
     .66     .00      5.46      .00     .000      .035     .000      .000   1059.40    374.31
 .001391    300.     300.      300.        2        11        0       .00    382.33    756.64


*SECNO 168.000
 168.000     6.37   1066.47   1063.65      .00   1067.00      .54       .46       .04   1079.00
 13500.0      .0   13500.0       .0       .0    2297.1       .0     757.1     143.6   1079.00
     .67     .00      5.88      .00     .000      .035     .000      .000   1060.10    386.06
 .001706    300.     300.      300.        2        11        0       .00    370.30    756.37


CCHV=     .100 CEHV=     .300
*SECNO 170.000
            BEGIN CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 300 FT.
            RT CHNL BTM WDTH = 250 FT.
 170.000     6.21   1066.81   1064.13      .00   1067.36      .56       .35       .01   1079.20
 13500.0      .0   13500.0       .0       .0    2256.3       .0     767.6     145.3   1079.20
     .68     .00      5.98      .00     .000      .035     .000      .000   1060.60    383.39
 .001827    200.     200.      200.        2        11        0       .00    372.82    756.21


*SECNO 173.000

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

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

END CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

173.000	5.76	1067.16	1065.76	.00	1068.37	1.21	.81	.20	1079.00
13500.0	.0	13500.0	.0	.0	1530.1	.0	780.6	147.6	1079.00
.69	.00	8.82	.00	.000	.035	.000	.000	1061.40	388.67
.004440	300.	300.	300.	2	19	0	.00	274.09	662.76

*SECNO 176.000

176.000	6.59	1068.79	1066.75	.00	1069.72	.93	1.32	.03	1079.60
13500.0	.0	13500.0	.0	.0	1743.3	.0	791.9	149.8	1079.60
.70	.00	7.74	.00	.000	.035	.000	.000	1062.20	287.53
.004369	300.	300.	300.	2	11	0	.00	376.05	663.58

*SECNO 177.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.98

BEGIN CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

177.000	7.16	1069.56	1065.90	.00	1069.97	.41	.20	.05	1080.50
13500.0	.0	13500.0	.0	.0	2629.1	.0	796.9	150.7	1080.50
.70	.00	5.13	.00	.000	.035	.000	.000	1062.40	289.92
.001110	100.	100.	100.	2	11	0	.00	374.24	664.16

*SECNO 179.000

END CHNL BTM TRANSITION LT.
LT CHNL BTM WDTH = 175 FT.

179.000	6.99	1069.79	1066.27	.00	1070.20	.41	.23	.00	1081.00
13500.0	.0	13500.0	.0	.0	2624.8	.0	809.0	152.4	1081.00
.72	.00	5.14	.00	.000	.035	.000	.000	1062.80	329.29
.001158	200.	200.	200.	2	11	0	.00	386.20	715.49

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

*SECNO 181.000

END CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 260 FT.

181.000	6.78	1070.08	1066.47	.00	1070.42	.34	.21	.01	1081.60
13500.0	.0	13500.0	.0	.0	2893.8	.0	821.7	154.3	1081.60
.73	.00	4.67	.00	.000	.035	.000	.000	1063.30	329.74
.000984	200.	200.	200.	2	14	0	.00	437.04	766.78

*SECNO 183.000

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

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

183.000	5.70	1069.50	1068.82	.00	1071.27	1.77	.42	.43	1081.30
13500.0	.0	13500.0	.0	.0	1263.9	.0	831.2	155.9	1081.30
.73	.00	10.68	.00	.000	.035	.000	.000	1063.80	331.10
.007216	200.	200.	200.	2	15	0	.00	241.61	765.70

*SECNO 188.000

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.78

188.000	7.71	1072.71	1069.29	.00	1073.26	.56	1.87	.12	1083.00
13500.0	.0	13500.0	.0	.0	2257.8	.0	851.4	159.8	1083.00
.76	.00	5.98	.00	.000	.035	.000	.000	1065.00	327.61
.002289	500.	500.	500.	5	15	0	.00	438.64	767.70

*SECNO 193.000

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

3265 DIVIDED FLOW

STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.

193.000	7.59	1073.79	1070.36	.00	1074.28	.49	1.01	.01	1084.00
13500.0	.0	13500.0	.0	.0	2412.7	.0	878.2	164.8	1084.00
.78	.00	5.60	.00	.000	.035	.000	.000	1066.20	327.60
.001800	500.	500.	500.	2	11	0	.00	432.18	767.60

*SECNO 197.000

3265 DIVIDED FLOW

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

BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
TO MATCH PAST DEIGN CROSS SECTIONS.

197.000	7.40	1074.60	1073.09	.00	1075.41	.81	1.03	.10	1084.60
13500.0	.0	13500.0	.0	.0	1863.6	.0	897.9	168.6	1084.60
.80	.00	7.24	.00	.000	.035	.000	.000	1067.20	327.59
.003999	400.	400.	400.	1	15	0	.00	411.62	767.40

CCHV= .300 CEHV= .500
*SECNO 199.000

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.22

199.000	7.68	1075.38	1071.11	.00	1075.71	.33	.15	.15	1086.20
13500.0	.0	13500.0	.0	.0	2932.2	.0	903.4	169.6	1086.20
.80	.00	4.60	.00	.000	.035	.000	.000	1067.70	328.32
.000814	200.	100.	200.	2	14	0	.00	389.36	717.68

*SECNO 201.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1086.70 ELREA= 1086.70

DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE

201.100	7.31	1075.51	1072.03	.00	1076.02	.51	.22	.09	1086.70
13500.0	.0	13500.0	.0	.0	2348.1	.0	916.1	171.3	1086.70
.81	.00	5.75	.00	.000	.035	.000	.000	1068.20	335.69
.001365	210.	210.	210.	2	8	0	.00	328.62	664.31

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

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	376.00	314.00	21.00	5763.00	1.00	1068.40	1068.20

*SECNO 201.900
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1075.52 BRIDGE VELOCITY= 6.23 CALCULATED CHANNEL AREA= 2136.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1076.12	.08	0.	13500.	5763.	5697.	1086.70	1091.80	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1091.80 ELREA= 1091.80

99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

201.900	7.19	1075.59	.00	.00	1076.12	.53	.10	.00	1086.90
13500.0	.0	13500.0	.0	.0	2308.9	.0	920.4	171.9	1086.90
.82	.00	5.85	.00	.000	.035	.000	.000	1068.40	335.81
.001442	80.	80.	80.	0	0	0	.00	328.38	664.19

*SECNO 204.000

204.000	6.99	1075.89	1072.73	.00	1076.45	.56	.32	.02	1087.40
13500.0	.0	13500.0	.0	.0	2241.6	.0	931.3	173.5	1087.40
.83	.00	6.02	.00	.000	.035	.000	.000	1068.90	336.02
.001588	210.	210.	210.	0	11	0	.00	327.97	663.98

CCHV= .300 CEHV= .500
*SECNO 209.300

209.300	6.59	1076.78	1074.02	.00	1077.41	.63	.92	.04	1088.19
13500.0	.0	13500.0	.0	.0	2112.6	.0	957.8	177.5	1088.19
.85	.00	6.39	.00	.000	.035	.000	.000	1070.19	336.41
.001926	530.	530.	530.	2	11	0	.00	327.18	663.59

CCHV= .300 CEHV= .500
*SECNO 212.600

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= 1089.60 ELREA= 1089.60

DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE

212.600	6.39	1077.39	1075.47	.00	1078.46	1.07	.83	.22	1089.60
13500.0	.0	13500.0	.0	.0	1625.8	.0	972.0	179.7	1089.60
.86	.00	8.30	.00	.000	.035	.000	.000	1071.00	369.61
.003423	330.	330.	330.	2	14	0	.00	260.78	630.39

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	300.00	248.00	18.50	4481.60	1.00	1071.50	1071.00

*SECNO 213.500
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1077.31 BRIDGE VELOCITY= 9.45 CALCULATED CHANNEL AREA= 1368.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1078.86	.35	0.	13500.	4482.	4482.	1089.60	1095.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1095.00 ELREA= 1095.00

OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

213.500	6.24	1077.74	.00	.00	1078.86	1.12	.40	.00	1089.60
13500.0	.0	13500.0	.0	.0	1586.6	.0	975.3	180.2	1089.60
.86	.00	8.51	.00	.000	.035	.000	.000	1071.50	369.76
.003706	90.	90.	90.	0	0	0	.00	260.48	630.24

CCHV= .100 CEHV= .300
*SECNO 213.700

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

213.700	4.32	1077.32	1077.32	.00	1079.46	2.15	.12	.31	1095.00
13500.0	.0	13500.0	.0	.0	1148.1	.0	975.9	180.4	1096.20
.86	.00	11.76	.00	.000	.035	.000	.000	1073.00	364.78
.011345	20.	20.	20.	0	19	0	.00	270.21	634.99

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 217.500

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.43

217.500	6.29	1080.49	1077.84	.00	1081.08	.60	1.46	.16	1096.00
13500.0	.0	13500.0	.0	.0	2179.3	.0	990.4	183.1	1097.00
.88	.00	6.19	.00	.000	.035	.000	.000	1074.20	320.51
.001916	380.	380.	380.	3	11	0	.00	352.97	673.49

*SECNO 221.100

221.100	5.90	1081.20	1078.83	.00	1081.82	.62	.73	.01	1096.60
13500.0	.0	13500.0	.0	.0	2138.1	.0	1008.3	186.1	1098.00
.90	.00	6.31	.00	.000	.035	.000	.000	1075.30	310.39
.002153	360.	360.	360.	2	11	0	.00	367.82	678.21

*SECNO 227.500

227.500	5.50	1082.60	1080.06	.00	1083.02	.42	1.18	.02	1099.00
13500.0	.0	13500.0	.0	.0	2587.4	.0	1043.0	192.3	1099.00
.93	.00	5.22	.00	.000	.035	.000	.000	1077.10	262.23
.001601	640.	640.	640.	2	8	0	.00	476.30	738.52

*SECNO 233.550

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

233.550	4.69	1083.69	1082.20	.00	1084.42	.73	1.31	.09	1101.70
13500.0	.0	13500.0	.0	.0	1965.3	.0	1073.3	198.2	1101.60
.95	.00	6.87	.00	.000	.035	.000	.000	1079.00	288.01
.003429	580.	580.	580.	0	11	0	.00	424.07	712.09

*SECNO 238.660

3301 HV CHANGED MORE THAN HVINS

238.660	4.94	1085.54	1084.61	.00	1086.84	1.29	2.25	.17	1103.30
13500.0	.0	13500.0	.0	.0	1478.5	.0	1093.7	202.6	1103.70
.97	.00	9.13	.00	.000	.035	.000	.000	1080.60	347.91
.005707	516.	516.	516.	2	11	0	.00	303.78	651.69

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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 238.690

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   238.690      3.95   1087.55   1087.55       .00   1089.51      1.97       .02       .20   1103.40
   13500.0       .0   13500.0       .0        .0    1198.7        .0    1093.8     202.6   1103.90
       .97      .00     11.26       .00      .000      .035      .000      .000   1083.60    340.85
   .011644       3.        3.        3.         0        15         0       .00    307.79    648.65


CCHV=     .100 CEHV=     .300
*SECNO 242.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.09

   242.000      6.02   1090.47   1088.31       .00   1091.25       .78      1.61       .12   1104.00
   13500.0       .0   13500.0       .0        .0    1907.0        .0    1105.6     205.0   1104.00
       .98      .00      7.08       .00      .000      .035      .000      .000   1084.45    338.53
   .002658      331.      331.      331.         3         8         0       .00    322.93    661.47


*SECNO 247.000
   247.000      6.12   1091.79   1089.51       .00   1092.54       .75      1.29       .00   1104.50
   13500.0       .0   13500.0       .0        .0    1946.7        .0    1127.7     208.7   1104.50
      1.00      .00      6.93       .00      .000      .035      .000      .000   1085.67    337.72
   .002499      500.      500.      500.         2        14         0       .00    324.57    662.28


CCHV=     .100 CEHV=     .300
*SECNO 270.500
CHIMP CLSTA=    9955.00 CELCH=    1086.50 BW=     365.00 STCHL=    9753.15 STCHR=   10175.00
EXCAVATION DATA
AEX=    1319.1SQ-FT     VEXR=        .0K*CU-YD     VEXT=        .0K*CU-YD


3470 ENCROACHMENT STATIONS=     9750.0   10218.0  TYPE=      1  TARGET=    -9750.000
```

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= 1105.85 ELREA= 1107.00

270.500	6.61	1093.11	1089.97	.00	1093.58	.47	1.02	.03	1105.85
13500.0	.0	13500.0	.0	.0	2458.0	.0	1155.8	213.2	1107.00
1.03	.00	5.49	.00	.000	.035	.000	.000	1086.50	9765.89
.001404	338.	555.	338.	2	11	0	.00	378.23	10144.11

*SECNO 273.500
CHIMP CLSTA= 9919.00 CELCH= 1087.20 BW= 375.00 STCHL= 9712.31 STCHR= 10127.15
EXCAVATION DATA
AEX= 2554.4SQ-FT VEXR= 22.2K*CU-YD VEXT= 22.2K*CU-YD

3470 ENCROACHMENT STATIONS= 9640.0 10160.0 TYPE= 1 TARGET= -9640.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1106.39 ELREA= 1107.85

273.500	6.36	1093.56	1090.60	.00	1094.04	.48	.45	.00	1106.39
13500.0	.0	13500.0	.0	.0	2422.9	.0	1173.1	215.9	1107.85
1.05	.00	5.57	.00	.000	.035	.000	.000	1087.20	9725.15
.001523	315.	310.	310.	2	11	0	.00	387.71	10112.85

*SECNO 277.900
CHIMP CLSTA= 9927.00 CELCH= 1088.30 BW= 360.00 STCHL= 9729.30 STCHR= 10137.00
EXCAVATION DATA
AEX= 2900.7SQ-FT VEXR= 42.4K*CU-YD VEXT= 64.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1106.00 ELREA= 1108.50

277.900	5.92	1094.22	1091.80	.00	1094.82	.60	.75	.04	1106.00
13500.0	.0	13500.0	.0	.0	2165.8	.0	1195.3	219.6	1108.50
1.06	.00	6.23	.00	.000	.035	.000	.000	1088.30	9741.08
.002093	420.	420.	420.	2	11	0	.00	371.84	10112.92

*SECNO 281.800
CHIMP CLSTA= 9932.00 CELCH= 1089.20 BW= 330.00 STCHL= 9747.63 STCHR= 10117.50

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


EXCAVATION DATA
AEX=    3280.4SQ-FT     VEXR=      46.9K*CU-YD     VEXT=      111.6K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1108.57 ELREA=      1109.70

  281.800      5.88   1095.08   1092.90       .00   1095.80       .73       .95       .04   1108.57
  13500.0        .0   13500.0       .0        .0    1974.3        .0    1214.7     222.9   1109.70
     1.08       .00      6.84       .00      .000      .035      .000      .000   1089.20   9761.12
  .002550      410.      410.      410.         2        14         0       .00    341.76  10102.88


CCHV=     .300 CEHV=     .500
*SECNO 288.000
CHIMP CLSTA=    9988.00 CELCH=    1092.20 BW=     274.00 STCHL=    9829.45 STCHR=   10145.00
EXCAVATION DATA
AEX=    1602.9SQ-FT     VEXR=      54.3K*CU-YD     VEXT=      165.9K*CU-YD


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .60


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1113.75 ELREA=      1112.00

  288.000      4.85   1097.05   1096.40       .00   1098.59      1.54      2.38       .41   1113.75
  13500.0        .0   13500.0       .0        .0    1353.5        .0    1237.7     227.2   1112.00
     1.10       .00      9.97       .00      .000      .035      .000      .000   1092.20   9846.15
  .006991      600.      600.      600.         2        15         0       .00    283.71  10129.85


*SECNO 290.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1117.80 ELREA=      1117.80

  290.000      5.54   1098.54   1097.39       .00   1099.86      1.32      1.21       .07   1117.80
  13500.0        .0   13500.0       .0        .0    1462.2        .0    1244.1     228.5   1117.80
     1.10       .00      9.23       .00      .000      .035      .000      .000   1093.00   9865.00
  .005256      220.      200.      160.         3        11         0       .00    271.00  10136.00
```

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

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	.00	271.00	10.50	4974.00	.00	1093.70	1093.30

*SECNO 291.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1098.41 BRIDGE VELOCITY= 10.56 CALCULATED CHANNEL AREA= 1227.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1100.10	.26	0.	13500.	4974.	5314.	1114.10	1119.10	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

291.000	5.80	1098.80	.00	.00	1100.10	1.30	.23	.00	1116.00
13500.0	.0	13500.0	.0	.0	1477.6	.0	1246.7	229.0	1116.00
1.11	.00	9.14	.00	.000	.035	.000	.000	1093.00	9865.00
.005077	77.	77.	77.	0	0	0	.00	271.00	10136.00

CCHV= .100 CEHV= .300
*SECNO 293.000
CHIMP CLSTA= 10007.00 CELCH= 1094.00 BW= 231.00 STCHL= 9869.90 STCHR= 10144.00
EXCAVATION DATA
AEX= -4.0SQ-FT VEXR= 5.9K*CU-YD VEXT= 171.8K*CU-YD

293.000	5.70	1099.70	1098.69	.00	1101.26	1.55	1.08	.08	1115.60
13500.0	.0	13500.0	.0	.0	1350.3	.0	1253.2	230.2	1115.00
1.11	.00	10.00	.00	.000	.035	.000	.000	1094.00	9885.79
.005763	200.	200.	200.	2	15	0	.00	242.41	10128.21

*SECNO 297.000
CHIMP CLSTA= 10006.00 CELCH= 1096.10 BW= 246.00 STCHL= 9863.04 STCHR= 10150.00
EXCAVATION DATA
AEX= -26.4SQ-FT VEXR= -.2K*CU-YD VEXT= 171.6K*CU-YD

297.000	5.94	1102.04	1100.59	.00	1103.30	1.27	2.02	.03	1116.05
13500.0	.0	13500.0	.0	.0	1495.7	.0	1266.3	232.4	1115.00
1.12	.00	9.03	.00	.000	.035	.000	.000	1096.10	9877.06
.004448	400.	400.	400.	2	15	0	.00	257.87	10134.94

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 302.000
CHIMP CLSTA=    9999.00 CELCH=    1098.20 BW=     197.00 STCHL=    9882.00 STCHR=   10118.78
EXCAVATION DATA
AEX=       3.1SQ-FT     VEXR=       -.2K*CU-YD     VEXT=      171.3K*CU-YD


3301 HV CHANGED MORE THAN HVINS

   302.000      6.20   1104.40   1103.40       .00   1106.18      1.78      2.72       .16   1116.00
   13500.0        .0   13500.0       .0        .0    1259.4        .0    1283.0     235.3   1119.48
      1.14       .00     10.72       .00      .000      .035      .000      .000   1098.20   9894.30
   .006009      530.      530.      530.         2        11         0       .00    209.40  10103.70


*SECNO 305.000
CHIMP CLSTA=    9992.00 CELCH=    1099.50 BW=     188.00 STCHL=    9880.94 STCHR=   10110.00
EXCAVATION DATA
AEX=     244.7SQ-FT     VEXR=       1.3K*CU-YD     VEXT=      172.6K*CU-YD

   305.000      6.55   1106.05   1104.86       .00   1107.79      1.74      1.61       .00   1116.56
   13500.0        .0   13500.0       .0        .0    1274.7        .0    1291.2     236.6   1119.50
      1.15       .00     10.59       .00      .000      .035      .000      .000   1099.50   9891.45
   .005497      280.      280.      280.         3        11         0       .00    201.10  10092.55


*SECNO 306.750
CHIMP CLSTA=    9959.00 CELCH=    1100.30 BW=     289.00 STCHL=    9798.80 STCHR=   10123.24
EXCAVATION DATA
AEX=    1770.8SQ-FT     VEXR=       8.0K*CU-YD     VEXT=      180.6K*CU-YD


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.97

   306.750      7.59   1107.89   1104.34       .00   1108.45       .56       .54       .12   1116.00
   13500.0        .0   13500.0       .0        .0    2252.1        .0    1299.9     237.9   1120.04
      1.16       .00      5.99       .00      .000      .035      .000      .000   1100.30   9806.91
   .001420      215.      215.      215.         2        14         0       .00    304.19  10111.09
```

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 310.000
CHIMP CLSTA= 9965.00 CELCH= 1101.60 BW= 330.00 STCHL= 9784.66 STCHR= 10149.29
EXCAVATION DATA
AEX= 1007.5SQ-FT VEXR= 16.5K*CU-YD VEXT= 197.1K*CU-YD

310.000	6.79	1108.39	1105.31	.00	1108.93	.54	.48	.00	1116.94
13500.0	.0	13500.0	.0	.0	2287.8	.0	1316.6	240.2	1120.90
1.17	.00	5.90	.00	.000	.035	.000	.000	1101.60	9793.21
.001576	320.	320.	320.	2	11	0	.00	343.59	10136.79

*SECNO 313.200
CHIMP CLSTA= 10000.00 CELCH= 1103.00 BW= 330.00 STCHL= 9820.00 STCHR= 10183.25
EXCAVATION DATA
AEX= 1069.6SQ-FT VEXR= 12.1K*CU-YD VEXT= 209.2K*CU-YD

313.200	5.88	1108.88	1106.71	.00	1109.61	.73	.62	.06	1117.00
13500.0	.0	13500.0	.0	.0	1975.6	.0	1332.0	242.7	1121.25
1.18	.00	6.83	.00	.000	.035	.000	.000	1103.00	9829.12
.002545	315.	315.	315.	2	11	0	.00	341.76	10170.88

*SECNO 318.000
CHIMP CLSTA= 10000.00 CELCH= 1105.10 BW= 330.00 STCHL= 9820.00 STCHR= 10182.90
EXCAVATION DATA
AEX= 52.1SQ-FT VEXR= 10.4K*CU-YD VEXT= 219.6K*CU-YD

318.000	5.19	1110.29	1108.80	.00	1111.22	.94	1.55	.06	1120.00
13500.0	.0	13500.0	.0	.0	1738.4	.0	1353.3	246.6	1123.00
1.20	.00	7.77	.00	.000	.035	.000	.000	1105.10	9829.81
.003868	500.	500.	500.	2	14	0	.00	340.37	10170.19

*SECNO 320.050
CHIMP CLSTA= 10000.00 CELCH= 1106.00 BW= 330.00 STCHL= 9816.00 STCHR= 10184.00
EXCAVATION DATA
AEX= 152.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 220.7K*CU-YD

320.050	5.41	1111.41	1109.72	.00	1112.27	.86	1.04	.01	1125.00
13500.0	.0	13500.0	.0	.0	1816.4	.0	1365.1	248.9	1125.00
1.21	.00	7.43	.00	.000	.035	.000	.000	1106.00	9829.58
.003350	290.	290.	290.	2	15	0	.00	340.83	10170.42

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 328.000
CHIMP CLSTA= 10000.00 CELCH= 1109.10 BW= 330.00 STCHL= 9817.10 STCHR= 10182.90
EXCAVATION DATA
AEX= 195.1SQ-FT VEXR= 4.1K*CU-YD VEXT= 224.8K*CU-YD

328.000	4.76	1113.86	1112.81	.00	1114.97	1.11	2.63	.08	1127.00
13500.0	.0	13500.0	.0	.0	1593.4	.0	1390.2	253.9	1127.00
1.23	.00	8.47	.00	.000	.035	.000	.000	1109.10	9830.24
.005138	640.	640.	640.	2	14	0	.00	339.52	10169.76

*SECNO 330.000
CHIMP CLSTA= 10000.00 CELCH= 1110.10 BW= 330.00 STCHL= 9817.60 STCHR= 10182.40
EXCAVATION DATA
AEX= 76.6SQ-FT VEXR= .9K*CU-YD VEXT= 225.7K*CU-YD

330.000	4.66	1114.76	1113.80	.00	1115.92	1.16	.93	.01	1127.50
13500.0	.0	13500.0	.0	.0	1558.9	.0	1396.5	255.3	1127.50
1.24	.00	8.66	.00	.000	.035	.000	.000	1110.10	9830.34
.005530	175.	175.	175.	2	15	0	.00	339.32	10169.66

*SECNO 334.000
CHIMP CLSTA= 10000.00 CELCH= 1112.00 BW= 330.00 STCHL= 9818.00 STCHR= 10182.00
EXCAVATION DATA
AEX= 68.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 226.8K*CU-YD

334.000	4.99	1116.99	1115.70	.00	1118.00	1.01	2.06	.02	1129.00
13500.0	.0	13500.0	.0	.0	1672.4	.0	1412.1	258.5	1129.00
1.25	.00	8.07	.00	.000	.035	.000	.000	1112.00	9830.01
.004391	420.	420.	420.	1	15	0	.00	339.98	10169.99

CCHV= .200 CEHV= .400
*SECNO 343.000
CHIMP CLSTA= 10025.00 CELCH= 1115.70 BW= 329.00 STCHL= 9861.00 STCHR= 10206.30
EXCAVATION DATA
AEX= 2385.5SQ-FT VEXR= 40.9K*CU-YD VEXT= 267.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

343.000	5.14	1120.84	1119.42	.00	1121.82	.98	3.81	.01	1132.00
13500.0	.0	13500.0	.0	.0	1703.1	.0	1447.0	265.5	1132.00
1.28	.00	7.93	.00	.000	.035	.000	.000	1115.70	9861.00
.004083	900.	900.	900.	2	15	0	.00	334.14	10195.14

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 344.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

344.900	5.37	1121.67	1120.02	.00	1122.55	.88	.71	.02	1132.00
13500.0	.0	13500.0	.0	.0	1795.5	.0	1454.6	267.0	1132.00
1.29	.00	7.52	.00	.000	.035	.000	.000	1116.30	9830.89
.003455	110.	190.	260.	2	15	0	.00	338.55	10169.45

T1 NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2 NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3 50-YEAR EVENT NRO2B

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

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 50-YR

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
*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
 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
     .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	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     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

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

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

            DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
   99.600      6.23   1052.43   1052.43   1049.78   1055.57      3.15       .03       .65   1063.80
  31000.0       .0   31000.0       .0       .0    2177.8        .0     623.2      76.0   1063.80
     .24       .00     14.23       .00      .000      .025      .000      .000   1046.20    325.13
 .005244        6.        6.        6.         0        15         0       .00    349.74    674.87
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1051.15 , NOT 1052.43 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	358.00	349.74	32.00	5378.30	.00	1046.50	1046.20

*SECNO 100.400

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.77

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1053.01 BRIDGE VELOCITY= 14.64 CALCULATED CHANNEL AREA= 2070.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1056.89	.00	0.	31000.	5378.	5370.	1063.40	1065.90	0.

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

GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

100.400	8.82	1055.32	.00	1051.57	1056.89	1.57	1.32	.00	1063.60
31000.0	.0	31000.0	.0	.0	3084.8	.0	628.0	76.6	1063.60
.24	.00	10.05	.00	.000	.025	.000	.000	1046.50	325.12
.001674	80.	80.	80.	0	0	0	.00	349.75	674.88

*SECNO 100.900

BEGIN CHANNEL BOTTOM TRANSITION

LT CHNL BTM WDTH = 157.9 FT.

RT CHNL BTM WDTH = 157.9 FT.

100.900	9.01	1055.61	1052.79	1051.77	1057.04	1.43	.11	.04	1063.60
31000.0	.0	31000.0	.0	.0	3232.3	.0	631.6	77.0	1063.60
.24	.00	9.59	.00	.000	.035	.000	.000	1046.60	316.14
.002889	50.	50.	50.	2	19	0	.00	367.72	683.86

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	9.62	1056.62	1053.05	1052.78	1057.77	1.14	.64	.09	1065.40
31000.0	.0	31000.0	.0	.0	3613.3	.0	652.1	79.3	1065.40
.25	.00	8.58	.00	.000	.035	.000	.000	1047.00	309.54
.002141	260.	260.	260.	2	14	0	.00	389.69	699.23

CCHV= .100 CEHV= .300

*SECNO 106.000

106.000	10.00	1057.60	1052.83	1053.55	1058.29	.69	.47	.05	1066.40
31000.0	.0	31000.0	.0	.0	4657.4	.0	680.5	82.3	1066.40
.26	.00	6.66	.00	.000	.035	.000	.000	1047.60	264.00
.001212	300.	300.	300.	2	11	0	.00	480.80	744.80

*SECNO 109.000

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 280 FT.
RT CHNL BTM WDTH = 280 FT.

109.000	9.91	1058.11	1052.99	1053.99	1058.62	.51	.31	.02	1066.90
31000.0	.0	31000.0	.0	.0	5432.5	.0	715.3	85.9	1066.90
.28	.00	5.71	.00	.000	.035	.000	.000	1048.20	218.89
.000912	300.	300.	300.	1	11	0	.00	571.02	789.91

*SECNO 110.000

110.000	11.19	1058.19	1053.26	1054.09	1058.72	.53	.09	.01	1066.90
31000.0	.0	31000.0	.0	.0	5310.7	.0	727.6	87.2	1066.90
.28	.00	5.84	.00	.000	.035	.000	.000	1047.00	218.91
.000983	100.	100.	100.	2	14	0	.00	570.88	789.79

*SECNO 113.000

113.000	9.48	1058.48	1053.72	1054.46	1059.03	.55	.30	.01	1067.20
31000.0	.0	31000.0	.0	.0	5224.2	.0	763.9	91.2	1067.20
.30	.00	5.93	.00	.000	.035	.000	.000	1049.00	219.25
.001036	300.	300.	300.	0	14	0	.00	570.23	789.48

*SECNO 116.000

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

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	9.17	1058.77	1054.54	1054.84	1059.40	.63	.35	.03	1067.30
31000.0	.0	31000.0	.0	.0	4858.5	.0	798.6	95.1	1067.30
.31	.00	6.38	.00	.000	.035	.000	.000	1049.60	219.35
.001332	240.	300.	340.	0	11	0	.00	569.83	789.18

*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	8.43	1058.83	1057.98	1055.34	1060.83	1.99	1.01	.41	1067.10
31000.0	.0	31000.0	.0	.0	2735.5	.0	833.5	99.8	1067.10
.32	.00	11.33	.00	.000	.035	.000	.000	1050.40	289.82
.006554	327.	400.	497.	2	15	0	.00	448.62	738.44

*SECNO 123.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.20

123.000	10.05	1061.05	1056.46	1057.27	1061.82	.77	.88	.12	1068.80
31000.0	.0	31000.0	.0	.0	4395.6	.0	861.5	103.3	1068.80
.33	.00	7.05	.00	.000	.035	.000	.000	1051.00	287.70
.001356	342.	342.	342.	2	14	0	.00	452.36	740.05

*SECNO 127.000

127.000	9.79	1061.59	1057.25	1057.78	1062.40	.81	.57	.01	1068.80
31000.0	.0	31000.0	.0	.0	4281.4	.0	901.3	107.5	1068.80
.35	.00	7.24	.00	.000	.035	.000	.000	1051.80	287.44
.001480	400.	400.	400.	2	11	0	.00	452.35	739.78

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	12.17	1062.17	1058.22	1058.39	1063.06	.89	.64	.02	1069.40
31000.0	.0	31000.0	.0	.0	4096.0	.0	939.8	111.6	1069.40
.36	.00	7.57	.00	.000	.035	.000	.000	1050.00	287.67
.001719	400.	400.	400.	1	15	0	.00	451.89	739.56

*SECNO 135.000

135.000	9.45	1062.85	1059.78	1059.19	1063.92	1.08	.80	.06	1069.60
31000.0	.0	31000.0	.0	.0	3723.9	.0	975.7	115.8	1069.90
.37	.00	8.32	.00	.000	.035	.000	.000	1053.40	287.26
.002377	400.	400.	400.	2	11	0	.00	452.07	739.33

*SECNO 138.000

138.000	9.63	1063.63	1059.99	1060.06	1064.57	.94	.64	.01	1069.60
31000.0	.0	31000.0	.0	.0	3983.0	.0	1002.2	118.9	1069.60
.39	.00	7.78	.00	.000	.035	.000	.000	1054.00	286.34
.001899	300.	300.	300.	2	14	0	.00	453.29	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	3701.8	.0	1028.7	122.0	1071.00
.40	.00	8.37	.00	.000	.035	.000	.000	1054.60	287.22
.002428	300.	300.	300.	2	14	0	.00	452.35	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	4290.2	.0	1065.4	126.1	1077.00
.41	.00	7.23	.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	9.70	1065.50	1061.25	1061.85	1066.33	.83	.30	.00	1072.40
31000.0	.0	31000.0	.0	.0	4249.7	.0	1085.0	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    4508.1        .0    1115.1     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


*SECNO 155.000

3301 HV CHANGED MORE THAN HVINS


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

            CHANNEL BOTTOM TAPERS
            LT CHNL BTM WDTH = 260 FT.
            RT CHNL BTM WDTH = 170 FT.
 155.000      9.21   1066.61   1064.47   1063.05   1068.01      1.41      1.04       .20   1073.30
 31000.0       .0   31000.0       .0       .0    3257.1        .0    1159.7     136.7   1073.30
     .45      .00      9.52       .00      .000      .035      .000      .000   1057.40    237.48
 .003614     585.      500.      460.        2        15         0       .00    441.72    679.21


CCHV=     .300 CEHV=     .500
*SECNO 158.000
            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 162.5 FT.
            RT CHNL BTM WDTH = 162.5 FT.
 158.000      9.51   1067.51   1064.73   1064.30   1069.11      1.60      1.00       .10   1076.50
 31000.0       .0   31000.0       .0       .0    3050.3        .0    1181.4     139.4   1075.00
     .45      .00     10.16       .00      .000      .035      .000      .000   1058.00    336.98
 .003088     360.      300.      265.        2        15         0       .00    335.03    672.01


*SECNO 159.450

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1077.46 ELREA=      1077.46

            DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE
 159.450     10.29   1068.59   1064.80   1064.97   1069.84      1.25       .63       .11   1076.80
 31000.0       .0   31000.0       .0       .0    3451.4        .0    1199.7     141.3   1076.80
     .46      .00      8.98       .00      .000      .035      .000      .000   1058.30    327.21
 .002149     245.      245.      245.        2        14         0       .00    345.59    672.79
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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

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	388.00	325.00	28.00	6034.00	1.00	1058.46	1058.30

*SECNO 160.250
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1068.31 BRIDGE VELOCITY= 10.17 CALCULATED CHANNEL AREA= 3023.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1070.16	.37	0.	31000.	6034.	6004.	1077.46	1082.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1082.00 ELREA= 1082.00

NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

160.250	10.50	1068.96	.00	1065.10	1070.16	1.20	.32	.00	1077.00
31000.0	.0	31000.0	.0	.0	3523.1	.0	1206.1	142.0	1077.00
.46	.00	8.80	.00	.000	.035	.000	.000	1058.46	327.02
.002011	80.	80.	80.	0	0	0	.00	345.96	672.98

*SECNO 162.000
BEGIN CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 162.5 FT.
RT CHNL BTM WDTH = 162.5 FT.

162.000	10.52	1069.32	1065.29	1065.41	1070.52	1.20	.35	.00	1077.00
31000.0	.0	31000.0	.0	.0	3531.6	.0	1220.3	143.4	1077.00
.47	.00	8.78	.00	.000	.035	.000	.000	1058.80	326.97
.001996	175.	175.	175.	0	14	0	.00	346.05	673.03

*SECNO 165.000
END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 300 FT.
RT CHNL BTM WDTH = 250 FT.

165.000	11.08	1070.48	1065.45	1066.04	1071.19	.71	.52	.15	1078.80
31000.0	.0	31000.0	.0	.0	4591.2	.0	1248.3	146.5	1078.80
.48	.00	6.75	.00	.000	.035	.000	.000	1059.40	205.83
.001539	300.	300.	300.	2	11	0	.00	555.25	761.08

```
 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 168.000
 168.000     10.84   1070.94   1066.26   1066.47   1071.72       .78       .50       .03   1079.00
 31000.0       .0   31000.0        .0        .0    4387.5        .0    1279.2     150.3   1079.00
     .49       .00      7.07       .00      .000      .035      .000      .000   1060.10    206.12
 .001788     300.      300.      300.         2        11         0       .00    554.72    760.84


CCHV=     .100 CEHV=     .300
*SECNO 170.000
            BEGIN CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 300 FT.
            RT CHNL BTM WDTH = 250 FT.
 170.000     10.70   1071.30   1066.73   1066.81   1072.08       .78       .36       .00   1079.20
 31000.0       .0   31000.0        .0        .0    4360.3        .0    1299.3     152.8   1079.20
     .50       .00      7.11       .00      .000      .035      .000      .000   1060.60    206.61
 .001823     200.      200.      200.         2        11         0       .00    554.09    760.70


*SECNO 173.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .70

            END CHNL BTM TRANSITION RT.
            RT CHNL BTM WDTH = 157 FT.
 173.000     10.05   1071.45   1069.22   1067.16   1073.10      1.65       .76       .26   1079.00
 31000.0       .0   31000.0        .0        .0    3007.1        .0    1324.6     156.0   1079.00
     .51       .00     10.31       .00      .000      .035      .000      .000   1061.40    293.29
 .003740     300.      300.      300.         2        19         0       .00    373.76    667.05


*SECNO 176.000
 176.000     10.52   1072.72   1070.07   1068.79   1074.13      1.41      1.01       .02   1079.60
 31000.0       .0   31000.0        .0        .0    3247.6        .0    1346.2     158.6   1079.60
     .52       .00      9.55       .00      .000      .035      .000      .000   1062.20    279.66
 .003042     300.      300.      300.         2        15         0       .00    387.87    667.52


*SECNO 177.000
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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

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

BEGIN CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

177.000	11.10	1073.50	1068.49	1069.56	1074.38	.88	.20	.05	1080.50
31000.0	.0	31000.0	.0	.0	4120.2	.0	1354.6	159.5	1080.50
.52	.00	7.52	.00	.000	.035	.000	.000	1062.40	286.02
.001361	100.	100.	100.	2	11	0	.00	382.09	668.10

*SECNO 179.000
END CHNL BTM TRANSITION LT.
LT CHNL BTM WDTH = 175 FT.

179.000	11.01	1073.81	1068.80	1069.79	1074.65	.84	.27	.00	1081.00
31000.0	.0	31000.0	.0	.0	4202.5	.0	1373.7	161.3	1081.00
.53	.00	7.38	.00	.000	.035	.000	.000	1062.80	321.22
.001335	200.	200.	200.	2	11	0	.00	398.29	719.51

*SECNO 181.000
END CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 260 FT.

181.000	10.94	1074.24	1068.81	1070.08	1074.91	.66	.24	.02	1081.60
31000.0	.0	31000.0	.0	.0	4739.7	.0	1394.3	163.3	1081.60
.54	.00	6.54	.00	.000	.035	.000	.000	1063.30	321.41
.001048	200.	200.	200.	2	8	0	.00	449.53	770.94

*SECNO 183.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .42

183.000	10.02	1073.82	1072.72	1069.50	1075.68	1.86	.41	.36	1081.30
31000.0	.0	31000.0	.0	.0	2832.3	.0	1411.6	165.3	1081.30
.54	.00	10.95	.00	.000	.035	.000	.000	1063.80	322.46
.005854	200.	200.	200.	3	15	0	.00	447.56	770.02

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 188.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.70

188.000	11.40	1076.40	1072.89	1072.71	1077.38	.98	1.61	.09	1083.00
31000.0	.0	31000.0	.0	.0	3905.9	.0	1450.3	170.5	1083.00
.56	.00	7.94	.00	.000	.035	.000	.000	1065.00	320.21
.002030	500.	500.	500.	2	15	0	.00	451.19	771.40

*SECNO 193.000

STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.

193.000	11.23	1077.43	1073.60	1073.79	1078.34	.92	.96	.01	1084.00
31000.0	.0	31000.0	.0	.0	4030.1	.0	1495.9	175.7	1084.00
.58	.00	7.69	.00	.000	.035	.000	.000	1066.20	320.34
.001828	500.	500.	500.	2	14	0	.00	450.90	771.23

*SECNO 197.000

BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
TO MATCH PAST DEIGN CROSS SECTIONS.

197.000	10.92	1078.12	1075.70	1074.60	1079.41	1.30	.95	.11	1084.60
31000.0	.0	31000.0	.0	.0	3393.0	.0	1529.9	179.8	1084.60
.59	.00	9.14	.00	.000	.035	.000	.000	1067.20	320.57
.003245	400.	400.	400.	2	15	0	.00	450.35	770.92

CCHV= .300 CEHV= .500
*SECNO 199.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.64

199.000	11.26	1078.96	1073.62	1075.38	1079.75	.79	.19	.15	1086.20
31000.0	.0	31000.0	.0	.0	4337.6	.0	1538.8	180.8	1086.20
.59	.00	7.15	.00	.000	.035	.000	.000	1067.70	324.74
.001203	200.	100.	200.	2	11	0	.00	396.52	721.26

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 201.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1086.70 ELREA= 1086.70

DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE

201.100	10.87	1079.07	1074.87	1075.51	1080.27	1.20	.31	.20	1086.70
31000.0	.0	31000.0	.0	.0	3531.4	.0	1557.8	182.5	1086.70
.60	.00	8.78	.00	.000	.035	.000	.000	1068.20	332.13
.001921	210.	210.	210.	2	11	0	.00	335.74	667.87

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	376.00	314.00	21.00	5763.00	1.00	1068.40	1068.20

*SECNO 201.900
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1078.93 BRIDGE VELOCITY= 9.61 CALCULATED CHANNEL AREA= 3195.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1080.51	.25	0.	31000.	5763.	5697.	1086.70	1091.80	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1091.80 ELREA= 1091.80

99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

201.900	10.92	1079.32	.00	1075.59	1080.51	1.18	.24	.00	1086.90
31000.0	.0	31000.0	.0	.0	3549.0	.0	1564.3	183.1	1086.90
.60	.00	8.73	.00	.000	.035	.000	.000	1068.40	332.08
.001891	80.	80.	80.	0	0	0	.00	335.84	667.92

*SECNO 204.000

204.000	10.81	1079.71	1075.54	1075.89	1080.92	1.21	.40	.01	1087.40
31000.0	.0	31000.0	.0	.0	3515.5	.0	1581.3	184.8	1087.40
.61	.00	8.82	.00	.000	.035	.000	.000	1068.90	332.18
.001949	210.	210.	210.	0	14	0	.00	335.65	667.82

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

CCHV=     .300 CEHV=     .500
*SECNO 209.300
  209.300     10.57   1080.76   1076.83   1076.78   1082.03      1.27      1.07       .03   1088.19
  31000.0       .0   31000.0       .0        .0    3430.2        .0    1623.6     188.8   1088.19
      .63       .00      9.04       .00      .000      .035      .000      .000   1070.19    332.43
  .002110     530.      530.      530.         2        14         0       .00    335.14    667.57

CCHV=     .300 CEHV=     .500
*SECNO 212.600

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1089.60 ELREA=     1089.60

            DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE
  212.600     10.24   1081.24   1078.76   1077.39   1083.37      2.14       .91       .43   1089.60
  31000.0       .0   31000.0       .0        .0    2643.4        .0    1646.6     191.1   1089.60
      .63       .00     11.73       .00      .000      .035      .000      .000   1071.00    365.76
  .003768     330.      330.      330.         2        15         0       .00    268.47    634.24

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
    1.05      1.56      2.90     300.00    248.00     18.50   4481.60      1.00   1071.50   1071.00

*SECNO 213.500
CLASS A LOW FLOW

3420 BRIDGE W.S.=    1080.62 BRIDGE VELOCITY=      13.85     CALCULATED CHANNEL AREA=      2175.

EGPRS     EGLWC     H3        QWEIR     QLOW      BAREA     TRAPEZOID     ELLC      ELTRD     WEIRLN
                                                                AREA
      .00   1084.06       .82        0.   31000.     4482.     4482.   1089.60   1095.00        0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1095.00 ELREA=     1095.00

            OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS
  213.500     10.56   1082.06       .00   1077.74   1084.06      2.00       .69       .00   1089.60
  31000.0       .0   31000.0       .0        .0    2729.1        .0    1652.1     191.7   1089.60
      .64       .00     11.36       .00      .000      .035      .000      .000   1071.50    365.44
  .003402      90.       90.       90.         0         0         0       .00    269.11    634.56
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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

CCHV= .100 CEHV= .300

*SECNO 213.700

3301 HV CHANGED MORE THAN HVINS

213.700	8.62	1081.62	1080.51	1077.32	1084.37	2.75	.09	.22	1095.00
31000.0	.0	31000.0	.0	.0	2329.7	.0	1653.3	191.8	1096.20
.64	.00	13.31	.00	.000	.035	.000	.000	1073.00	360.48
.005989	20.	20.	20.	3	15	0	.00	278.60	639.08

*SECNO 217.500

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.78

217.500	10.39	1084.59	1080.51	1080.49	1085.71	1.12	1.18	.16	1096.00
31000.0	.0	31000.0	.0	.0	3648.2	.0	1679.4	194.6	1097.00
.65	.00	8.50	.00	.000	.035	.000	.000	1074.20	316.40
.001893	380.	380.	380.	2	15	0	.00	361.20	677.60

*SECNO 221.100

221.100	10.00	1085.30	1081.44	1081.20	1086.41	1.11	.70	.00	1096.60
31000.0	.0	31000.0	.0	.0	3660.6	.0	1709.6	197.7	1098.00
.66	.00	8.47	.00	.000	.035	.000	.000	1075.30	306.30
.001970	360.	360.	360.	2	11	0	.00	376.00	682.30

*SECNO 227.500

227.500	9.65	1086.75	1082.23	1082.60	1087.46	.71	1.01	.04	1099.00
31000.0	.0	31000.0	.0	.0	4583.3	.0	1770.1	204.0	1099.00
.69	.00	6.76	.00	.000	.035	.000	.000	1077.10	257.86
.001297	640.	640.	640.	2	11	0	.00	484.83	742.69

*SECNO 233.550

233.550	8.45	1087.45	1084.55	1083.69	1088.62	1.17	1.02	.14	1101.70
31000.0	.0	31000.0	.0	.0	3577.9	.0	1824.5	210.1	1101.60
.71	.00	8.66	.00	.000	.035	.000	.000	1079.00	284.24
.002536	580.	580.	580.	2	11	0	.00	431.61	715.86

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 238.660

3301 HV CHANGED MORE THAN HVINS

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

238.660	7.78	1088.38	1087.54	1085.54	1091.09	2.71	2.00	.46	1103.30
31000.0	.0	31000.0	.0	.0	2346.1	.0	1859.5	214.5	1103.70
.72	.00	13.21	.00	.000	.035	.000	.000	1080.60	345.05
.006683	516.	516.	516.	2	15	0	.00	309.49	654.55

*SECNO 238.690

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

238.690	6.85	1090.45	1090.45	1087.55	1093.83	3.38	.02	.20	1103.40
31000.0	.0	31000.0	.0	.0	2101.0	.0	1859.7	214.5	1103.90
.72	.00	14.75	.00	.000	.035	.000	.000	1083.60	337.95
.009793	3.	3.	3.	0	11	0	.00	313.60	651.55

CCHV= .100 CEHV= .300
*SECNO 242.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.82

242.000	9.62	1094.07	1091.15	1090.47	1095.64	1.57	1.63	.18	1104.00
31000.0	.0	31000.0	.0	.0	3082.6	.0	1879.4	216.9	1104.00
.73	.00	10.06	.00	.000	.035	.000	.000	1084.45	334.93
.002945	331.	331.	331.	2	8	0	.00	330.14	665.07

*SECNO 247.000

247.000	9.91	1095.58	1092.34	1091.79	1097.04	1.46	1.39	.01	1104.50
31000.0	.0	31000.0	.0	.0	3193.0	.0	1915.4	220.7	1104.50
.74	.00	9.71	.00	.000	.035	.000	.000	1085.67	333.92
.002643	500.	500.	500.	3	19	0	.00	332.16	666.08

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


CCHV=     .100 CEHV=     .300
*SECNO 270.500
CHIMP CLSTA=    9955.00 CELCH=    1086.50 BW=     365.00 STCHL=    9753.15 STCHR=   10175.00
EXCAVATION DATA
AEX=    1319.1SQ-FT     VEXR=        .0K*CU-YD     VEXT=        .0K*CU-YD


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9750.0   10218.0  TYPE=      1  TARGET=    -9750.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1105.85 ELREA=      1107.00

   270.500     10.75   1097.25   1092.52   1093.11   1098.17       .91      1.07       .05   1105.85
   31000.0       .0   31000.0       .0        .0    4041.2        .0    1961.5     225.3   1107.00
       .76       .00      7.67       .00      .000      .035      .000      .000   1086.50   9761.75
   .001469     338.      555.      338.         2        14         0       .00    386.51  10148.25


*SECNO 273.500
CHIMP CLSTA=    9919.00 CELCH=    1087.20 BW=     375.00 STCHL=    9712.31 STCHR=   10127.15
EXCAVATION DATA
AEX=    2554.4SQ-FT     VEXR=      22.2K*CU-YD     VEXT=      22.2K*CU-YD


3470 ENCROACHMENT STATIONS=     9640.0   10160.0  TYPE=      1  TARGET=    -9640.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1106.39 ELREA=      1107.85

   273.500     10.52   1097.72   1093.12   1093.56   1098.63       .91       .46       .00   1106.39
   31000.0       .0   31000.0       .0        .0    4056.3        .0    1990.3     228.1   1107.85
       .77       .00      7.64       .00      .000      .035      .000      .000   1087.20   9720.98
   .001500     315.      310.      310.         2        11         0       .00    396.04  10117.02


*SECNO 277.900
CHIMP CLSTA=    9927.00 CELCH=    1088.30 BW=     360.00 STCHL=    9729.30 STCHR=   10137.00
EXCAVATION DATA
AEX=    2900.7SQ-FT     VEXR=      42.4K*CU-YD     VEXT=      64.7K*CU-YD
```

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= 1106.00 ELREA= 1108.50

277.900	10.00	1098.30	1094.39	1094.22	1099.39	1.09	.71	.05	1106.00
31000.0	.0	31000.0	.0	.0	3701.8	.0	2027.7	231.8	1108.50
.79	.00	8.37	.00	.000	.035	.000	.000	1088.30	9737.00
.001925	420.	420.	420.	2	11	0	.00	380.01	10117.00

*SECNO 281.800
CHIMP CLSTA= 9932.00 CELCH= 1089.20 BW= 330.00 STCHL= 9747.63 STCHR= 10117.50
EXCAVATION DATA
AEX= 3280.4SQ-FT VEXR= 46.9K*CU-YD VEXT= 111.6K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1108.57 ELREA= 1109.70

281.800	9.81	1099.01	1095.63	1095.08	1100.36	1.34	.89	.08	1108.57
31000.0	.0	31000.0	.0	.0	3332.2	.0	2060.8	235.3	1109.70
.80	.00	9.30	.00	.000	.035	.000	.000	1089.20	9757.19
.002450	410.	410.	410.	0	14	0	.00	349.61	10106.81

CCHV= .300 CEHV= .500
*SECNO 288.000
CHIMP CLSTA= 9988.00 CELCH= 1092.20 BW= 274.00 STCHL= 9829.45 STCHR= 10145.00
EXCAVATION DATA
AEX= 1602.9SQ-FT VEXR= 54.3K*CU-YD VEXT= 165.9K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1113.75 ELREA= 1112.00

288.000	8.34	1100.54	1099.47	1097.05	1103.23	2.69	2.20	.67	1113.75
31000.0	.0	31000.0	.0	.0	2355.1	.0	2100.0	239.7	1112.00
.81	.00	13.16	.00	.000	.035	.000	.000	1092.20	9842.66
.006085	600.	600.	600.	2	15	0	.00	290.68	10133.34

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 290.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

290.000	8.72	1101.72	1100.53	1098.54	1104.49	2.76	1.22	.04	1117.80
31000.0	.0	31000.0	.0	.0	2323.6	.0	2110.7	241.0	1117.80
.81	.00	13.34	.00	.000	.035	.000	.000	1093.00	9865.00
.006096	220.	200.	160.	2	11	0	.00	271.00	10136.00

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1099.64 , NOT 1101.72 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	.00	271.00	10.50	4974.00	.00	1093.70	1093.30

*SECNO 291.000
CLASS B LOW FLOW

3420 BRIDGE W.S.= 1101.11 BRIDGE VELOCITY= 15.65 CALCULATED CHANNEL AREA= 1929.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1105.08	.00	0.	31000.	4974.	5314.	1114.10	1119.10	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

291.000	9.82	1102.82	.00	1098.80	1105.08	2.27	.60	.00	1116.00
31000.0	.0	31000.0	.0	.0	2565.2	.0	2115.0	241.5	1116.00
.82	.00	12.08	.00	.000	.035	.000	.000	1093.00	9865.00
.004420	77.	77.	77.	0	0	0	.00	271.00	10136.00

CCHV= .100 CEHV= .300
*SECNO 293.000
CHIMP CLSTA= 10007.00 CELCH= 1094.00 BW= 231.00 STCHL= 9869.90 STCHR= 10144.00
EXCAVATION DATA
AEX= -4.0SQ-FT VEXR= 5.9K*CU-YD VEXT= 171.8K*CU-YD

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

293.000	9.35	1103.35	1102.11	1099.70	1106.30	2.95	1.01	.20	1115.60
31000.0	.0	31000.0	.0	.0	2249.7	.0	2126.1	242.6	1115.00
.82	.00	13.78	.00	.000	.035	.000	.000	1094.00	9882.14
.005853	200.	200.	200.	2	15	0	.00	249.72	10131.86

*SECNO 297.000
CHIMP CLSTA= 10006.00 CELCH= 1096.10 BW= 246.00 STCHL= 9863.04 STCHR= 10150.00
EXCAVATION DATA
AEX= -26.4SQ-FT VEXR= -.2K*CU-YD VEXT= 171.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

297.000	9.93	1106.03	1103.92	1102.04	1108.34	2.31	1.98	.06	1116.05
31000.0	.0	31000.0	.0	.0	2542.1	.0	2148.1	245.0	1115.00
.83	.00	12.19	.00	.000	.035	.000	.000	1096.10	9873.07
.004234	400.	400.	400.	3	11	0	.00	265.87	10138.93

*SECNO 302.000
CHIMP CLSTA= 9999.00 CELCH= 1098.20 BW= 197.00 STCHL= 9882.00 STCHR= 10118.78
EXCAVATION DATA
AEX= 3.1SQ-FT VEXR= -.2K*CU-YD VEXT= 171.3K*CU-YD

3301 HV CHANGED MORE THAN HVINS

302.000	9.72	1107.92	1107.19	1104.40	1111.62	3.70	2.86	.42	1116.00
31000.0	.0	31000.0	.0	.0	2009.1	.0	2175.8	247.9	1119.48
.84	.00	15.43	.00	.000	.035	.000	.000	1098.20	9890.78
.007096	530.	530.	530.	3	11	0	.00	216.44	10107.22

*SECNO 305.000
CHIMP CLSTA= 9992.00 CELCH= 1099.50 BW= 188.00 STCHL= 9880.94 STCHR= 10110.00
EXCAVATION DATA
AEX= 244.7SQ-FT VEXR= 1.3K*CU-YD VEXT= 172.6K*CU-YD

305.000	10.57	1110.07	1108.79	1106.05	1113.45	3.38	1.81	.03	1116.56
31000.0	.0	31000.0	.0	.0	2099.6	.0	2189.0	249.3	1119.50
.84	.00	14.76	.00	.000	.035	.000	.000	1099.50	9887.43
.005898	280.	280.	280.	3	8	0	.00	209.15	10096.57

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 306.750
CHIMP CLSTA= 9959.00 CELCH= 1100.30 BW= 289.00 STCHL= 9798.80 STCHR= 10123.24
EXCAVATION DATA
AEX= 1770.8SQ-FT VEXR= 8.0K*CU-YD VEXT= 180.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

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

306.750	12.93	1113.23	1107.31	1107.89	1114.21	.98	.51	.24	1116.00
31000.0	.0	31000.0	.0	.0	3902.6	.0	2203.8	250.6	1120.04
.85	.00	7.94	.00	.000	.035	.000	.000	1100.30	9801.57
.001276	215.	215.	215.	3	14	0	.00	314.85	10116.43

*SECNO 310.000
CHIMP CLSTA= 9965.00 CELCH= 1101.60 BW= 330.00 STCHL= 9784.66 STCHR= 10149.29
EXCAVATION DATA
AEX= 1007.5SQ-FT VEXR= 16.5K*CU-YD VEXT= 197.1K*CU-YD

310.000	12.15	1113.75	1108.03	1108.39	1114.61	.86	.40	.01	1116.94
31000.0	.0	31000.0	.0	.0	4158.3	.0	2233.4	253.1	1120.90
.86	.00	7.45	.00	.000	.035	.000	.000	1101.60	9787.85
.001200	320.	320.	320.	2	8	0	.00	354.31	10142.15

*SECNO 313.200
CHIMP CLSTA= 10000.00 CELCH= 1103.00 BW= 330.00 STCHL= 9820.00 STCHR= 10183.25
EXCAVATION DATA
AEX= 1069.6SQ-FT VEXR= 12.1K*CU-YD VEXT= 209.2K*CU-YD

313.200	11.06	1114.06	1109.43	1108.88	1115.11	1.05	.44	.06	1117.00
31000.0	.0	31000.0	.0	.0	3772.2	.0	2262.1	255.6	1121.25
.87	.00	8.22	.00	.000	.035	.000	.000	1103.00	9823.94
.001642	315.	315.	315.	2	11	0	.00	352.12	10176.06

*SECNO 318.000
CHIMP CLSTA= 10000.00 CELCH= 1105.10 BW= 330.00 STCHL= 9820.00 STCHR= 10182.90

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

EXCAVATION DATA
AEX= 52.1SQ-FT VEXR= 10.4K*CU-YD VEXT= 219.6K*CU-YD

318.000	9.74	1114.84	1111.55	1110.29	1116.21	1.36	1.00	.09	1120.00
31000.0	.0	31000.0	.0	.0	3310.2	.0	2302.7	259.6	1123.00
.89	.00	9.37	.00	.000	.035	.000	.000	1105.10	9825.26
.002503	500.	500.	500.	2	11	0	.00	349.49	10174.74

*SECNO 320.050
CHIMP CLSTA= 10000.00 CELCH= 1106.00 BW= 330.00 STCHL= 9816.00 STCHR= 10184.00
EXCAVATION DATA
AEX= 152.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 220.7K*CU-YD

320.050	9.55	1115.55	1112.43	1111.41	1116.97	1.42	.75	.02	1125.00
31000.0	.0	31000.0	.0	.0	3244.0	.0	2324.6	262.0	1125.00
.90	.00	9.56	.00	.000	.035	.000	.000	1106.00	9825.45
.002672	290.	290.	290.	2	14	0	.00	349.11	10174.55

*SECNO 328.000
CHIMP CLSTA= 10000.00 CELCH= 1109.10 BW= 330.00 STCHL= 9817.10 STCHR= 10182.90
EXCAVATION DATA
AEX= 195.1SQ-FT VEXR= 4.1K*CU-YD VEXT= 224.8K*CU-YD

328.000	8.25	1117.35	1115.53	1113.86	1119.27	1.91	2.15	.15	1127.00
31000.0	.0	31000.0	.0	.0	2792.0	.0	2368.9	267.1	1127.00
.91	.00	11.10	.00	.000	.035	.000	.000	1109.10	9826.75
.004338	640.	640.	640.	2	14	0	.00	346.51	10173.25

*SECNO 330.000
CHIMP CLSTA= 10000.00 CELCH= 1110.10 BW= 330.00 STCHL= 9817.60 STCHR= 10182.40
EXCAVATION DATA
AEX= 76.6SQ-FT VEXR= .9K*CU-YD VEXT= 225.7K*CU-YD

330.000	7.96	1118.06	1116.53	1114.76	1120.12	2.06	.81	.04	1127.50
31000.0	.0	31000.0	.0	.0	2688.8	.0	2379.9	268.5	1127.50
.92	.00	11.53	.00	.000	.035	.000	.000	1110.10	9827.04
.004911	175.	175.	175.	2	15	0	.00	345.91	10172.96

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 334.000
CHIMP CLSTA= 10000.00 CELCH= 1112.00 BW= 330.00 STCHL= 9818.00 STCHR= 10182.00
EXCAVATION DATA
AEX= 68.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 226.8K*CU-YD

334.000	8.15	1120.15	1118.43	1116.99	1122.11	1.97	1.98	.01	1129.00
31000.0	.0	31000.0	.0	.0	2754.6	.0	2406.1	271.8	1129.00
.93	.00	11.25	.00	.000	.035	.000	.000	1112.00	9826.85
.004540	420.	420.	420.	2	15	0	.00	346.29	10173.15

CCHV= .200 CEHV= .400
*SECNO 343.000
CHIMP CLSTA= 10025.00 CELCH= 1115.70 BW= 329.00 STCHL= 9861.00 STCHR= 10206.30
EXCAVATION DATA
AEX= 2385.5SQ-FT VEXR= 40.9K*CU-YD VEXT= 267.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

343.000	8.45	1124.15	1122.16	1120.84	1126.03	1.88	3.90	.02	1132.00
31000.0	.0	31000.0	.0	.0	2816.9	.0	2463.7	278.9	1132.00
.95	.00	11.01	.00	.000	.035	.000	.000	1115.70	9861.00
.004149	900.	900.	900.	2	15	0	.00	337.45	10198.45

*SECNO 344.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

344.900	8.80	1125.10	1122.74	1121.67	1126.80	1.70	.73	.04	1132.00
31000.0	.0	31000.0	.0	.0	2966.3	.0	2476.3	280.4	1132.00
.96	.00	10.45	.00	.000	.035	.000	.000	1116.30	9828.27
.003534	110.	190.	260.	2	15	0	.00	344.02	10172.29

T1 NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2 NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3 100-YEAR EVENT NRO2B

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

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

*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
      .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
```

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	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     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

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

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

            DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
   99.600      7.50   1053.70   1053.70   1049.78   1057.49      3.79       .03       .72   1063.80
  41000.0        .0   41000.0       .0        .0    2623.1        .0     735.4      76.7   1063.80
      .21       .00     15.63       .00      .000      .025      .000      .000   1046.20    325.13
  .004980       6.        6.        6.         0        15         0       .00    349.74    674.87
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1052.16 , NOT 1053.70 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	358.00	349.74	32.00	5378.30	.00	1046.50	1046.20

*SECNO 100.400

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.77

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1054.38 BRIDGE VELOCITY= 16.08 CALCULATED CHANNEL AREA= 2503.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1059.02	.00	0.	41000.	5378.	5370.	1063.40	1065.90	0.

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

GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

100.400	10.63	1057.13	.00	1051.57	1059.02	1.89	1.52	.00	1063.60
41000.0	.0	41000.0	.0	.0	3716.9	.0	741.3	77.3	1063.60
.21	.00	11.03	.00	.000	.025	.000	.000	1046.50	325.12
.001594	80.	80.	80.	0	0	0	.00	349.76	674.88

*SECNO 100.900

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

100.900	10.88	1057.48	1054.05	1051.77	1059.18	1.69	.10	.06	1063.60
41000.0	.0	41000.0	.0	.0	3925.0	.0	745.6	77.7	1063.60
.22	.00	10.45	.00	.000	.035	.000	.000	1046.60	314.26
.002695	50.	50.	50.	2	19	0	.00	371.47	685.74

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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   11.50     1058.50   1054.28   1052.78   1059.88   1.38      .61       .09       1065.40
   41000.0   .0        41000.0   .0        .0        4351.3    .0        770.3     80.0      1065.40
   .22       .00       9.42      .00       .000      .035      .000      .000      1047.00   305.78
   .002062   260.      260.      260.      2         14        0         .00       395.33    701.11


CCHV=     .100 CEHV=     .300
*SECNO 106.000

3301 HV CHANGED MORE THAN HVINS

   106.000   11.96     1059.56   1053.89   1053.55   1060.39   .83       .46       .05       1066.40
   41000.0   .0        41000.0   .0        .0        5608.1    .0        804.6     83.0      1066.40
   .23       .00       7.31      .00       .000      .035      .000      .000      1047.60   260.07
   .001163   300.      300.      300.      2         11        0         .00       486.69    746.76


*SECNO 109.000
            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 280 FT.
            RT CHNL BTM WDTH = 280 FT.
   109.000   11.91     1060.11   1053.94   1053.99   1060.71   .60       .30       .02       1066.90
   41000.0   .0        41000.0   .0        .0        6582.8    .0        846.6     86.7      1066.90
   .25       .00       6.23      .00       .000      .035      .000      .000      1048.20   214.88
   .000855   300.      300.      300.      2         11        0         .00       577.03    791.91


*SECNO 110.000
   110.000   13.18     1060.18   1054.20   1054.09   1060.81   .63       .09       .01       1066.90
   41000.0   .0        41000.0   .0        .0        6453.4    .0        861.6     88.0      1066.90
   .25       .00       6.35      .00       .000      .035      .000      .000      1047.00   214.88
   .000913   100.      100.      100.      2         14        0         .00       576.90    791.78


*SECNO 113.000
   113.000   11.45     1060.45   1054.66   1054.46   1061.10   .65       .28       .01       1067.20
   41000.0   .0        41000.0   .0        .0        6354.5    .0        905.7     92.0      1067.20
   .26       .00       6.45      .00       .000      .035      .000      .000      1049.00   215.31
   .000959   300.      300.      300.      0         14        0         .00       576.14    791.45
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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 116.000

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

116.000	11.11	1060.71	1055.51	1054.84	1061.44	.73	.32	.03	1067.30
41000.0	.0	41000.0	.0	.0	5968.8	.0	948.1	96.0	1067.30
.28	.00	6.87	.00	.000	.035	.000	.000	1049.60	215.47
.001192	240.	300.	340.	1	11	0	.00	575.65	791.12

*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	10.22	1060.62	1059.08	1055.34	1062.70	2.08	.86	.40	1067.10
41000.0	.0	41000.0	.0	.0	3544.2	.0	991.8	100.7	1067.10
.29	.00	11.57	.00	.000	.035	.000	.000	1050.40	286.24
.004928	327.	400.	497.	2	15	0	.00	454.00	740.23

*SECNO 123.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.85

123.000	11.65	1062.65	1057.57	1057.27	1063.64	.99	.83	.11	1068.80
41000.0	.0	41000.0	.0	.0	5124.4	.0	1025.8	104.3	1068.80
.30	.00	8.00	.00	.000	.035	.000	.000	1051.00	284.49
.001447	342.	342.	342.	2	14	0	.00	457.16	741.65

*SECNO 127.000

127.000	11.42	1063.22	1058.37	1057.78	1064.25	1.03	.60	.01	1068.80
41000.0	.0	41000.0	.0	.0	5025.9	.0	1072.4	108.5	1068.80
.31	.00	8.16	.00	.000	.035	.000	.000	1051.80	284.16
.001543	400.	400.	400.	3	11	0	.00	457.26	741.42

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	13.82	1063.82	1059.33	1058.39	1064.93	1.11	.66	.02	1069.40
41000.0	.0	41000.0	.0	.0	4846.6	.0	1117.8	112.7	1069.40
.33	.00	8.46	.00	.000	.035	.000	.000	1050.00	284.37
.001746	400.	400.	400.	0	15	0	.00	456.85	741.22

*SECNO 135.000

135.000	11.08	1064.48	1060.89	1059.19	1065.79	1.31	.80	.06	1069.60
41000.0	.0	41000.0	.0	.0	4465.7	.0	1160.5	116.9	1069.90
.34	.00	9.18	.00	.000	.035	.000	.000	1053.40	283.93
.002309	400.	400.	400.	0	11	0	.00	457.01	740.94

*SECNO 138.000

138.000	11.26	1065.26	1061.09	1060.06	1066.43	1.17	.63	.01	1069.60
41000.0	.0	41000.0	.0	.0	4727.6	.0	1192.2	120.0	1069.60
.35	.00	8.67	.00	.000	.035	.000	.000	1054.00	283.07
.001909	300.	300.	300.	2	14	0	.00	458.19	741.26

*SECNO 141.000

141.000	11.19	1065.79	1062.26	1060.64	1067.11	1.32	.63	.05	1071.00
41000.0	.0	41000.0	.0	.0	4439.0	.0	1223.7	123.2	1071.00
.36	.00	9.24	.00	.000	.035	.000	.000	1054.60	283.99
.002358	300.	300.	300.	2	14	0	.00	457.20	741.19

*SECNO 145.000

A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL

145.000	11.46	1066.86	1061.98	1061.60	1067.89	1.03	.75	.03	1072.00
41000.0	.0	41000.0	.0	.0	5036.2	.0	1267.2	127.3	1077.00
.37	.00	8.14	.00	.000	.035	.000	.000	1055.40	283.67
.001527	400.	400.	400.	2	11	0	.00	455.14	738.81

*SECNO 147.000

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

147.000	11.36	1067.16	1062.37	1061.85	1068.21	1.04	.31	.00	1072.40
41000.0	.0	41000.0	.0	.0	5004.6	.0	1290.3	129.4	1072.40
.38	.00	8.19	.00	.000	.035	.000	.000	1055.80	283.87
.001566	200.	200.	200.	2	11	0	.00	457.49	741.36

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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     11.34   1067.74   1062.67   1062.30   1068.66       .92       .44       .01   1073.00
  41000.0       .0   41000.0       .0        .0    5335.6        .0    1325.9     132.7   1073.00
      .39      .00      7.68       .00      .000      .035      .000      .000   1056.40    233.92
  .001375     350.      300.      260.         2        11         0       .00    487.43    721.34


*SECNO 155.000

3301 HV CHANGED MORE THAN HVINS


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

            CHANNEL BOTTOM TAPERS
            LT CHNL BTM WDTH = 260 FT.
            RT CHNL BTM WDTH = 170 FT.
  155.000     10.85   1068.25   1065.62   1063.05   1069.89      1.64      1.01       .22   1073.30
  41000.0       .0   41000.0       .0        .0    3985.6        .0    1379.4     138.1   1073.30
      .40      .00     10.29       .00      .000      .035      .000      .000   1057.40    234.20
  .003282     585.      500.      460.         2        19         0       .00    446.65    680.85


CCHV=     .300 CEHV=     .500
*SECNO 158.000
            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 162.5 FT.
            RT CHNL BTM WDTH = 162.5 FT.
  158.000     11.03   1069.03   1066.09   1064.30   1071.08      2.06       .99       .21   1076.50
  41000.0       .0   41000.0       .0        .0    3562.0        .0    1405.4     140.8   1075.00
      .41      .00     11.51       .00      .000      .035      .000      .000   1058.00    333.95
  .003291     360.      300.      265.         2        15         0       .00    339.58    673.53


*SECNO 159.450

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1077.46 ELREA=     1077.46

           DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE
  159.450     11.99   1070.29   1066.14   1064.97   1071.88      1.60       .66       .14   1076.80
  41000.0       .0   41000.0       .0        .0    4040.8        .0    1426.8     142.7   1076.80
      .41      .00     10.15       .00      .000      .035      .000      .000   1058.30    325.51
  .002263     245.      245.      245.         2        15         0       .00    348.98    674.49
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	388.00	325.00	28.00	6034.00	1.00	1058.46	1058.30

*SECNO 160.250
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1069.87 BRIDGE VELOCITY= 11.57 CALCULATED CHANNEL AREA= 3518.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1072.30	.50	0.	41000.	6034.	6004.	1077.46	1082.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1082.00 ELREA= 1082.00

NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

160.250	12.33	1070.79	.00	1065.10	1072.30	1.51	.41	.00	1077.00
41000.0	.0	41000.0	.0	.0	4158.0	.0	1434.3	143.3	1077.00
.42	.00	9.86	.00	.000	.035	.000	.000	1058.46	325.20
.002064	80.	80.	80.	0	0	0	.00	349.60	674.80

*SECNO 162.000
BEGIN CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 162.5 FT.
RT CHNL BTM WDTH = 162.5 FT.

162.000	12.36	1071.16	1066.61	1065.41	1072.66	1.50	.36	.00	1077.00
41000.0	.0	41000.0	.0	.0	4171.8	.0	1451.0	144.7	1077.00
.42	.00	9.83	.00	.000	.035	.000	.000	1058.80	325.13
.002043	175.	175.	175.	0	14	0	.00	349.73	674.87

*SECNO 165.000

3301 HV CHANGED MORE THAN HVINS

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 300 FT.
RT CHNL BTM WDTH = 250 FT.

165.000	13.17	1072.57	1066.68	1066.04	1073.35	.79	.48	.21	1078.80
41000.0	.0	41000.0	.0	.0	5758.8	.0	1485.2	147.9	1078.80
.43	.00	7.12	.00	.000	.035	.000	.000	1059.40	201.65
.001288	300.	300.	300.	2	11	0	.00	561.53	763.18

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


*SECNO 168.000
  168.000     12.84   1072.94   1067.32   1066.47   1073.81       .86       .42       .04   1079.00
  41000.0       .0   41000.0       .0        .0    5504.6        .0    1524.0     151.7   1079.00
      .44       .00      7.45       .00      .000      .035      .000      .000   1060.10    202.11
  .001494     300.      300.      300.         2        11         0       .00    560.73    762.84


CCHV=     .100 CEHV=     .300
*SECNO 170.000
            BEGIN CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 300 FT.
            RT CHNL BTM WDTH = 250 FT.
  170.000     12.63   1073.23   1068.31   1066.81   1074.12       .88       .30       .01   1079.20
  41000.0       .0   41000.0       .0        .0    5436.4        .0    1549.1     154.3   1079.20
      .45       .00      7.54       .00      .000      .035      .000      .000   1060.60    202.74
  .001554     200.      200.      200.         1        14         0       .00    559.88    762.63


*SECNO 173.000

3301 HV CHANGED MORE THAN HVINS


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

            END CHNL BTM TRANSITION RT.
            RT CHNL BTM WDTH = 157 FT.
  173.000     11.85   1073.25   1070.52   1067.16   1075.10      1.85       .69       .29   1079.00
  41000.0       .0   41000.0       .0        .0    3754.0        .0    1580.8     157.7   1079.00
      .46       .00     10.92       .00      .000      .035      .000      .000   1061.40    235.59
  .003803     300.      300.      300.         2        15         0       .00    433.26    668.85


*SECNO 176.000
  176.000     12.20   1074.40   1071.30   1068.79   1076.11      1.71      1.00       .01   1079.60
  41000.0       .0   41000.0       .0        .0    3905.2        .0    1607.2     160.6   1079.60
      .47       .00     10.50       .00      .000      .035      .000      .000   1062.20    276.29
  .002938     300.      300.      300.         2        15         0       .00    392.92    669.21


*SECNO 177.000
```

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

3301 HV CHANGED MORE THAN HVINS

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

BEGIN CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

177.000	12.83	1075.23	1069.71	1069.56	1076.37	1.14	.20	.06	1080.50
41000.0	.0	41000.0	.0	.0	4785.2	.0	1617.1	161.5	1080.50
.47	.00	8.57	.00	.000	.035	.000	.000	1062.40	284.30
.001469	100.	100.	100.	2	14	0	.00	385.53	669.84

*SECNO 179.000
END CHNL BTM TRANSITION LT.
LT CHNL BTM WDTH = 175 FT.

179.000	12.79	1075.59	1070.03	1069.79	1076.67	1.08	.29	.01	1081.00
41000.0	.0	41000.0	.0	.0	4915.7	.0	1639.4	163.3	1081.00
.48	.00	8.34	.00	.000	.035	.000	.000	1062.80	317.65
.001415	200.	200.	200.	2	11	0	.00	403.63	721.29

*SECNO 181.000
END CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 260 FT.

181.000	12.80	1076.10	1069.92	1070.08	1076.94	.84	.25	.02	1081.60
41000.0	.0	41000.0	.0	.0	5579.9	.0	1663.5	165.3	1081.60
.49	.00	7.35	.00	.000	.035	.000	.000	1063.30	317.70
.001085	200.	200.	200.	2	11	0	.00	455.10	772.80

*SECNO 183.000

3301 HV CHANGED MORE THAN HVINS

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

183.000	11.93	1075.73	1073.82	1069.50	1077.65	1.91	.38	.32	1081.30
41000.0	.0	41000.0	.0	.0	3693.8	.0	1684.8	167.3	1081.30
.49	.00	11.10	.00	.000	.035	.000	.000	1063.80	318.63
.004312	200.	200.	200.	3	15	0	.00	453.30	771.93

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 188.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.44

188.000	12.93	1077.93	1074.01	1072.71	1079.16	1.23	1.45	.07	1083.00
41000.0	.0	41000.0	.0	.0	4605.7	.0	1732.4	172.6	1083.00
.51	.00	8.90	.00	.000	.035	.000	.000	1065.00	317.12
.002083	500.	500.	500.	2	15	0	.00	455.82	772.94

*SECNO 193.000

STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.

193.000	12.80	1079.00	1074.75	1073.79	1080.16	1.16	.99	.01	1084.00
41000.0	.0	41000.0	.0	.0	4743.0	.0	1786.1	177.8	1084.00
.52	.00	8.64	.00	.000	.035	.000	.000	1066.20	317.19
.001889	500.	500.	500.	2	14	0	.00	455.61	772.80

*SECNO 197.000

BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
TO MATCH PAST DEIGN CROSS SECTIONS.

197.000	12.48	1079.68	1076.87	1074.60	1081.23	1.55	.95	.12	1084.60
41000.0	.0	41000.0	.0	.0	4099.4	.0	1826.7	182.0	1084.60
.53	.00	10.00	.00	.000	.035	.000	.000	1067.20	317.45
.003072	400.	400.	400.	2	19	0	.00	455.03	772.48

CCHV= .300 CEHV= .500
*SECNO 199.000

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

199.000	12.81	1080.51	1074.85	1075.38	1081.57	1.06	.20	.15	1086.20
41000.0	.0	41000.0	.0	.0	4956.9	.0	1837.1	183.0	1086.20
.54	.00	8.27	.00	.000	.035	.000	.000	1067.70	323.19
.001369	200.	100.	200.	2	11	0	.00	399.63	722.81

*SECNO 201.100

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1086.70 ELREA= 1086.70

DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE

201.100	12.40	1080.60	1076.19	1075.51	1082.20	1.59	.36	.26	1086.70
41000.0	.0	41000.0	.0	.0	4048.9	.0	1858.8	184.7	1086.70
.54	.00	10.13	.00	.000	.035	.000	.000	1068.20	330.60
.002166	210.	210.	210.	2	14	0	.00	338.81	669.40

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	376.00	314.00	21.00	5763.00	1.00	1068.40	1068.20

*SECNO 201.900
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1080.36 BRIDGE VELOCITY= 11.14 CALCULATED CHANNEL AREA= 3647.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1082.53	.37	0.	41000.	5763.	5697.	1086.70	1091.80	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1091.80 ELREA= 1091.80

99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

201.900	12.58	1080.98	.00	1075.59	1082.53	1.55	.33	.00	1086.90
41000.0	.0	41000.0	.0	.0	4107.7	.0	1866.3	185.4	1086.90
.54	.00	9.98	.00	.000	.035	.000	.000	1068.40	330.42
.002068	80.	80.	80.	0	0	0	.00	339.16	669.58

*SECNO 204.000

204.000	12.51	1081.41	1076.89	1075.89	1082.97	1.56	.44	.01	1087.40
41000.0	.0	41000.0	.0	.0	4086.5	.0	1886.0	187.0	1087.40
.55	.00	10.03	.00	.000	.035	.000	.000	1068.90	330.48
.002103	210.	210.	210.	1	14	0	.00	339.03	669.52

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

CCHV= .300 CEHV= .500
*SECNO 209.300

209.300	12.34	1082.53	1078.18	1076.78	1084.14	1.61	1.14	.02	1088.19
41000.0	.0	41000.0	.0	.0	4023.5	.0	1935.4	191.1	1088.19
.56	.00	10.19	.00	.000	.035	.000	.000	1070.19	330.67
.002210	530.	530.	530.	1	14	0	.00	338.66	669.33

CCHV= .300 CEHV= .500
*SECNO 212.600

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1089.60 ELREA= 1089.60

DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE

212.600	11.93	1082.93	1080.32	1077.39	1085.64	2.71	.96	.55	1089.60
41000.0	.0	41000.0	.0	.0	3101.6	.0	1962.3	193.4	1089.60
.57	.00	13.22	.00	.000	.035	.000	.000	1071.00	364.07
.003958	330.	330.	330.	2	15	0	.00	271.86	635.93

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	300.00	248.00	18.50	4481.60	1.00	1071.50	1071.00

*SECNO 213.500
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1081.73 BRIDGE VELOCITY= 16.30 CALCULATED CHANNEL AREA= 2452.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1086.49	1.11	0.	41000.	4482.	4482.	1089.60	1095.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1095.00 ELREA= 1095.00

OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

213.500	12.54	1084.04	.00	1077.74	1086.49	2.44	.84	.00	1089.60
41000.0	.0	41000.0	.0	.0	3267.7	.0	1968.9	194.0	1089.60
.57	.00	12.55	.00	.000	.035	.000	.000	1071.50	363.46
.003353	90.	90.	90.	0	0	0	.00	273.08	636.54

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

CCHV= .100 CEHV= .300

*SECNO 213.700

3301 HV CHANGED MORE THAN HVINS

213.700	10.67	1083.67	1082.02	1077.32	1086.76	3.09	.08	.19	1095.00
41000.0	.0	41000.0	.0	.0	2907.0	.0	1970.3	194.1	1096.20
.57	.00	14.10	.00	.000	.035	.000	.000	1073.00	358.42
.005143	20.	20.	20.	2	15	0	.00	282.61	641.03

*SECNO 217.500

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.69

217.500	12.47	1086.67	1081.81	1080.49	1088.02	1.35	1.08	.17	1096.00
41000.0	.0	41000.0	.0	.0	4400.9	.0	2002.2	196.9	1097.00
.59	.00	9.32	.00	.000	.035	.000	.000	1074.20	314.33
.001809	380.	380.	380.	3	15	0	.00	365.34	679.67

*SECNO 221.100

221.100	12.06	1087.36	1082.69	1081.20	1088.68	1.32	.66	.00	1096.60
41000.0	.0	41000.0	.0	.0	4438.6	.0	2038.7	200.0	1098.00
.60	.00	9.24	.00	.000	.035	.000	.000	1075.30	304.24
.001849	360.	360.	360.	2	11	0	.00	380.12	684.36

*SECNO 227.500

227.500	11.73	1088.83	1083.28	1082.60	1089.67	.83	.94	.05	1099.00
41000.0	.0	41000.0	.0	.0	5596.8	.0	2112.5	206.4	1099.00
.62	.00	7.33	.00	.000	.035	.000	.000	1077.10	255.68
.001184	640.	640.	640.	2	11	0	.00	489.11	744.79

*SECNO 233.550

3301 HV CHANGED MORE THAN HVINS

233.550	10.40	1089.40	1085.68	1083.69	1090.73	1.34	.92	.15	1101.70
41000.0	.0	41000.0	.0	.0	4421.1	.0	2179.2	212.6	1101.60
.64	.00	9.27	.00	.000	.035	.000	.000	1079.00	282.30
.002228	580.	580.	580.	2	11	0	.00	435.50	717.80

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 238.660

3301 HV CHANGED MORE THAN HVINS

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

238.660	9.25	1089.85	1088.94	1085.54	1093.16	3.32	1.84	.59	1103.30
41000.0	.0	41000.0	.0	.0	2805.3	.0	2222.0	217.0	1103.70
.65	.00	14.62	.00	.000	.035	.000	.000	1080.60	343.56
.006557	516.	516.	516.	2	15	0	.00	312.47	656.03

*SECNO 238.690

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

238.690	8.24	1091.84	1091.84	1087.55	1095.89	4.05	.02	.22	1103.40
41000.0	.0	41000.0	.0	.0	2537.7	.0	2222.1	217.0	1103.90
.65	.00	16.16	.00	.000	.035	.000	.000	1083.60	336.56
.009278	3.	3.	3.	0	11	0	.00	316.37	652.94

CCHV= .100 CEHV= .300
*SECNO 242.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.75

242.000	11.30	1095.75	1092.51	1090.47	1097.72	1.97	1.62	.21	1104.00
41000.0	.0	41000.0	.0	.0	3639.7	.0	2245.6	219.5	1104.00
.66	.00	11.26	.00	.000	.035	.000	.000	1084.45	333.25
.003017	331.	331.	331.	3	8	0	.00	333.49	666.75

*SECNO 247.000

247.000	11.65	1097.32	1093.72	1091.79	1099.16	1.83	1.42	.01	1104.50
41000.0	.0	41000.0	.0	.0	3776.3	.0	2288.2	223.3	1104.50
.67	.00	10.86	.00	.000	.035	.000	.000	1085.67	332.17
.002694	500.	500.	500.	3	15	0	.00	335.65	667.83

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

CCHV= .100 CEHV= .300
*SECNO 270.500
CHIMP CLSTA= 9955.00 CELCH= 1086.50 BW= 365.00 STCHL= 9753.15 STCHR= 10175.00
EXCAVATION DATA
AEX= 1319.1SQ-FT VEXR= .0K*CU-YD VEXT= .0K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9750.0 10218.0 TYPE= 1 TARGET= -9750.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1105.85 ELREA= 1107.00

270.500	12.67	1099.17	1093.74	1093.11	1100.31	1.14	1.09	.07	1105.85
41000.0	.0	41000.0	.0	.0	4787.1	.0	2342.7	228.0	1107.00
.69	.00	8.56	.00	.000	.035	.000	.000	1086.50	9759.82
.001488	338.	555.	338.	2	14	0	.00	390.35	10150.17

*SECNO 273.500
CHIMP CLSTA= 9919.00 CELCH= 1087.20 BW= 375.00 STCHL= 9712.31 STCHR= 10127.15
EXCAVATION DATA
AEX= 2554.4SQ-FT VEXR= 22.2K*CU-YD VEXT= 22.2K*CU-YD

3470 ENCROACHMENT STATIONS= 9640.0 10160.0 TYPE= 1 TARGET= -9640.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1106.39 ELREA= 1107.85

273.500	12.46	1099.66	1094.33	1093.56	1100.78	1.12	.46	.00	1106.39
41000.0	.0	41000.0	.0	.0	4825.9	.0	2376.9	230.8	1107.85
.70	.00	8.50	.00	.000	.035	.000	.000	1087.20	9719.04
.001497	315.	310.	310.	2	11	0	.00	399.91	10118.96

*SECNO 277.900
CHIMP CLSTA= 9927.00 CELCH= 1088.30 BW= 360.00 STCHL= 9729.30 STCHR= 10137.00
EXCAVATION DATA
AEX= 2900.7SQ-FT VEXR= 42.4K*CU-YD VEXT= 64.7K*CU-YD

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= 1106.00 ELREA= 1108.50

277.900	11.91	1100.21	1095.64	1094.22	1101.54	1.33	.70	.06	1106.00
41000.0	.0	41000.0	.0	.0	4430.1	.0	2421.6	234.5	1108.50
.71	.00	9.25	.00	.000	.035	.000	.000	1088.30	9735.09
.001884	420.	420.	420.	2	11	0	.00	383.82	10118.91

*SECNO 281.800
CHIMP CLSTA= 9932.00 CELCH= 1089.20 BW= 330.00 STCHL= 9747.63 STCHR= 10117.50
EXCAVATION DATA
AEX= 3280.4SQ-FT VEXR= 46.9K*CU-YD VEXT= 111.6K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1108.57 ELREA= 1109.70

281.800	11.66	1100.86	1096.94	1095.08	1102.51	1.64	.87	.09	1108.57
41000.0	.0	41000.0	.0	.0	3984.3	.0	2461.2	238.0	1109.70
.72	.00	10.29	.00	.000	.035	.000	.000	1089.20	9755.34
.002408	410.	410.	410.	2	14	0	.00	353.32	10108.66

CCHV= .300 CEHV= .500
*SECNO 288.000
CHIMP CLSTA= 9988.00 CELCH= 1092.20 BW= 274.00 STCHL= 9829.45 STCHR= 10145.00
EXCAVATION DATA
AEX= 1602.9SQ-FT VEXR= 54.3K*CU-YD VEXT= 165.9K*CU-YD

3301 HV CHANGED MORE THAN HVINS

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1113.75 ELREA= 1112.00

288.000	10.01	1102.21	1100.93	1097.05	1105.44	3.23	2.14	.79	1113.75
41000.0	.0	41000.0	.0	.0	2842.1	.0	2508.2	242.5	1112.00
.73	.00	14.43	.00	.000	.035	.000	.000	1092.20	9840.99
.005809	600.	600.	600.	2	15	0	.00	294.01	10135.01

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

*SECNO 290.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

290.000	10.29	1103.29	1102.04	1098.54	1106.75	3.45	1.20	.11	1117.80
41000.0	.0	41000.0	.0	.0	2749.4	.0	2521.0	243.8	1117.80
.74	.00	14.91	.00	.000	.035	.000	.000	1093.00	9865.00
.006174	220.	200.	160.	2	11	0	.00	271.00	10136.00

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1100.94 , NOT 1103.29 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	.00	271.00	10.50	4974.00	.00	1093.70	1093.30

*SECNO 291.000

3301 HV CHANGED MORE THAN HVINS

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1102.66 BRIDGE VELOCITY= 17.18 CALCULATED CHANNEL AREA= 2334.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1107.45	.00	0.	41000.	4974.	5314.	1114.10	1119.10	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

291.000	11.68	1104.68	.00	1098.80	1107.45	2.77	.70	.00	1116.00
41000.0	.0	41000.0	.0	.0	3071.3	.0	2526.1	244.3	1116.00
.74	.00	13.35	.00	.000	.035	.000	.000	1093.00	9865.00
.004315	77.	77.	77.	0	0	0	.00	271.00	10136.00

CCHV= .100 CEHV= .300
*SECNO 293.000
CHIMP CLSTA= 10007.00 CELCH= 1094.00 BW= 231.00 STCHL= 9869.90 STCHR= 10144.00

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

EXCAVATION DATA
AEX= -4.0SQ-FT VEXR= 5.9K*CU-YD VEXT= 171.8K*CU-YD

3301 HV CHANGED MORE THAN HVINS

293.000	11.08	1105.08	1103.79	1099.70	1108.71	3.63	1.00	.26	1115.60
41000.0	.0	41000.0	.0	.0	2682.0	.0	2539.4	245.5	1115.00
.74	.00	15.29	.00	.000	.035	.000	.000	1094.00	9880.42
.005843	200.	200.	200.	3	11	0	.00	253.16	10133.58

*SECNO 297.000
CHIMP CLSTA= 10006.00 CELCH= 1096.10 BW= 246.00 STCHL= 9863.04 STCHR= 10150.00
EXCAVATION DATA
AEX= -26.4SQ-FT VEXR= -.2K*CU-YD VEXT= 171.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

297.000	11.84	1107.94	1105.49	1102.04	1110.74	2.80	1.95	.08	1116.05
41000.0	.0	41000.0	.0	.0	3052.3	.0	2565.7	247.9	1115.00
.75	.00	13.43	.00	.000	.035	.000	.000	1096.10	9871.16
.004131	400.	400.	400.	3	11	0	.00	269.68	10140.84

*SECNO 302.000
CHIMP CLSTA= 9999.00 CELCH= 1098.20 BW= 197.00 STCHL= 9882.00 STCHR= 10118.78
EXCAVATION DATA
AEX= 3.1SQ-FT VEXR= -.2K*CU-YD VEXT= 171.3K*CU-YD

3301 HV CHANGED MORE THAN HVINS

302.000	11.29	1109.49	1108.99	1104.40	1114.21	4.72	2.89	.58	1116.00
41000.0	.0	41000.0	.0	.0	2351.4	.0	2598.6	250.8	1119.48
.76	.00	17.44	.00	.000	.035	.000	.000	1098.20	9889.21
.007541	530.	530.	530.	3	11	0	.00	219.58	10108.79

*SECNO 305.000
CHIMP CLSTA= 9992.00 CELCH= 1099.50 BW= 188.00 STCHL= 9880.94 STCHR= 10110.00

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

EXCAVATION DATA
AEX= 244.7SQ-FT VEXR= 1.3K*CU-YD VEXT= 172.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

305.000	12.44	1111.94	1110.59	1106.05	1116.14	4.20	1.88	.05	1116.56
41000.0	.0	41000.0	.0	.0	2493.7	.0	2614.1	252.2	1119.50
.76	.00	16.44	.00	.000	.035	.000	.000	1099.50	9885.56
.006004	280.	280.	280.	4	5	0	.00	212.88	10098.44

*SECNO 306.750
CHIMP CLSTA= 9959.00 CELCH= 1100.30 BW= 289.00 STCHL= 9798.80 STCHR= 10123.24
EXCAVATION DATA
AEX= 1770.8SQ-FT VEXR= 8.0K*CU-YD VEXT= 180.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.21

306.750	15.46	1115.76	1108.74	1107.89	1116.94	1.18	.50	.30	1116.00
41000.0	.0	41000.0	.0	.0	4708.1	.0	2631.9	253.5	1120.04
.77	.00	8.71	.00	.000	.035	.000	.000	1100.30	9799.04
.001229	215.	215.	215.	3	14	0	.00	319.93	10118.96

*SECNO 310.000
CHIMP CLSTA= 9965.00 CELCH= 1101.60 BW= 330.00 STCHL= 9784.66 STCHR= 10149.29
EXCAVATION DATA
AEX= 1007.5SQ-FT VEXR= 16.5K*CU-YD VEXT= 197.1K*CU-YD

310.000	14.72	1116.32	1109.34	1108.39	1117.33	1.01	.37	.02	1116.94
41000.0	.0	41000.0	.0	.0	5074.5	.0	2667.8	256.0	1120.90
.78	.00	8.08	.00	.000	.035	.000	.000	1101.60	9785.28
.001110	320.	320.	320.	2	8	0	.00	359.44	10144.72

*SECNO 313.200
CHIMP CLSTA= 10000.00 CELCH= 1103.00 BW= 330.00 STCHL= 9820.00 STCHR= 10183.25

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

EXCAVATION DATA
AEX= 1069.6SQ-FT VEXR= 12.1K*CU-YD VEXT= 209.2K*CU-YD

313.200	13.59	1116.59	1110.74	1108.88	1117.78	1.20	.40	.06	1117.00
41000.0	.0	41000.0	.0	.0	4668.4	.0	2703.1	258.6	1121.25
.79	.00	8.78	.00	.000	.035	.000	.000	1103.00	9821.41
.001449	315.	315.	315.	2	11	0	.00	357.17	10178.59

*SECNO 318.000
CHIMP CLSTA= 10000.00 CELCH= 1105.10 BW= 330.00 STCHL= 9820.00 STCHR= 10182.90
EXCAVATION DATA
AEX= 52.1SQ-FT VEXR= 10.4K*CU-YD VEXT= 219.6K*CU-YD

318.000	12.13	1117.23	1112.85	1110.29	1118.75	1.52	.87	.10	1120.00
41000.0	.0	41000.0	.0	.0	4148.9	.0	2753.7	262.7	1123.00
.80	.00	9.88	.00	.000	.035	.000	.000	1105.10	9822.87
.002114	500.	500.	500.	0	11	0	.00	354.25	10177.13

*SECNO 320.050
CHIMP CLSTA= 10000.00 CELCH= 1106.00 BW= 330.00 STCHL= 9816.00 STCHR= 10184.00
EXCAVATION DATA
AEX= 152.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 220.7K*CU-YD

320.050	11.81	1117.81	1113.74	1111.41	1119.41	1.60	.64	.03	1125.00
41000.0	.0	41000.0	.0	.0	4037.6	.0	2780.9	265.1	1125.00
.81	.00	10.15	.00	.000	.035	.000	.000	1106.00	9823.19
.002308	290.	290.	290.	2	14	0	.00	353.63	10176.81

*SECNO 328.000
CHIMP CLSTA= 10000.00 CELCH= 1109.10 BW= 330.00 STCHL= 9817.10 STCHR= 10182.90
EXCAVATION DATA
AEX= 195.1SQ-FT VEXR= 4.1K*CU-YD VEXT= 224.8K*CU-YD

3301 HV CHANGED MORE THAN HVINS

328.000	10.17	1119.27	1116.84	1113.86	1121.45	2.18	1.86	.17	1127.00
41000.0	.0	41000.0	.0	.0	3459.6	.0	2836.0	270.2	1127.00
.83	.00	11.85	.00	.000	.035	.000	.000	1109.10	9824.83
.003790	640.	640.	640.	2	14	0	.00	350.34	10175.17

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

*SECNO 330.000
CHIMP CLSTA= 10000.00 CELCH= 1110.10 BW= 330.00 STCHL= 9817.60 STCHR= 10182.40
EXCAVATION DATA
AEX= 76.6SQ-FT VEXR= .9K*CU-YD VEXT= 225.7K*CU-YD

330.000	9.74	1119.84	1117.84	1114.76	1122.22	2.38	.71	.06	1127.50
41000.0	.0	41000.0	.0	.0	3309.2	.0	2849.6	271.6	1127.50
.83	.00	12.39	.00	.000	.035	.000	.000	1110.10	9825.26
.004383	175.	175.	175.	2	15	0	.00	349.48	10174.74

*SECNO 334.000
CHIMP CLSTA= 10000.00 CELCH= 1112.00 BW= 330.00 STCHL= 9818.00 STCHR= 10182.00
EXCAVATION DATA
AEX= 68.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 226.8K*CU-YD

334.000	9.68	1121.68	1119.74	1116.99	1124.09	2.41	1.86	.01	1129.00
41000.0	.0	41000.0	.0	.0	3287.7	.0	2881.4	275.0	1129.00
.84	.00	12.47	.00	.000	.035	.000	.000	1112.00	9825.32
.004476	420.	420.	420.	2	15	0	.00	349.36	10174.68

CCHV= .200 CEHV= .400
*SECNO 343.000
CHIMP CLSTA= 10025.00 CELCH= 1115.70 BW= 329.00 STCHL= 9861.00 STCHR= 10206.30
EXCAVATION DATA
AEX= 2385.5SQ-FT VEXR= 40.9K*CU-YD VEXT= 267.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

343.000	9.96	1125.66	1123.48	1120.84	1128.02	2.36	3.91	.01	1132.00
41000.0	.0	41000.0	.0	.0	3328.0	.0	2949.7	282.1	1132.00
.86	.00	12.32	.00	.000	.035	.000	.000	1115.70	9861.00
.004221	900.	900.	900.	0	15	0	.00	338.96	10199.96

*SECNO 344.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

344.900	10.39	1126.69	1124.05	1121.67	1128.80	2.11	.74	.05	1132.00
41000.0	.0	41000.0	.0	.0	3514.6	.0	2964.7	283.6	1132.00
.87	.00	11.67	.00	.000	.035	.000	.000	1116.30	9827.06
.003566	110.	190.	260.	2	15	0	.00	346.54	10173.60

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T1      NEW RIVER: FLOOD CONTROL DISTRICT CHANNELIZATION PROJECT
T2      NEW RIVER: BETHANY HOME ALIGNMENT TO GRAND AVE.
T3      500-YEAR EVENT              NRO2B

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

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

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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    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
 .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

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

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

          DOWNSTREAM BRIDGE SECTION - GLENDALE AVENUE
   99.600     11.22   1057.42   1057.42   1049.78   1063.09      5.67       .03       .90   1063.80
  75000.0       .0   75000.0        .0        .0    3924.2        .0    1042.4      78.4   1063.80
     .16       .00     19.11       .00      .000      .025      .000      .000   1046.20    325.12
 .004470        6.        6.        6.         0        15         0       .00    349.76    674.88


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS    1055.12 , NOT    1057.42 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     .90      1.56      2.90     358.00    349.74     32.00   5378.30       .00   1046.50   1046.20

*SECNO 100.400

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.76

CLASS B LOW FLOW

3420 BRIDGE W.S.=    1058.36 BRIDGE VELOCITY=      19.66     CALCULATED CHANNEL AREA=      3767.

 EGPRS      EGLWC       H3       QWEIR      QLOW      BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                                  AREA
  1062.13   1065.22      .00        0.    75000.     5378.     5370.     1063.40   1065.90        0.


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1065.90 ELREA=      1065.90
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GLENDALE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

100.400	15.90	1062.40	.00	1051.57	1065.22	2.83	2.13	.00	1063.60
75000.0	.0	75000.0	.0	.0	5559.7	.0	1051.1	79.0	1063.60
.17	.00	13.49	.00	.000	.025	.000	.000	1046.50	325.10
.001447	80.	80.	80.	0	0	0	.00	349.79	674.90

*SECNO 100.900

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

100.900	16.42	1063.02	1057.70	1051.77	1065.44	2.41	.09	.12	1063.60
75000.0	.0	75000.0	.0	.0	6014.6	.0	1057.7	79.5	1063.60
.17	.00	12.47	.00	.000	.035	.000	.000	1046.60	308.72
.002294	50.	50.	50.	2	19	0	.00	382.55	691.28

*SECNO 103.000

103.000	17.09	1064.09	1057.83	1052.78	1066.09	2.00	.53	.12	1065.40
75000.0	.0	75000.0	.0	.0	6606.7	.0	1095.4	81.8	1065.40
.17	.00	11.35	.00	.000	.035	.000	.000	1047.00	294.61
.001832	260.	260.	260.	2	14	0	.00	412.09	706.70

CCHV= .100 CEHV= .300
*SECNO 106.000

3301 HV CHANGED MORE THAN HVINS

106.000	17.76	1065.36	1056.98	1053.55	1066.57	1.21	.41	.08	1066.40
75000.0	.0	75000.0	.0	.0	8481.1	.0	1147.4	85.0	1066.40
.18	.00	8.84	.00	.000	.035	.000	.000	1047.60	248.47
.001037	300.	300.	300.	2	11	0	.00	504.09	752.56

*SECNO 109.000

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 280 FT.
RT CHNL BTM WDTH = 280 FT.

109.000	17.80	1066.00	1056.69	1053.99	1066.87	.87	.26	.03	1066.90
75000.0	.0	75000.0	.0	.0	10034.7	.0	1211.1	88.8	1066.90
.19	.00	7.47	.00	.000	.035	.000	.000	1048.20	203.09
.000736	300.	300.	300.	2	11	0	.00	594.71	797.80

*SECNO 110.000

110.000	19.06	1066.06	1056.97	1054.09	1066.95	.89	.08	.01	1066.90
75000.0	.0	75000.0	.0	.0	9897.0	.0	1234.0	90.1	1066.90
.20	.00	7.58	.00	.000	.035	.000	.000	1047.00	203.00
.000771	100.	100.	100.	2	11	0	.00	594.66	797.66

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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    17.28   1066.28   1057.40   1054.46   1067.20       .92       .24       .01   1067.20
 75000.0      .0   75000.0       .0        .0    9770.0        .0    1301.7      94.2   1067.20
     .21     .00      7.68       .00      .000      .035      .000      .000   1049.00    203.63
 .000803    300.      300.      300.         0        14         0       .00    593.66    797.29

*SECNO 116.000
            BEGIN CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 280 FT.
            RT CHNL BTM WDTH = 280 FT.
 116.000    16.88   1066.48   1058.37   1054.84   1067.48      1.00       .26       .03   1067.30
 75000.0      .0   75000.0       .0        .0    9336.4        .0    1367.5      98.3   1067.30
     .22     .00      8.03       .00      .000      .035      .000      .000   1049.60    203.94
 .000941    240.      300.      340.         2         8         0       .00    592.94    796.88

*SECNO 120.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .57

            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 210 FT.
            RT CHNL BTM WDTH = 230 FT.
 120.000    15.74   1066.14   1062.26   1055.34   1068.49      2.35       .61       .40   1067.10
 75000.0      .0   75000.0       .0        .0    6094.8        .0    1438.4     103.2   1067.10
     .23     .00     12.31       .00      .000      .035      .000      .000   1050.40    275.20
 .002864    327.      400.      497.         2        19         0       .00    470.55    745.75

*SECNO 123.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.40

 123.000    16.68   1067.68   1060.78   1057.27   1069.25      1.57       .68       .08   1068.80
 75000.0      .0   75000.0       .0        .0    7465.5        .0    1491.6     106.9   1068.80
     .24     .00     10.05       .00      .000      .035      .000      .000   1051.00    274.42
 .001454    342.      342.      342.         2        14         0       .00    472.28    746.69
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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 127.000
 127.000    16.45   1068.25   1061.60   1057.78   1069.86      1.61       .60       .01   1068.80
 75000.0      .0   75000.0       .0       .0    7359.6        .0    1559.7     111.2   1068.80
     .25     .00     10.19       .00      .000      .035      .000      .000   1051.80    274.12
 .001525    400.      400.      400.         2        11         0       .00    472.32    746.44


*SECNO 131.000
 131.000    18.83   1068.83   1062.55   1058.39   1070.52      1.70       .64       .02   1069.40
 75000.0      .0   75000.0       .0       .0    7177.3        .0    1626.4     115.6   1069.40
     .26     .00     10.45       .00      .000      .035      .000      .000   1050.00    274.33
 .001662    400.      400.      400.         1        15         0       .00    471.91    746.24


*SECNO 135.000
 135.000    16.01   1069.41   1064.11   1059.19   1071.32      1.91       .74       .07   1069.60
 75000.0      .0   75000.0       .0       .0    6756.1        .0    1690.4     119.9   1069.90
     .27     .00     11.10       .00      .000      .035      .000      .000   1053.40    273.89
 .002044    400.      400.      400.         2        11         0       .00    471.93    745.82


*SECNO 138.000
3280 CROSS SECTION    138.00 EXTENDED       .53 FEET

 138.000    16.13   1070.13   1064.29   1060.06   1071.91      1.79       .58       .01   1069.60
 75000.0      .0   75000.0       .0       .0    6990.0        .0    1737.7     123.1   1069.60
     .28     .00     10.73       .00      .000      .035      .000      .000   1054.00    274.40
 .001818    300.      300.      300.         2        14         0       .00    471.20    745.60


*SECNO 141.000
 141.000    15.99   1070.59   1065.46   1060.64   1072.56      1.96       .59       .05   1071.00
 75000.0      .0   75000.0       .0       .0    6669.4        .0    1784.7     126.4   1071.00
     .28     .00     11.25       .00      .000      .035      .000      .000   1054.60    274.41
 .002133    300.      300.      300.         2        14         0       .00    471.58    745.99


*SECNO 145.000
            A.D.O.T. CHANNEL INLET LT. BANK, NORTHERN AVENUE CHANNEL
 145.000    16.26   1071.66   1065.17   1061.60   1073.32      1.66       .73       .03   1072.00
 75000.0      .0   75000.0       .0       .0    7249.6        .0    1848.7     130.7   1077.00
     .30     .00     10.35       .00      .000      .035      .000      .000   1055.40    274.08
 .001591    400.      400.      400.         2        14         0       .00    468.41    742.49
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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     16.17   1071.97   1065.56   1061.85   1073.64      1.67       .32       .00   1072.40
  75000.0       .0   75000.0       .0       .0    7239.5        .0    1881.9     132.9   1072.40
      .30       .00     10.36       .00      .000      .035      .000      .000   1055.80    274.26
  .001608     200.      200.      200.         2        14         0       .00    471.92    746.17


*SECNO 150.000
            CHANNEL BOTTOM TAPERS
            LT CHNL BTM WDTH = 260 FT.
            RT CHNL BTM WDTH = 210 FT.
  150.000     16.26   1072.66   1065.77   1062.30   1074.11      1.45       .45       .02   1073.00
  75000.0       .0   75000.0       .0       .0    7769.8        .0    1933.6     136.2   1073.00
      .31       .00      9.65       .00      .000      .035      .000      .000   1056.40    224.08
  .001378     350.      300.      260.         2        11         0       .00    502.19    726.26


*SECNO 155.000

3301 HV CHANGED MORE THAN HVINS

            CHANNEL BOTTOM TAPERS
            LT CHNL BTM WDTH = 260 FT.
            RT CHNL BTM WDTH = 170 FT.
  155.000     15.60   1073.00   1068.85   1063.05   1075.31      2.32       .94       .26   1073.30
  75000.0       .0   75000.0       .0       .0    6140.6        .0    2013.4     141.7   1073.30
      .32       .00     12.21       .00      .000      .035      .000      .000   1057.40    224.70
  .002732     585.      500.      460.         2        19         0       .00    460.89    685.60


CCHV=     .300 CEHV=     .500
*SECNO 158.000

3301 HV CHANGED MORE THAN HVINS

            END CHANNEL BOTTOM TRANSITION
            LT CHNL BTM WDTH = 162.5 FT.
            RT CHNL BTM WDTH = 162.5 FT.
  158.000     15.39   1073.39   1070.01   1064.30   1076.79      3.39       .94       .54   1076.50
  75000.0       .0   75000.0       .0       .0    5073.3        .0    2052.1     144.5   1075.00
      .33       .00     14.78       .00      .000      .035      .000      .000   1058.00    325.21
  .003597     360.      300.      265.         2        15         0       .00    352.68    677.89
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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 159.450

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1077.46 ELREA= 1077.46

DOWNSTREAM BRIDGE SECTION - NORTHERN AVENUE BRIDGE

159.450	16.77	1075.07	1069.94	1064.97	1077.73	2.66	.73	.22	1076.80
75000.0	.0	75000.0	.0	.0	5732.7	.0	2082.4	146.5	1076.80
.33	.00	13.08	.00	.000	.035	.000	.000	1058.30	320.73
.002479	245.	245.	245.	3	15	0	.00	358.55	679.27

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	388.00	325.00	28.00	6034.00	1.00	1058.46	1058.30

*SECNO 160.250
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1078.82	1078.43	.94	0.	75000.	6034.	6004.	1077.46	1082.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1082.00 ELREA= 1082.00

NORTHERN AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

160.250	18.09	1076.55	.00	1065.10	1078.82	2.27	1.08	.00	1077.00
75000.0	.0	75000.0	.0	.0	6206.2	.0	2093.4	147.2	1077.00
.33	.00	12.08	.00	.000	.035	.000	.000	1058.46	319.45
.001928	80.	80.	80.	3	0	0	.00	361.10	680.55

*SECNO 162.000
BEGIN CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 162.5 FT.
RT CHNL BTM WDTH = 162.5 FT.

162.000	18.09	1076.89	1070.44	1065.41	1079.15	2.27	.34	.00	1077.00
75000.0	.0	75000.0	.0	.0	6205.1	.0	2118.3	148.7	1077.00
.34	.00	12.09	.00	.000	.035	.000	.000	1058.80	319.41
.001930	175.	175.	175.	2	14	0	.00	361.17	680.59

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 165.000
3280 CROSS SECTION 165.00 EXTENDED .13 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.47

END CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 300 FT.
RT CHNL BTM WDTH = 250 FT.

165.000	19.53	1078.93	1070.43	1066.04	1079.92	.99	.38	.38	1078.80
75000.0	.0	75000.0	.0	.0	9384.9	.0	2172.0	151.9	1078.80
.35	.00	7.99	.00	.000	.035	.000	.000	1059.40	189.20
.000892	300.	300.	300.	3	14	0	.00	580.20	769.40

*SECNO 168.000
3280 CROSS SECTION 168.00 EXTENDED .17 FEET

168.000	19.07	1079.17	1071.31	1066.47	1080.24	1.07	.28	.04	1079.00
75000.0	.0	75000.0	.0	.0	9054.7	.0	2235.5	155.9	1079.00
.36	.00	8.28	.00	.000	.035	.000	.000	1060.10	190.00
.001002	300.	300.	300.	2	11	0	.00	578.90	768.90

CCHV= .100 CEHV= .300
*SECNO 170.000
3280 CROSS SECTION 170.00 EXTENDED .16 FEET

BEGIN CHANNEL BOTTOM TRANSITION
LT CHNL BTM WDTH = 300 FT.
RT CHNL BTM WDTH = 250 FT.

170.000	18.76	1079.36	1071.72	1066.81	1080.45	1.10	.20	.01	1079.20
75000.0	.0	75000.0	.0	.0	8926.7	.0	2276.8	158.5	1079.20
.36	.00	8.40	.00	.000	.035	.000	.000	1060.60	190.80
.001048	200.	200.	200.	0	11	0	.00	577.80	768.60

*SECNO 173.000
3280 CROSS SECTION 173.00 EXTENDED .05 FEET

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

3301 HV CHANGED MORE THAN HVINS

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

END CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

173.000	17.64	1079.04	1074.31	1067.16	1081.23	2.19	.46	.33	1079.00
75000.0	.0	75000.0	.0	.0	6315.1	.0	2329.3	162.1	1079.00
.37	.00	11.88	.00	.000	.035	.000	.000	1061.40	224.10
.002392	300.	300.	300.	2	19	0	.00	450.50	674.60

*SECNO 176.000
3280 CROSS SECTION 176.00 EXTENDED .01 FEET

176.000	17.41	1079.61	1074.84	1068.79	1082.04	2.43	.74	.07	1079.60
75000.0	.0	75000.0	.0	.0	5990.0	.0	2371.7	165.0	1079.60
.38	.00	12.52	.00	.000	.035	.000	.000	1062.20	265.90
.002513	300.	300.	300.	2	19	0	.00	408.50	674.40

*SECNO 177.000

3301 HV CHANGED MORE THAN HVINS

BEGIN CHNL BTM TRANSITION RT.
RT CHNL BTM WDTH = 157 FT.

177.000	18.01	1080.41	1073.29	1069.56	1082.30	1.88	.20	.06	1080.50
75000.0	.0	75000.0	.0	.0	6808.4	.0	2386.3	166.0	1080.50
.38	.00	11.02	.00	.000	.035	.000	.000	1062.40	279.18
.001593	100.	100.	100.	2	14	0	.00	395.83	675.02

*SECNO 179.000
END CHNL BTM TRANSITION LT.
LT CHNL BTM WDTH = 175 FT.

179.000	18.08	1080.88	1073.54	1069.79	1082.62	1.73	.31	.01	1081.00
75000.0	.0	75000.0	.0	.0	7095.3	.0	2418.3	167.8	1081.00
.39	.00	10.57	.00	.000	.035	.000	.000	1062.80	307.03
.001481	200.	200.	200.	2	14	0	.00	419.55	726.58

```
 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 181.000
            END CHNL BTM TRANSITION RT.
            RT CHNL BTM WDTH = 260 FT.
 181.000    18.29   1081.59   1073.17   1070.08   1082.91      1.32       .25       .04   1081.60
 75000.0      .0   75000.0       .0        .0    8123.4        .0    2453.2     169.9   1081.60
     .39     .00      9.23       .00      .000      .035      .000      .000   1063.30    306.72
 .001099    200.      200.      200.         2        11         0       .00    471.57    778.29


*SECNO 183.000

3301 HV CHANGED MORE THAN HVINS


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

 183.000    17.48   1081.28   1077.01   1069.50   1083.51      2.23       .32       .27   1081.30
 75000.0      .0   75000.0       .0        .0    6255.1        .0    2486.2     172.0   1081.30
     .40     .00     11.99       .00      .000      .035      .000      .000   1063.80    307.54
 .002638    200.      200.      200.         2        19         0       .00    469.95    777.48


*SECNO 188.000
 188.000    17.82   1082.82   1077.20   1072.71   1084.67      1.85      1.12       .04   1083.00
 75000.0      .0   75000.0       .0        .0    6868.1        .0    2561.5     177.4   1083.00
     .41     .00     10.92       .00      .000      .035      .000      .000   1065.00    307.35
 .001934    500.      500.      500.         2        19         0       .00    470.47    777.82


*SECNO 193.000
            STA. 192+60.12 IS P.O.C. OF CURVE TO THE RT.
 193.000    17.62   1083.82   1077.97   1073.79   1085.62      1.80       .94       .01   1084.00
 75000.0      .0   75000.0       .0        .0    6972.8        .0    2641.0     182.8   1084.00
     .42     .00     10.76       .00      .000      .035      .000      .000   1066.20    307.55
 .001837    500.      500.      500.         2        14         0       .00    470.07    777.62


*SECNO 197.000
            BEGIN CHANNEL BOTTOM TRANSITION LEFT AND RIGHT
            TO MATCH PAST DEIGN CROSS SECTIONS.
 197.000    17.20   1084.40   1080.06   1074.60   1086.61      2.21       .87       .13   1084.60
 75000.0      .0   75000.0       .0        .0    6281.3        .0    2701.8     187.2   1084.60
     .43     .00     11.94       .00      .000      .035      .000      .000   1067.20    308.00
 .002601    400.      400.      400.         2        19         0       .00    469.20    777.20
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .300 CEHV= .500

*SECNO 199.000

199.000	17.31	1085.01	1078.33	1075.38	1086.91	1.90	.21	.09	1086.20
75000.0	.0	75000.0	.0	.0	6773.0	.0	2716.8	188.2	1086.20
.43	.00	11.07	.00	.000	.035	.000	.000	1067.70	318.69
.001685	200.	100.	200.	2	14	0	.00	408.62	727.31

*SECNO 201.100

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1086.70 ELREA= 1086.70

DOWNSTREAM BRIDGE SECTION - 99TH AVENUE BRIDGE

201.100	16.78	1084.98	1080.11	1075.51	1087.81	2.83	.44	.47	1086.70
75000.0	.0	75000.0	.0	.0	5551.2	.0	2746.5	190.0	1086.70
.44	.00	13.51	.00	.000	.035	.000	.000	1068.20	326.22
.002652	210.	210.	210.	2	14	0	.00	347.56	673.78

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.90	376.00	314.00	21.00	5763.00	1.00	1068.40	1068.20

*SECNO 201.900

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1089.08	1088.42	.81	0.	75000.	5763.	5697.	1086.70	1091.80	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1091.80 ELREA= 1091.80

99TH AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

201.900	18.33	1086.73	.00	1075.59	1089.08	2.35	1.27	.00	1086.90
75000.0	.0	75000.0	.0	.0	6092.4	.0	2757.2	190.6	1086.90
.44	.00	12.31	.00	.000	.035	.000	.000	1068.40	324.67
.001977	80.	80.	80.	3	0	0	.00	350.66	675.33

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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 204.000
 204.000     18.24   1087.14   1080.80   1075.89   1089.52      2.38       .42       .01   1087.40
 75000.0       .0   75000.0       .0       .0    6058.5        .0    2786.5     192.3   1087.40
     .44       .00     12.38       .00      .000      .035      .000      .000   1068.90    324.76
 .002012     210.      210.      210.        2        14         0       .00    350.47    675.24


CCHV=     .300 CEHV=     .500
*SECNO 209.300
3280 CROSS SECTION    209.30 EXTENDED       .00 FEET

 209.300     18.00   1088.19   1082.09   1076.78   1090.64      2.45      1.09       .03   1088.19
 75000.0       .0   75000.0       .0       .0    5976.8        .0    2859.7     196.6   1088.19
     .46       .00     12.55       .00      .000      .035      .000      .000   1070.19    325.00
 .002100     530.      530.      530.        0        14         0       .00    350.00    675.00


CCHV=     .300 CEHV=     .500
*SECNO 212.600

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1089.60 ELREA=      1089.60

            DOWNSTREAM BRIDGE SECTION - OLIVE AVENUE BRIDGE
 212.600     17.25   1088.25   1084.84   1077.39   1092.42      4.17       .92       .86   1089.60
 75000.0       .0   75000.0       .0       .0    4576.7        .0    2899.7     199.0   1089.60
     .46       .00     16.39       .00      .000      .035      .000      .000   1071.00    358.75
 .003881     330.      330.      330.        2        15         0       .00    282.51    641.25


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS    1082.38 , NOT    1088.25 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.05      1.56      2.90    300.00    248.00     18.50   4481.60      1.00   1071.50   1071.00

*SECNO 213.500
3280 CROSS SECTION    213.50 EXTENDED      2.59 FEET
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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

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1095.03	1093.43	.00	2.	74906.	4482.	4482.	1089.60	1095.00	300.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1095.00 ELREA= 1095.00

OLIVE AVENUE BRIDGE - SPECIAL BRIDGE ANALYSIS

213.500	20.68	1092.18	.00	1077.74	1095.02	2.83	2.60	.00	1089.60
75000.0	.0	75000.0	.0	.0	5551.4	.0	2910.1	199.6	1089.60
.46	.00	13.51	.00	.000	.035	.000	.000	1071.50	357.90
.002085	90.	90.	90.	3	0	0	.00	284.20	642.10

CCHV= .100 CEHV= .300

*SECNO 213.700

213.700	19.07	1092.07	1086.38	1077.32	1095.13	3.05	.05	.07	1095.00
75000.0	.0	75000.0	.0	.0	5348.2	.0	2912.6	199.7	1096.20
.46	.00	14.02	.00	.000	.035	.000	.000	1073.00	350.03
.002500	20.	20.	20.	2	14	0	.00	298.96	648.99

*SECNO 217.500

3301 HV CHANGED MORE THAN HVINS

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

217.500	20.04	1094.24	1085.54	1080.49	1095.92	1.67	.65	.14	1096.00
75000.0	.0	75000.0	.0	.0	7225.0	.0	2967.5	202.7	1097.00
.47	.00	10.38	.00	.000	.035	.000	.000	1074.20	306.76
.001249	380.	380.	380.	3	11	0	.00	380.49	687.24

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 221.100

221.100	19.43	1094.73	1086.28	1081.20	1096.37	1.64	.45	.00	1096.60
75000.0	.0	75000.0	.0	.0	7295.9	.0	3027.5	205.9	1098.00
.48	.00	10.28	.00	.000	.035	.000	.000	1075.30	296.87
.001266	360.	360.	360.	2	11	0	.00	394.87	691.73

*SECNO 227.500

3301 HV CHANGED MORE THAN HVINS

227.500	18.93	1096.03	1086.35	1082.60	1097.07	1.04	.64	.06	1099.00
75000.0	.0	75000.0	.0	.0	9173.2	.0	3148.5	212.5	1099.00
.51	.00	8.18	.00	.000	.035	.000	.000	1077.10	248.11
.000806	640.	640.	640.	2	11	0	.00	503.91	752.02

*SECNO 233.550

3301 HV CHANGED MORE THAN HVINS

233.550	17.26	1096.26	1088.93	1083.69	1097.83	1.57	.60	.16	1101.70
75000.0	.0	75000.0	.0	.0	7457.1	.0	3259.2	218.8	1101.60
.52	.00	10.06	.00	.000	.035	.000	.000	1079.00	275.44
.001381	580.	580.	580.	2	11	0	.00	449.23	724.66

*SECNO 238.660

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .57

238.660	15.12	1095.72	1093.05	1085.54	1099.72	4.00	1.16	.73	1103.30
75000.0	.0	75000.0	.0	.0	4674.0	.0	3331.0	223.4	1103.70
.53	.00	16.05	.00	.000	.035	.000	.000	1080.60	337.64
.004282	516.	516.	516.	3	15	0	.00	324.31	661.95

*SECNO 238.690

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

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

238.690	12.26	1095.86	1095.86	1087.55	1101.82	5.97	.02	.59	1103.40
75000.0	.0	75000.0	.0	.0	3826.5	.0	3331.3	223.4	1103.90
.53	.00	19.60	.00	.000	.035	.000	.000	1083.60	332.54
.008270	3.	3.	3.	0	15	0	.00	324.42	656.96

CCHV= .100 CEHV= .300
*SECNO 242.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.63

242.000	16.08	1100.53	1096.45	1090.47	1103.69	3.16	1.59	.28	1104.00
75000.0	.0	75000.0	.0	.0	5254.7	.0	3365.8	225.9	1104.00
.54	.00	14.27	.00	.000	.035	.000	.000	1084.45	328.48
.003125	331.	331.	331.	3	8	0	.00	343.04	671.52

*SECNO 247.000

247.000	16.58	1102.25	1097.62	1091.79	1105.19	2.94	1.47	.02	1104.50
75000.0	.0	75000.0	.0	.0	5454.5	.0	3427.3	229.9	1104.50
.55	.00	13.75	.00	.000	.035	.000	.000	1085.67	327.25
.002789	500.	500.	500.	3	15	0	.00	345.51	672.75

CCHV= .100 CEHV= .300
*SECNO 270.500
CHIMP CLSTA= 9955.00 CELCH= 1086.50 BW= 365.00 STCHL= 9753.15 STCHR= 10175.00
EXCAVATION DATA
AEX= 1319.1SQ-FT VEXR= .0K*CU-YD VEXT= .0K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9750.0 10218.0 TYPE= 1 TARGET= -9750.000

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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


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1105.85 ELREA=     1107.00

  270.500     18.10   1104.60   1097.30   1093.11   1106.42      1.82      1.12       .11   1105.85
  75000.0       .0   75000.0       .0       .0    6934.7        .0    3506.2     234.7   1107.00
      .56       .00     10.82       .00      .000      .035      .000      .000   1086.50   9754.40
 .001522     338.      555.      338.         3        14         0       .00    401.20  10155.60


*SECNO 273.500
CHIMP CLSTA=    9919.00 CELCH=    1087.20 BW=     375.00 STCHL=    9712.31 STCHR=   10127.15
EXCAVATION DATA
AEX=    2554.4SQ-FT     VEXR=      22.2K*CU-YD     VEXT=       22.2K*CU-YD


3470 ENCROACHMENT STATIONS=     9640.0   10160.0  TYPE=      1  TARGET=    -9640.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1106.39 ELREA=     1107.85

  273.500     17.93   1105.13   1097.85   1093.56   1106.89      1.76       .47       .01   1106.39
  75000.0       .0   75000.0       .0       .0    7045.7        .0    3556.0     237.5   1107.85
      .57       .00     10.64       .00      .000      .035      .000      .000   1087.20   9713.57
 .001490     315.      310.      310.         2        11         0       .00    410.86  10124.43


*SECNO 277.900
CHIMP CLSTA=    9927.00 CELCH=    1088.30 BW=     360.00 STCHL=    9729.30 STCHR=   10137.00
EXCAVATION DATA
AEX=    2900.7SQ-FT     VEXR=      42.4K*CU-YD     VEXT=       64.7K*CU-YD


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=     1106.00 ELREA=     1108.50

  277.900     17.32   1105.62   1099.19   1094.22   1107.67      2.05       .69       .09   1106.00
  75000.0       .0   75000.0       .0       .0    6535.3        .0    3621.4     241.4   1108.50
      .58       .00     11.48       .00      .000      .035      .000      .000   1088.30   9729.68
 .001815     420.      420.      420.         2        14         0       .00    394.64  10124.32


*SECNO 281.800
CHIMP CLSTA=    9932.00 CELCH=    1089.20 BW=     330.00 STCHL=    9747.63 STCHR=   10117.50
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EXCAVATION DATA
AEX= 3280.4SQ-FT VEXR= 46.9K*CU-YD VEXT= 111.6K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1108.57 ELREA= 1109.70

281.800	16.92	1106.12	1100.73	1095.08	1108.65	2.54	.84	.15	1108.57
75000.0	.0	75000.0	.0	.0	5869.3	.0	3679.8	245.0	1109.70
.59	.00	12.78	.00	.000	.035	.000	.000	1089.20	9750.08
.002337	410.	410.	410.	2	14	0	.00	363.84	10113.92

CCHV= .300 CEHV= .500
*SECNO 288.000
CHIMP CLSTA= 9988.00 CELCH= 1092.20 BW= 274.00 STCHL= 9829.45 STCHR= 10145.00
EXCAVATION DATA
AEX= 1602.9SQ-FT VEXR= 54.3K*CU-YD VEXT= 165.9K*CU-YD

3301 HV CHANGED MORE THAN HVINS

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1113.75 ELREA= 1112.00

288.000	14.82	1107.02	1105.19	1097.05	1111.79	4.76	2.02	1.11	1113.75
75000.0	.0	75000.0	.0	.0	4281.8	.0	3749.7	249.6	1112.00
.60	.00	17.52	.00	.000	.035	.000	.000	1092.20	9836.17
.005258	600.	600.	600.	2	15	0	.00	303.65	10139.82

*SECNO 290.000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

290.000	14.78	1107.78	1106.45	1098.54	1113.34	5.56	1.15	.40	1117.80
75000.0	.0	75000.0	.0	.0	3964.8	.0	3768.7	250.9	1117.80
.60	.00	18.92	.00	.000	.035	.000	.000	1093.00	9865.00
.006350	220.	200.	160.	2	11	0	.00	271.00	10136.00

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

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1104.73 , NOT 1107.78 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	2.90	.00	271.00	10.50	4974.00	.00	1093.70	1093.30

*SECNO 291.000

3301 HV CHANGED MORE THAN HVINS

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1107.20 BRIDGE VELOCITY= 21.01 CALCULATED CHANNEL AREA= 3518.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1113.29	1114.35	.00	0.	75000.	4974.	5314.	1114.10	1119.10	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1117.80 ELREA= 1117.80

291.000	17.13	1110.13	.00	1098.80	1114.35	4.22	1.02	.00	1116.00
75000.0	.0	75000.0	.0	.0	4546.9	.0	3776.2	251.4	1116.00
.60	.00	16.49	.00	.000	.035	.000	.000	1093.00	9865.00
.004099	77.	77.	77.	0	0	0	.00	271.00	10136.00

CCHV= .100 CEHV= .300
*SECNO 293.000
CHIMP CLSTA= 10007.00 CELCH= 1094.00 BW= 231.00 STCHL= 9869.90 STCHR= 10144.00
EXCAVATION DATA
AEX= -4.0SQ-FT VEXR= 5.9K*CU-YD VEXT= 171.8K*CU-YD

3301 HV CHANGED MORE THAN HVINS

293.000	16.23	1110.23	1108.52	1099.70	1115.66	5.42	.94	.36	1115.60
75000.0	.0	75000.0	.0	.0	4013.6	.0	3795.8	252.6	1115.00
.61	.00	18.69	.00	.000	.035	.000	.000	1094.00	9875.27
.005482	200.	200.	200.	3	11	0	.00	263.47	10138.73

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 297.000
CHIMP CLSTA= 10006.00 CELCH= 1096.10 BW= 246.00 STCHL= 9863.04 STCHR= 10150.00
EXCAVATION DATA
AEX= -26.4SQ-FT VEXR= -.2K*CU-YD VEXT= 171.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

297.000	17.31	1113.41	1110.04	1102.04	1117.61	4.21	1.84	.12	1116.05
75000.0	.0	75000.0	.0	.0	4555.8	.0	3835.2	255.1	1115.00
.61	.00	16.46	.00	.000	.035	.000	.000	1096.10	9865.70
.003908	400.	400.	400.	3	11	0	.00	280.61	10146.30

*SECNO 302.000
CHIMP CLSTA= 9999.00 CELCH= 1098.20 BW= 197.00 STCHL= 9882.00 STCHR= 10118.78
EXCAVATION DATA
AEX= 3.1SQ-FT VEXR= -.2K*CU-YD VEXT= 171.3K*CU-YD

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

302.000	16.00	1114.20	1114.20	1104.40	1121.72	7.52	2.86	.99	1116.00
75000.0	.0	75000.0	.0	.0	3407.5	.0	3883.6	258.2	1119.48
.62	.00	22.01	.00	.000	.035	.000	.000	1098.20	9884.50
.007902	530.	530.	530.	0	11	0	.00	228.99	10113.50

*SECNO 305.000
CHIMP CLSTA= 9992.00 CELCH= 1099.50 BW= 188.00 STCHL= 9880.94 STCHR= 10110.00
EXCAVATION DATA
AEX= 244.7SQ-FT VEXR= 1.3K*CU-YD VEXT= 172.6K*CU-YD

3301 HV CHANGED MORE THAN HVINS

305.000	17.60	1117.10	1115.92	1106.05	1123.78	6.68	1.97	.08	1116.56
75000.0	7.1	74992.9	.0	5.1	3615.7	.0	3906.2	259.7	1119.50
.62	1.39	20.74	.00	.035	.035	.000	.000	1099.50	9861.74
.006307	280.	280.	280.	3	8	0	.00	241.85	10103.59

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 306.750
CHIMP CLSTA= 9959.00 CELCH= 1100.30 BW= 289.00 STCHL= 9798.80 STCHR= 10123.24
EXCAVATION DATA
AEX= 1770.8SQ-FT VEXR= 8.0K*CU-YD VEXT= 180.6K*CU-YD

3280 CROSS SECTION 306.75 EXTENDED 7.01 FEET

3301 HV CHANGED MORE THAN HVINS

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

306.750	22.72	1123.02	1112.85	1107.89	1124.74	1.72	.47	.50	1116.00
75000.0	511.5	74442.7	45.8	124.8	7049.7	25.4	3932.9	261.2	1120.04
.63	4.10	10.56	1.80	.035	.035	.035	.000	1100.30	9781.00
.001082	215.	215.	215.	3	19	0	.00	359.39	10140.39

*SECNO 310.000
CHIMP CLSTA= 9965.00 CELCH= 1101.60 BW= 330.00 STCHL= 9784.66 STCHR= 10149.29
EXCAVATION DATA
AEX= 1007.5SQ-FT VEXR= 16.5K*CU-YD VEXT= 197.1K*CU-YD

3280 CROSS SECTION 310.00 EXTENDED 6.66 FEET

310.000	22.06	1123.66	1113.16	1108.39	1125.08	1.43	.32	.03	1116.94
75000.0	79.0	74464.2	456.8	31.2	7739.2	150.3	3988.5	264.0	1120.90
.64	2.53	9.62	3.04	.035	.035	.035	.000	1101.60	9780.00
.000920	320.	320.	320.	2	8	0	.00	405.00	10185.00

*SECNO 313.200
CHIMP CLSTA= 10000.00 CELCH= 1103.00 BW= 330.00 STCHL= 9820.00 STCHR= 10183.25
EXCAVATION DATA
AEX= 1069.6SQ-FT VEXR= 12.1K*CU-YD VEXT= 209.2K*CU-YD

3280 CROSS SECTION 313.20 EXTENDED 6.85 FEET

313.200	20.85	1123.85	1114.53	1108.88	1125.45	1.60	.32	.05	1117.00
75000.0	573.9	74327.3	98.8	137.1	7296.5	40.3	4044.1	266.9	1121.25
.65	4.19	10.19	2.45	.035	.035	.035	.000	1103.00	9800.00
.001106	315.	315.	315.	2	11	0	.00	398.00	10198.00

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

*SECNO 318.000
CHIMP CLSTA= 10000.00 CELCH= 1105.10 BW= 330.00 STCHL= 9820.00 STCHR= 10182.90
EXCAVATION DATA
AEX= 52.1SQ-FT VEXR= 10.4K*CU-YD VEXT= 219.6K*CU-YD

3280 CROSS SECTION 318.00 EXTENDED 1.25 FEET

318.000	19.15	1124.25	1116.64	1110.29	1126.20	1.94	.64	.10	1120.00
75000.0	170.0	74795.6	34.4	55.1	6678.4	18.9	4125.8	271.5	1123.00
.66	3.09	11.20	1.82	.035	.035	.035	.000	1105.10	9800.00
.001504	500.	500.	500.	2	11	0	.00	398.00	10198.00

*SECNO 320.050
CHIMP CLSTA= 10000.00 CELCH= 1106.00 BW= 330.00 STCHL= 9816.00 STCHR= 10184.00
EXCAVATION DATA
AEX= 152.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 220.7K*CU-YD

320.050	18.63	1124.63	1117.53	1111.41	1126.70	2.07	.46	.04	1125.00
75000.0	.0	75000.0	.0	.0	6495.9	.0	4169.9	274.0	1125.00
.67	.00	11.55	.00	.000	.035	.000	.000	1106.00	9816.37
.001695	290.	290.	290.	0	14	0	.00	367.27	10183.63

*SECNO 328.000
CHIMP CLSTA= 10000.00 CELCH= 1109.10 BW= 330.00 STCHL= 9817.10 STCHR= 10182.90
EXCAVATION DATA
AEX= 195.1SQ-FT VEXR= 4.1K*CU-YD VEXT= 224.8K*CU-YD

3301 HV CHANGED MORE THAN HVINS

328.000	16.41	1125.51	1120.63	1113.86	1128.21	2.70	1.32	.19	1127.00
75000.0	.0	75000.0	.0	.0	5684.3	.0	4259.4	279.4	1127.00
.68	.00	13.19	.00	.000	.035	.000	.000	1109.10	9818.59
.002583	640.	640.	640.	2	14	0	.00	362.82	10181.41

*SECNO 330.000
CHIMP CLSTA= 10000.00 CELCH= 1110.10 BW= 330.00 STCHL= 9817.60 STCHR= 10182.40
EXCAVATION DATA
AEX= 76.6SQ-FT VEXR= .9K*CU-YD VEXT= 225.7K*CU-YD

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
330.000	15.72	1125.82	1121.62	1114.76	1128.77	2.96	.49	.08	1127.50
75000.0	.0	75000.0	.0	.0	5433.1	.0	4281.7	280.9	1127.50
.68	.00	13.80	.00	.000	.035	.000	.000	1110.10	9819.28
.002987	175.	175.	175.	2	19	0	.00	361.43	10180.72

*SECNO 334.000
CHIMP CLSTA= 10000.00 CELCH= 1112.00 BW= 330.00 STCHL= 9818.00 STCHR= 10182.00
EXCAVATION DATA
AEX= 68.0SQ-FT VEXR= 1.1K*CU-YD VEXT= 226.8K*CU-YD

334.000	14.95	1126.95	1123.54	1116.99	1130.23	3.29	1.36	.10	1129.00
75000.0	.0	75000.0	.0	.0	5156.4	.0	4332.7	284.3	1129.00
.69	.00	14.55	.00	.000	.035	.000	.000	1112.00	9820.05
.003528	420.	420.	420.	2	15	0	.00	359.90	10179.95

CCHV= .200 CEHV= .400
*SECNO 343.000
CHIMP CLSTA= 10025.00 CELCH= 1115.70 BW= 329.00 STCHL= 9861.00 STCHR= 10206.30
EXCAVATION DATA
AEX= 2385.5SQ-FT VEXR= 40.9K*CU-YD VEXT= 267.7K*CU-YD

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

343.000	14.44	1130.14	1127.32	1120.84	1133.85	3.70	3.45	.17	1132.00
75000.0	.0	75000.0	.0	.0	4856.6	.0	4436.2	291.6	1132.00
.71	.00	15.44	.00	.000	.035	.000	.000	1115.70	9861.00
.004172	900.	900.	900.	2	15	0	.00	343.44	10204.44

*SECNO 344.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1132.00 ELREA= 1132.00

344.900	15.06	1131.36	1127.85	1121.67	1134.65	3.29	.72	.08	1132.00
75000.0	.0	75000.0	.0	.0	5150.2	.0	4458.0	293.1	1132.00
.71	.00	14.56	.00	.000	.035	.000	.000	1116.30	9823.49
.003489	110.	190.	260.	3	15	0	.00	353.98	10177.47

THIS RUN EXECUTED 17JUN92 14:14:47

****
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

	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	1049.78	10.79	3.58	349.72	325.14	674.86
*	99.600	31000.00	1052.43	14.23	6.23	349.74	325.13	674.87
*	99.600	41000.00	1053.70	15.63	7.50	349.74	325.13	674.87
*	99.600	75000.00	1057.42	19.11	11.22	349.76	325.12	674.88
*	100.400	13500.00	1051.57	7.62	5.07	349.73	325.14	674.86
*	100.400	31000.00	1055.32	10.05	8.82	349.75	325.12	674.88
*	100.400	41000.00	1057.13	11.03	10.63	349.76	325.12	674.88
*	100.400	75000.00	1062.40	13.49	15.90	349.79	325.10	674.90
	100.900	13500.00	1051.77	7.36	5.17	360.04	319.98	680.02
	100.900	31000.00	1055.61	9.59	9.01	367.72	316.14	683.86
	100.900	41000.00	1057.48	10.45	10.88	371.47	314.26	685.74
	100.900	75000.00	1063.02	12.47	16.42	382.55	308.72	691.28
	103.000	13500.00	1052.78	6.32	5.78	378.13	317.24	695.38
	103.000	31000.00	1056.62	8.58	9.62	389.69	309.54	699.23
	103.000	41000.00	1058.50	9.42	11.50	395.33	305.78	701.11
	103.000	75000.00	1064.09	11.35	17.09	412.09	294.61	706.70
	106.000	13500.00	1053.55	4.94	5.95	468.64	272.11	740.75
	106.000	31000.00	1057.60	6.66	10.00	480.80	264.00	744.80
	106.000	41000.00	1059.56	7.31	11.96	486.69	260.07	746.76
	106.000	75000.00	1065.36	8.84	17.76	504.09	248.47	752.56
	109.000	13500.00	1053.99	4.34	5.79	558.68	227.11	785.79
	109.000	31000.00	1058.11	5.71	9.91	571.02	218.89	789.91
	109.000	41000.00	1060.11	6.23	11.91	577.03	214.88	791.91
	109.000	75000.00	1066.00	7.47	17.80	594.71	203.09	797.80
	110.000	13500.00	1054.09	4.51	7.09	558.50	227.19	785.69
	110.000	31000.00	1058.19	5.84	11.19	570.88	218.91	789.79
	110.000	41000.00	1060.18	6.35	13.18	576.90	214.88	791.78
	110.000	75000.00	1066.06	7.58	19.06	594.66	203.00	797.66
	113.000	13500.00	1054.46	4.56	5.46	558.17	227.28	785.46
	113.000	31000.00	1058.48	5.93	9.48	570.23	219.25	789.48
	113.000	41000.00	1060.45	6.45	11.45	576.14	215.31	791.45
	113.000	75000.00	1066.28	7.68	17.28	593.66	203.63	797.29
	116.000	13500.00	1054.84	5.05	5.24	538.41	227.21	785.24
	116.000	31000.00	1058.77	6.38	9.17	569.83	219.35	789.18
	116.000	41000.00	1060.71	6.87	11.11	575.65	215.47	791.12
	116.000	75000.00	1066.48	8.03	16.88	592.94	203.94	796.88

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
*	120.000	13500.00	1055.34	9.44	4.94	307.15	296.81	734.94
*	120.000	31000.00	1058.83	11.33	8.43	448.62	289.82	738.44
*	120.000	41000.00	1060.62	11.57	10.22	454.00	286.24	740.23
*	120.000	75000.00	1066.14	12.31	15.74	470.55	275.20	745.75
*	123.000	13500.00	1057.27	5.00	6.27	440.99	295.28	736.26
*	123.000	31000.00	1061.05	7.05	10.05	452.36	287.70	740.05
*	123.000	41000.00	1062.65	8.00	11.65	457.16	284.49	741.65
*	123.000	75000.00	1067.68	10.05	16.68	472.28	274.42	746.69
	127.000	13500.00	1057.78	5.24	5.98	440.91	295.06	735.97
	127.000	31000.00	1061.59	7.24	9.79	452.35	287.44	739.78
	127.000	41000.00	1063.22	8.16	11.42	457.26	284.16	741.42
	127.000	75000.00	1068.25	10.19	16.45	472.32	274.12	746.44
	131.000	13500.00	1058.39	5.60	8.39	440.56	295.22	735.79
	131.000	31000.00	1062.17	7.57	12.17	451.89	287.67	739.56
	131.000	41000.00	1063.82	8.46	13.82	456.85	284.37	741.22
	131.000	75000.00	1068.83	10.45	18.83	471.91	274.33	746.24
	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	452.07	287.26	739.33
	135.000	41000.00	1064.48	9.18	11.08	457.01	283.93	740.94
	135.000	75000.00	1069.41	11.10	16.01	471.93	273.89	745.82
	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	453.29	286.34	739.63
	138.000	41000.00	1065.26	8.67	11.26	458.19	283.07	741.26
	138.000	75000.00	1070.13	10.73	16.13	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	452.35	287.22	739.57
	141.000	41000.00	1065.79	9.24	11.19	457.20	283.99	741.19
	141.000	75000.00	1070.59	11.25	15.99	471.58	274.41	745.99
*	145.000	13500.00	1061.60	5.04	6.20	440.56	294.20	734.76
	145.000	31000.00	1065.22	7.23	9.82	450.58	286.96	737.55
	145.000	41000.00	1066.86	8.14	11.46	455.14	283.67	738.81
	145.000	75000.00	1071.66	10.35	16.26	468.41	274.08	742.49
	147.000	13500.00	1061.85	5.16	6.05	441.57	294.49	736.06
	147.000	31000.00	1065.50	7.29	9.70	452.51	287.19	739.70
	147.000	41000.00	1067.16	8.19	11.36	457.49	283.87	741.36
	147.000	75000.00	1071.97	10.36	16.17	471.92	274.26	746.17
	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	1067.74	7.68	11.34	487.43	233.92	721.34
	150.000	75000.00	1072.66	9.65	16.26	502.19	224.08	726.26

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
*	155.000	13500.00	1063.05	7.75	5.65	400.68	244.60	675.65
*	155.000	31000.00	1066.61	9.52	9.21	441.72	237.48	679.21
*	155.000	41000.00	1068.25	10.29	10.85	446.65	234.20	680.85
	155.000	75000.00	1073.00	12.21	15.60	460.89	224.70	685.60
*	158.000	13500.00	1064.30	6.78	6.30	325.41	343.39	668.80
	158.000	31000.00	1067.51	10.16	9.51	335.03	336.98	672.01
	158.000	41000.00	1069.03	11.51	11.03	339.58	333.95	673.53
	158.000	75000.00	1073.39	14.78	15.39	352.68	325.21	677.89
	159.450	13500.00	1064.97	6.11	6.67	338.33	330.83	669.17
	159.450	31000.00	1068.59	8.98	10.29	345.59	327.21	672.79
	159.450	41000.00	1070.29	10.15	11.99	348.98	325.51	674.49
	159.450	75000.00	1075.07	13.08	16.77	358.55	320.73	679.27
	160.250	13500.00	1065.10	6.13	6.64	338.26	330.87	669.13
	160.250	31000.00	1068.96	8.80	10.50	345.96	327.02	672.98
	160.250	41000.00	1070.79	9.86	12.33	349.60	325.20	674.80
	160.250	75000.00	1076.55	12.08	18.09	361.10	319.45	680.55
	162.000	13500.00	1065.41	6.16	6.61	338.21	330.89	669.11
	162.000	31000.00	1069.32	8.78	10.52	346.05	326.97	673.03
	162.000	41000.00	1071.16	9.83	12.36	349.73	325.13	674.87
	162.000	75000.00	1076.89	12.09	18.09	361.17	319.41	680.59
	165.000	13500.00	1066.04	5.46	6.64	382.33	374.31	756.64
	165.000	31000.00	1070.48	6.75	11.08	555.25	205.83	761.08
	165.000	41000.00	1072.57	7.12	13.17	561.53	201.65	763.18
*	165.000	75000.00	1078.93	7.99	19.53	580.20	189.20	769.40
	168.000	13500.00	1066.47	5.88	6.37	370.30	386.06	756.37
	168.000	31000.00	1070.94	7.07	10.84	554.72	206.12	760.84
	168.000	41000.00	1072.94	7.45	12.84	560.73	202.11	762.84
	168.000	75000.00	1079.17	8.28	19.07	578.90	190.00	768.90
	170.000	13500.00	1066.81	5.98	6.21	372.82	383.39	756.21
	170.000	31000.00	1071.30	7.11	10.70	554.09	206.61	760.70
	170.000	41000.00	1073.23	7.54	12.63	559.88	202.74	762.63
	170.000	75000.00	1079.36	8.40	18.76	577.80	190.80	768.60
*	173.000	13500.00	1067.16	8.82	5.76	274.09	388.67	662.76
*	173.000	31000.00	1071.45	10.31	10.05	373.76	293.29	667.05
*	173.000	41000.00	1073.25	10.92	11.85	433.26	235.59	668.85
*	173.000	75000.00	1079.04	11.88	17.64	450.50	224.10	674.60
	176.000	13500.00	1068.79	7.74	6.59	376.05	287.53	663.58
	176.000	31000.00	1072.72	9.55	10.52	387.87	279.66	667.52
	176.000	41000.00	1074.40	10.50	12.20	392.92	276.29	669.21
	176.000	75000.00	1079.61	12.52	17.41	408.50	265.90	674.40

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
*	177.000	13500.00	1069.56	5.13	7.16	374.24	289.92	664.16
*	177.000	31000.00	1073.50	7.52	11.10	382.09	286.02	668.10
*	177.000	41000.00	1075.23	8.57	12.83	385.53	284.30	669.84
	177.000	75000.00	1080.41	11.02	18.01	395.83	279.18	675.02
	179.000	13500.00	1069.79	5.14	6.99	386.20	329.29	715.49
	179.000	31000.00	1073.81	7.38	11.01	398.29	321.22	719.51
	179.000	41000.00	1075.59	8.34	12.79	403.63	317.65	721.29
	179.000	75000.00	1080.88	10.57	18.08	419.55	307.03	726.58
	181.000	13500.00	1070.08	4.67	6.78	437.04	329.74	766.78
	181.000	31000.00	1074.24	6.54	10.94	449.53	321.41	770.94
	181.000	41000.00	1076.10	7.35	12.80	455.10	317.70	772.80
	181.000	75000.00	1081.59	9.23	18.29	471.57	306.72	778.29
*	183.000	13500.00	1069.50	10.68	5.70	241.61	331.10	765.70
*	183.000	31000.00	1073.82	10.95	10.02	447.56	322.46	770.02
*	183.000	41000.00	1075.73	11.10	11.93	453.30	318.63	771.93
*	183.000	75000.00	1081.28	11.99	17.48	469.95	307.54	777.48
*	188.000	13500.00	1072.71	5.98	7.71	438.64	327.61	767.70
*	188.000	31000.00	1076.40	7.94	11.40	451.19	320.21	771.40
*	188.000	41000.00	1077.93	8.90	12.93	455.82	317.12	772.94
	188.000	75000.00	1082.82	10.92	17.82	470.47	307.35	777.82
	193.000	13500.00	1073.79	5.60	7.59	432.18	327.60	767.60
	193.000	31000.00	1077.43	7.69	11.23	450.90	320.34	771.23
	193.000	41000.00	1079.00	8.64	12.80	455.61	317.19	772.80
	193.000	75000.00	1083.82	10.76	17.62	470.07	307.55	777.62
*	197.000	13500.00	1074.60	7.24	7.40	411.62	327.59	767.40
	197.000	31000.00	1078.12	9.14	10.92	450.35	320.57	770.92
	197.000	41000.00	1079.68	10.00	12.48	455.03	317.45	772.48
	197.000	75000.00	1084.40	11.94	17.20	469.20	308.00	777.20
*	199.000	13500.00	1075.38	4.60	7.68	389.36	328.32	717.68
*	199.000	31000.00	1078.96	7.15	11.26	396.52	324.74	721.26
*	199.000	41000.00	1080.51	8.27	12.81	399.63	323.19	722.81
	199.000	75000.00	1085.01	11.07	17.31	408.62	318.69	727.31
	201.100	13500.00	1075.51	5.75	7.31	328.62	335.69	664.31
	201.100	31000.00	1079.07	8.78	10.87	335.74	332.13	667.87
	201.100	41000.00	1080.60	10.13	12.40	338.81	330.60	669.40
	201.100	75000.00	1084.98	13.51	16.78	347.56	326.22	673.78
	201.900	13500.00	1075.59	5.85	7.19	328.38	335.81	664.19
	201.900	31000.00	1079.32	8.73	10.92	335.84	332.08	667.92
	201.900	41000.00	1080.98	9.98	12.58	339.16	330.42	669.58
	201.900	75000.00	1086.73	12.31	18.33	350.66	324.67	675.33

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	204.000	13500.00	1075.89	6.02	6.99	327.97	336.02	663.98
	204.000	31000.00	1079.71	8.82	10.81	335.65	332.18	667.82
	204.000	41000.00	1081.41	10.03	12.51	339.03	330.48	669.52
	204.000	75000.00	1087.14	12.38	18.24	350.47	324.76	675.24
	209.300	13500.00	1076.78	6.39	6.59	327.18	336.41	663.59
	209.300	31000.00	1080.76	9.04	10.57	335.14	332.43	667.57
	209.300	41000.00	1082.53	10.19	12.34	338.66	330.67	669.33
	209.300	75000.00	1088.19	12.55	18.00	350.00	325.00	675.00
	212.600	13500.00	1077.39	8.30	6.39	260.78	369.61	630.39
	212.600	31000.00	1081.24	11.73	10.24	268.47	365.76	634.24
	212.600	41000.00	1082.93	13.22	11.93	271.86	364.07	635.93
	212.600	75000.00	1088.25	16.39	17.25	282.51	358.75	641.25
	213.500	13500.00	1077.74	8.51	6.24	260.48	369.76	630.24
	213.500	31000.00	1082.06	11.36	10.56	269.11	365.44	634.56
	213.500	41000.00	1084.04	12.55	12.54	273.08	363.46	636.54
*	213.500	75000.00	1092.18	13.51	20.68	284.20	357.90	642.10
*	213.700	13500.00	1077.32	11.76	4.32	270.21	364.78	634.99
	213.700	31000.00	1081.62	13.31	8.62	278.60	360.48	639.08
	213.700	41000.00	1083.67	14.10	10.67	282.61	358.42	641.03
	213.700	75000.00	1092.07	14.02	19.07	298.96	350.03	648.99
*	217.500	13500.00	1080.49	6.19	6.29	352.97	320.51	673.49
*	217.500	31000.00	1084.59	8.50	10.39	361.20	316.40	677.60
*	217.500	41000.00	1086.67	9.32	12.47	365.34	314.33	679.67
*	217.500	75000.00	1094.24	10.38	20.04	380.49	306.76	687.24
	221.100	13500.00	1081.20	6.31	5.90	367.82	310.39	678.21
	221.100	31000.00	1085.30	8.47	10.00	376.00	306.30	682.30
	221.100	41000.00	1087.36	9.24	12.06	380.12	304.24	684.36
	221.100	75000.00	1094.73	10.28	19.43	394.87	296.87	691.73
	227.500	13500.00	1082.60	5.22	5.50	476.30	262.23	738.52
	227.500	31000.00	1086.75	6.76	9.65	484.83	257.86	742.69
	227.500	41000.00	1088.83	7.33	11.73	489.11	255.68	744.79
	227.500	75000.00	1096.03	8.18	18.93	503.91	248.11	752.02
*	233.550	13500.00	1083.69	6.87	4.69	424.07	288.01	712.09
	233.550	31000.00	1087.45	8.66	8.45	431.61	284.24	715.86
	233.550	41000.00	1089.40	9.27	10.40	435.50	282.30	717.80
	233.550	75000.00	1096.26	10.06	17.26	449.23	275.44	724.66
	238.660	13500.00	1085.54	9.13	4.94	303.78	347.91	651.69
*	238.660	31000.00	1088.38	13.21	7.78	309.49	345.05	654.55
*	238.660	41000.00	1089.85	14.62	9.25	312.47	343.56	656.03
*	238.660	75000.00	1095.72	16.05	15.12	324.31	337.64	661.95

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
*	238.690	13500.00	1087.55	11.26	3.95	307.79	340.85	648.65
*	238.690	31000.00	1090.45	14.75	6.85	313.60	337.95	651.55
*	238.690	41000.00	1091.84	16.16	8.24	316.37	336.56	652.94
*	238.690	75000.00	1095.86	19.60	12.26	324.42	332.54	656.96
*	242.000	13500.00	1090.47	7.08	6.02	322.93	338.53	661.47
*	242.000	31000.00	1094.07	10.06	9.62	330.14	334.93	665.07
*	242.000	41000.00	1095.75	11.26	11.30	333.49	333.25	666.75
*	242.000	75000.00	1100.53	14.27	16.08	343.04	328.48	671.52
	247.000	13500.00	1091.79	6.93	6.12	324.57	337.72	662.28
	247.000	31000.00	1095.58	9.71	9.91	332.16	333.92	666.08
	247.000	41000.00	1097.32	10.86	11.65	335.65	332.17	667.83
	247.000	75000.00	1102.25	13.75	16.58	345.51	327.25	672.75
	270.500	13500.00	1093.11	5.49	6.61	378.23	9765.89	10144.11
	270.500	31000.00	1097.25	7.67	10.75	386.51	9761.75	10148.25
	270.500	41000.00	1099.17	8.56	12.67	390.35	9759.82	10150.17
	270.500	75000.00	1104.60	10.82	18.10	401.20	9754.40	10155.60
	273.500	13500.00	1093.56	5.57	6.36	387.71	9725.15	10112.85
	273.500	31000.00	1097.72	7.64	10.52	396.04	9720.98	10117.02
	273.500	41000.00	1099.66	8.50	12.46	399.91	9719.04	10118.96
	273.500	75000.00	1105.13	10.64	17.93	410.86	9713.57	10124.43
	277.900	13500.00	1094.22	6.23	5.92	371.84	9741.08	10112.92
	277.900	31000.00	1098.30	8.37	10.00	380.01	9737.00	10117.00
	277.900	41000.00	1100.21	9.25	11.91	383.82	9735.09	10118.91
	277.900	75000.00	1105.62	11.48	17.32	394.64	9729.68	10124.32
	281.800	13500.00	1095.08	6.84	5.88	341.76	9761.12	10102.88
	281.800	31000.00	1099.01	9.30	9.81	349.61	9757.19	10106.81
	281.800	41000.00	1100.86	10.29	11.66	353.32	9755.34	10108.66
	281.800	75000.00	1106.12	12.78	16.92	363.84	9750.08	10113.92
*	288.000	13500.00	1097.05	9.97	4.85	283.71	9846.15	10129.85
*	288.000	31000.00	1100.54	13.16	8.34	290.68	9842.66	10133.34
*	288.000	41000.00	1102.21	14.43	10.01	294.01	9840.99	10135.01
*	288.000	75000.00	1107.02	17.52	14.82	303.65	9836.17	10139.82
	290.000	13500.00	1098.54	9.23	5.54	271.00	9865.00	10136.00
	290.000	31000.00	1101.72	13.34	8.72	271.00	9865.00	10136.00
	290.000	41000.00	1103.29	14.91	10.29	271.00	9865.00	10136.00
	290.000	75000.00	1107.78	18.92	14.78	271.00	9865.00	10136.00
	291.000	13500.00	1098.80	9.14	5.80	271.00	9865.00	10136.00
*	291.000	31000.00	1102.82	12.08	9.82	271.00	9865.00	10136.00
*	291.000	41000.00	1104.68	13.35	11.68	271.00	9865.00	10136.00
*	291.000	75000.00	1110.13	16.49	17.13	271.00	9865.00	10136.00

	SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
	293.000	13500.00	1099.70	10.00	5.70	242.41	9885.79	10128.21
	293.000	31000.00	1103.35	13.78	9.35	249.72	9882.14	10131.86
	293.000	41000.00	1105.08	15.29	11.08	253.16	9880.42	10133.58
	293.000	75000.00	1110.23	18.69	16.23	263.47	9875.27	10138.73
	297.000	13500.00	1102.04	9.03	5.94	257.87	9877.06	10134.94
	297.000	31000.00	1106.03	12.19	9.93	265.87	9873.07	10138.93
	297.000	41000.00	1107.94	13.43	11.84	269.68	9871.16	10140.84
	297.000	75000.00	1113.41	16.46	17.31	280.61	9865.70	10146.30
	302.000	13500.00	1104.40	10.72	6.20	209.40	9894.30	10103.70
	302.000	31000.00	1107.92	15.43	9.72	216.44	9890.78	10107.22
	302.000	41000.00	1109.49	17.44	11.29	219.58	9889.21	10108.79
*	302.000	75000.00	1114.20	22.01	16.00	228.99	9884.50	10113.50
	305.000	13500.00	1106.05	10.59	6.55	201.10	9891.45	10092.55
	305.000	31000.00	1110.07	14.76	10.57	209.15	9887.43	10096.57
	305.000	41000.00	1111.94	16.44	12.44	212.88	9885.56	10098.44
	305.000	75000.00	1117.10	20.74	17.60	241.85	9861.74	10103.59
*	306.750	13500.00	1107.89	5.99	7.59	304.19	9806.91	10111.09
*	306.750	31000.00	1113.23	7.94	12.93	314.85	9801.57	10116.43
*	306.750	41000.00	1115.76	8.71	15.46	319.93	9799.04	10118.96
*	306.750	75000.00	1123.02	10.56	22.72	359.39	9781.00	10140.39
	310.000	13500.00	1108.39	5.90	6.79	343.59	9793.21	10136.79
	310.000	31000.00	1113.75	7.45	12.15	354.31	9787.85	10142.15
	310.000	41000.00	1116.32	8.08	14.72	359.44	9785.28	10144.72
	310.000	75000.00	1123.66	9.62	22.06	405.00	9780.00	10185.00
	313.200	13500.00	1108.88	6.83	5.88	341.76	9829.12	10170.88
	313.200	31000.00	1114.06	8.22	11.06	352.12	9823.94	10176.06
	313.200	41000.00	1116.59	8.78	13.59	357.17	9821.41	10178.59
	313.200	75000.00	1123.85	10.19	20.85	398.00	9800.00	10198.00
	318.000	13500.00	1110.29	7.77	5.19	340.37	9829.81	10170.19
	318.000	31000.00	1114.84	9.37	9.74	349.49	9825.26	10174.74
	318.000	41000.00	1117.23	9.88	12.13	354.25	9822.87	10177.13
	318.000	75000.00	1124.25	11.20	19.15	398.00	9800.00	10198.00
	320.050	13500.00	1111.41	7.43	5.41	340.83	9829.58	10170.42
	320.050	31000.00	1115.55	9.56	9.55	349.11	9825.45	10174.55
	320.050	41000.00	1117.81	10.15	11.81	353.63	9823.19	10176.81
	320.050	75000.00	1124.63	11.55	18.63	367.27	9816.37	10183.63
	328.000	13500.00	1113.86	8.47	4.76	339.52	9830.24	10169.76
	328.000	31000.00	1117.35	11.10	8.25	346.51	9826.75	10173.25
	328.000	41000.00	1119.27	11.85	10.17	350.34	9824.83	10175.17
	328.000	75000.00	1125.51	13.19	16.41	362.82	9818.59	10181.41

SECNO	Q	CWSEL	VCH	DEPTH	TOPWID	SSTA	ENDST
330.000	13500.00	1114.76	8.66	4.66	339.32	9830.34	10169.66
330.000	31000.00	1118.06	11.53	7.96	345.91	9827.04	10172.96
330.000	41000.00	1119.84	12.39	9.74	349.48	9825.26	10174.74
330.000	75000.00	1125.82	13.80	15.72	361.43	9819.28	10180.72
334.000	13500.00	1116.99	8.07	4.99	339.98	9830.01	10169.99
334.000	31000.00	1120.15	11.25	8.15	346.29	9826.85	10173.15
334.000	41000.00	1121.68	12.47	9.68	349.36	9825.32	10174.68
334.000	75000.00	1126.95	14.55	14.95	359.90	9820.05	10179.95
343.000	13500.00	1120.84	7.93	5.14	334.14	9861.00	10195.14
343.000	31000.00	1124.15	11.01	8.45	337.45	9861.00	10198.45
343.000	41000.00	1125.66	12.32	9.96	338.96	9861.00	10199.96
343.000	75000.00	1130.14	15.44	14.44	343.44	9861.00	10204.44
344.900	13500.00	1121.67	7.52	5.37	338.55	9830.89	10169.45
344.900	31000.00	1125.10	10.45	8.80	344.02	9828.27	10172.29
344.900	41000.00	1126.69	11.67	10.39	346.54	9827.06	10173.60
344.900	75000.00	1131.36	14.56	15.06	353.98	9823.49	10177.47

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

CAUTION SECNO=    100.400  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=    100.400  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=    100.400  PROFILE=  2  HYDRAULIC JUMP D.S.
WARNING SECNO=    100.400  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=    100.400  PROFILE=  3  HYDRAULIC JUMP D.S.
WARNING SECNO=    100.400  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=    100.400  PROFILE=  4  HYDRAULIC JUMP D.S.
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
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WARNING SECNO=    123.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    123.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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

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WARNING SECNO=    158.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    165.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    173.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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WARNING SECNO=    197.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    199.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    199.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    199.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    213.500  PROFILE=  4  HYDRAULIC JUMP D.S.

CAUTION SECNO=    213.700  PROFILE=  1  CRITICAL DEPTH ASSUMED
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WARNING SECNO=    233.550  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    238.660  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    238.660  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=    238.690  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=    242.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    242.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    242.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    242.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    288.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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WARNING SECNO=    288.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    288.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    291.000  PROFILE=  2  HYDRAULIC JUMP D.S.
CAUTION SECNO=    291.000  PROFILE=  3  HYDRAULIC JUMP D.S.
CAUTION SECNO=    291.000  PROFILE=  4  HYDRAULIC JUMP D.S.

CAUTION SECNO=    302.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    302.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY
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WARNING SECNO=    306.750  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    306.750  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    306.750  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    306.750  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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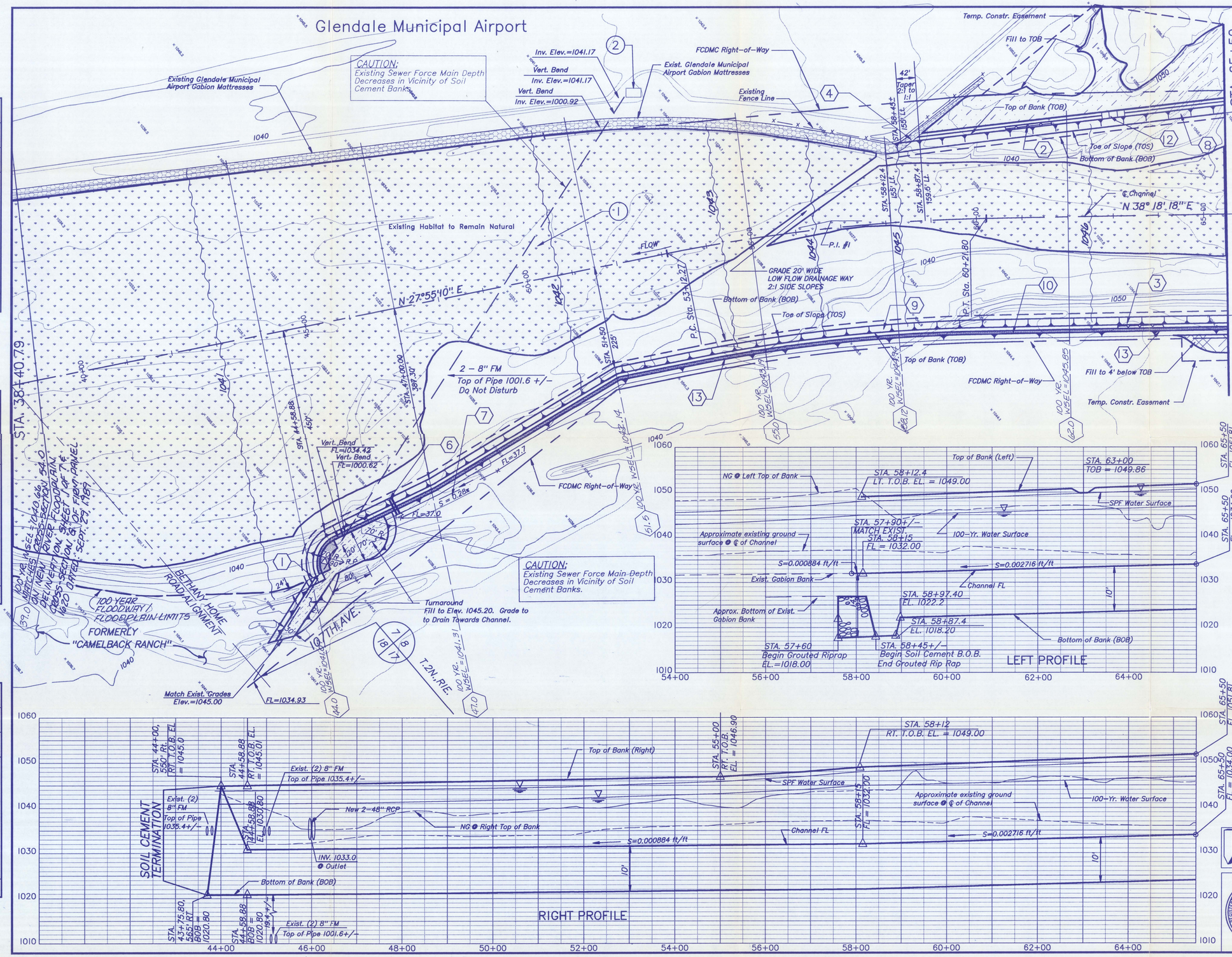
APPENDIX III: HYDRAULIC ANALYSES

HEC-2 DIGITAL INPUT/OUTPUT DATA FILES



CONSTRUCTION NOTES

1. Construct Soil Cement Termination at 1:1 down to BOB. Use Caution in Vicinity of Sewer Forcemain
2. STA. 58+20 to STA. 65+50 (LT) Install 730 L.F. Safety Rail per detail, sheet 4.
3. STA. 44+00, 550'(RT.) to STA. 65+50 (RT) Install 2,199 L.F. Safety Rail, per detail sheet 4.
4. Grout Gabions and provide soil cement connection per detail sheet 9.
6. STA. 46+00 (RT) Install 32 L.F. 2 – 48" RCP with drop inlet hdwl. per Side Drainage Inlet detail sheet 5. Drop inlet crest = 1037.0 Drop inlet inv = 1035.0 Outlet with flapgate per Flapgate Details, sheet 5. Outlet Inv. = 1033.0
7. STA. 48+50 400' to STA. 46+15 465' (RT) Grade Side Drainage Collection Swale per detail sheet 8.
8. STA. 58+45 +/– to STA. 65+50 (LT) Place Soil Cement Banks (6,044 c.y.) per Typical Bank Section sheet 3.
9. STA. 44+80 RT to STA. 65+50 (RT) Place Soil Cement Banks (17,968 c.y.) per Typical Bank Section sheet 3.
10. STA. 44+00, 550' RT. to STA. 65+50 (RT) Place 7"x4" thick ABC Maintenance Road (1,915 s.y.) per Typical Bank Section, sheet 3.
12. Sta. 63+00 Lt. Construct overbank flow depression per detail sheet 2A.
13. STA. 54+00 (RT) STA. 64+00 (RT) Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.

EXISTING UTILITIES

1. 2 – 8" Sewer Forcemain
2. Sewage Lift Station

CAUTION: Existing Sewer Force Main Depth Decreases in Vicinity of Soil Cement Banks.

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown March 1988.

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

SEP 28 1992

HORIZ. SCALE: 1 IN. = 100 FT.

100 0 100 200

VERT. SCALE: 1 IN. = 10 FT.

10 0 10 20

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 42+75 TO STA. 65+50

BETHANY HOME ROAD TO OLIVE AVENUE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

RECOMMENDED BY:

APPROVED BY: DATE:

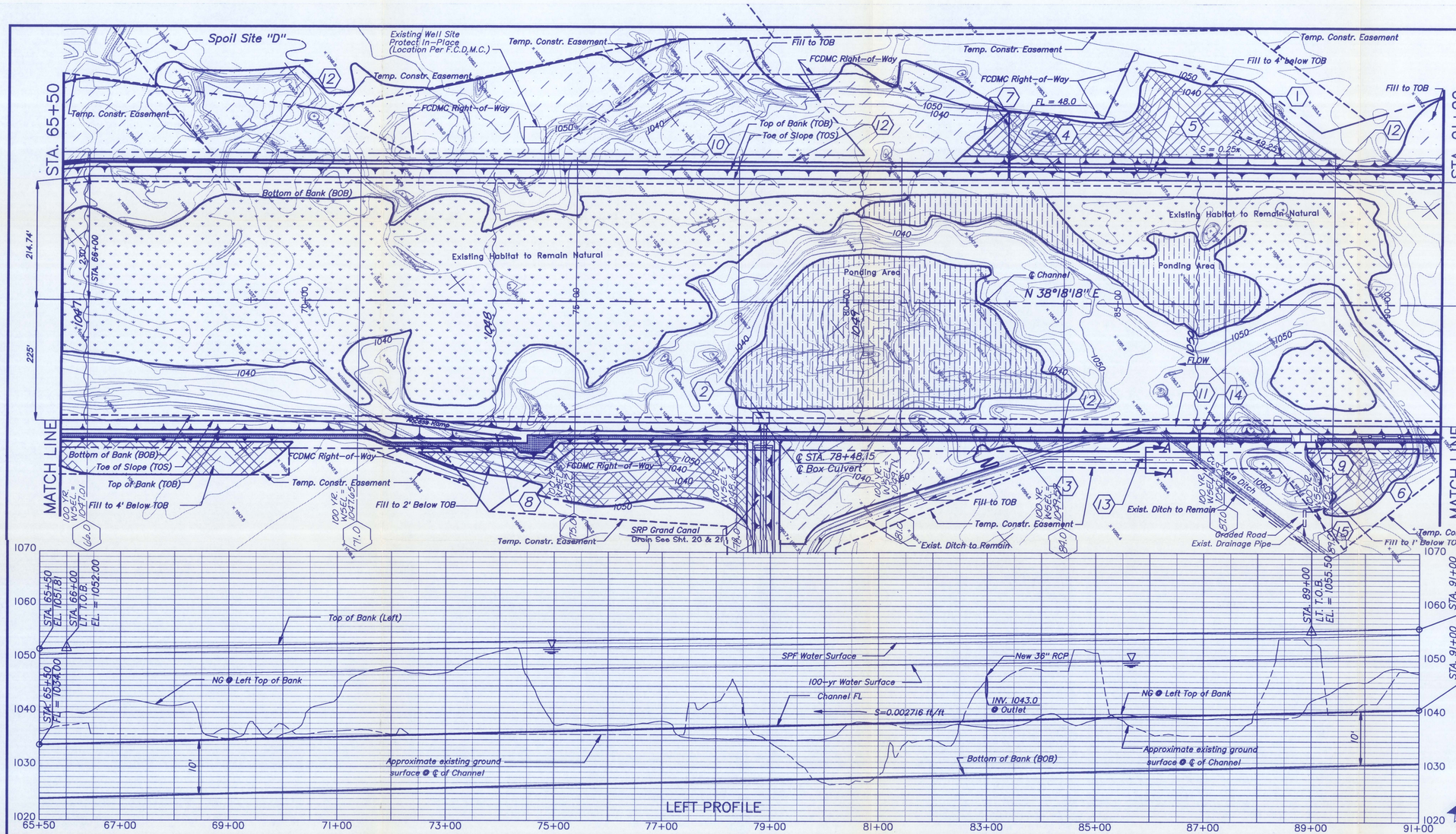
CHIEF ENGINEER & GENERAL MANAGER:

SHEET ~~11 of 48~~

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 15696 PAUL W.R. HOSKIN Date Signed 9/23/92 ARIZONA, U.S.A.

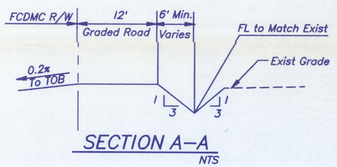
DESIGNED SWV/PWRH	DRAWN JBR	CHECKED PWRH	CVL# 1090-06
DATE 12/91	DATE 12/91	DATE 1/92	

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.



CONSTRUCTION NOTES

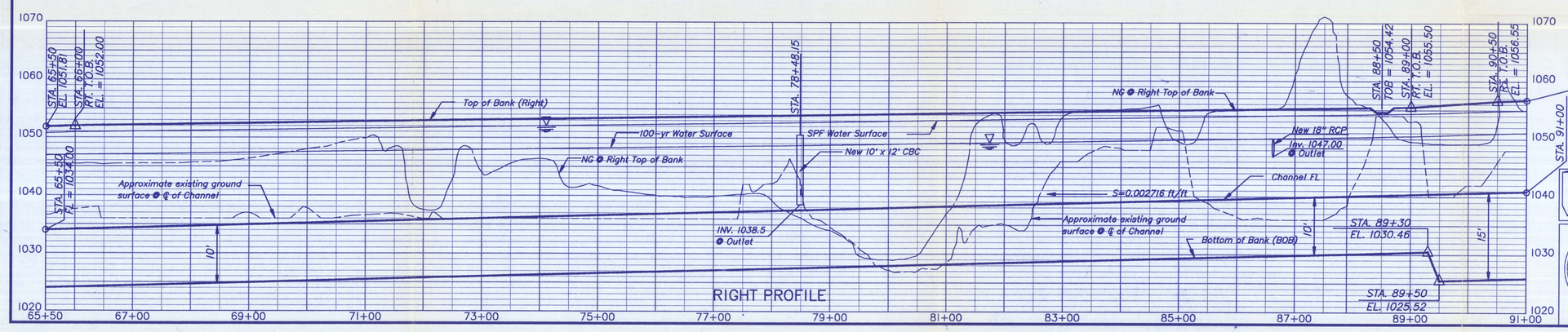
1. STA. 83+00 280'(LT) to STA. 88+00 280' (LT)
   Grade Side Drainage Collection Swale per detail sheet 8.
2. STA. 78+48.15 (RT)
   Construct Concrete Box Culvert and drainage channel per Grand Drain Outlet Details, sheet 20 & 21.
3. STA. 65+50 to 91+00 (RT)
   Place 7'x4" thick ABC Maintenance Road (2,105 s.y.) per Typical Bank Section Sheet 3.
4. STA. 83+00 (LT)
   Install 32 L.F. 36" RCP with drop inlet hdwl. per side drainage inlet details Sheet 5.
   Drop inlet crest = 1048.0
   Drop inlet inv. = 1046.0
   Outlet with Flapgate Per Flapgate Detail, Sheet 5.
   Outlet Inv. = 1043.0
5. STA. 65+50 to 91+00 (LT)
   Install 2,550 L.F. Safety Rail per Detail, sheet 4.
6. STA. 65+50 to 91+00 (RT)
   Install 2,550 L.F. Safety Rail per Detail, sheet 4.
7. STA. 82+00 to 83+00(LT)
   Fill limits vary from Elevation TOB to 4' below TOB.
8. STA. 74+00 (RT) (STA. A)
   Construct Channel Access Ramp per Access Ramp Details, sheet 10.
9. STA. 88+50 (RT)
   Construct Overbank Flow Depression per Detail sheet 2A.
10. STA. 65+50 (LT) to STA. 91+00 (LT)
    Place Soil Cement Banks (21,290 c.y.) Per Typical Bank Section sheet 3.
11. STA. 65+50 (RT) to STA. 91+00 (RT)
    Place Soil Cement Banks (21,384 c.y.) Per Typical Bank Section sheet 3.
12. STA. 69+00 (LT)
    STA. 79+00 (LT)
    STA. 84+00 (RT)
    STA. 89+00 (LT)
    Construct Animal Ramp Per Animal Ramp Details, sheet 2A.
13. STA. 83+50 (RT) to Sta. 86+50 (RT)
    Grade Ditch Per Section A–A, this sheet.
    Match Exist. Fl, Grade to Drain.
14. STA. 86+62 (RT)
    Install 64 L.F. 18" R.C.P.
    Inlet Inv. = Match Exist. Conc. Ditch & Inv.
    Outlet Inv.=1047.00 Remove & Dispose of excess Conc. Ditch
    Hand form mortar around pipe inlet.
15. Grade Swale to drain from exist. Tailwater Ditch at T.C.E. to Sta. 88+50 Overbank Flow Depression.



SECTION A–A
NTS

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown March 1988.



FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

SEP 28 1992

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 13694 PAUL W.R. HOSKIN No. 31.7.93 ARIZONA, U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 65+50 to 91+00

BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:

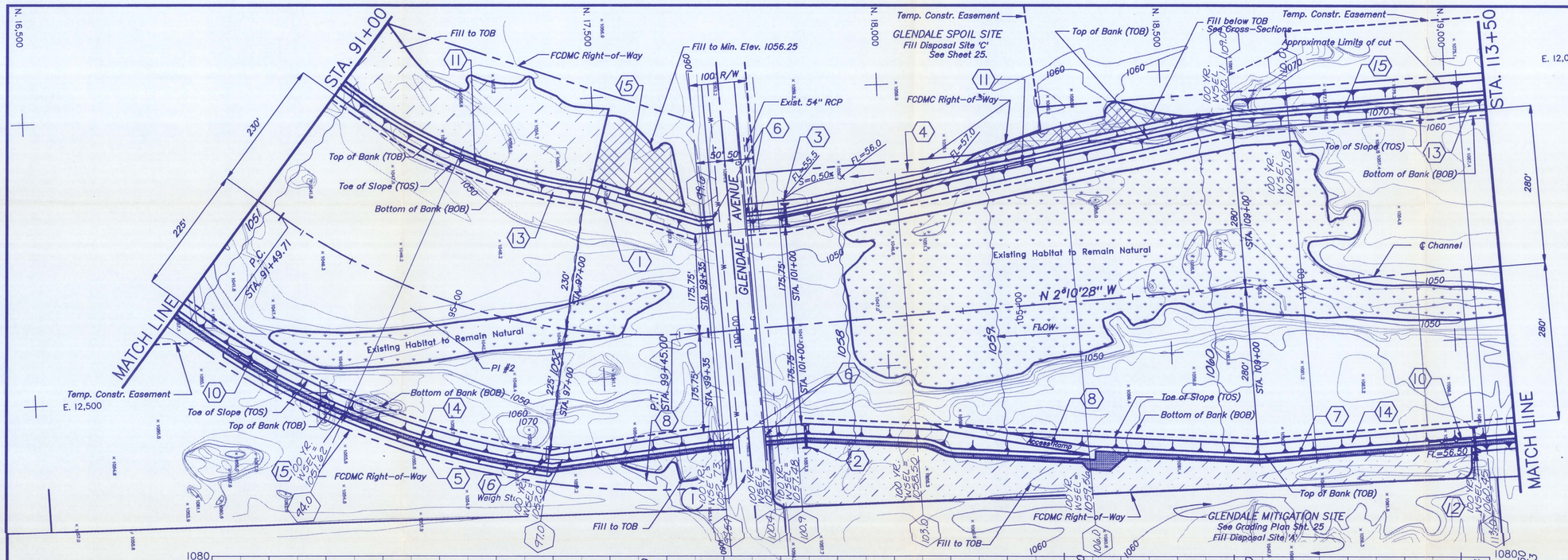
APPROVED BY: DATE:

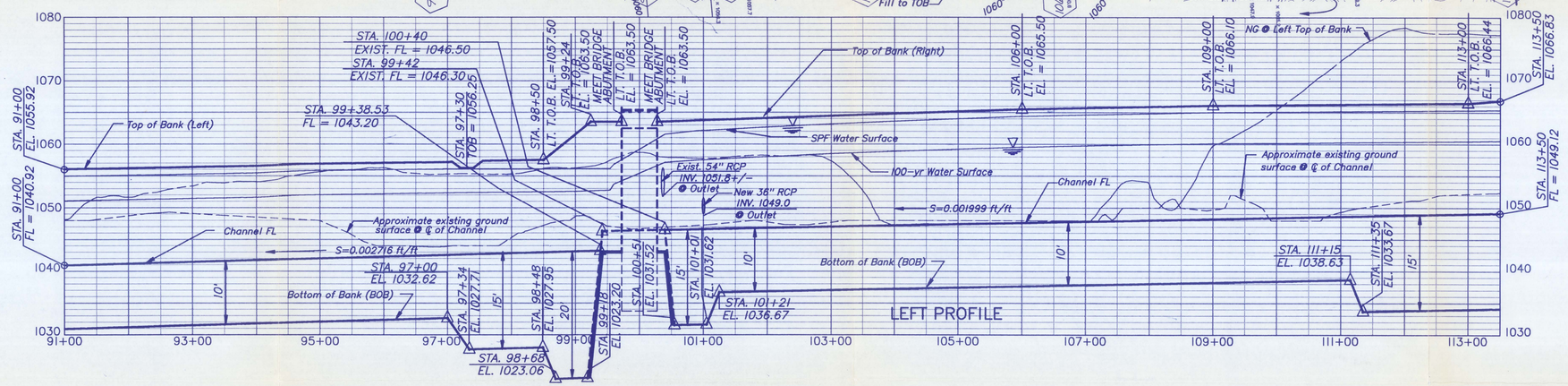
CHIEF ENGINEER & GENERAL MANAGER:

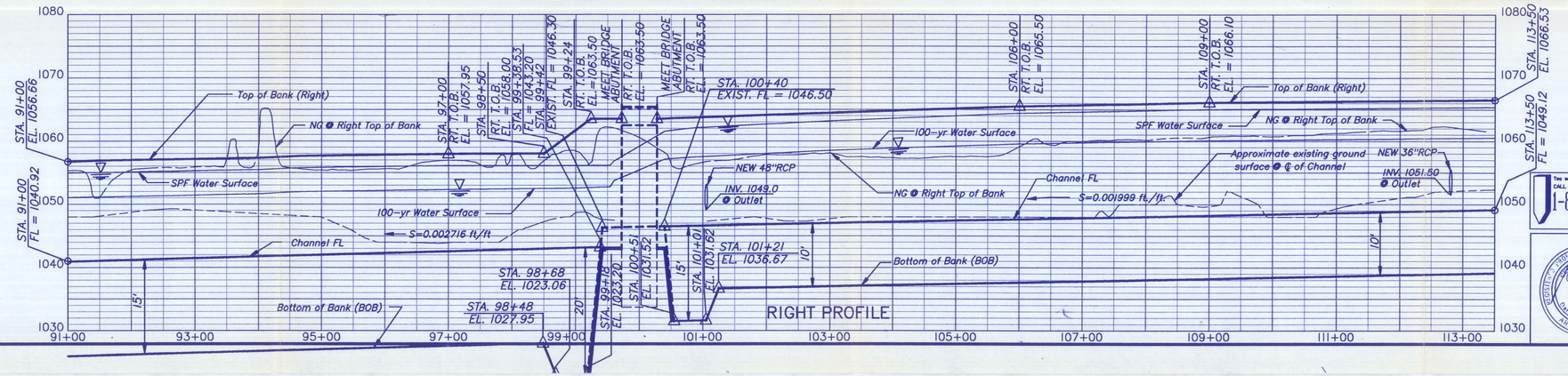
SHEET ~~12 OF 48~~

DESIGNED SWV/PWRH	DRAWN JBR	CHECKED PWRH	CVL# 1090-06
DATE 12/91	DATE 12/91	DATE 3/92	

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.







CONSTRUCTION NOTES

1. STA. 97+30 (LT.).
   Construct overbank flow depression per detail sheet 2A.
2. STA. 101+00 (RT)
   Install 38 L.F. 48" RCP with drop inlet hdwl. per side drainage inlet details, Sheet 5.
   Drop inlet crest = 1053.50
   Drop inlet inv. = 1051.00
   Outlet with flapgate per flapgate detail Sheet 5.
   Outlet inv. = 1049.0
3. STA. 101+00 (LT)
   Install 36 L.F. 36" RCP with drop inlet hdwl. per side drainage inlet details Sheet 5.
   Drop inlet crest = 1055.5
   Drop inlet inv. = 1054.0
   Outlet with flapgate per flapgate detail Sheet 5.
   Outlet inv. = 1049.0
4. STA. 101+00 230' to STA. 104+15 265' (LT.).
   Grade Side Drainage Collection Swale per detail sheet 8.
5. STA. 91+00 to 99+70 (RT)
   Place 7' x 4" thick ABC Maintenance Road (810 s.y.) per Typical Bank Section sheet 3.
6. STA. 100+00
   Construct, soil cement banks, per Glendale Bridge Tie-in Details sheet 22.
7. STA. 100+30 (RT) to 113+50 (RT)
   Place 7' wide 4" thick ABC Maintenance Road (1,165 s.y.) per Typical Bank Section sheet 3.
8. STA. 106+00 (RT) (STA. A)
   Construct channel access per Access Ramp Detail, sheet 10.
10. STA. 91+00 to STA. 99+73 (RT)
    STA. 100+27 to STA. 113+50 (RT)
    Install 2,360 L.F. Safety Rail, per detail sheet 4.
11. STA. 91+00 to 99+73 (LT)
    STA. 100+27 to 113+50 (LT)
    Install 2,035 L.F. Safety Rail, per detail sheet 4.
12. Sta. 112+80 (RT)
    Install 42 L.F. 36" R.C.P. with Drop Inlet Headwall Per Side Drainage Inlet Details, Sheet 5.
    Drop Inlet Crest = 1056.50
    Drop Inlet Inv. = 1054.50
    Outlet with Flapgate , per flapgate detail Sheet 5.
    Outlet Inv. = 1051.50
13. STA. 91+00 to South Bridge Abutment (LT.).
    North Bridge Abutment to STA. 113+50 (LT.).
    Place Soil Cement Banks (17,853 C.Y.) per typical bank section, sheet 3.
14. STA. 91+00 to South Bridge Abutment (RT.)
    North Bridge Abutment to STA. 113+50 (RT.).
    Place Soil Cement Banks(19,235 C.Y.) per typical bank section, sheet 3.
15. STA. 94+00 (RT)
    STA. 97+50 (LT)
    STA. 111+00 (LT)
    Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.
16. Remove Exist. Weigh Station and all Concrete Structures.

EXISTING UTILITIES

1. See Glendale Bridge Tie-in Details for Utilities, sheet 22.

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co.
Flown March 1988.

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

SEP 28 1992

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER (CIVIL) PAUL W. R. HOSKIN III No. 21214 Date Signed 3/31/92 ARIZONA, U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

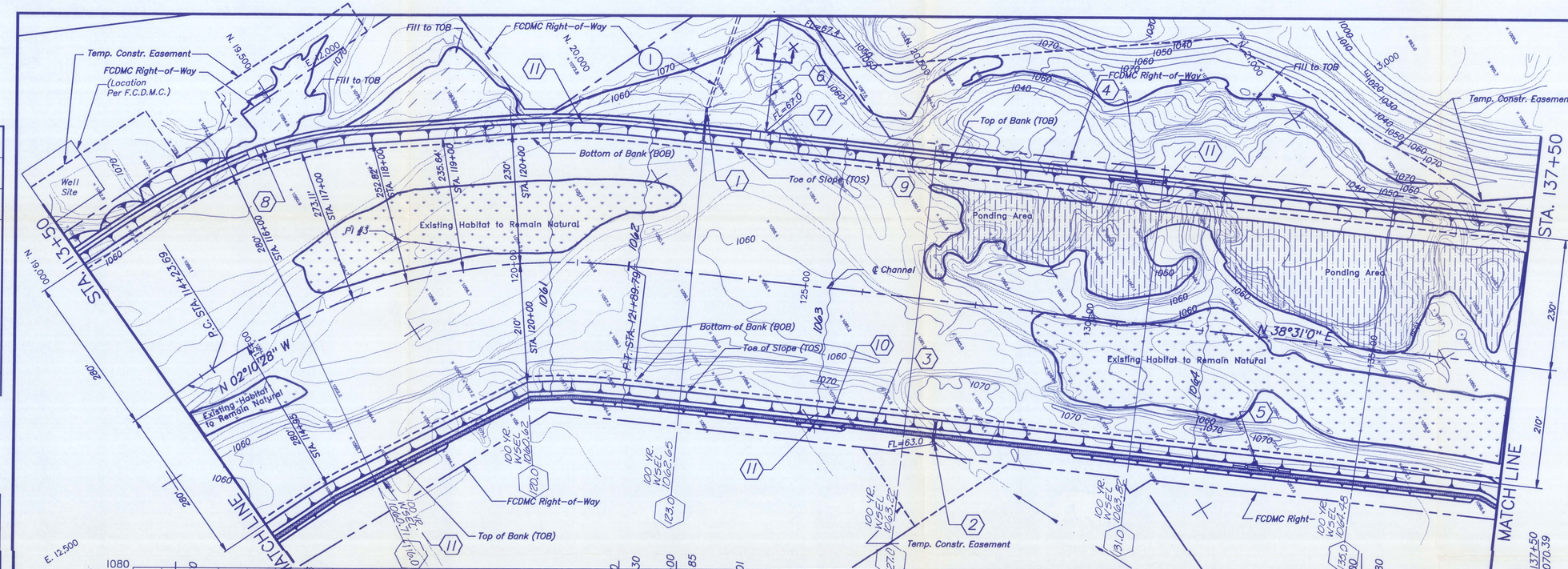
NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 91+00 to STA. 113+50

BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:			SHEET
APPROVED BY:		DATE:	13 OF 48
CHIEF ENGINEER & GENERAL MANAGER:			
DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	
DATE 1/92	DATE 1/92	DATE 3/92	CVL# 1090-06

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.

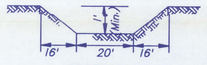


CONSTRUCTION NOTES

1. STA. 122+90 (LT)
   Remove exist. hdwl. and trash rack and connect 55 L.F. 54" RCP with pipe collar to exist. 54" RCP, Outlet per Side Drainage Inlet details Sheet 5.
   Match exist. inv.
   Outlet Inv. = 1052.0
2. STA. 127+60 (RT)
   Install 32 L.F. 42" RCP with drop inlet hdwl. per Side Drainage Inlet Details sheet 5.
   Drop inlet crest = 1063.0
   Drop inlet inv. = 1061.0
   Outlet with flapgate per Flapgate Details, Sheet 5.
   Outlet Inv. = 1054.0
3. STA. 113+50 to 137+50 (RT)
   Place 7' x 4" thick ABC Maintenance Road (1,755 s.y.) per Typical Bank Section Sheet 3.
4. STA. 113+50 to STA. 137+50 (LT)
   Install 2,612 L.F. Safety Rail, per detail sheet 4.
5. STA. 113+50 to STA. 137+50 (RT)
   Install 2,235 L.F. Safety Rail, per detail sheet 4.
6. STA. 124+00 265' (LT.) to 465' (LT.)
   Construct offside Collection Channel per section X-X, Sheet 14.
7. STA. 124+00 (LT.)
   Construct Bank depression per detail sheet 2A.
8. STA. 116+50 (LT.)
   Construct Bank depression per detail sheet 2A.
9. STA. 113+50 to STA. 137+50 (LT.).
   Place Soil Cement Banks (23,934 C.Y.) per typical bank section, sheet 3.
10. STA. 113+50 to STA. 137+50 (RT.).
    Place Soil Cement Banks(18,881 C.Y.) per typical bank section, sheet 3.
11. STA. 116+00 (RT)
    STA. 121+00 (LT)
    STA. 125+50 (RT)
    STA. 131+00 (LT)
    Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.

EXISTING UTLITIES

1. 54" RCP Storm Drain

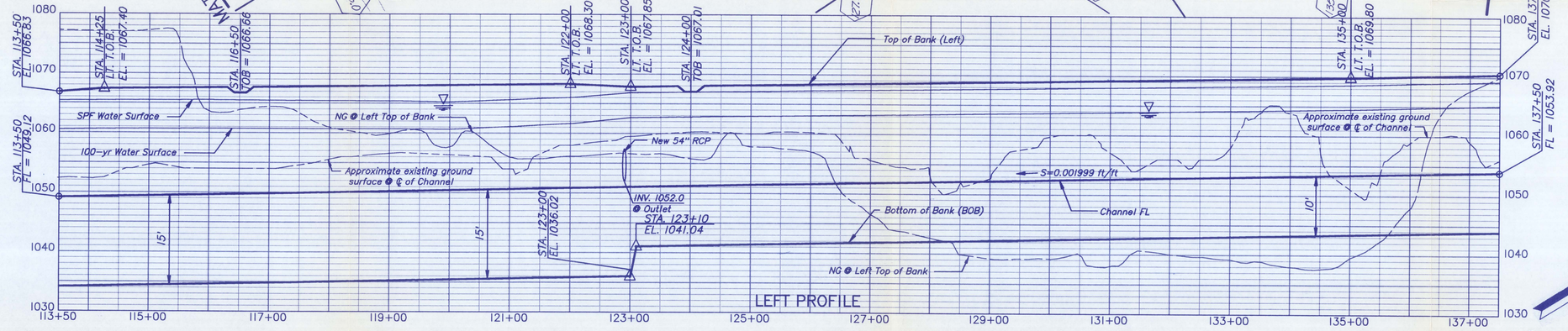


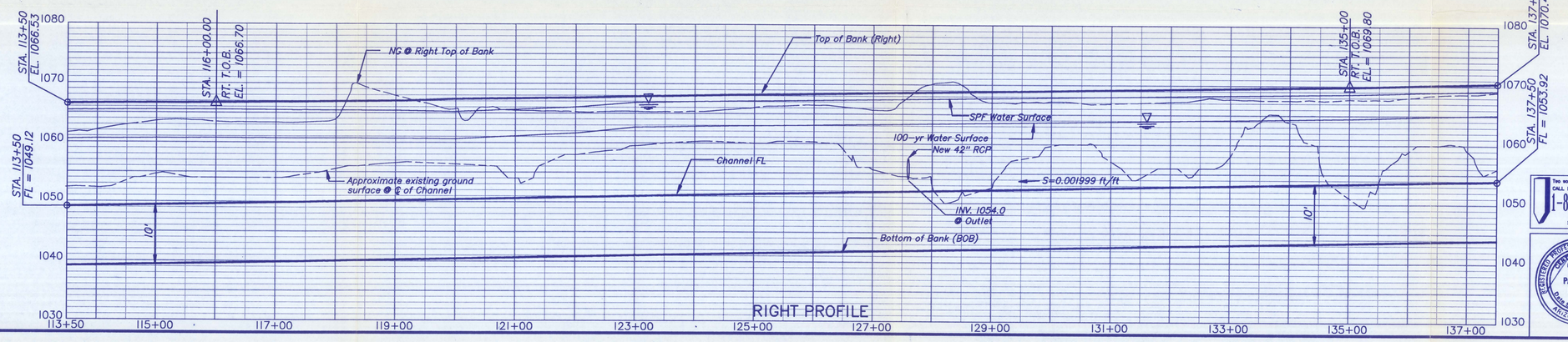
SECTION X-X
NTS

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown June, 1991

STA. 113+50 to STA. 120+00± Topographic Mapping by Aerial Mapping Co. Flown March, 1988.





FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

SEP 28 1992

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER PAUL WM HOSKIN 13584 DATE SIGNED 3-12-92 ARIZONA, U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 113+50 to STA. 137+50

BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:
APPROVED BY: DATE:
CHIEF ENGINEER & GENERAL MANAGER:

SHEET ~~14~~ of 48

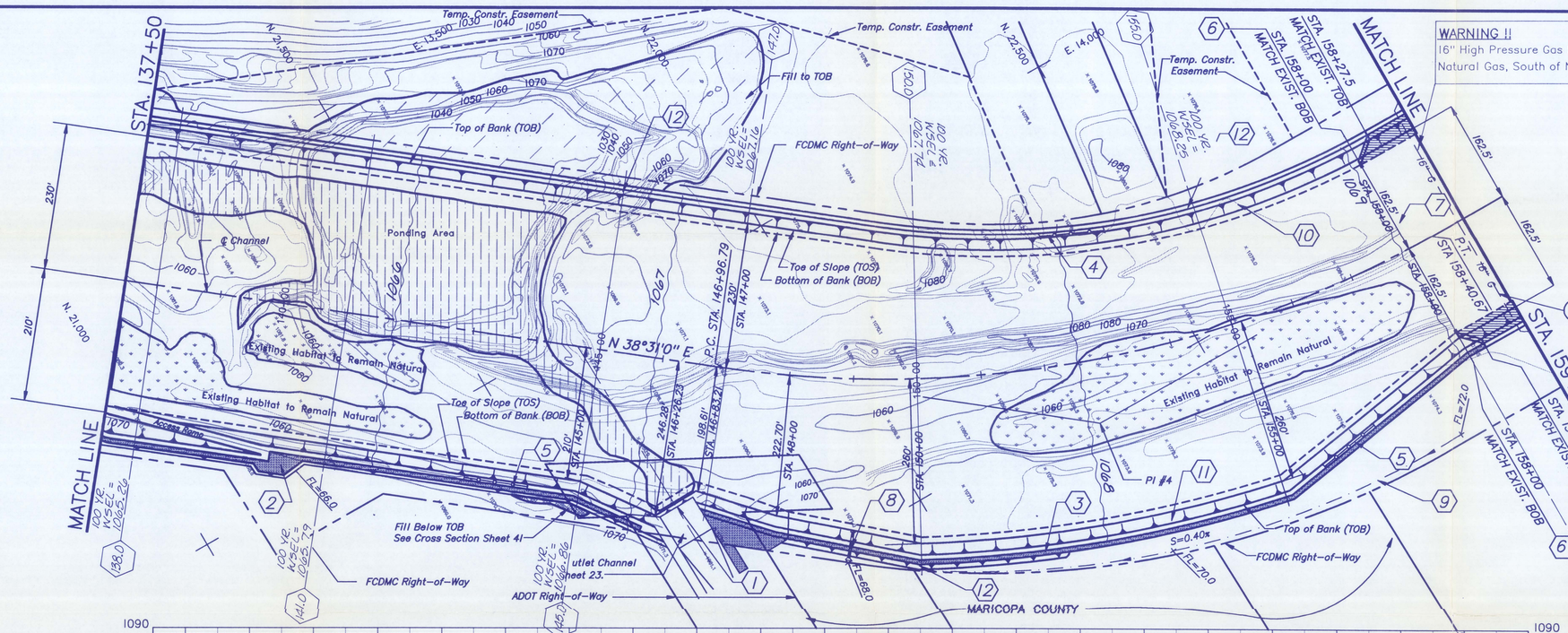
DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	CVL # 1090-06
DATE 1/92	DATE 1/92	DATE 3/92	

COE & VAN LOO CONSULTING ENGINEERS, INC.

REVISION BY			
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY			
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY			
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE



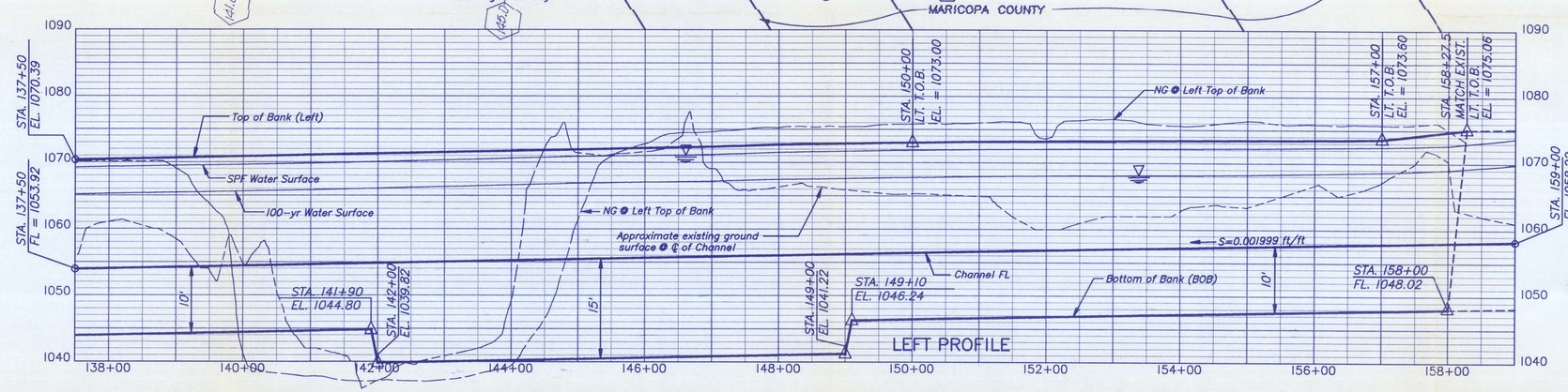
WARNING !!
16" High Pressure Gas Line, El Paso Natural Gas, South of Northern .

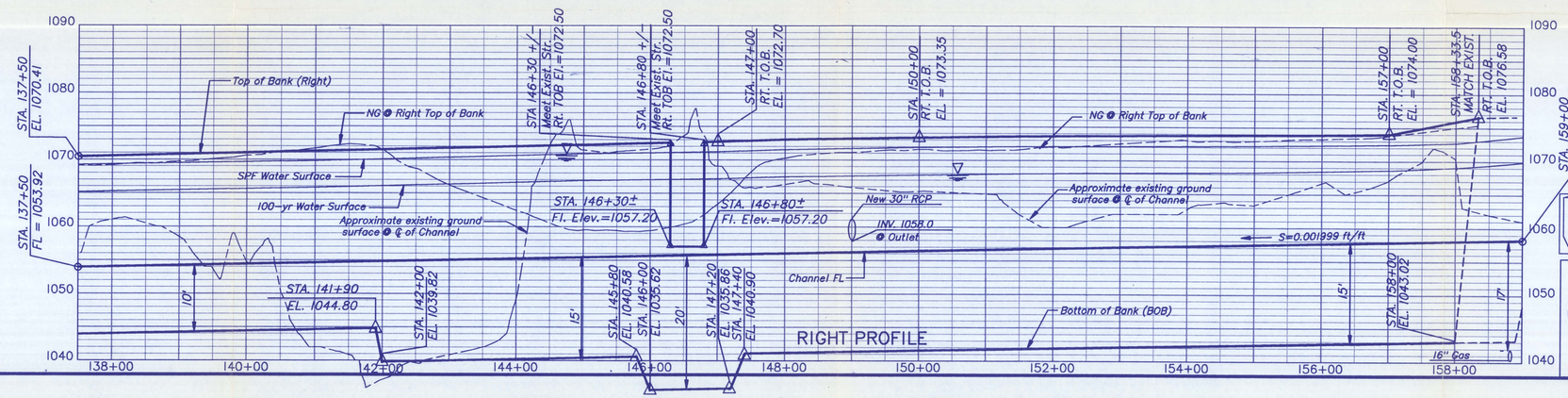
CONSTRUCTION NOTES

1. STA. 144+65 (RT)
   Construct ADOT Channel Outlet per Northern Avenue ADOT Channel Detail, sheet 23.
2. STA. 140+00 (RT) (STA. A)
   Construct Channel Access Ramp per Access Ramp Details, sheet 10.
3. STA. 137+50 to 146+20 (RT)
   STA. 147+55 to STA. 158+33.5 (RT)
   Place 7"x4" thick ABC Maintenance Road (1682 s.y.) per Typical Bank Section Sheet 3.
4. STA. 137+50 to STA. 159+00.00 (LT)
   Install 2015 L.F. Safety Rail, per detail sheet 4.
5. STA. 137+50 to STA. 145+90 (RT)
   STA. 147+88 to STA. 159+00.00 (RT)
   Install 2144 L.F. Safety Rail, per detail sheet 4.
6. STA. 158+00 to 161+10
   Soil Cement, Bank, Channel Excavation per Northern Avenue Bridge Construction Plans by BRW, Inc..
7. Grade out Channel invert between exist soil cement Banks.
8. STA. 149+00 (RT)
   Install 34 L.F. 30" RCP with drop inlet hdwl.
   Per Side Drainage Inlet Detail Sheet 5.
   Drop inlet crest = 1068.0
   Drop inlet inv. = 1066.5
   Outlet with flagate per flapgate details.
   Outlet inv. = 1058.0
9. STA. 149+00 290'(RT.) to STA. 157+40 295' (RT.)
   Grade side drainage Collection Swale per detail sheet 8.
   Per side drainage inlet detail sheet 5.
10. STA. 137+50 to STA. 158+27.5 (LT)
    Place Soil Cement Banks (20,593 c.y.)
    Per Typical Bank Section Sheet 3.
11. STA. 137+50 RT. to STA. 155+33.5 (RT)
    Place Soil Cement Banks (21,789 c.y.)
    Per Typical Bank Section Sheet 3.
12. STA. 145+00 (LT)
    STA. 150+00 (RT)
    STA. 155+00 (LT)
    Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.

EXISTING UTILITIES

1. 16" High Pressure Gas 100' S of Northern Ave. ℄ (El Paso Natural Gas)





CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown June 1991

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.

VERT. SCALE: 1 IN. = 10 FT.

SEP 28 1992

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT! Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 19694 PAUL W. F. HAWKIN Date Signed 9-28-92 ARIZONA, U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

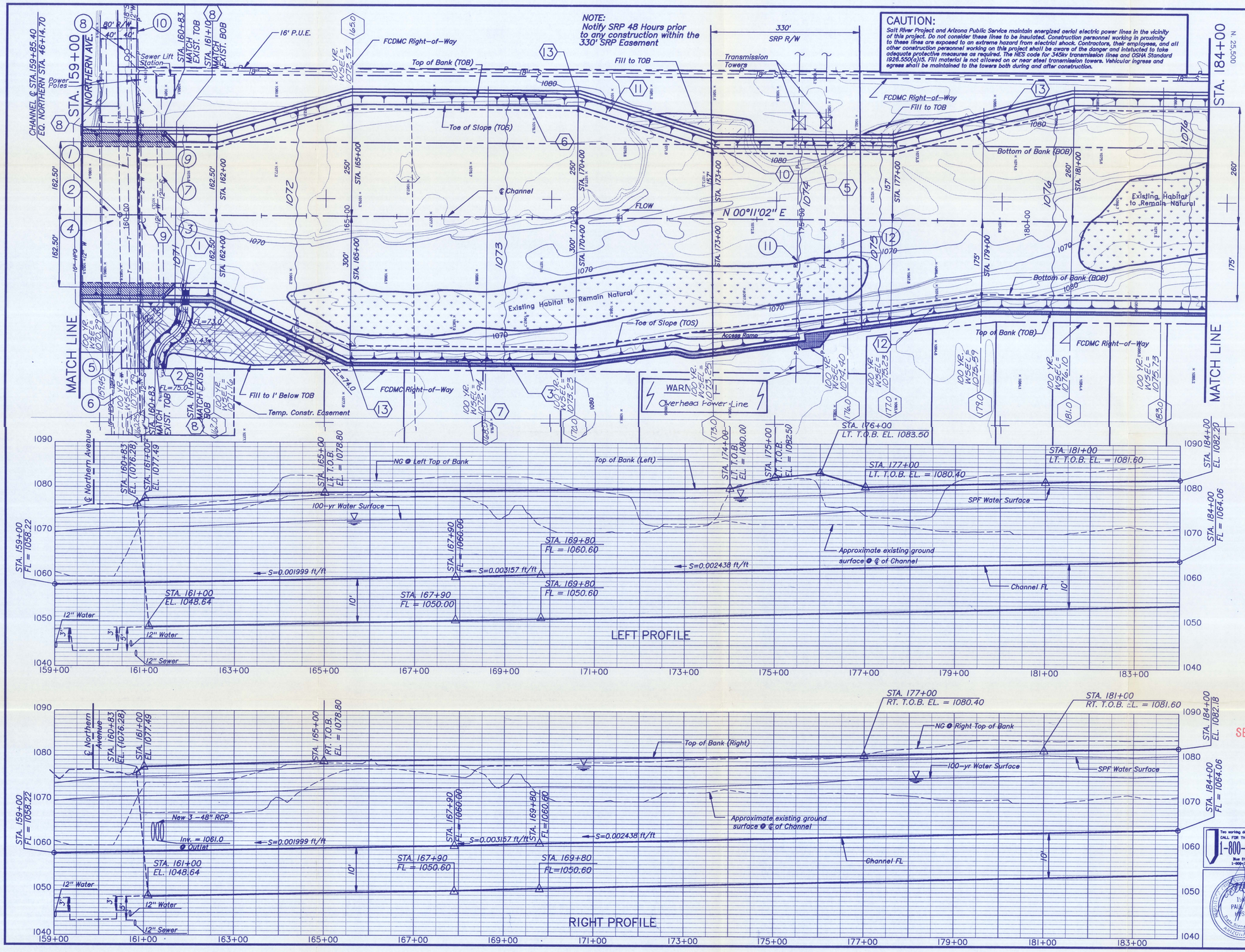
NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 137+50 to STA. 159+00

BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:			SHEET
APPROVED BY:	DATE:		15 of 48
CHIEF ENGINEER & GENERAL MANAGER:			
DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	
DATE 1/92	DATE 1/92	DATE 3/92	CVL# 1090-06

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.



CAUTION:

Salt River Project and Arizona Public Service maintain energized aerial electric power lines in the vicinity of this project. Do not consider these lines to be insulated. Construction personnel working in proximity to these lines are exposed to an extreme hazard from electrial shock. Contractors, their employees, and all other construction personnel working on this project shall be aware of the danger and intstucted to take adequate protective measures as required. The NES code for 345kv transmission lines and OSHA Standard 1926.550(a)15. Fill material is not allowed on or near steel transmission towers. Vehicular ingress and egress shall be maintained to the towers both during and after construction.

NOTE:
Notify SRP 48 Hours prior to any construction within the 330' SRP Easement

CONSTRUCTION NOTES

1. STA. 161+30 (RT)
   Install 34 L.F. 3 – 48" RCP total length of pipe = 102 L.F. with drop inlet hdwl. per Channel Outlet detail, sheet 6.
   Drop inlet crest = 1071.0
   Drop inlet inv. = 1069.0
   Outlet without flapgate per uncontrolled outlet detail
   Outlet pipe inv. = 1061.0
2. STA. 160+70 330'(RT.) to STA. 161+30 215' (RT.)
   Grade Collection Channel per detail sheet 6.
   Match Exist. Grades @ FCDMC R/W.
3. STA. 160+83 to 184+00 (RT)
   Place 7' x 4" thick ABC Maintenance Road (1,956 s.y.) per Typical Bank Section, sheet 3.
4. STA. 175+00 (LT) (STA. A)
   Construct Channel Access Ramp per Access Ramp Details, sheet 10.
5. Refer to SRP & APS Utility and Access Road Detail, sheet 8.
6. STA. 159+00 to STA. 159+45 (LT)
   STA. 160+24 to STA. 184+00 (LT)
   Install 2,459 L.F. Safety Rail, per detail sheet 4.
7. STA. 159+00 to STA. 159+45 (RT.)
   STA. 160+24 to STA. 184+00 (RT.)
   Install 2,464 L.F. Safety Rail, per detail sheet 4.
8. STA. 158+00 to 161+10
   Match Exist. Soil Cement Bank. Channel Excavation per Northern Avenue Bridge Construction plans by BRW, Inc..
9. Grade out channel invert between exist. Soil cement banks.
10. STA. 172+80; STA. 174+25; STA. 176+15 (LT. & RT.).
    Construct non-contiguous Safety Rail Gaps (3) per detail sheet 8.
11. STA. 160+83 to STA. 184+00 (LT.).
    Place Soil Cement Banks (21,136 C.Y.) per typical bank section, sheet 3.
12. STA. 160+83 to STA. 184+00 (RT.).
    Place Soil Cement Banks(21,122 C.Y.) per typical bank section, sheet 3.
13. STA. 165+00 (RT)
    STA. 170+00 (LT)
    STA. 179+50 (LT)
    Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.

EXISTING UTILITIES

NOTES: All utilities within the Northern Avenue Right-of-Way have been, relocated by others.

1. Tele Cable, 20' N of ℄
2. 16" High Pressure Gas, 100' (S) of Northern ℄ (El Paso Natural Gas)
3. 12" Water 85'(N) of Northern ℄ (City Of Peoria).
4. 12" ACP Water, 85' (S) of Northern ℄ (City of Glendale)
5. 6" Water Main (Does not cross river) Stubbed, 12' N of ℄
6. 10" Sewer, C.O. Peoria, 45' N of ℄
7. 12" Sewer 95' (N) of Northern ℄ (City Of Peoria)
8. 60" I.D. Sewer Manhole & 18" P.V.C. 20' N of ℄ (City Of Peoria)
9. 2" Abandoned Water, 49' N of ℄
10. Overhead Power Lines – A.P.S.
11. SRP Transmission Lines (Overhead) – 230kv
12. APS Transmission Lines (Overhead) – 230kv

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown March 1988.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

SEP 28 1992

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

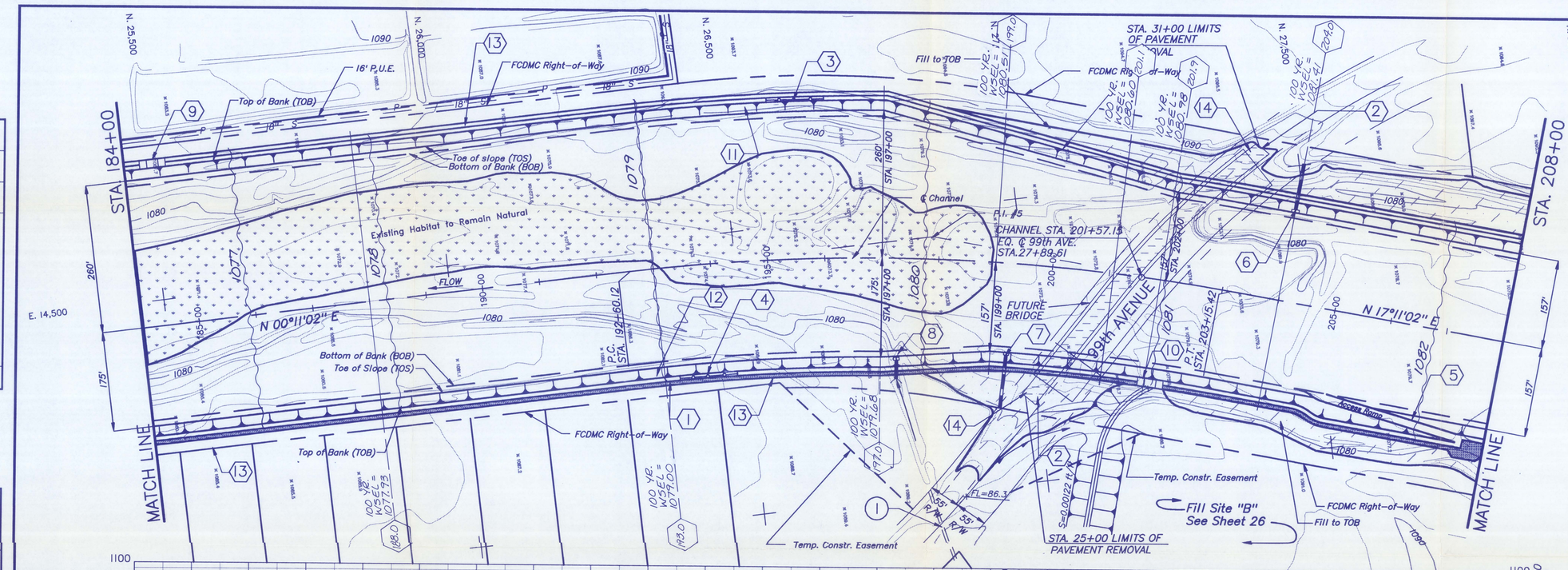
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

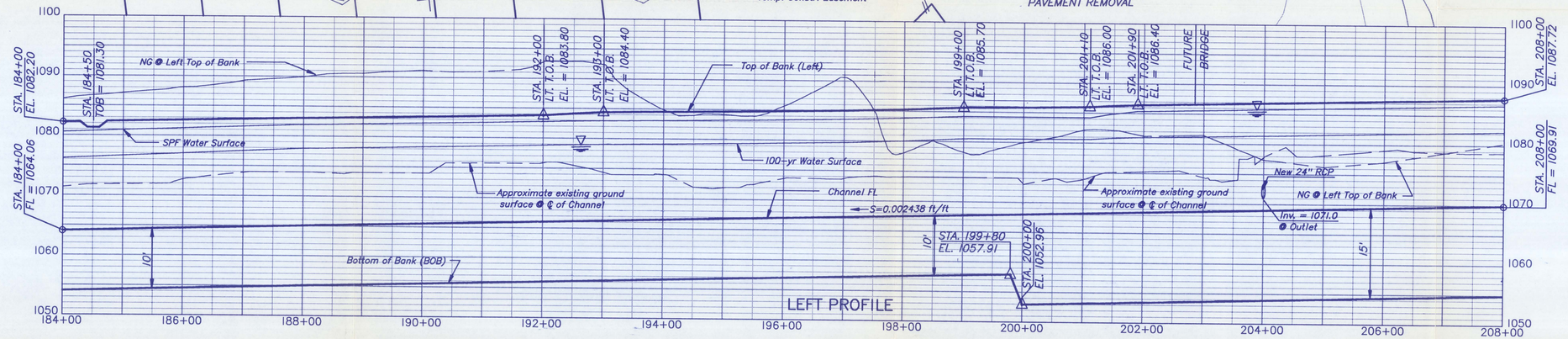
NEW RIVER CHANNELIZATION

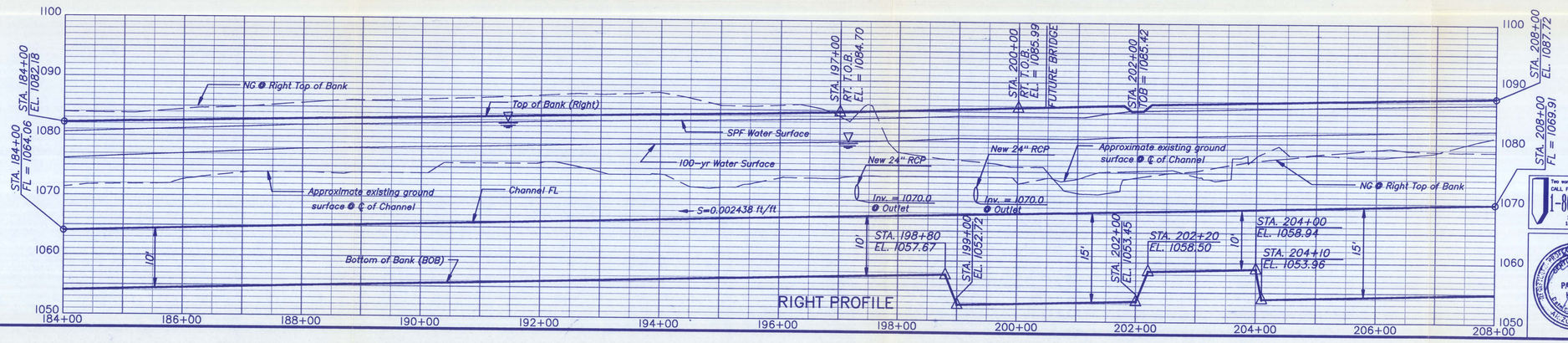
PLAN / PROFILE STA. 159+00 to STA. 184+00
BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:			SHEET ~~16~~ of 18
APPROVED BY:		DATE:	
CHIEF ENGINEER & GENERAL MANAGER:			
DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	CVL# 1090-06
DATE 1/92	DATE 1/92	DATE 3/92	

COE & VAN LOO CONSULTING ENGINEERS, INC.







CONSTRUCTION NOTES

1. STA. 184+00 to 208+00 (RT)
   Place 7" x 4" thick ABC Maintenance Road (1,945 s.y.) per Typical Bank Section Sheet 3.
2. 99th AVE. STA. 25+00 to STA. 31+00
   pavement (1,867 s.y.)
   Refer to Sheets SP1–SP8 For Pavement Removal outside the limits (Seperate Bid Item).
3. STA. 184+00 to STA. 208+00 (LT)
   Install 2,480 L.F. Safety Rail, per detail sheet 4.
4. STA. 184+00 to 208+00 (RT)
   Install 2,345 L.F. Safety Rail, per detail sheet 4.
5. STA. 207+50 (RT) (STA. A)
   Construct Channel Access Ramp per Access Ramp Details, sheet 10.
6. STA. 204+00 (LT.)
   Install 82 L.F. 24" RCP, plug inlet per M.A.G. detail 427
   Inlet inv. = 1085.4
   Outlet without flapgate per uncontrolled outlet per detail sheet 5.
   Outlet inv. = 1071.0
7. STA. 199+30 (RT)
   Install 90 L.F. 24" RCP, plug inlet per M.A.G. detail 427.
   Inlet inv. = 1080.0
   Outlet without flapgate per uncontrolled outlet detail sheet 5 .
   Outlet inv. = 1070.0
8. STA. 197+30 (RT.).
   Install 32 L.F. 24" RCP with drop inlet hdwl. per side drainage inlet details sheet 5.
   Drop inlet crest =1081.50
   Drop inlet inv. =1080.00
   Outlet with Flapgate per Flapgate Details.
   Outlet inv. =1070.00
9. STA. 184+50 (LT.)
   Constuct overbank flow depression per detail sheet 2A.
10. STA. 202+00 (RT.).
    Constuct overbank flow depression per detail sheet 2A.
11. STA. 184+00 to STA. 208+00 (LT.).
    Place Soil Cement Banks (23,158 C.Y.) per typical bank section, sheet 3.
12. STA. 184+00 to STA. 208+00 (RT.).
    Place Soil Cement Banks(21,611 C.Y.) per typical bank section, sheet 3.
13. STA. 185+00 (RT)
    STA. 190+00 (LT)
    STA. 195+00 (RT)
    STA. 200+00 (LT)
    Construct Animal Ramp Per Animal Ramp Detail, Sheet 2A.
14. All fill within the 99th Avenue Right-Of-Way Limits To Be Placed as "Embankment FW". See Sheets SP1–SP8.

EXISTING UTILITIES

1. 24" irrigation pipe

CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Aerial Mapping Co. Flown March 1988.

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.

100 0 100 200

VERT. SCALE: 1 IN. = 10 FT.

10 0 10 20

SEP 28 1992

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT! Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 19990 PAUL W.R. HOSKIN ARIZONA, U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 184+00 to STA. 208+00

BETHANY HOME ROAD TO OLIVE AVENUE

RECOMMENDED BY:

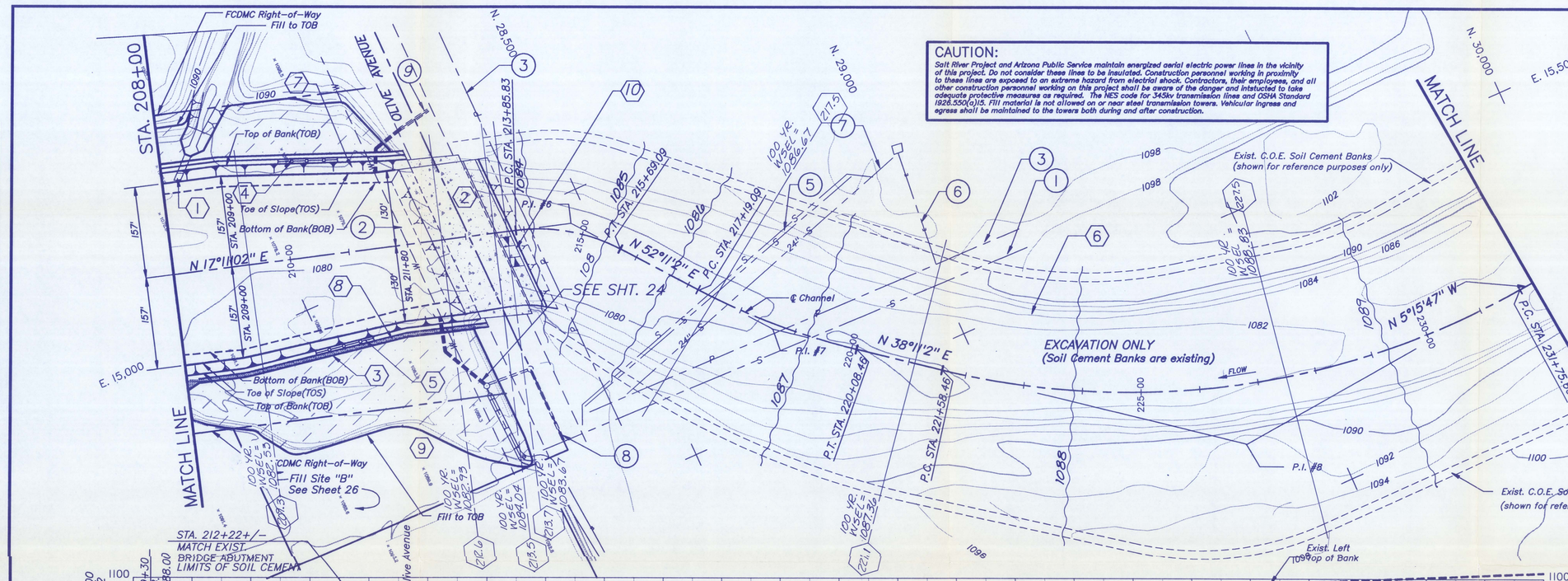
APPROVED BY: DATE:

CHIEF ENGINEER & GENERAL MANAGER:

SHEET ~~17~~ 48

DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	CVL# 1090-06
DATE 1/92	DATE 1/92	DATE 3/92	

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.



CAUTION:

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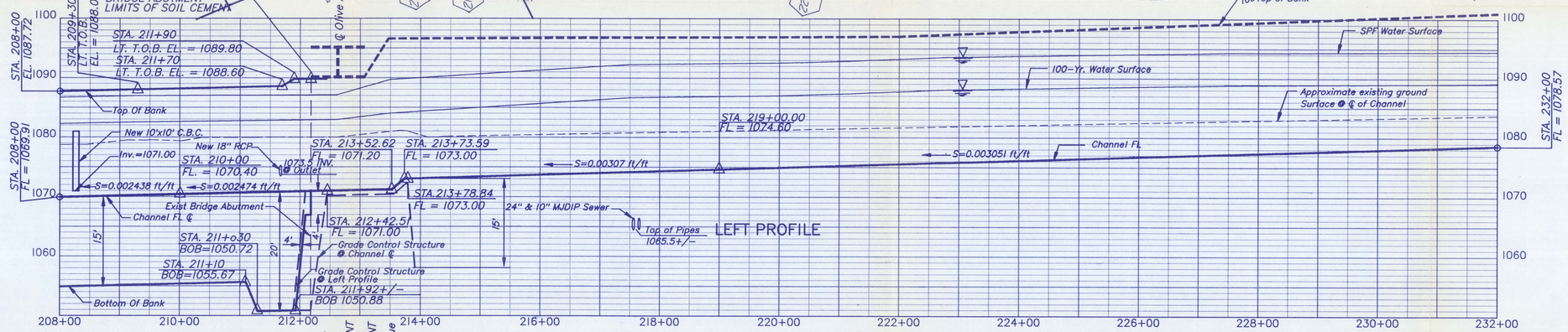
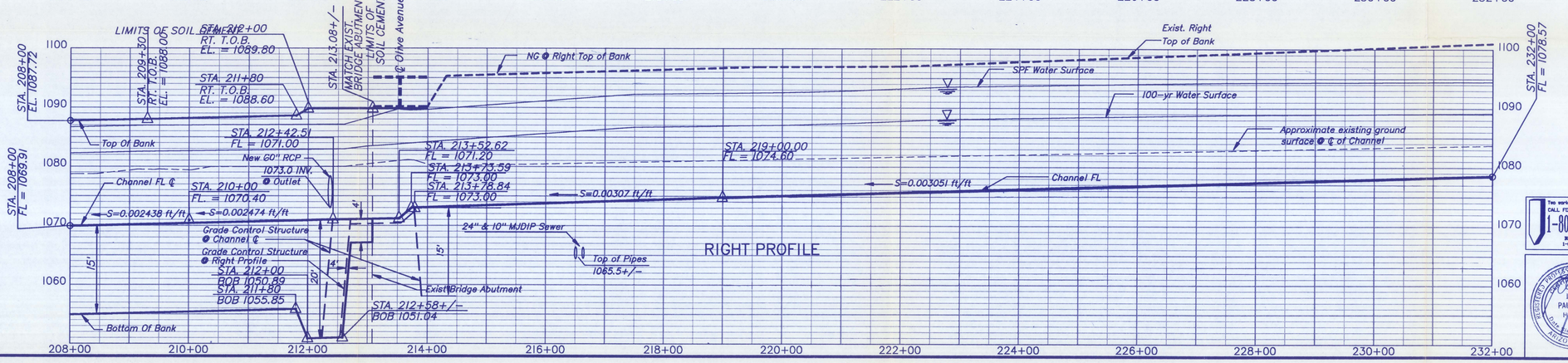
CONSTRUCTION NOTES

1. STA. 208+25 (LT)
   Construct Concrete Box Culvert w/ spillway per Sun City Channel Outlet Detail, sheet 9.
2. STA. 212+60
   Construct Bridge Protection, storm Drainage Utilities, Access Roads per Olive Avenue Bridge Protection Details, sheet 24.
3. STA. 208+00 to 213+18 (RT)
   Place 7"x4" thick ABC Maintenance Road (398.s.y.) per Typical Bank Section Sheet 3.
4. STA. 208+00 to STA. 212+25 (LT)
   Install 420 L.F. Safety Rail, per detail sheet 4.
5. STA. 208+00 to STA. 213+00 (RT)
   Install 510 L.F. Safety Rail, per detail sheet 4.
6. North of Olive Ave., Construction entails earthwork excavation only. Soil Cement Bank shown is existing.
7. STA. 208+00 to STA. 212+18 (LT)
   Place Soil Cement Banks (4347 c.y.) per Typical Bank Section Sheet 3.
8. STA. 208+00 to STA. 213+08 (RT)
   Place Soil Cement Banks (5050 c.y.) per Typical Bank Section Sheet 3.
9. Compaction on fill site "B" to be to 95% see sheet 43.
10. ℄ STA. 213+5±, 44.32'(RT.).
    Construct Low Flow Notch Per Detail, Sheet 24.

EXISTING UTILITIES

1. 14" ACP FM Sewer (abandoned in place)
2. 16" Water, 100' S. of ℄ (City of Peoria) to be relocated see sheet 24.
3. Overhead Power Lines
5. 10" and 24" MJDIP Sewer have been relocated.
6. Electric Line
7. 24" Dip Sewer (abandoned in place)
8. 54" RGRCP, proposed by MCHD
9. 18" RGRCP





CONTOUR INTERVAL: 2 FEET

North of Olive Avenue
Topographic Mapping by Kenney
Aerial Mapping, Inc.
Flown August, 1991

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

SEP 28 1992

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER (CIVIL) PAUL W. HANKIN ARIZONA, U.S.A.

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 208+00 to STA. 232+00

BETHANY HOME ROAD TO OLIVE AVENUE

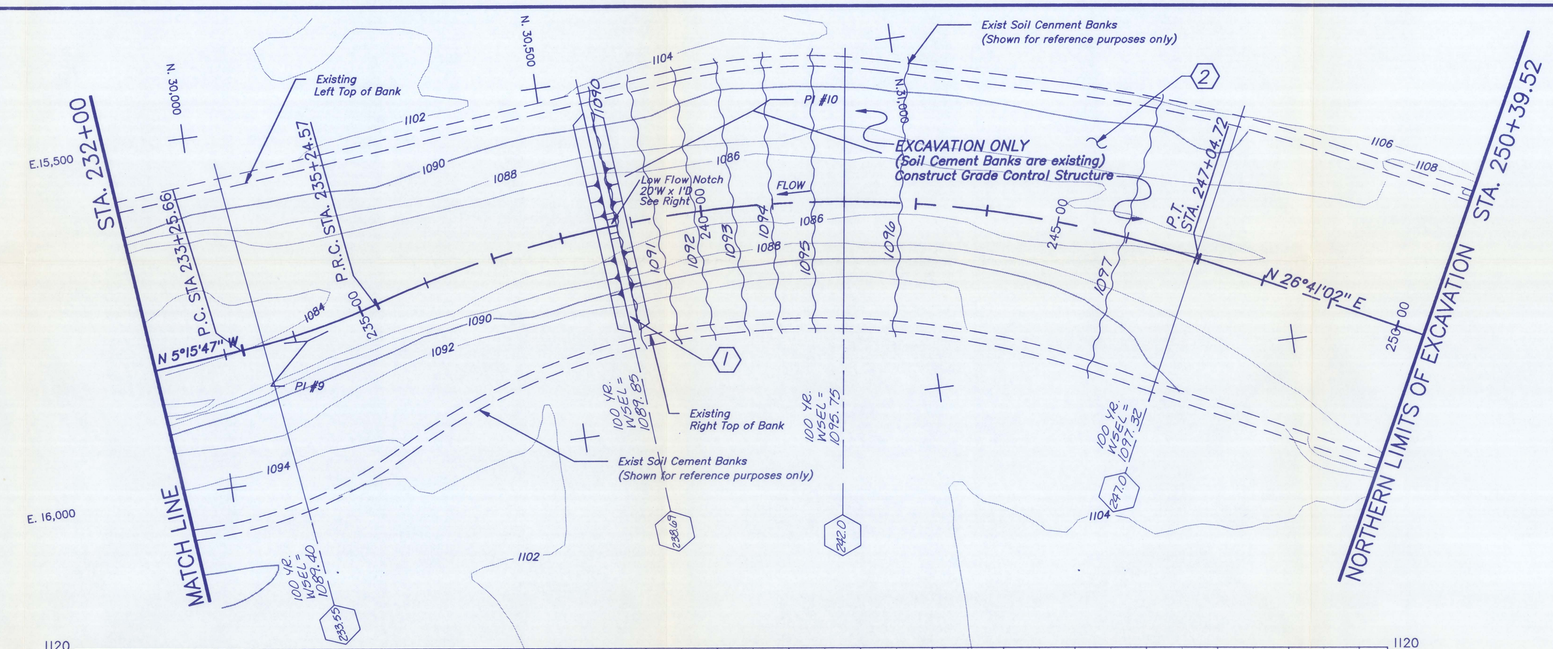
RECOMMENDED BY:
APPROVED BY: DATE:
CHIEF ENGINEER & GENERAL MANAGER:

SHEET ~~18 of 48~~

DESIGNED SWV/PWRH	DRAWN JBR	CHECKED PWRH
DATE 1/92	DATE 1/92	DATE 3/92

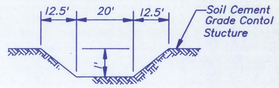
CVL# 1090-06

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.

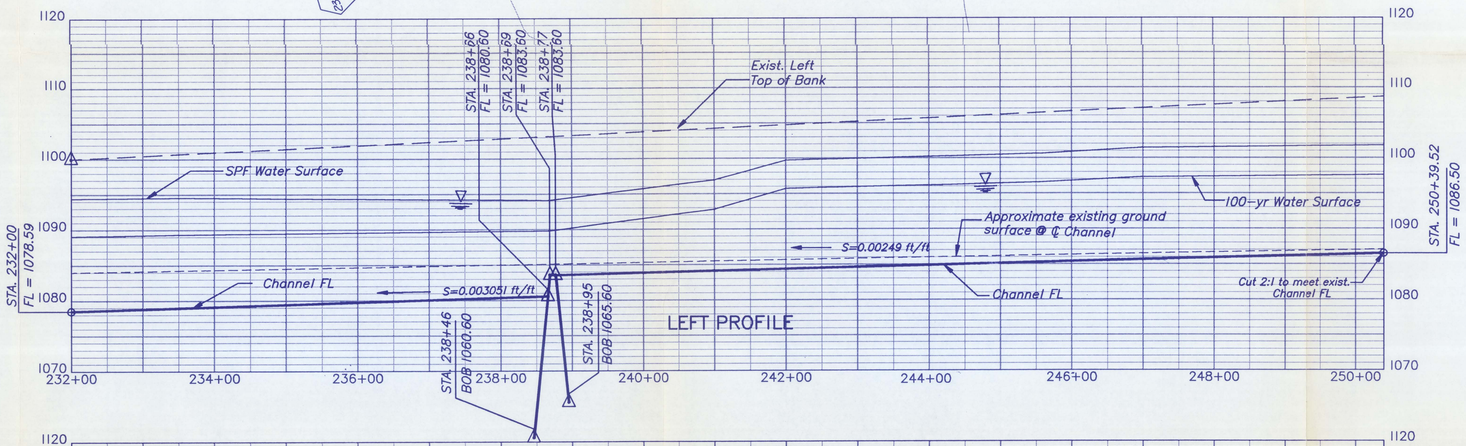


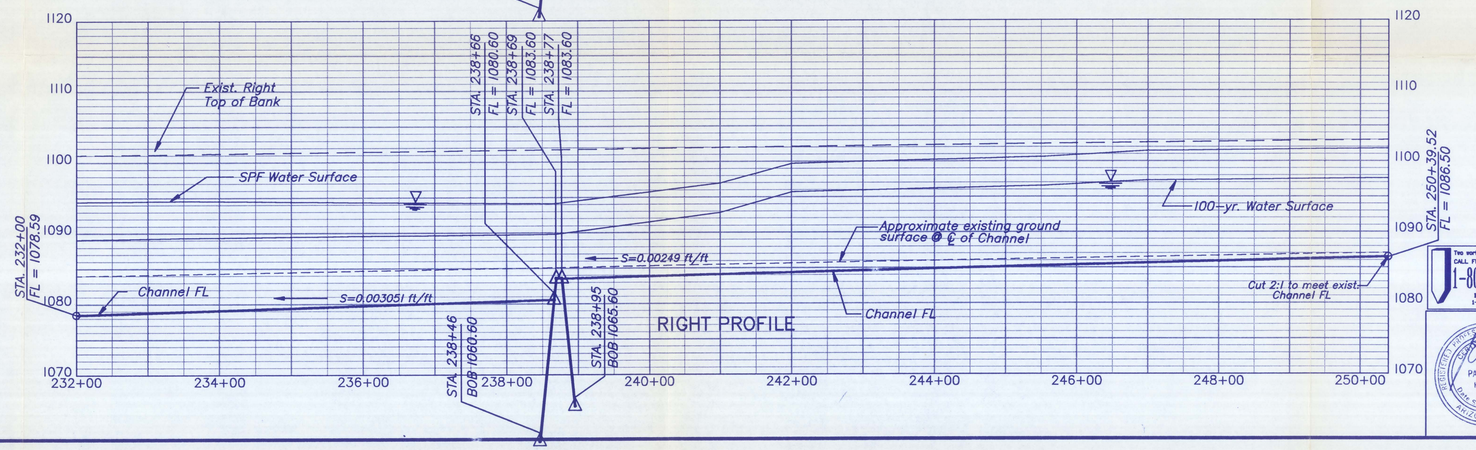
CONSTRUCTION NOTES

1. STA. 238+89
   Construct Grade Control Structure per detail, sheet 8.
2. North of Olive Ave., Construction entails earthwork excavation only. Soil Cement Banks are existing.



LOW FLOW NOTCH
NTS





CONTOUR INTERVAL: 2 FEET

Topographic Mapping by Kenney Aerial Mapping, Inc.
Flown August, 1991

FLOODPLAIN DELINEATION FOR C.L.O.M.R.

HORIZ. SCALE: 1 IN. = 100 FT.
100 0 100 200

SEP 28 1992

VERT. SCALE: 1 IN. = 10 FT.
10 0 10 20

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

REVISION BY				
NO.	DESCRIPTION	REV. BY	CKD. BY	DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

NEW RIVER CHANNELIZATION

PLAN / PROFILE STA. 232+00 to 250+39.52

BETHANY HOME ROAD TO OLIVE AVENUE

Two working days before you dig CALL FOR THE BLUE STAKES 1-800-STAKE-IT Blue Stake Center 1-800-782-5348

REGISTERED PROFESSIONAL ENGINEER PAUL W. HOFMAN ARIZONA, U.S.A.

RECOMMENDED BY:
APPROVED BY: DATE:
CHIEF ENGINEER & GENERAL MANAGER:

SHEET ~~19 of 48~~

DESIGNED SWV/PWRH	DRAWN JEA	CHECKED PWRH	CVL# 1090-06
DATE 1/92	DATE 1/92	DATE 1/92	

CVL COE & VAN LOO CONSULTING ENGINEERS, INC.