DRAINAGE STUDY FOR THE

TIMARRON WEST SUBDIVISION UNIT 5

MAY 25, 2000

BOHANNAN HUSTON

Courtyard One

7500 JEFFERSON NE

Albuquerque

NEW MEXICO 87109

voice 505.823.1000

fax 505.821.0892

PREPARED FOR:

CENTEX HOMES
BUILDING B
6700 JEFFERSON NE
ALBUQUERQUE, NEW MEXICO 87109

DRAINAGE STUDY
FOR THE
TIMARRON WEST SUBDIVISION
UNIT 5

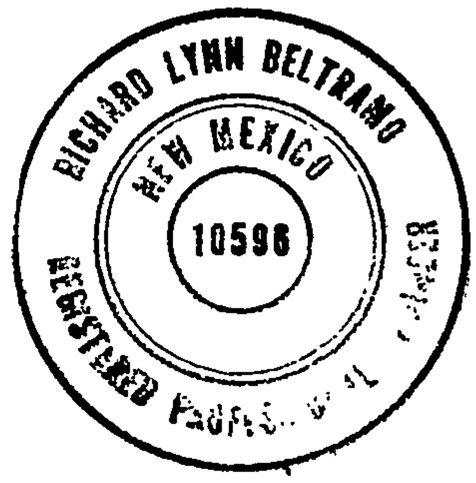
MAY 25, 2000

PREPARED BY:

BOHANNAN HUSTON, INC.
COURTYARD I
7500 JEFFERSON STREET N.E.
ALBUQUERQUE, NM 87109

PREPARED FOR:

CENTEX HOMES
BUILDING B
6700 JEFFERSON NE
ALBUQUERQUE, NM 87109



PREPARED BY:

Rick Beltramo, P.E. 5/25/00
Date

TABLE OF CONTENTS

I. INTRODUCTION

This Drainage Study will address the developed storm runoff and the necessary facilities to adequately convey the flow from the properties legally described as Tract 2, Lands of Grevey/Liberman and the Lutheran Church Property. This tract contains 63.0 acres are will be developed as Timarron West Units 4 and 5. Unit 5 is planned to contain 149 single-family homes on 26.3 acres.

Timarron West is located west of the Snow Vista Channel and north of DeVargas Road. Unit 5 is bounded to the north by Timarron West Unit 4 and to the east by Atrisco Village. The land to the west is undeveloped land called Tract 3, Lands of Grevey/Liberman. See vicinity map on the preliminary plat for location.

This study is necessary in order to obtain preliminary plat approval for the Timarron West Subdivision Unit 5. Prior to final plat and building permit approvals of this project, final grading plans and work order construction plans must be approved by the City of Albuquerque (CoA) and AMAFCA.

II. METHODOLOGY

Existing and proposed site hydrological conditions were analyzed for the 100-year, 6-hour storm in accordance with the revised Section 22.2, Hydrology, of the Development Process Manual (DPM) for the City of Albuquerque, dated January 1993. Street capacities were analyzed using Manning's equation, consistent with the revised DPM Section 22.2. All data and calculations supporting this study are located in **Appendix B.** The new rational method hydrologic procedures identified within the revised DPM Section 22.2 are utilized to determine peak flow rates for design of the storm drainage improvements within the projects. The 100-year, 6-hour storm is used as the design event. The results are included in **Appendix A.**

The storm sewer system internal to the subdivision is analyzed using current DPM methods for gravity flow conditions. Inlet capacity computations, along with all hydraulic computations, are included in **Appendix B**.

III. EXISTING CONDITIONS

Timarron West will be sited on undeveloped land that slopes west to east at approximately 3.5 percent. The existing basins to the west of Unit 5 are called Basin WN and Basin WS on the **Historic Conditions Off-site Basin Map** exhibit. Basin WN currently produces 15.6 cfs. The flow from this basin currently combines with undeveloped flow in Basin SN, the northern third of Unit 5, to produce 26 cfs. These combined basins currently drain into Cavett Street, through Atrisco Village, and into De Vargas Road. There are existing inlets in De Vargas Road at Cerrillos Road to accept the flow and convey it into Timarron West Unit 2. The **Atrisco Village Basin Map** shows the basins and the existing and proposed flows. The southern portion of Timarron West Unit 5 currently enters Atrisco Village at El Moro Lane. When Atrisco Village was built, there was no drainage report and no concern for offsite flow. Currently, 75 cfs enters the subdivision through El Moro Lane. Since there is no storm drain in the area, this 75 cfs currently flows in and floods the streets in Atrisco Village. This situation will be improved with the development of Timarron West Unit 5.

IV. LAND TREATMENTS

The minimum lot dimensions are 45' x 105'. The percent impervious was determined using the following formula from Table A-5 of the DPM, Section 22.2.

$$\text{percent "D"} = 7 * \sqrt{((N*N) + (5*N))}$$

where N = units/acre.

V. PROPOSED DEVELOPED CONDITIONS

The proposed development is a single-family, detached-unit residential subdivision with 149 lots on 26.3 acres, producing a density of 5.66 D.U. per acre. Proposed street configurations are shown on the Preliminary Plat. (See **Plate 1**). An AHYMO analysis, shown in **Appendix A,** was performed to determine the flows created by this subdivision and to model the ponds.

A detention/desiltation pond (Pond B) will be constructed on the west boundary of Unit 5 to detain and divert the offsite flow to one of two detention and desiltation ponds. Pond 'B' was designed to store

water as well as to convey it. It is 30' wide with 4:1 side slopes and a 10' bottom. The southern offsite basin and most of the southern two-thirds of Unit 5 will drain into Pond 'C' located at the south end of the subdivision. This pond will drain into El Moro Lane through a storm drain, which will daylight through a curb opening. The pond will release 2.3 cfs into El Moro Lane and store 2.4 acre-ft. The pond has one foot of freeboard and an additional 1.0 foot of retention to accommodate sedimentation. If the pond receives more than the 100-year flow, the water would exit through an emergency overflow weir and travel down Benevides Road. The freeboard and emergency overflow provide positive outfall and added protection for the Atrisco Village Subdivision. The second detention pond, Pond 'A', accommodates flow from the northern offsite basin. It has nearly one foot of freeboard and stores 0.3 acre-feet. This pond will drain 2 cfs into the existing pond west of Unit 4. The flow from these ponds combines with the flow from the northern third of Unit 5 and several basins in Unit 4. This flow will be routed through a detention/surge pond within Unit 4. This pond was designed to accept 23.3 cfs from Unit 5. The flow then travels through Units 4, 3, 2, and 1 to the Snow Vista Channel. The calculations for the storm drain, hydraulic grade line, street capacity, and pond design are in **Appendix B**.

A portion of Unit 5 is too low to drain into detention pond 'C'. The flow from Basins 3 and 6 will surface flow to El Moro Lane. Even though these basins discharge freely into El Moro Lane, the flow entering Atrisco Village will decrease significantly from existing conditions. Currently, 75.7 cfs enters El Moro Lane. When Timarron West Unit 5 is built, 26.6 cfs will be released. An analysis of the streets in Atrisco Village was completed as part of this report. Atrisco Village was built in the 1950's. Apparently, no accounting for off-site storm water was made and therefore no storm drain facilities were provided. The only existing storm drain in the area was built to protect the Carlos Rey Elementary School and conveys the flow into the park/pond facility to the south. The **Atrisco Village Basin Map** shows the existing and proposed flow rates and the street slopes. The street capacity calculations and the inlet capacities are included in **Appendix B.** The main area of concern is intersection of Apodaca and Delgado just west of the elementary school. There are two type 'C' inlets at this intersection to intercept runoff. At worst case, if the water does not completely turn the corner onto Delgado, it may overtop the curb and sidewalk and enter the school site. The latest grading plan for the school shows an existing swale and inlet intended to divert the flow around the school building and into the pond/park. Based on a very approximate analysis, it is estimated that approximately 2 cfs overtops the curb and escapes the public right-of-way (see analysis in **Appendix B**). Flooding, if it should occur, is minimal. The existing swale and storm drain will adequately keep the storm water from the existing building. The ultimate impact

due to the planned development reduces runoff at this critical location by approximately 50 cfs, greatly improving the conditions.

In the future, when the land to the west of Timarron West is developed, the offsite detention ponds could be removed. These future developments would be required to divert the water south through storm drains or channels to the Amole Arroyo. Alternately, permanent detention ponds could be constructed functioning in a similar manner as the proposed temporary ponds. The exhibit titled **Future Conditions Off-Site Basin Map** illustrates the direction of the future flow.

VI. CONCLUSION

The development of Timarron West Unit 5 will result in an improvement in the drainage conditions for downstream areas. The flow rates entering the existing Atrisco Village Subdivision will decrease with the implementation of the detention ponds and storm drain system. Future developments have the option to use the established outfall or redirect runoff to the Amole Channel. This report includes a detailed study of the existing and proposed runoff, street capacities, and pond volumes. Attached are the preliminary plat, existing conditions basin map, proposed conditions basin map, and grading plan. This drainage plan maintains the overall drainage pattern and allows for safe management of storm runoff in the proposed development.

N

SCALE: 1" = 386'

(APPROX.)

BASIN N

29.0 cfs

BASIN 4

26.4cfs

BASIN 3

32.9 cfs

BASIN WN

15.6 cfs

BASIN SN

10.4 cfs

BASIN WS

43.5 cfs

BASIN 5S

32.0 cfs

BASIN BEN

CORPORATE LIMITS

DIVERSION DIKE

DIKE

BENAVIDES

DELGADO DRIVE

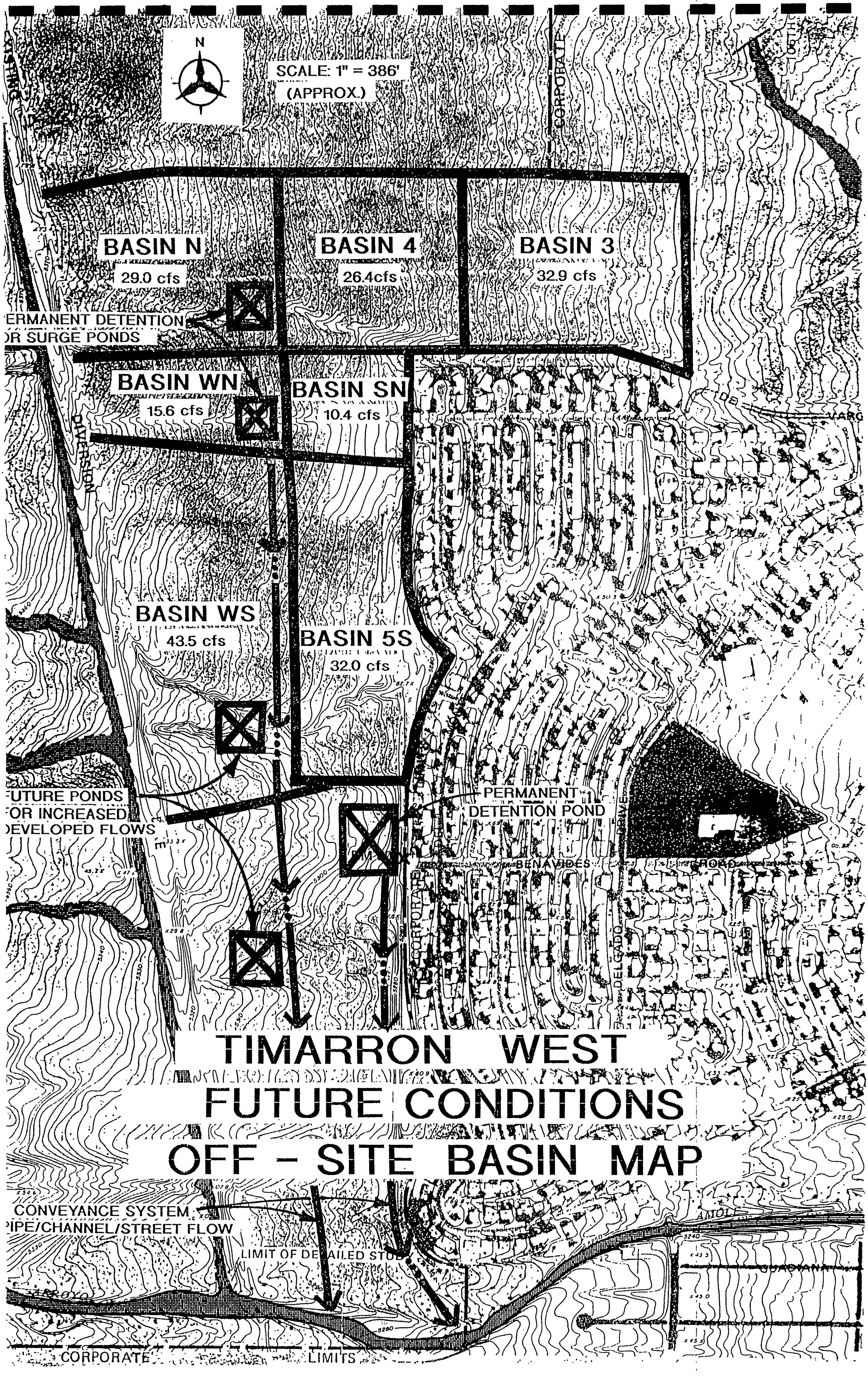
GUADALUPE

LIMIT OF DETAILED STUDY

TIMARRON WEST

HISTORIC CONDITIONS

OFF - SITE BASIN MAP


N
SCALE: 1" = 386'
(APPROX.)
BASIN N
29.0 cfs
BASIN 4
26.4cfs
BASIN 3
32.9 cfs
ERMANENT DETENTION
OR SURGE PONDS
BASIN WN
15.6 cfs
BASIN SN
10.4 cfs
BASIN WS
43.5 cfs
BASIN 5S
32.0 cfs
UTURE PONDS
OR INCREASED
EVELOPED FLOWS
PERMANENT
DETENTION POND
CORPORATE
BENAVIDES
ROAD
DELGADO
DRIVE
TIMARRON WEST
FUTURE CONDITIONS
OFF - SITE BASIN MAP
CONVEYANCE SYSTEM
IPE/CHANNEL/STREET FLOW
LIMIT OF DETAILED STUDY
CORPORATE
LIMITS
AMOLE

APPENDICES

APPENDIX A - AHYMO INPUT, OUTPUT AND SUMMARY FILES CONDITIONS

APPENDIX B - STREET FLOW, INLET, & STORM DRAIN CALCULATIONS

APPENDIX C - INFRASTRUCTURE LIST

APPENDIX A

AHYMO INPUT, OUTPUT AND SUMMARY FILES CONDITIONS

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/22/2000
INPUT FILE = U5.TXT USER NO.= BOHN_HNM.STE

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.		TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
*S TIMARRON WEST UNIT 5 SITE FLOW												
START											TIME=	.00
RAINFALL TYPE= 1											RAIN6=	2.200
*S GOES INTO SURGE POND IN UNIT 4												
COMPUTE NM HYD	U4	-		1	.01160	23.47	.815	1.31698	1.500	3.161	PER IMP=	50.00
COMPUTE NM HYD	2.00	-		2	.00340	6.89	.239	1.31698	1.500	3.165	PER IMP=	50.00
COMPUTE NM HYD	3.00	-		3	.00570	11.54	.400	1.31698	1.500	3.163	PER IMP=	50.00
COMPUTE NM HYD	4.00	-		4	.00360	7.29	.253	1.31698	1.500	3.165	PER IMP=	50.00
COMPUTE NM HYD	5.00	-		5	.00370	7.49	.260	1.31698	1.500	3.165	PER IMP=	50.00
*S BYPASS PONDS INTO EL MORO												
COMPUTE NM HYD	6.00	-		6	.00680	13.76	.478	1.31698	1.500	3.162	PER IMP=	50.00
COMPUTE NM HYD	7.00	-		7	.00390	7.90	.274	1.31698	1.500	3.164	PER IMP=	50.00
COMPUTE NM HYD	8.00	-		8	.00360	7.29	.253	1.31698	1.500	3.165	PER IMP=	50.00
*S ADD BASINS INTO STORM DRAIN TO SOUTH POND												
ADD HYD	24.00	2&	4	20	.00700	14.18	.492	1.31690	1.500	3.165		
ADD HYD	245.00	20&	5	21	.01070	21.68	.752	1.31690	1.500	3.165		
ADD HYD	2457.00	21&	7	23	.01460	29.57	1.025	1.31690	1.500	3.165		
ADD HYD	U5	23&	8	25	.01820	36.87	1.278	1.31690	1.500	3.165		
*S OFFSITE FLOW INTO SOUTH POND												
COMPUTE NM HYD	WS	-		27	.04200	43.54	1.213	.54156	1.500	1.620	PER IMP=	.00
COMPUTE NM HYD	BEN	-		28	.00950	9.85	.274	.54156	1.500	1.621	PER IMP=	.00
*S******ROUTE THROUGH WESTERN DETENTION/CHANNEL POND												
ROUTE RESERVOIR	WPOND	27		10	.04200	15.95	1.213	.54156	1.750	.593	AC-FT=	.592
*S ADD IN UNIT 5 FLOW TO POND												
ADD HYD	WS5S	10&25		30	.06020	45.33	2.491	.77595	1.550	1.177		
*S ADD IN BENAVIDES OFFSITE FLOW TO POND												
ADD HYD	S	30&28		31	.06970	54.98	2.766	.74400	1.500	1.233		
*S******ROUTE THROUGH SOUTHERN DETENTION POND												
ROUTE RESERVOIR	SPOND	31		12	.06970	2.32	2.764	.74362	3.000	.052	AC-FT=	2.362
ADD HYD	WS	12&	6	27	.07650	15.10	3.242	.79458	1.500	.309		
ADD HYD	ELMORO	27&	3	29	.08220	26.64	3.642	.83080	1.500	.506		
*S***** ATRISCO VILLAGE ANALYSIS **********												
COMPUTE NM HYD	AT1	-		1	.01786	36.12	1.254	1.31698	1.500	3.160	PER IMP=	50.00
COMPUTE NM HYD	AT2	-		2	.01290	26.09	.906	1.31698	1.500	3.161	PER IMP=	50.00
COMPUTE NM HYD	AT3	-		3	.01194	24.15	.839	1.31698	1.500	3.161	PER IMP=	50.00
COMPUTE NM HYD	AT4	-		4	.01320	26.70	.927	1.31698	1.500	3.161	PER IMP=	50.00
COMPUTE NM HYD	AT5	-		5	.02100	42.47	1.475	1.31698	1.500	3.160	PER IMP=	50.00
ADD HYD	AT1	29&	1	30	.10006	62.77	4.897	.91758	1.500	.980		
ADD HYD	AT2	30&	2	31	.11296	88.86	5.803	.96319	1.500	1.229		
ADD HYD	AT3	31&	3	32	.12490	113.01	6.641	.99701	1.500	1.414		
DIVIDE HYD	PIPE	32		33	.09266	27.60	4.927	.99701	1.350	.465		
	ST	AND		34	.03224	85.41	1.714	.99701	1.500	4.140		
DIVIDE HYD	PIPE2	5		40	.01573	17.60	1.105	1.31697	1.400	1.748		
	ST2	AND		41	.00527	24.87	.370	1.31697	1.500	7.378		
ADD HYD	AT5	34&41		35	.03750	110.29	2.084	1.04194	1.500	4.595		
ADD HYD	AT4	4&35		36	.05070	136.99	3.011	1.11354	1.500	4.221		
FINISH												

A-1

```
*
*S TIMARRON WEST UNIT 5 SITE FLOW
START              RAINFALL BEGINS AT 0.00 HOURS
*                    100 YEAR RETURN PERIOD
*************************************************************************
*
*      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
*      ::                          MISC. DATA                          ::
*      ::        RAINFALL RETURN PERIOD_____________  100-YEAR       ::
*      ::        RAINFALL DURATION__________________  6-HOUR             ::
*      ::       ZONE 1                                          ::
*      ::        RAINFALL DEPTHS: 1 HOUR (P60)___  1.87 INCHES       ::
*      ::        (UNADJUSTED)     6 HOUR (P360)__  2.20 INCHES       ::
*      ::                        24 HOUR (P1440)_  2.68 INCHES       ::
*      ::                                                            ::
*      ::        RAINFALL DATA TAKEN FROM NOAA.                      ::
*      ::                                                            ::
*      ::              HYDROGRAPH METHODOLOGY                        ::
*      ::                                                            ::
*      ::        CITY OF ALBQ. DPM VOL. 2, SECTION 22.2 July, 1997   ::
*      ::        INITIAL ABSTRACTION - INFILTRATION METHOD           ::
*      ::        Tc CALCULATIONS PER C.O.A. DPM 22.2-B.4             ::
*      ::        AMAFCA AHYMO VERSION MARCH 20,1992                  ::
*      ::                                                            ::
*      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
*                            BEGIN  ANALYSIS
*************************************************************************
*
RAINFALL              TYPE=1 RAIN QUARTER=0.0 RAIN ONE=1.87
                      RAIN SIX=2.20 RAIN DAY=2.68 DT=0.05
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 1  *********
*S GOES INTO SURGE POND IN UNIT 4
COMPUTE NM HYD        ID=1 HYD=U4  AREA=0.0116 PER A=0.0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=1   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 2 *********
COMPUTE NM HYD        ID=2 HYD=2  AREA=0.0034 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=2   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 3 *********
COMPUTE NM HYD        ID=3 HYD=3  AREA=0.0057 PER A=0.0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=3   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 4 *********
COMPUTE NM HYD        ID=4 HYD=4  AREA=0.0036 PER A=0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=4   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 5 *********
COMPUTE NM HYD        ID=5 HYD=5  AREA=0.0037 PER A=0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=5   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 6 *********
*S BYPASS PONDS INTO EL MORO
COMPUTE NM HYD        ID=6 HYD=6  AREA=0.0068 PER A=0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=6   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 7 *********
COMPUTE NM HYD        ID=7 HYD=7  AREA=0.0039 PER A=0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD               ID=5   CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN 8 *********
COMPUTE NM HYD        ID=8 HYD=8  AREA=0.0036 PER A=0 PER B=50
                     PER C=0 PER D=50  TP=.133  RAINFALL=-1
```

```
PRINT HYD              ID=8    CODE=1
*
**********************************************************************
*S ADD BASINS INTO STORM DRAIN TO SOUTH POND
**********************************************************************
ADD HYD                ID=20  HYD=24   IDI=2   IDII=4
PRINT HYD              ID=20    CODE=1
*
ADD HYD                ID=21  HYD=245 IDI=20   IDII=5
PRINT HYD              ID=21    CODE=1
*
ADD HYD                ID=23  HYD=2457        IDI=21  IDII=7
PRINT HYD              ID=23    CODE=1
*
ADD HYD                ID=25  HYD=U5    IDI=23  IDII=8
PRINT HYD              ID=25    CODE=1
*
*S OFFSITE FLOW INTO SOUTH POND
**********************************************************************
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN WS UNDEVELOPED*********
COMPUTE NM HYD        ID=27 HYD=WS   AREA=0.042 PER A=50 PER B=50
                     PER C=0 PER D=0   TP=.133   RAINFALL=-1
PRINT HYD              ID=27    CODE=1
*
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN BEN UNDEVELOPED*********
COMPUTE NM HYD        ID=28 HYD=BEN   AREA=0.0095 PER A=50 PER B=50
                     PER C=0 PER D=0   TP=.133   RAINFALL=-1
PRINT HYD              ID=28    CODE=1
*
*DETERMINATION OF WESTERN POND:
*S******ROUTE THROUGH WESTERN DETENTION POND
ROUTE RESERVOIR      ID=10 HYD=WPOND INFLOW ID=27   CODE=1
                     OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
                0       0        6
                15.12668245     0.488596578     7
                19.54798178     1.04822666      7.67
*
PRINT HYD            ID=10       CODE=20
*
*S ADD IN UNIT 5 FLOW TO POND
ADD HYD                ID=30  HYD=WS5S         IDI=10  IDII=25
PRINT HYD              ID=30    CODE=1
*
*S ADD IN BENAVIDES OFFSITE FLOW TO POND
ADD HYD                ID=31  HYD=S    IDI=30  IDII=28
PRINT HYD              ID=31    CODE=1
*
*DETERMINATION OF SOUTHERN POND:
*S******ROUTE THROUGH SOUTHERN DETENTION POND
ROUTE RESERVOIR      ID=12 HYD=SPOND INFLOW ID=31   CODE=1
                     OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
                0       0        78
                0.945417653     0.178458555     79
                1.337022467     0.467898771     80
                1.637511409     0.824667236     81
                1.890835306     1.252555603     82
                2.114018139     1.755756692     83
                2.315790844     2.338656162     84
                2.501339995     3.0135943       85
*
PRINT HYD            ID=12       CODE=20
*
ADD HYD                ID=27  HYD=WS   IDI=12   IDII=6
PRINT HYD              ID=27    CODE=1
*
ADD HYD                ID=29  HYD=ELMORO       IDI=27  IDII=3
PRINT HYD              ID=29    CODE=1
*
```

```
**************************************************************
*S***** ATRISCO VILLAGE ANALYSIS ************************
**************************************************************
**** COMPUTE AND PRINT NM HYD DATA FOR BASIN O-2B *********
COMPUTE NM HYD       ID=2 HYD=AT1  AREA=0.01786 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD             ID=2   CODE=1
*
COMPUTE NM HYD       ID=3 HYD=AT2  AREA=0.0129 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD             ID=3   CODE=1
*
COMPUTE NM HYD       ID=4 HYD=AT3  AREA=0.01194 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD             ID=4   CODE=1
*
COMPUTE NM HYD       ID=5 HYD=AT4  AREA=0.0132 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD             ID=4   CODE=1
*
COMPUTE NM HYD       ID=6 HYD=AT5  AREA=0.0177 PER A=0 PER B=50
                    PER C=0 PER D=50  TP=.133  RAINFALL=-1
PRINT HYD             ID=6   CODE=1
*
ADD HYD               ID=30  HYD=AT1        IDI=29  IDII=2
PRINT HYD             ID=30    CODE=1
*
ADD HYD               ID=31  HYD=AT2        IDI=30  IDII=3
PRINT HYD             ID=31    CODE=1
*
ADD HYD               ID=32  HYD=AT3        IDI=31  IDII=4
PRINT HYD             ID=32   CODE=1
*
ADD HYD               ID=33  HYD=AT4        IDI=32  IDII=5
PRINT HYD             ID=33   CODE=1
*
FINISH
```

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 . RUN DATE (MON/DAY/YR) =05/18/2000
INPUT FILE = U4.TXT USER NO.= BOHN_HNM.STE

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S TIMARRON WEST UNIT 4 SITE FLOW										
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.200
*S GOES INTO SURGE POND IN UNIT 4 FROM UNIT 5										
COMPUTE NM HYD	U5	-	1	.01150	23.27	.808	1.31698	1.500	3.161	PER IMP= 50.00
COMPUTE NM HYD	A	-	2	.00273	5.53	.192	1.31698	1.500	3.167	PER IMP= 50.00
COMPUTE NM HYD	B1	-	3	.00498	10.07	.349	1.31698	1.500	3.163	PER IMP= 50.00
COMPUTE NM HYD	C	-	4	.00198	4.02	.139	1.31698	1.500	3.170	PER IMP= 50.00
COMPUTE NM HYD	D1	-	5	.00160	3.25	.112	1.31698	1.500	3.173	PER IMP= 50.00
COMPUTE NM HYD	E	-	6	.00320	6.48	.225	1.31698	1.500	3.166	PER IMP= 50.00
COMPUTE NM HYD	F1	-	7	.00136	2.76	.096	1.31698	1.500	3.175	PER IMP= 50.00
COMPUTE NM HYD	G1	-	8	.00160	3.25	.112	1.31698	1.500	3.173	PER IMP= 50.00
COMPUTE NM HYD	H	-	9	.00440	8.91	.309	1.31698	1.500	3.164	PER IMP= 50.00
COMPUTE NM HYD	I1	-	10	.00170	3.45	.119	1.31698	1.500	3.173	PER IMP= 50.00
COMPUTE NM HYD	J	-	11	.00320	6.48	.225	1.31698	1.500	3.166	PER IMP= 50.00
COMPUTE NM HYD	K	-	12	.00130	2.64	.091	1.31698	1.500	3.176	PER IMP= 50.00
COMPUTE NM HYD	L	-	13	.00160	3.25	.112	1.31698	1.500	3.173	PER IMP= 50.00
COMPUTE NM HYD	OFFN	-	14	.02800	29.03	.809	.54156	1.500	1.620	PER IMP= .00
COMPUTE NM HYD	OFF5	-	15	.01500	15.56	.433	.54156	1.500	1.620	PER IMP= .00
COMPUTE NM HYD	B2	-	16	.00150	3.05	.105	1.31698	1.500	3.175	PER IMP= 50.00
COMPUTE NM HYD	D2	-	17	.00310	6.28	.218	1.31698	1.500	3.166	PER IMP= 50.00
COMPUTE NM HYD	G2	-	18	.00310	6.28	.218	1.31698	1.500	3.166	PER IMP= 50.00
COMPUTE NM HYD	I2	-	19	.00340	6.89	.239	1.31698	1.500	3.165	PER IMP= 50.00
COMPUTE NM HYD	F2	-	50	.00168	3.41	.118	1.31698	1.500	3.173	PER IMP= 50.00
COMPUTE NM HYD	F3	-	51	.00200	4.06	.140	1.31698	1.500	3.170	PER IMP= 50.00
COMPUTE NM HYD	F4	-	52	.00190	3.86	.133	1.31698	1.500	3.170	PER IMP= 50.00
COMPUTE NM HYD	114.00	-	53	.00210	5.79	.220	1.96760	1.500	4.305	PER IMP= 100.00
COMPUTE NM HYD	DV1	-	54	.00190	5.24	.199	1.96760	1.500	4.305	PER IMP= 100.00
COMPUTE NM HYD	DV2	-	55	.00480	13.22	.504	1.96760	1.500	4.302	PER IMP= 100.00
COMPUTE NM HYD	PND	-	56	.00202	1.67	.047	.43936	1.500	1.293	PER IMP= .00
COMPUTE NM HYD	L2	-	57	.00433	8.77	.304	1.31698	1.500	3.164	PER IMP= 50.00
COMPUTE NM HYD	OPEN	-	58	.00125	1.04	.029	.43936	1.500	1.296	PER IMP= .00
ADD HYD	114O	14&53	25	.03010	34.82	1.029	.64104	1.500	1.807	
*S******ROUTE THROUGH OFFSITE POND WEST OF UNIT 5										
ROUTE RESERVOIR	POND5	15	22	.01500	1.95	.433	.54155	1.900	.203	AC-FT= .311
ADD HYD	COMBO	22&25	26	.04510	35.55	1.462	.60789	1.500	1.232	
*S******ROUTE THROUGH OFFSITE POND WEST OF UNIT 4										
ROUTE RESERVOIR	POND4	26	23	.04510	2.12	1.459	.60647	2.800	.073	AC-FT= .983
ADD HYD	OFFA	23& 2	24	.04783	6.27	1.650	.64701	1.500	.205	
ADD HYD	OAC	24& 4	21	.04981	10.28	1.790	.67364	1.500	.323	
ADD HYD	B12	3&16	22	.00648	13.12	.455	1.31689	1.500	3.166	
ADD HYD	BOAC	22&21	23	.05629	23.40	2.244	.74764	1.500	.650	
ADD HYD	5DEV	1&54	24	.01340	28.50	1.007	1.40919	1.500	3.323	
ADD HYD	5BOAC	24&23	25	.06969	51.90	3.251	.87485	1.500	1.164	
ADD HYD	POND	25&56	26	.07171	53.58	3.299	.86258	1.500	1.167	

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S DETERMINATION OF SURGE POND:										
ROUTE RESERVOIR	POND	26	27	.07171	1.60	2.953	.77224	6.700	.035	AC-FT= 2.024
ADD HYD	PE	27& 6	30	.07491	7.28	3.178	.79551	1.500	.152	
ADD HYD	PED2	30&17	31	.07801	13.56	3.396	.81623	1.500	.272	
ADD HYD	GH	18& 9	33	.00750	15.19	.527	1.31690	1.500	3.165	
ADD HYD	PEDGH	33&31	34	.08551	28.75	3.922	.86014	1.500	.525	
ADD HYD	IJ	19&11	35	.00660	13.37	.464	1.31689	1.500	3.166	
ADD HYD	IJL2	35&57	37	.01093	22.14	.768	1.31690	1.500	3.165	
ADD HYD	EDGHIJL	37&34	39	.09644	50.89	4.690	.91191	1.500	.825	
ADD HYD	FD1	7& 5	42	.00296	6.01	.208	1.31678	1.500	3.174	
ADD HYD	BFDF2	42&50	44	.00464	9.42	.326	1.31680	1.500	3.173	
ADD HYD	BF2DG	44& 8	45	.00624	12.67	.438	1.31679	1.500	3.173	
ADD HYD	BF3DG	45&51	47	.00824	16.73	.579	1.31680	1.500	3.172	
ADD HYD	BFDGI	47&10	49	.00994	20.18	.698	1.31680	1.500	3.172	
ADD HYD	BFDGIK	49&52	60	.01184	24.04	.832	1.31680	1.500	3.172	
ADD HYD	NORTH	60&12	62	.01314	26.68	.923	1.31680	1.500	3.172	
ADD HYD	NL1	62&13	63	.01474	29.93	1.035	1.31680	1.500	3.172	
ADD HYD	34.00	63&39	64	.11118	80.82	5.725	.96559	1.500	1.136	
ADD HYD	ALL	64&55	65	.11598	94.03	6.229	1.00706	1.500	1.267	
FINISH										

1-Mar-00
TIMARRON WEST UNITS 3,4, AND 5
Job # 99470
5/16/00

WEST OF UNIT 4

Elevation	Area ft^2	Avg Area ft^2	increment Vol ft^3	Cum Vol ft^3	Cum Vol ac-ft	H ft	Q cfs	d (ft)=	0.7
2	25783.9		0	0	0	0	0		
3	33735.1	29759.5	29759.5	29759.5	0.683181	1	1.85		
4	41866.2	37800.65	37800.65	67560.15	1.550962	2	2.62		

SURGE POND IN UNIT 4

Elevation	Area ft^2	Avg Area ft^2	increment Vol ft^3	Cum Vol ft^3	Cum Vol ac-ft	H ft	Q cfs	d (ft)=	0.5
87	26668.12		0	0	0	0	0		
88	29333.65	28000.885	28000.885	28000.89	0.642809	1	0.95		
89	32128.89	30731.27	30731.27	58732.16	1.348299	2	1.34		
90	35053.8	33591.345	33591.345	92323.5	2.119448	3	1.64		

SOUTH OF UNIT 5

Elevation	Area ft^2	Avg Area ft^2	increment Vol ft^3	Cum Vol ft^3	Cum Vol ac-ft	H ft	Q cfs	d (ft)=	0.5
78	4369.2		0	0	0	0	0		
79	11178.17	7773.685	7773.685	7773.685	0.178459	1	0.95		
80	14037.96	12608.065	12608.065	20381.75	0.467899	2	1.34		
81	17043.83	15540.895	15540.895	35922.65	0.824667	3	1.64		
82	20233.95	18638.89	18638.89	54561.54	1.252556	4	1.89		
83	23605.1	21919.525	21919.525	76481.06	1.755757	5	2.11		
84	27177.3	25391.2	25391.2	101872.3	2.338656	6	2.32		
85	31623.54	29400.42	29400.42	131272.7	3.013594	7	2.50		

NORTH WEST OF UNIT 5

Elevation	Area ft^2	Avg Area ft^2	increment Vol ft^3	Cum Vol ft^3	Cum Vol ac-ft	H ft	Q cfs	d (ft)=	0.7
5	10703.1		0	0	0	0	0		
6	12813.34	11758.22	11758.22	11758.22	0.269931	1	1.85		
7	15023	13918.17	13918.17	25676.39	0.589447	2	2.62		

WEST OF UNIT 5

Elevation	Area ft^2	Avg Area ft^2	increment Vol ft^3	Cum Vol ft^3	Cum Vol ac-ft	H ft	Q cfs	d (ft)=	2
6	10923		0	0	0	0	0		
7	31643.7	21283.35	21283.35	21283.35	0.488597	1	15.13		
7.67	41125.2	36384.45	24377.5815	45660.93	1.048227	1.67	19.55		

```
*
**********************************************************************
*DETERMINATION OF WESTERN POND OFFSITE OF UNIT 5 :
*S******ROUTE THROUGH OFFSITE POND WEST OF UNIT 5
ROUTE RESERVOIR     ID=22 HYD=POND5 INFLOW ID=15  CODE=1
                    OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
                         0       0       5
                         1.8530186       0.269930535     6
                         2.620564035     0.589446506     7

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

    TIME       INFLOW     ELEV       VOLUME     OUTFLOW
    (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      .00         .00       5.00        .000        .00
      .05         .00       5.00        .000        .00
      .10         .00       5.00        .000        .00
      .15         .00       5.00        .000        .00
      .20         .00       5.00        .000        .00
      .25         .00       5.00        .000        .00
      .30         .00       5.00        .000        .00
      .35         .00       5.00        .000        .00
      .40         .00       5.00        .000        .00
      .45         .00       5.00        .000        .00
      .50         .00       5.00        .000        .00
      .55         .00       5.00        .000        .00
      .60         .00       5.00        .000        .00
      .65         .00       5.00        .000        .00
      .70         .00       5.00        .000        .00
      .75         .00       5.00        .000        .00
      .80         .00       5.00        .000        .00
      .85         .00       5.00        .000        .00
      .90         .00       5.00        .000        .00
      .95         .00       5.00        .000        .00
     1.00         .00       5.00        .000        .00
     1.05         .00       5.00        .000        .00
     1.10         .00       5.00        .000        .00
     1.15         .00       5.00        .000        .00
     1.20         .00       5.00        .000        .00
     1.25         .00       5.00        .000        .00
     1.30         .00       5.00        .000        .00
     1.35         .96       5.01        .002        .01
     1.40        5.62       5.06        .015        .11
     1.45       12.14       5.19        .051        .35
     1.50       15.56       5.39        .106        .73
     1.55       14.95       5.61        .165       1.13
     1.60       12.30       5.80        .216       1.48
     1.65        9.34       5.94        .254       1.74
     1.70        6.82       6.03        .280       1.88
     1.75        4.89       6.08        .296       1.92
     1.80        3.48       6.11        .306       1.94
     1.85        2.51       6.13        .310       1.95
     1.90        1.92       6.13        .311       1.95
     1.95        1.59       6.13        .310       1.95
     2.00        1.39       6.12        .309       1.95
     2.05        1.23       6.11        .306       1.94
     2.10        1.09       6.10        .303       1.93
     2.15         .97       6.09        .299       1.92
     2.20         .87       6.08        .295       1.91
     2.25         .78       6.06        .290       1.90
     2.30         .69       6.05        .286       1.89
     2.35         .62       6.03        .281       1.88
     2.40         .55       6.02        .275       1.87
     2.45         .49       6.00        .270       1.85
     2.50         .44       5.98        .264       1.81
     2.55         .39       5.96        .258       1.77
     2.60         .35       5.94        .253       1.73
     2.65         .31       5.91        .247       1.70
     2.70         .28       5.89        .241       1.66
     2.75         .25       5.87        .236       1.62
```

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
2.80	.22	5.85	.230	1.58
2.85	.20	5.83	.224	1.54
2.90	.18	5.81	.219	1.50
2.95	.16	5.79	.213	1.47
3.00	.14	5.77	.208	1.43
3.05	.13	5.75	.203	1.39
3.10	.11	5.73	.198	1.36
3.15	.10	5.71	.193	1.32
3.20	.09	5.69	.188	1.29
3.25	.08	5.68	.183	1.25
3.30	.07	5.66	.178	1.22
3.35	.06	5.64	.173	1.19
3.40	.06	5.62	.169	1.16
3.45	.05	5.61	.164	1.13
3.50	.05	5.59	.160	1.10
3.55	.04	5.58	.155	1.07
3.60	.04	5.56	.151	1.04
3.65	.03	5.54	.147	1.01
3.70	.03	5.53	.143	.98
3.75	.03	5.52	.139	.96
3.80	.02	5.50	.135	.93
3.85	.02	5.49	.132	.90
3.90	.02	5.47	.128	.88
3.95	.02	5.46	.125	.86
4.00	.01	5.45	.121	.83
4.05	.01	5.44	.118	.81
4.10	.01	5.42	.115	.79
4.15	.01	5.41	.111	.77
4.20	.01	5.40	.108	.74
4.25	.01	5.39	.105	.72
4.30	.01	5.38	.102	.70
4.35	.01	5.37	.100	.68
4.40	.01	5.36	.097	.66
4.45	.00	5.35	.094	.65
4.50	.00	5.34	.092	.63
4.55	.00	5.33	.089	.61
4.60	.00	5.32	.087	.59
4.65	.00	5.31	.084	.58
4.70	.00	5.30	.082	.56
4.75	.00	5.29	.079	.55
4.80	.00	5.29	.077	.53
4.85	.00	5.28	.075	.52
4.90	.00	5.27	.073	.50
4.95	.00	5.26	.071	.49
5.00	.00	5.26	.069	.47
5.05	.00	5.25	.067	.46
5.10	.00	5.24	.065	.45
5.15	.00	5.23	.063	.43
5.20	.00	5.23	.062	.42
5.25	.00	5.22	.060	.41
5.30	.00	5.22	.058	.40
5.35	.00	5.21	.057	.39
5.40	.00	5.20	.055	.38
5.45	.00	5.20	.053	.37
5.50	.00	5.19	.052	.36
5.55	.00	5.19	.050	.35

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	.00	5.18	.049	.34
5.65	.00	5.18	.048	.33
5.70	.00	5.17	.046	.32
5.75	.00	5.17	.045	.31
5.80	.00	5.16	.044	.30
5.85	.00	5.16	.043	.29
5.90	.00	5.15	.041	.28

5.95	.00	5.15	.040	.28
6.00	.00	5.14	.039	.27
6.05	.00	5.14	.038	.26
6.10	.00	5.14	.037	.25
6.15	.00	5.13	.036	.25
6.20	.00	5.13	.035	.24
6.25	.00	5.13	.034	.23
6.30	.00	5.12	.033	.23
6.35	.00	5.12	.032	.22
6.40	.00	5.12	.031	.21
6.45	.00	5.11	.030	.21
6.50	.00	5.11	.029	.20
6.55	.00	5.11	.029	.20
6.60	.00	5.10	.028	.19
6.65	.00	5.10	.027	.19
6.70	.00	5.10	.026	.18
6.75	.00	5.09	.026	.18
6.80	.00	5.09	.025	.17
6.85	.00	5.09	.024	.17
6.90	.00	5.09	.023	.16
6.95	.00	5.08	.023	.16
7.00	.00	5.08	.022	.15
7.05	.00	5.08	.022	.15
7.10	.00	5.08	.021	.14
7.15	.00	5.08	.020	.14
7.20	.00	5.07	.020	.14
7.25	.00	5.07	.019	.13
7.30	.00	5.07	.019	.13
7.35	.00	5.07	.018	.12
7.40	.00	5.07	.018	.12
7.45	.00	5.06	.017	.12
7.50	.00	5.06	.017	.11
7.55	.00	5.06	.016	.11
7.60	.00	5.06	.016	.11
7.65	.00	5.06	.015	.11
7.70	.00	5.06	.015	.10
7.75	.00	5.05	.014	.10
7.80	.00	5.05	.014	.10
7.85	.00	5.05	.014	.09
7.90	.00	5.05	.013	.09
7.95	.00	5.05	.013	.09
8.00	.00	5.05	.013	.09
8.05	.00	5.05	.012	.08
8.10	.00	5.04	.012	.08
8.15	.00	5.04	.012	.08
8.20	.00	5.04	.011	.08
8.25	.00	5.04	.011	.07
8.30	.00	5.04	.011	.07
8.35	.00	5.04	.010	.07

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	.00	5.04	.010	.07
8.45	.00	5.04	.010	.07
8.50	.00	5.04	.009	.06
8.55	.00	5.03	.009	.06
8.60	.00	5.03	.009	.06
8.65	.00	5.03	.009	.06
8.70	.00	5.03	.008	.06
8.75	.00	5.03	.008	.06
8.80	.00	5.03	.008	.05
8.85	.00	5.03	.008	.05
8.90	.00	5.03	.008	.05
8.95	.00	5.03	.007	.05
9.00	.00	5.03	.007	.05
9.05	.00	5.03	.007	.05
9.10	.00	5.02	.007	.05
9.15	.00	5.02	.007	.04
9.20	.00	5.02	.006	.04
9.25	.00	5.02	.006	.04

9.30	.00	5.02	.006	.04
9.35	.00	5.02	.006	.04
9.40	.00	5.02	.006	.04
9.45	.00	5.02	.006	.04
9.50	.00	5.02	.005	.04
9.55	.00	5.02	.005	.04
9.60	.00	5.02	.005	.03
9.65	.00	5.02	.005	.03
9.70	.00	5.02	.005	.03
9.75	.00	5.02	.005	.03
9.80	.00	5.02	.005	.03
9.85	.00	5.02	.004	.03
9.90	.00	5.02	.004	.03
9.95	.00	5.02	.004	.03
10.00	.00	5.01	.004	.03
10.05	.00	5.01	.004	.03
10.10	.00	5.01	.004	.03
10.15	.00	5.01	.004	.03
10.20	.00	5.01	.004	.02
10.25	.00	5.01	.004	.02
10.30	.00	5.01	.003	.02
10.35	.00	5.01	.003	.02
10.40	.00	5.01	.003	.02
10.45	.00	5.01	.003	.02
10.50	.00	5.01	.003	.02
10.55	.00	5.01	.003	.02
10.60	.00	5.01	.003	.02
10.65	.00	5.01	.003	.02
10.70	.00	5.01	.003	.02
10.75	.00	5.01	.003	.02
10.80	.00	5.01	.003	.02
10.85	.00	5.01	.002	.02
10.90	.00	5.01	.002	.02
10.95	.00	5.01	.002	.02
11.00	.00	5.01	.002	.02
11.05	.00	5.01	.002	.02
11.10	.00	5.01	.002	.01
11.15	.00	5.01	.002	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.00	5.01	.002	.01
11.25	.00	5.01	.002	.01
11.30	.00	5.01	.002	.01
11.35	.00	5.01	.002	.01
11.40	.00	5.01	.002	.01
11.45	.00	5.01	.002	.01
11.50	.00	5.01	.002	.01
11.55	.00	5.01	.002	.01
11.60	.00	5.01	.002	.01
11.65	.00	5.01	.002	.01
11.70	.00	5.01	.002	.01
11.75	.00	5.01	.001	.01
11.80	.00	5.01	.001	.01
11.85	.00	5.01	.001	.01
11.90	.00	5.01	.001	.01
11.95	.00	5.00	.001	.01
12.00	.00	5.00	.001	.01
12.05	.00	5.00	.001	.01
12.10	.00	5.00	.001	.01
12.15	.00	5.00	.001	.01
12.20	.00	5.00	.001	.01
12.25	.00	5.00	.001	.01
12.30	.00	5.00	.001	.01
12.35	.00	5.00	.001	.01
12.40	.00	5.00	.001	.01
12.45	.00	5.00	.001	.01
12.50	.00	5.00	.001	.01
12.55	.00	5.00	.001	.01
12.60	.00	5.00	.001	.01

12.65	.00	5.00	.001	.01
12.70	.00	5.00	.001	.01
12.75	.00	5.00	.001	.01
12.80	.00	5.00	.001	.01
12.85	.00	5.00	.001	.01
12.90	.00	5.00	.001	.01
12.95	.00	5.00	.001	.01
13.00	.00	5.00	.001	.01
13.05	.00	5.00	.001	.00

PEAK DISCHARGE = 1.952 CFS - PEAK OCCURS AT HOUR 1.90
MAXIMUM WATER SURFACE ELEVATION = 6.129
MAXIMUM STORAGE = .3112 AC-FT INCREMENTAL TIME= .050000HRS

*DETERMINATION OF WESTERN POND OFFSITE OF UNIT 4 :
*S******ROUTE THROUGH OFFSITE POND WEST OF UNIT 4
ROUTE RESERVOIR ID=23 HYD=POND4 INFLOW ID=26 CODE=1

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0	0	2
1.8530186	0.683181448	3
2.620564035	1.550961578	4

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

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	2.00	.000	.00
.05	.00	2.00	.000	.00
.10	.00	2.00	.000	.00
.15	.00	2.00	.000	.00
.20	.00	2.00	.000	.00
.25	.00	2.00	.000	.00
.30	.00	2.00	.000	.00
.35	.00	2.00	.000	.00
.40	.00	2.00	.000	.00
.45	.00	2.00	.000	.00
.50	.00	2.00	.000	.00
.55	.00	2.00	.000	.00
.60	.00	2.00	.000	.00
.65	.00	2.00	.000	.00
.70	.00	2.00	.000	.00
.75	.00	2.00	.000	.00
.80	.00	2.00	.000	.00
.85	.00	2.00	.000	.00
.90	.00	2.00	.000	.00
.95	.00	2.00	.000	.00
1.00	.00	2.00	.000	.00
1.05	.00	2.00	.000	.00
1.10	.00	2.00	.000	.00
1.15	.02	2.00	.000	.00
1.20	.16	2.00	.000	.00
1.25	.61	2.00	.002	.01
1.30	1.35	2.01	.006	.02
1.35	4.17	2.03	.017	.05
1.40	14.26	2.08	.055	.15
1.45	28.15	2.21	.141	.38
1.50	35.55	2.40	.271	.73
1.55	34.07	2.60	.411	1.11
1.60	28.33	2.78	.534	1.45
1.65	22.25	2.93	.632	1.72
1.70	17.21	3.03	.706	1.87
1.75	13.34	3.09	.762	1.92
1.80	10.52	3.14	.803	1.96
1.85	8.51	3.17	.834	1.99
1.90	7.25	3.20	.859	2.01
1.95	6.50	3.23	.879	2.03
2.00	5.97	3.25	.896	2.04
2.05	5.52	3.26	.911	2.05
2.10	4.97	3.28	.924	2.07
2.15	4.44	3.29	.935	2.08
2.20	4.04	3.30	.944	2.08
2.25	3.75	3.31	.952	2.09
2.30	3.52	3.32	.958	2.10
2.35	3.32	3.32	.963	2.10
2.40	3.14	3.33	.968	2.11
2.45	2.98	3.33	.972	2.11
2.50	2.82	3.34	.975	2.11
2.55	2.67	3.34	.978	2.11
2.60	2.53	3.34	.980	2.12
2.65	2.41	3.34	.981	2.12
2.70	2.29	3.34	.982	2.12
2.75	2.18	3.35	.983	2.12

TIME	INFLOW	ELEV	VOLUME	OUTFLOW

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
2.80	2.09	3.35	.983	2.12
2.85	1.99	3.35	.983	2.12
2.90	1.91	3.34	.982	2.12
2.95	1.83	3.34	.981	2.12
3.00	1.76	3.34	.980	2.12
3.05	1.69	3.34	.978	2.11
3.10	1.62	3.34	.976	2.11
3.15	1.56	3.34	.974	2.11
3.20	1.51	3.33	.972	2.11
3.25	1.45	3.33	.969	2.11
3.30	1.40	3.33	.966	2.10
3.35	1.35	3.32	.963	2.10
3.40	1.31	3.32	.960	2.10
3.45	1.26	3.32	.957	2.09
3.50	1.22	3.31	.953	2.09
3.55	1.18	3.31	.950	2.09
3.60	1.15	3.30	.946	2.09
3.65	1.11	3.30	.942	2.08
3.70	1.08	3.29	.938	2.08
3.75	1.04	3.29	.933	2.07
3.80	1.01	3.28	.929	2.07
3.85	.98	3.28	.925	2.07
3.90	.95	3.27	.920	2.06
3.95	.92	3.27	.916	2.06
4.00	.89	3.26	.911	2.05
4.05	.87	3.26	.906	2.05
4.10	.84	3.25	.901	2.05
4.15	.82	3.25	.896	2.04
4.20	.80	3.24	.891	2.04
4.25	.77	3.23	.886	2.03
4.30	.75	3.23	.881	2.03
4.35	.73	3.22	.875	2.02
4.40	.71	3.22	.870	2.02
4.45	.69	3.21	.864	2.01
4.50	.67	3.20	.859	2.01
4.55	.65	3.20	.853	2.00
4.60	.64	3.19	.848	2.00
4.65	.62	3.18	.842	1.99
4.70	.60	3.18	.836	1.99
4.75	.58	3.17	.831	1.98
4.80	.57	3.16	.825	1.98
4.85	.55	3.16	.819	1.97
4.90	.54	3.15	.813	1.97
4.95	.52	3.14	.807	1.96
5.00	.51	3.14	.801	1.96
5.05	.50	3.13	.795	1.95
5.10	.48	3.12	.789	1.95
5.15	.47	3.12	.783	1.94
5.20	.46	3.11	.777	1.94
5.25	.45	3.10	.771	1.93
5.30	.44	3.09	.765	1.93
5.35	.43	3.09	.759	1.92
5.40	.42	3.08	.752	1.91
5.45	.41	3.07	.746	1.91
5.50	.40	3.07	.740	1.90
5.55	.39	3.06	.734	1.90
5.60	.38	3.05	.727	1.89
5.65	.37	3.04	.721	1.89
5.70	.36	3.04	.715	1.88
5.75	.35	3.03	.709	1.88
5.80	.34	3.02	.702	1.87
5.85	.33	3.01	.696	1.86
5.90	.33	3.01	.690	1.86
5.95	.32	3.00	.683	1.85
6.00	.31	2.99	.677	1.84

6.05	.30	2.98	.671	1.82
6.10	.29	2.97	.664	1.80
6.15	.27	2.96	.658	1.79
6.20	.25	2.95	.652	1.77
6.25	.24	2.95	.646	1.75
6.30	.23	2.94	.639	1.73
6.35	.22	2.93	.633	1.72
6.40	.22	2.92	.627	1.70
6.45	.21	2.91	.621	1.68
6.50	.20	2.90	.615	1.67
6.55	.20	2.89	.609	1.65
6.60	.19	2.88	.603	1.64
6.65	.19	2.87	.597	1.62
6.70	.18	2.87	.591	1.60
6.75	.18	2.86	.585	1.59
6.80	.17	2.85	.579	1.57
6.85	.17	2.84	.574	1.56
6.90	.16	2.83	.568	1.54
6.95	.16	2.82	.562	1.52
7.00	.15	2.81	.557	1.51
7.05	.15	2.81	.551	1.49
7.10	.14	2.80	.545	1.48
7.15	.14	2.79	.540	1.46
7.20	.14	2.78	.535	1.45
7.25	.13	2.77	.529	1.44
7.30	.13	2.77	.524	1.42
7.35	.12	2.76	.518	1.41
7.40	.12	2.75	.513	1.39
7.45	.12	2.74	.508	1.38
7.50	.11	2.74	.503	1.36
7.55	.11	2.73	.498	1.35
7.60	.11	2.72	.493	1.34
7.65	.11	2.71	.487	1.32
7.70	.10	2.71	.482	1.31
7.75	.10	2.70	.477	1.30
7.80	.10	2.69	.473	1.28
7.85	.09	2.68	.468	1.27
7.90	.09	2.68	.463	1.26
7.95	.09	2.67	.458	1.24
8.00	.09	2.66	.453	1.23
8.05	.08	2.66	.449	1.22
8.10	.08	2.65	.444	1.20
8.15	.08	2.64	.439	1.19
8.20	.08	2.64	.435	1.18
8.25	.07	2.63	.430	1.17
8.30	.07	2.62	.426	1.15
8.35	.07	2.62	.421	1.14

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	.07	2.61	.417	1.13
8.45	.07	2.60	.413	1.12
8.50	.06	2.60	.408	1.11
8.55	.06	2.59	.404	1.10
8.60	.06	2.58	.400	1.08
8.65	.06	2.58	.395	1.07
8.70	.06	2.57	.391	1.06
8.75	.06	2.57	.387	1.05
8.80	.05	2.56	.383	1.04
8.85	.05	2.55	.379	1.03
8.90	.05	2.55	.375	1.02
8.95	.05	2.54	.371	1.01
9.00	.05	2.54	.367	1.00
9.05	.05	2.53	.363	.99
9.10	.05	2.53	.359	.97
9.15	.04	2.52	.356	.96
9.20	.04	2.51	.352	.95
9.25	.04	2.51	.348	.94
9.30	.04	2.50	.344	.93
9.35	.04	2.50	.341	.92

9.40	.04	2.49	.337	.91
9.45	.04	2.49	.333	.90
9.50	.04	2.48	.330	.89
9.55	.04	2.48	.326	.89
9.60	.03	2.47	.323	.88
9.65	.03	2.47	.319	.87
9.70	.03	2.46	.316	.86
9.75	.03	2.46	.313	.85
9.80	.03	2.45	.309	.84
9.85	.03	2.45	.306	.83
9.90	.03	2.44	.303	.82
9.95	.03	2.44	.299	.81
10.00	.03	2.43	.296	.80
10.05	.03	2.43	.293	.79
10.10	.03	2.42	.290	.79
10.15	.03	2.42	.287	.78
10.20	.02	2.42	.284	.77
10.25	.02	2.41	.281	.76
10.30	.02	2.41	.277	.75
10.35	.02	2.40	.274	.74
10.40	.02	2.40	.272	.74
10.45	.02	2.39	.269	.73
10.50	.02	2.39	.266	.72
10.55	.02	2.38	.263	.71
10.60	.02	2.38	.260	.71
10.65	.02	2.38	.257	.70
10.70	.02	2.37	.254	.69
10.75	.02	2.37	.252	.68
10.80	.02	2.36	.249	.67
10.85	.02	2.36	.246	.67
10.90	.02	2.36	.243	.66
10.95	.02	2.35	.241	.65
11.00	.02	2.35	.238	.65
11.05	.02	2.34	.236	.64
11.10	.01	2.34	.233	.63
11.15	.01	2.34	.231	.63

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.01	2.33	.228	.62
11.25	.01	2.33	.226	.61
11.30	.01	2.33	.223	.61
11.35	.01	2.32	.221	.60
11.40	.01	2.32	.218	.59
11.45	.01	2.32	.216	.59
11.50	.01	2.31	.213	.58
11.55	.01	2.31	.211	.57
11.60	.01	2.31	.209	.57
11.65	.01	2.30	.207	.56
11.70	.01	2.30	.204	.55
11.75	.01	2.30	.202	.55
11.80	.01	2.29	.200	.54
11.85	.01	2.29	.198	.54
11.90	.01	2.29	.196	.53
11.95	.01	2.28	.193	.52
12.00	.01	2.28	.191	.52
12.05	.01	2.28	.189	.51
12.10	.01	2.27	.187	.51
12.15	.01	2.27	.185	.50
12.20	.01	2.27	.183	.50
12.25	.01	2.26	.181	.49
12.30	.01	2.26	.179	.49
12.35	.01	2.26	.177	.48
12.40	.01	2.26	.175	.47
12.45	.01	2.25	.173	.47
12.50	.01	2.25	.171	.46
12.55	.01	2.25	.169	.46
12.60	.01	2.25	.168	.45
12.65	.01	2.24	.166	.45
12.70	.01	2.24	.164	.44

12.75	.01	2.24	.162	.44
12.80	.01	2.23	.160	.43
12.85	.01	2.23	.159	.43
12.90	.01	2.23	.157	.43
12.95	.01	2.23	.155	.42
13.00	.01	2.22	.153	.42
13.05	.00	2.22	.152	.41
13.10	.00	2.22	.150	.41
13.15	.00	2.22	.148	.40
13.20	.00	2.21	.147	.40
13.25	.00	2.21	.145	.39
13.30	.00	2.21	.143	.39
13.35	.00	2.21	.142	.38
13.40	.00	2.21	.140	.38
13.45	.00	2.20	.139	.38
13.50	.00	2.20	.137	.37
13.55	.00	2.20	.136	.37
13.60	.00	2.20	.134	.36
13.65	.00	2.19	.133	.36
13.70	.00	2.19	.131	.36
13.75	.00	2.19	.130	.35
13.80	.00	2.19	.128	.35
13.85	.00	2.19	.127	.34
13.90	.00	2.18	.126	.34
13.95	.00	2.18	.124	.34

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.00	2.18	.123	.33
14.05	.00	2.18	.121	.33
14.10	.00	2.18	.120	.33
14.15	.00	2.17	.119	.32
14.20	.00	2.17	.117	.32
14.25	.00	2.17	.116	.32
14.30	.00	2.17	.115	.31
14.35	.00	2.17	.114	.31
14.40	.00	2.16	.112	.30
14.45	.00	2.16	.111	.30
14.50	.00	2.16	.110	.30
14.55	.00	2.16	.109	.29
14.60	.00	2.16	.107	.29
14.65	.00	2.16	.106	.29
14.70	.00	2.15	.105	.29
14.75	.00	2.15	.104	.28
14.80	.00	2.15	.103	.28
14.85	.00	2.15	.102	.28
14.90	.00	2.15	.101	.27
14.95	.00	2.15	.099	.27
15.00	.00	2.14	.098	.27
15.05	.00	2.14	.097	.26
15.10	.00	2.14	.096	.26
15.15	.00	2.14	.095	.26
15.20	.00	2.14	.094	.26
15.25	.00	2.14	.093	.25
15.30	.00	2.13	.092	.25
15.35	.00	2.13	.091	.25
15.40	.00	2.13	.090	.24
15.45	.00	2.13	.089	.24
15.50	.00	2.13	.088	.24
15.55	.00	2.13	.087	.24
15.60	.00	2.13	.086	.23
15.65	.00	2.12	.085	.23
15.70	.00	2.12	.084	.23
15.75	.00	2.12	.083	.23
15.80	.00	2.12	.082	.22
15.85	.00	2.12	.081	.22
15.90	.00	2.12	.080	.22
15.95	.00	2.12	.080	.22
16.00	.00	2.12	.079	.21
16.05	.00	2.11	.078	.21

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.10	.00	2.11	.077	.21
16.15	.00	2.11	.076	.21
16.20	.00	2.11	.075	.20
16.25	.00	2.11	.074	.20
16.30	.00	2.11	.074	.20
16.35	.00	2.11	.073	.20
16.40	.00	2.11	.072	.20
16.45	.00	2.10	.071	.19
16.50	.00	2.10	.070	.19
16.55	.00	2.10	.070	.19
16.60	.00	2.10	.069	.19
16.65	.00	2.10	.068	.18
16.70	.00	2.10	.067	.18
16.75	.00	2.10	.066	.18
16.80	.00	2.10	.066	.18
16.85	.00	2.10	.065	.18
16.90	.00	2.09	.064	.17
16.95	.00	2.09	.064	.17
17.00	.00	2.09	.063	.17
17.05	.00	2.09	.062	.17
17.10	.00	2.09	.061	.17
17.15	.00	2.09	.061	.16
17.20	.00	2.09	.060	.16
17.25	.00	2.09	.059	.16
17.30	.00	2.09	.059	.16
17.35	.00	2.09	.058	.16
17.40	.00	2.08	.057	.16
17.45	.00	2.08	.057	.15
17.50	.00	2.08	.056	.15
17.55	.00	2.08	.056	.15
17.60	.00	2.08	.055	.15
17.65	.00	2.08	.054	.15
17.70	.00	2.08	.054	.15
17.75	.00	2.08	.053	.14
17.80	.00	2.08	.053	.14
17.85	.00	2.08	.052	.14
17.90	.00	2.08	.051	.14
17.95	.00	2.07	.051	.14
18.00	.00	2.07	.050	.14
18.05	.00	2.07	.050	.13
18.10	.00	2.07	.049	.13
18.15	.00	2.07	.049	.13
18.20	.00	2.07	.048	.13
18.25	.00	2.07	.048	.13
18.30	.00	2.07	.047	.13
18.35	.00	2.07	.046	.13
18.40	.00	2.07	.046	.12
18.45	.00	2.07	.045	.12
18.50	.00	2.07	.045	.12
18.55	.00	2.07	.044	.12
18.60	.00	2.06	.044	.12
18.65	.00	2.06	.043	.12
18.70	.00	2.06	.043	.12
18.75	.00	2.06	.042	.12
18.80	.00	2.06	.042	.11
18.85	.00	2.06	.042	.11
18.90	.00	2.06	.041	.11
18.95	.00	2.06	.041	.11
19.00	.00	2.06	.040	.11
19.05	.00	2.06	.040	.11
19.10	.00	2.06	.039	.11
19.15	.00	2.06	.039	.11
19.20	.00	2.06	.038	.10
19.25	.00	2.06	.038	.10
19.30	.00	2.05	.038	.10
19.35	.00	2.05	.037	.10
19.40	.00	2.05	.037	.10

19.45	.00	2.05	.036	.10
19.50	.00	2.05	.036	.10
19.55	.00	2.05	.035	.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
19.60	.00	2.05	.035	.10
19.65	.00	2.05	.035	.09
19.70	.00	2.05	.034	.09
19.75	.00	2.05	.034	.09
19.80	.00	2.05	.034	.09
19.85	.00	2.05	.033	.09
19.90	.00	2.05	.033	.09
19.95	.00	2.05	.032	.09
20.00	.00	2.05	.032	.09
20.05	.00	2.05	.032	.09
20.10	.00	2.05	.031	.09
20.15	.00	2.05	.031	.08
20.20	.00	2.04	.031	.08
20.25	.00	2.04	.030	.08
20.30	.00	2.04	.030	.08
20.35	.00	2.04	.030	.08
20.40	.00	2.04	.029	.08
20.45	.00	2.04	.029	.08
20.50	.00	2.04	.029	.08
20.55	.00	2.04	.028	.08
20.60	.00	2.04	.028	.08
20.65	.00	2.04	.028	.08
20.70	.00	2.04	.027	.07
20.75	.00	2.04	.027	.07
20.80	.00	2.04	.027	.07
20.85	.00	2.04	.027	.07
20.90	.00	2.04	.026	.07
20.95	.00	2.04	.026	.07
21.00	.00	2.04	.026	.07
21.05	.00	2.04	.025	.07
21.10	.00	2.04	.025	.07
21.15	.00	2.04	.025	.07
21.20	.00	2.04	.025	.07
21.25	.00	2.04	.024	.07
21.30	.00	2.04	.024	.07
21.35	.00	2.03	.024	.06
21.40	.00	2.03	.023	.06
21.45	.00	2.03	.023	.06
21.50	.00	2.03	.023	.06
21.55	.00	2.03	.023	.06
21.60	.00	2.03	.022	.06
21.65	.00	2.03	.022	.06
21.70	.00	2.03	.022	.06
21.75	.00	2.03	.022	.06
21.80	.00	2.03	.021	.06
21.85	.00	2.03	.021	.06
21.90	.00	2.03	.021	.06
21.95	.00	2.03	.021	.06
22.00	.00	2.03	.020	.06
22.05	.00	2.03	.020	.05
22.10	.00	2.03	.020	.05
22.15	.00	2.03	.020	.05
22.20	.00	2.03	.020	.05
22.25	.00	2.03	.019	.05
22.30	.00	2.03	.019	.05
22.35	.00	2.03	.019	.05

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
22.40	.00	2.03	.019	.05
22.45	.00	2.03	.019	.05
22.50	.00	2.03	.018	.05
22.55	.00	2.03	.018	.05

22.60	.00	2.03	.018	.05
22.65	.00	2.03	.018	.05
22.70	.00	2.03	.018	.05
22.75	.00	2.03	.017	.05
22.80	.00	2.03	.017	.05
22.85	.00	2.02	.017	.05
22.90	.00	2.02	.017	.05
22.95	.00	2.02	.017	.04
23.00	.00	2.02	.016	.04
23.05	.00	2.02	.016	.04
23.10	.00	2.02	.016	.04
23.15	.00	2.02	.016	.04
23.20	.00	2.02	.016	.04
23.25	.00	2.02	.015	.04
23.30	.00	2.02	.015	.04
23.35	.00	2.02	.015	.04
23.40	.00	2.02	.015	.04
23.45	.00	2.02	.015	.04
23.50	.00	2.02	.015	.04
23.55	.00	2.02	.014	.04
23.60	.00	2.02	.014	.04
23.65	.00	2.02	.014	.04
23.70	.00	2.02	.014	.04
23.75	.00	2.02	.014	.04
23.80	.00	2.02	.014	.04
23.85	.00	2.02	.014	.04
23.90	.00	2.02	.013	.04
23.95	.00	2.02	.013	.04
24.00	.00	2.02	.013	.04
24.05	.00	2.02	.013	.04
24.10	.00	2.02	.013	.03
24.15	.00	2.02	.013	.03
24.20	.00	2.02	.013	.03
24.25	.00	2.02	.012	.03
24.30	.00	2.02	.012	.03
24.35	.00	2.02	.012	.03
24.40	.00	2.02	.012	.03
24.45	.00	2.02	.012	.03
24.50	.00	2.02	.012	.03
24.55	.00	2.02	.012	.03
24.60	.00	2.02	.011	.03
24.65	.00	2.02	.011	.03
24.70	.00	2.02	.011	.03
24.75	.00	2.02	.011	.03
24.80	.00	2.02	.011	.03
24.85	.00	2.02	.011	.03
24.90	.00	2.02	.011	.03
24.95	.00	2.02	.011	.03
25.00	.00	2.02	.010	.03
25.05	.00	2.02	.010	.03
25.10	.00	2.01	.010	.03
25.15	.00	2.01	.010	.03

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
25.20	.00	2.01	.010	.03
25.25	.00	2.01	.010	.03
25.30	.00	2.01	.010	.03
25.35	.00	2.01	.010	.03
25.40	.00	2.01	.010	.03
25.45	.00	2.01	.009	.03
25.50	.00	2.01	.009	.03
25.55	.00	2.01	.009	.03
25.60	.00	2.01	.009	.02
25.65	.00	2.01	.009	.02
25.70	.00	2.01	.009	.02
25.75	.00	2.01	.009	.02
25.80	.00	2.01	.009	.02
25.85	.00	2.01	.009	.02
25.90	.00	2.01	.009	.02

25.95	.00	2.01	.008	.02
26.00	.00	2.01	.008	.02
26.05	.00	2.01	.008	.02
26.10	.00	2.01	.008	.02
26.15	.00	2.01	.008	.02
26.20	.00	2.01	.008	.02
26.25	.00	2.01	.008	.02
26.30	.00	2.01	.008	.02
26.35	.00	2.01	.008	.02
26.40	.00	2.01	.008	.02
26.45	.00	2.01	.008	.02
26.50	.00	2.01	.007	.02
26.55	.00	2.01	.007	.02
26.60	.00	2.01	.007	.02
26.65	.00	2.01	.007	.02
26.70	.00	2.01	.007	.02
26.75	.00	2.01	.007	.02
26.80	.00	2.01	.007	.02
26.85	.00	2.01	.007	.02
26.90	.00	2.01	.007	.02
26.95	.00	2.01	.007	.02
27.00	.00	2.01	.007	.02
27.05	.00	2.01	.007	.02
27.10	.00	2.01	.007	.02
27.15	.00	2.01	.006	.02
27.20	.00	2.01	.006	.02
27.25	.00	2.01	.006	.02
27.30	.00	2.01	.006	.02
27.35	.00	2.01	.006	.02
27.40	.00	2.01	.006	.02
27.45	.00	2.01	.006	.02
27.50	.00	2.01	.006	.02
27.55	.00	2.01	.006	.02
27.60	.00	2.01	.006	.02
27.65	.00	2.01	.006	.02
27.70	.00	2.01	.006	.02
27.75	.00	2.01	.006	.02
27.80	.00	2.01	.006	.02
27.85	.00	2.01	.006	.01
27.90	.00	2.01	.005	.01
27.95	.00	2.01	.005	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	2.01	.005	.01
28.05	.00	2.01	.005	.01
28.10	.00	2.01	.005	.01
28.15	.00	2.01	.005	.01
28.20	.00	2.01	.005	.01
28.25	.00	2.01	.005	.01
28.30	.00	2.01	.005	.01
28.35	.00	2.01	.005	.01
28.40	.00	2.01	.005	.01
28.45	.00	2.01	.005	.01
28.50	.00	2.01	.005	.01
28.55	.00	2.01	.005	.01
28.60	.00	2.01	.005	.01
28.65	.00	2.01	.005	.01
28.70	.00	2.01	.005	.01
28.75	.00	2.01	.005	.01
28.80	.00	2.01	.004	.01
28.85	.00	2.01	.004	.01
28.90	.00	2.01	.004	.01
28.95	.00	2.01	.004	.01
29.00	.00	2.01	.004	.01
29.05	.00	2.01	.004	.01
29.10	.00	2.01	.004	.01
29.15	.00	2.01	.004	.01
29.20	.00	2.01	.004	.01
29.25	.00	2.01	.004	.01

29.30	.00	2.01	.004	.01
29.35	.00	2.01	.004	.01
29.40	.00	2.01	.004	.01
29.45	.00	2.01	.004	.01
29.50	.00	2.01	.004	.01
29.55	.00	2.01	.004	.01
29.60	.00	2.01	.004	.01
29.65	.00	2.01	.004	.01
29.70	.00	2.01	.004	.01
29.75	.00	2.01	.004	.01
29.80	.00	2.01	.004	.01
29.85	.00	2.01	.004	.01
29.90	.00	2.01	.003	.01
29.95	.00	2.01	.003	.01

PEAK DISCHARGE = 2.118 CFS - PEAK OCCURS AT HOUR 2.80
MAXIMUM WATER SURFACE ELEVATION = 3.345
MAXIMUM STORAGE = .9829 AC-FT INCREMENTAL TIME= .050000HRS

*
PRINT HYD ID=23 CODE=1

HYDROGRAPH FROM AREA POND4

RUNOFF VOLUME = .60647 INCHES = 1.4587 ACRE-FEET
PEAK DISCHARGE RATE = 2.12 CFS AT 2.800 HOURS BASIN AREA = .0451 SQ. MI.

*
ADD HYD ID=24 HYD=OFFA IDI=23 IDII=2
PRINT HYD ID=24 CODE=1

HYDROGRAPH FROM AREA OFFA

RUNOFF VOLUME = .64701 INCHES = 1.6505 ACRE-FEET
PEAK DISCHARGE RATE = 6.27 CFS AT 1.500 HOURS BASIN AREA = .0478 SQ. MI.

```
*DETERMINATION OF WESTERN POND:
*S******ROUTE THROUGH WESTERN DETENTION/CHANNEL POND
ROUTE RESERVOIR     ID=10 HYD=WPOND INFLOW ID=27  CODE=1
                    OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
                         0       0       6
                         15.12668245     0.488596578     7
                         19.54798178     1.04822666      7.67

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

    TIME       INFLOW     ELEV       VOLUME     OUTFLOW
    (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      .00         .00       6.00        .000        .00
      .05         .00       6.00        .000        .00
      .10         .00       6.00        .000        .00
      .15         .00       6.00        .000        .00
      .20         .00       6.00        .000        .00
      .25         .00       6.00        .000        .00
      .30         .00       6.00        .000        .00
      .35         .00       6.00        .000        .00
      .40         .00       6.00        .000        .00
      .45         .00       6.00        .000        .00
      .50         .00       6.00        .000        .00
      .55         .00       6.00        .000        .00
      .60         .00       6.00        .000        .00
      .65         .00       6.00        .000        .00
      .70         .00       6.00        .000        .00
      .75         .00       6.00        .000        .00
      .80         .00       6.00        .000        .00
      .85         .00       6.00        .000        .00
      .90         .00       6.00        .000        .00
      .95         .00       6.00        .000        .00
     1.00         .00       6.00        .000        .00
     1.05         .00       6.00        .000        .00
     1.10         .00       6.00        .000        .00
     1.15         .00       6.00        .000        .00
     1.20         .00       6.00        .000        .00
     1.25         .00       6.00        .000        .00
     1.30         .00       6.00        .000        .00
     1.35        2.69       6.01        .005        .16
     1.40       15.73       6.08        .040       1.25
     1.45       33.98       6.27        .132       4.09
     1.50       43.54       6.55        .267       8.26
     1.55       41.86       6.82        .401      12.40
     1.60       34.44       7.01        .501      15.23
     1.65       26.14       7.09        .562      15.71
     1.70       19.10       7.12        .590      15.93
     1.75       13.70       7.12        .592      15.95
     1.80        9.75       7.10        .575      15.81
     1.85        7.01       7.07        .545      15.57
     1.90        5.37       7.02        .507      15.27
     1.95        4.46       6.95        .466      14.42
     2.00        3.88       6.87        .426      13.19
     2.05        3.43       6.80        .389      12.04
     2.10        3.06       6.73        .355      10.98
     2.15        2.73       6.66        .323      10.01
     2.20        2.44       6.60        .295       9.12
     2.25        2.18       6.55        .268       8.30
     2.30        1.94       6.50        .244       7.55
     2.35        1.73       6.45        .222       6.86
     2.40        1.55       6.41        .201       6.23
     2.45        1.38       6.37        .183       5.66
     2.50        1.23       6.34        .166       5.14
     2.55        1.10       6.31        .151       4.66
     2.60         .98       6.28        .136       4.23
     2.65         .88       6.25        .124       3.83
     2.70         .78       6.23        .112       3.47
     2.75         .70       6.21        .101       3.14

TIME       INFLOW     ELEV       VOLUME     OUTFLOW
```

(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
2.80	.63	6.19	.092	2.84
2.85	.56	6.17	.083	2.57
2.90	.50	6.15	.075	2.33
2.95	.44	6.14	.068	2.10
3.00	.40	6.13	.061	1.90
3.05	.35	6.11	.055	1.72
3.10	.32	6.10	.050	1.55
3.15	.28	6.09	.045	1.40
3.20	.25	6.08	.041	1.26
3.25	.23	6.08	.037	1.14
3.30	.20	6.07	.033	1.03
3.35	.18	6.06	.030	.93
3.40	.16	6.06	.027	.84
3.45	.14	6.05	.024	.76
3.50	.13	6.04	.022	.68
3.55	.11	6.04	.020	.61
3.60	.10	6.04	.018	.55
3.65	.09	6.03	.016	.50
3.70	.08	6.03	.014	.45
3.75	.07	6.03	.013	.40
3.80	.06	6.02	.012	.36
3.85	.06	6.02	.011	.33
3.90	.05	6.02	.010	.29
3.95	.05	6.02	.009	.26
4.00	.04	6.02	.008	.24
4.05	.04	6.01	.007	.21
4.10	.03	6.01	.006	.19
4.15	.03	6.01	.006	.17
4.20	.03	6.01	.005	.16
4.25	.02	6.01	.005	.14
4.30	.02	6.01	.004	.13
.4.35	.02	6.01	.004	.11
4.40	.02	6.01	.003	.10
4.45	.01	6.01	.003	.09
4.50	.01	6.01	.003	.08
4.55	.01	6.00	.002	.07
4.60	.01	6.00	.002	.07
4.65	.01	6.00	.002	.06
4.70	.01	6.00	.002	.05
4.75	.01	6.00	.002	.05
4.80	.01	6.00	.001	.04
4.85	.01	6.00	.001	.04
4.90	.00	6.00	.001	.03
4.95	.00	6.00	.001	.03
5.00	.00	6.00	.001	.03
5.05	.00	6.00	.001	.02
5.10	.00	6.00	.001	.02
5.15	.00	6.00	.001	.02
5.20	.00	6.00	.001	.02
5.25	.00	6.00	.000	.01
5.30	.00	6.00	.000	.01
5.35	.00	6.00	.000	.01
5.40	.00	6.00	.000	.01
5.45	.00	6.00	.000	.01
5.50	.00	6.00	.000	.01
5.55	.00	6.00	.000	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	.00	6.00	.000	.01
5.65	.00	6.00	.000	.01
5.70	.00	6.00	.000	.00

PEAK DISCHARGE = 15.946 CFS - PEAK OCCURS AT HOUR 1.75
MAXIMUM WATER SURFACE ELEVATION = 7.124
MAXIMUM STORAGE = .5923 AC-FT INCREMENTAL TIME= .050000HRS

*DETERMINATION OF SOUTHERN POND:
*S******ROUTE THROUGH SOUTHERN DETENTION POND
ROUTE RESERVOIR ID=12 HYD=SPOND INFLOW ID=31 CODE=1
OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)

0	0	78
0.945417653	0.178458555	79
1.337022467	0.467898771	80
1.637511409	0.824667236	81
1.890835306	1.252555603	82
2.114018139	1.755756692	83
2.315790844	2.338656162	84
2.501339995	3.0135943	85

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

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	78.00	.000	.00
.05	.00	78.00	.000	.00
.10	.00	78.00	.000	.00
.15	.00	78.00	.000	.00
.20	.00	78.00	.000	.00
.25	.00	78.00	.000	.00
.30	.00	78.00	.000	.00
.35	.00	78.00	.000	.00
.40	.00	78.00	.000	.00
.45	.00	78.00	.000	.00
.50	.00	78.00	.000	.00
.55	.00	78.00	.000	.00
.60	.00	78.00	.000	.00
.65	.00	78.00	.000	.00
.70	.00	78.00	.000	.00
.75	.00	78.00	.000	.00
.80	.00	78.00	.000	.00
.85	.00	78.00	.000	.00
.90	.00	78.00	.000	.00
.95	.00	78.00	.000	.00
1.00	.00	78.00	.000	.00
1.05	.00	78.00	.000	.00
1.10	.00	78.00	.000	.00
1.15	.07	78.00	.000	.00
1.20	.71	78.01	.002	.01
1.25	2.64	78.05	.009	.05
1.30	5.86	78.14	.026	.14
1.35	12.10	78.35	.062	.33
1.40	25.42	78.77	.137	.73
1.45	43.45	79.34	.276	1.08
1.50	54.98	80.02	.474	1.34
1.55	54.80	80.64	.695	1.53
1.60	48.91	81.18	.903	1.68
1.65	41.92	81.60	1.083	1.79
1.70	36.65	81.97	1.238	1.88
1.75	32.69	82.24	1.373	1.94
1.80	29.61	82.48	1.494	2.00
1.85	27.22	82.70	1.603	2.05
1.90	25.41	82.90	1.703	2.09
1.95	23.45	83.07	1.795	2.13
2.00	21.33	83.21	1.879	2.16
2.05	19.32	83.34	1.954	2.18
2.10	16.79	83.45	2.020	2.21
2.15	14.33	83.55	2.075	2.22
2.20	12.46	83.63	2.121	2.24
2.25	11.04	83.69	2.160	2.25
2.30	9.88	83.75	2.194	2.27
2.35	8.89	83.80	2.223	2.28
2.40	8.00	83.85	2.249	2.28
2.45	7.20	83.88	2.271	2.29
2.50	6.49	83.92	2.290	2.30
2.55	5.85	83.94	2.306	2.30
2.60	5.27	83.97	2.319	2.31

2.65	4.75	83.99	2.330	2.31
2.70	4.29	84.00	2.339	2.32
2.75	3.87	84.01	2.347	2.32

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
2.80	3.50	84.02	2.352	2.32
2.85	3.17	84.03	2.356	2.32
2.90	2.87	84.03	2.359	2.32
2.95	2.59	84.03	2.361	2.32
3.00	2.35	84.03	2.362	2.32
3.05	2.13	84.03	2.361	2.32
3.10	1.93	84.03	2.360	2.32
3.15	1.75	84.03	2.358	2.32
3.20	1.59	84.02	2.355	2.32
3.25	1.45	84.02	2.352	2.32
3.30	1.31	84.01	2.348	2.32
3.35	1.19	84.01	2.344	2.32
3.40	1.07	84.00	2.339	2.32
3.45	.98	83.99	2.333	2.31
3.50	.89	83.98	2.328	2.31
3.55	.82	83.97	2.322	2.31
3.60	.75	83.96	2.315	2.31
3.65	.69	83.95	2.309	2.31
3.70	.63	83.94	2.302	2.30
3.75	.58	83.93	2.295	2.30
3.80	.54	83.91	2.288	2.30
3.85	.50	83.90	2.281	2.30
3.90	.46	83.89	2.273	2.29
3.95	.43	83.87	2.265	2.29
4.00	.40	83.86	2.258	2.29
4.05	.37	83.85	2.250	2.29
4.10	.35	83.83	2.242	2.28
4.15	.33	83.82	2.234	2.28
4.20	.31	83.81	2.226	2.28
4.25	.29	83.79	2.218	2.27
4.30	.28	83.78	2.209	2.27
4.35	.26	83.76	2.201	2.27
4.40	.25	83.75	2.193	2.27
4.45	.24	83.74	2.184	2.26
4.50	.23	83.72	2.176	2.26
4.55	.22	83.71	2.168	2.26
4.60	.21	83.69	2.159	2.25
4.65	.21	83.68	2.151	2.25
4.70	.20	83.66	2.142	2.25
4.75	.20	83.65	2.134	2.24
4.80	.19	83.63	2.126	2.24
4.85	.19	83.62	2.117	2.24
4.90	.19	83.61	2.109	2.24
4.95	.19	83.59	2.100	2.23
5.00	.18	83.58	2.092	2.23
5.05	.18	83.56	2.083	2.23
5.10	.18	83.55	2.075	2.22
5.15	.18	83.53	2.066	2.22
5.20	.18	83.52	2.058	2.22
5.25	.18	83.50	2.049	2.22
5.30	.18	83.49	2.041	2.21
5.35	.18	83.47	2.033	2.21
5.40	.18	83.46	2.024	2.21
5.45	.18	83.45	2.016	2.20
5.50	.18	83.43	2.007	2.20
5.55	.18	83.42	1.999	2.20

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	.18	83.40	1.991	2.20
5.65	.18	83.39	1.982	2.19
5.70	.18	83.37	1.974	2.19
5.75	.18	83.36	1.966	2.19

5.80	.18	83.35	1.958	2.18
5.85	.19	83.33	1.949	2.18
5.90	.19	83.32	1.941	2.18
5.95	.19	83.30	1.933	2.18
6.00	.19	83.29	1.925	2.17
6.05	.19	83.28	1.917	2.17
6.10	.14	83.26	1.908	2.17
6.15	.08	83.25	1.900	2.16
6.20	.05	83.23	1.891	2.16
6.25	.03	83.22	1.882	2.16
6.30	.02	83.20	1.874	2.15
6.35	.02	83.19	1.865	2.15
6.40	.01	83.17	1.856	2.15
6.45	.01	83.16	1.847	2.15
6.50	.01	83.14	1.838	2.14
6.55	.01	83.13	1.829	2.14
6.60	.01	83.11	1.821	2.14
6.65	.00	83.10	1.812	2.13
6.70	.00	83.08	1.803	2.13
6.75	.00	83.07	1.794	2.13
6.80	.00	83.05	1.785	2.12
6.85	.00	83.04	1.777	2.12
6.90	.00	83.02	1.768	2.12
6.95	.00	83.01	1.759	2.12
7.00	.00	82.99	1.750	2.11
7.05	.00	82.97	1.742	2.11
7.10	.00	82.95	1.733	2.10
7.15	.00	82.94	1.724	2.10
7.20	.00	82.92	1.716	2.10
7.25	.00	82.90	1.707	2.09
7.30	.00	82.89	1.698	2.09
7.35	.00	82.87	1.690	2.08
7.40	.00	82.85	1.681	2.08
7.45	.00	82.83	1.673	2.08
7.50	.00	82.82	1.664	2.07
7.55	.00	82.80	1.655	2.07
7.60	.00	82.78	1.647	2.07
7.65	.00	82.77	1.638	2.06
7.70	.00	82.75	1.630	2.06
7.75	.00	82.73	1.621	2.05
7.80	.00	82.72	1.613	2.05
7.85	.00	82.70	1.604	2.05
7.90	.00	82.68	1.596	2.04
7.95	.00	82.67	1.588	2.04
8.00	.00	82.65	1.579	2.04
8.05	.00	82.63	1.571	2.03
8.10	.00	82.62	1.562	2.03
8.15	.00	82.60	1.554	2.02
8.20	.00	82.58	1.546	2.02
8.25	.00	82.57	1.537	2.02
8.30	.00	82.55	1.529	2.01
8.35	.00	82.53	1.521	2.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	.00	82.52	1.512	2.01
8.45	.00	82.50	1.504	2.00
8.50	.00	82.48	1.496	2.00
8.55	.00	82.47	1.487	2.00
8.60	.00	82.45	1.479	1.99
8.65	.00	82.43	1.471	1.99
8.70	.00	82.42	1.463	1.98
8.75	.00	82.40	1.455	1.98
8.80	.00	82.39	1.446	1.98
8.85	.00	82.37	1.438	1.97
8.90	.00	82.35	1.430	1.97
8.95	.00	82.34	1.422	1.97
9.00	.00	82.32	1.414	1.96
9.05	.00	82.30	1.406	1.96
9.10	.00	82.29	1.398	1.96

9.15	.00	82.27	1.390	1.95
9.20	.00	82.26	1.382	1.95
9.25	.00	82.24	1.374	1.94
9.30	.00	82.22	1.366	1.94
9.35	.00	82.21	1.357	1.94
9.40	.00	82.19	1.349	1.93
9.45	.00	82.18	1.342	1.93
9.50	.00	82.16	1.334	1.93
9.55	.00	82.15	1.326	1.92
9.60	.00	82.13	1.318	1.92
9.65	.00	82.11	1.310	1.92
9.70	.00	82.10	1.302	1.91
9.75	.00	82.08	1.294	1.91
9.80	.00	82.07	1.286	1.91
9.85	.00	82.05	1.278	1.90
9.90	.00	82.04	1.270	1.90
9.95	.00	82.02	1.262	1.90
10.00	.00	82.00	1.255	1.89
10.05	.00	81.99	1.247	1.89
10.10	.00	81.97	1.239	1.88
10.15	.00	81.95	1.231	1.88
10.20	.00	81.93	1.224	1.87
10.25	.00	81.91	1.216	1.87
10.30	.00	81.90	1.208	1.86
10.35	.00	81.88	1.200	1.86
10.40	.00	81.86	1.193	1.86
10.45	.00	81.84	1.185	1.85
10.50	.00	81.82	1.177	1.85
10.55	.00	81.81	1.170	1.84
10.60	.00	81.79	1.162	1.84
10.65	.00	81.77	1.155	1.83
10.70	.00	81.75	1.147	1.83
10.75	.00	81.74	1.139	1.82
10.80	.00	81.72	1.132	1.82
10.85	.00	81.70	1.124	1.82
10.90	.00	81.68	1.117	1.81
10.95	.00	81.67	1.109	1.81
11.00	.00	81.65	1.102	1.80
11.05	.00	81.63	1.095	1.80
11.10	.00	81.61	1.087	1.79
11.15	.00	81.60	1.080	1.79

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.00	81.58	1.072	1.78
11.25	.00	81.56	1.065	1.78
11.30	.00	81.54	1.058	1.78
11.35	.00	81.53	1.050	1.77
11.40	.00	81.51	1.043	1.77
11.45	.00	81.49	1.036	1.76
11.50	.00	81.48	1.028	1.76
11.55	.00	81.46	1.021	1.75
11.60	.00	81.44	1.014	1.75
11.65	.00	81.43	1.007	1.75
11.70	.00	81.41	1.000	1.74
11.75	.00	81.39	.992	1.74
11.80	.00	81.38	.985	1.73
11.85	.00	81.36	.978	1.73
11.90	.00	81.34	.971	1.72
11.95	.00	81.33	.964	1.72
12.00	.00	81.31	.957	1.72
12.05	.00	81.29	.950	1.71
12.10	.00	81.28	.943	1.71
12.15	.00	81.26	.936	1.70
12.20	.00	81.24	.929	1.70
12.25	.00	81.23	.921	1.69
12.30	.00	81.21	.914	1.69
12.35	.00	81.19	.908	1.69
12.40	.00	81.18	.901	1.68
12.45	.00	81.16	.894	1.68

12.50	.00	81.14	.887	1.67
12.55	.00	81.13	.880	1.67
12.60	.00	81.11	.873	1.67
12.65	.00	81.10	.866	1.66
12.70	.00	81.08	.859	1.66
12.75	.00	81.06	.852	1.65
12.80	.00	81.05	.845	1.65
12.85	.00	81.03	.839	1.65
12.90	.00	81.02	.832	1.64
12.95	.00	81.00	.825	1.64
13.00	.00	80.98	.818	1.63
13.05	.00	80.96	.812	1.63
13.10	.00	80.94	.805	1.62
13.15	.00	80.93	.798	1.62
13.20	.00	80.91	.792	1.61
13.25	.00	80.89	.785	1.60
13.30	.00	80.87	.778	1.60
13.35	.00	80.85	.772	1.59
13.40	.00	80.83	.765	1.59
13.45	.00	80.81	.759	1.58
13.50	.00	80.80	.752	1.58
13.55	.00	80.78	.746	1.57
13.60	.00	80.76	.739	1.57
13.65	.00	80.74	.733	1.56
13.70	.00	80.72	.726	1.55
13.75	.00	80.71	.720	1.55
13.80	.00	80.69	.713	1.54
13.85	.00	80.67	.707	1.54
13.90	.00	80.65	.701	1.53
13.95	.00	80.63	.694	1.53

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.00	80.62	.688	1.52
14.05	.00	80.60	.682	1.52
14.10	.00	80.58	.676	1.51
14.15	.00	80.56	.669	1.51
14.20	.00	80.55	.663	1.50
14.25	.00	80.53	.657	1.50
14.30	.00	80.51	.651	1.49
14.35	.00	80.50	.645	1.49
14.40	.00	80.48	.638	1.48
14.45	.00	80.46	.632	1.48
14.50	.00	80.44	.626	1.47
14.55	.00	80.43	.620	1.47
14.60	.00	80.41	.614	1.46
14.65	.00	80.39	.608	1.46
14.70	.00	80.38	.602	1.45
14.75	.00	80.36	.596	1.44
14.80	.00	80.34	.590	1.44
14.85	.00	80.33	.584	1.43
14.90	.00	80.31	.578	1.43
14.95	.00	80.29	.572	1.43
15.00	.00	80.28	.567	1.42
15.05	.00	80.26	.561	1.42
15.10	.00	80.24	.555	1.41
15.15	.00	80.23	.549	1.41
15.20	.00	80.21	.543	1.40
15.25	.00	80.19	.537	1.40
15.30	.00	80.18	.532	1.39
15.35	.00	80.16	.526	1.39
15.40	.00	80.15	.520	1.38
15.45	.00	80.13	.515	1.38
15.50	.00	80.11	.509	1.37
15.55	.00	80.10	.503	1.37
15.60	.00	80.08	.498	1.36
15.65	.00	80.07	.492	1.36
15.70	.00	80.05	.486	1.35
15.75	.00	80.04	.481	1.35
15.80	.00	80.02	.475	1.34

15.85	.00	80.00	.470	1.34
15.90	.00	79.99	.464	1.33
15.95	.00	79.97	.459	1.32
16.00	.00	79.95	.453	1.32
16.05	.00	79.93	.448	1.31
16.10	.00	79.91	.442	1.30
16.15	.00	79.89	.437	1.30
16.20	.00	79.87	.432	1.29
16.25	.00	79.86	.426	1.28
16.30	.00	79.84	.421	1.27
16.35	.00	79.82	.416	1.27
16.40	.00	79.80	.411	1.26
16.45	.00	79.78	.405	1.25
16.50	.00	79.77	.400	1.25
16.55	.00	79.75	.395	1.24
16.60	.00	79.73	.390	1.23
16.65	.00	79.71	.385	1.22
16.70	.00	79.70	.380	1.22
16.75	.00	79.68	.375	1.21

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	.00	79.66	.370	1.20
16.85	.00	79.64	.365	1.20
16.90	.00	79.63	.360	1.19
16.95	.00	79.61	.355	1.18
17.00	.00	79.59	.350	1.18
17.05	.00	79.58	.345	1.17
17.10	.00	79.56	.341	1.16
17.15	.00	79.54	.336	1.16
17.20	.00	79.53	.331	1.15
17.25	.00	79.51	.326	1.15
17.30	.00	79.49	.321	1.14
17.35	.00	79.48	.317	1.13
17.40	.00	79.46	.312	1.13
17.45	.00	79.45	.307	1.12
17.50	.00	79.43	.303	1.11
17.55	.00	79.41	.298	1.11
17.60	.00	79.40	.294	1.10
17.65	.00	79.38	.289	1.10
17.70	.00	79.37	.285	1.09
17.75	.00	79.35	.280	1.08
17.80	.00	79.34	.276	1.08
17.85	.00	79.32	.271	1.07
17.90	.00	79.31	.267	1.07
17.95	.00	79.29	.262	1.06
18.00	.00	79.28	.258	1.05
18.05	.00	79.26	.254	1.05
18.10	.00	79.25	.249	1.04
18.15	.00	79.23	.245	1.04
18.20	.00	79.22	.241	1.03
18.25	.00	79.20	.237	1.02
18.30	.00	79.19	.232	1.02
18.35	.00	79.17	.228	1.01
18.40	.00	79.16	.224	1.01
18.45	.00	79.14	.220	1.00
18.50	.00	79.13	.216	1.00
18.55	.00	79.11	.212	.99
18.60	.00	79.10	.208	.98
18.65	.00	79.09	.204	.98
18.70	.00	79.07	.199	.97
18.75	.00	79.06	.195	.97
18.80	.00	79.05	.191	.96
18.85	.00	79.03	.188	.96
18.90	.00	79.02	.184	.95
18.95	.00	79.00	.180	.95
19.00	.00	78.98	.176	.93
19.05	.00	78.96	.172	.91
19.10	.00	78.94	.168	.89
19.15	.00	78.92	.165	.87

19.20	.00	78.90	.161	.85
19.25	.00	78.88	.158	.83
19.30	.00	78.86	.154	.82
19.35	.00	78.84	.151	.80
19.40	.00	78.83	.148	.78
19.45	.00	78.81	.144	.76
19.50	.00	78.79	.141	.75
19.55	.00	78.77	.138	.73

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
19.60	.00	78.76	.135	.72
19.65	.00	78.74	.132	.70
19.70	.00	78.72	.129	.69
19.75	.00	78.71	.127	.67
19.80	.00	78.69	.124	.66
19.85	.00	78.68	.121	.64
19.90	.00	78.66	.119	.63
19.95	.00	78.65	.116	.61
20.00	.00	78.64	.113	.60
20.05	.00	78.62	.111	.59
20.10	.00	78.61	.109	.58
20.15	.00	78.60	.106	.56
20.20	.00	78.58	.104	.55
20.25	.00	78.57	.102	.54
20.30	.00	78.56	.099	.53
20.35	.00	78.55	.097	.52
20.40	.00	78.53	.095	.50
20.45	.00	78.52	.093	.49
20.50	.00	78.51	.091	.48
20.55	.00	78.50	.089	.47
20.60	.00	78.49	.087	.46
20.65	.00	78.48	.085	.45
20.70	.00	78.47	.083	.44
20.75	.00	78.46	.082	.43
20.80	.00	78.45	.080	.42
20.85	.00	78.44	.078	.41
20.90	.00	78.43	.076	.41
20.95	.00	78.42	.075	.40
21.00	.00	78.41	.073	.39
21.05	.00	78.40	.072	.38
21.10	.00	78.39	.070	.37
21.15	.00	78.38	.069	.36
21.20	.00	78.38	.067	.36
21.25	.00	78.37	.066	.35
21.30	.00	78.36	.064	.34
21.35	.00	78.35	.063	.33
21.40	.00	78.34	.061	.33
21.45	.00	78.34	.060	.32
21.50	.00	78.33	.059	.31
21.55	.00	78.32	.058	.30
21.60	.00	78.32	.056	.30
21.65	.00	78.31	.055	.29
21.70	.00	78.30	.054	.29
21.75	.00	78.30	.053	.28
21.80	.00	78.29	.052	.27
21.85	.00	78.28	.050	.27
21.90	.00	78.28	.049	.26
21.95	.00	78.27	.048	.26
22.00	.00	78.26	.047	.25
22.05	.00	78.26	.046	.24
22.10	.00	78.25	.045	.24
22.15	.00	78.25	.044	.23
22.20	.00	78.24	.043	.23
22.25	.00	78.24	.042	.22
22.30	.00	78.23	.041	.22
22.35	.00	78.23	.041	.21

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
22.40	.00	78.22	.040	.21
22.45	.00	78.22	.039	.21
22.50	.00	78.21	.038	.20
22.55	.00	78.21	.037	.20
22.60	.00	78.20	.036	.19
22.65	.00	78.20	.036	.19
22.70	.00	78.19	.035	.18
22.75	.00	78.19	.034	.18
22.80	.00	78.19	.033	.18
22.85	.00	78.18	.033	.17
22.90	.00	78.18	.032	.17
22.95	.00	78.17	.031	.17
23.00	.00	78.17	.031	.16
23.05	.00	78.17	.030	.16
23.10	.00	78.16	.029	.15
23.15	.00	78.16	.029	.15
23.20	.00	78.16	.028	.15
23.25	.00	78.15	.027	.14
23.30	.00	78.15	.027	.14
23.35	.00	78.15	.026	.14
23.40	.00	78.14	.026	.14
23.45	.00	78.14	.025	.13
23.50	.00	78.14	.025	.13
23.55	.00	78.13	.024	.13
23.60	.00	78.13	.023	.12
23.65	.00	78.13	.023	.12
23.70	.00	78.13	.022	.12
23.75	.00	78.12	.022	.12
23.80	.00	78.12	.021	.11
23.85	.00	78.12	.021	.11
23.90	.00	78.12	.021	.11
23.95	.00	78.11	.020	.11
24.00	.00	78.11	.020	.10
24.05	.00	78.11	.019	.10
24.10	.00	78.11	.019	.10
24.15	.00	78.10	.018	.10
24.20	.00	78.10	.018	.10
24.25	.00	78.10	.018	.09
24.30	.00	78.10	.017	.09
24.35	.00	78.09	.017	.09
24.40	.00	78.09	.017	.09
24.45	.00	78.09	.016	.09
24.50	.00	78.09	.016	.08
24.55	.00	78.09	.015	.08
24.60	.00	78.08	.015	.08
24.65	.00	78.08	.015	.08
24.70	.00	78.08	.014	.08
24.75	.00	78.08	.014	.08
24.80	.00	78.08	.014	.07
24.85	.00	78.08	.014	.07
24.90	.00	78.07	.013	.07
24.95	.00	78.07	.013	.07
25.00	.00	78.07	.013	.07
25.05	.00	78.07	.012	.07
25.10	.00	78.07	.012	.06
25.15	.00	78.07	.012	.06
25.20	.00	78.07	.012	.06
25.25	.00	78.06	.011	.06
25.30	.00	78.06	.011	.06
25.35	.00	78.06	.011	.06
25.40	.00	78.06	.011	.06
25.45	.00	78.06	.010	.06
25.50	.00	78.06	.010	.05
25.55	.00	78.06	.010	.05
25.60	.00	78.05	.010	.05
25.65	.00	78.05	.010	.05

25.70	.00	78.05	.009	.05
25.75	.00	78.05	.009	.05
25.80	.00	78.05	.009	.05
25.85	.00	78.05	.009	.05
25.90	.00	78.05	.009	.05
25.95	.00	78.05	.008	.04
26.00	.00	78.05	.008	.04
26.05	.00	78.04	.008	.04
26.10	.00	78.04	.008	.04
26.15	.00	78.04	.008	.04
26.20	.00	78.04	.008	.04
26.25	.00	78.04	.007	.04
26.30	.00	78.04	.007	.04
26.35	.00	78.04	.007	.04
26.40	.00	78.04	.007	.04
26.45	.00	78.04	.007	.04
26.50	.00	78.04	.007	.03
26.55	.00	78.04	.006	.03
26.60	.00	78.04	.006	.03
26.65	.00	78.03	.006	.03
26.70	.00	78.03	.006	.03
26.75	.00	78.03	.006	.03
26.80	.00	78.03	.006	.03
26.85	.00	78.03	.006	.03
26.90	.00	78.03	.006	.03
26.95	.00	78.03	.005	.03
27.00	.00	78.03	.005	.03
27.05	.00	78.03	.005	.03
27.10	.00	78.03	.005	.03
27.15	.00	78.03	.005	.03
27.20	.00	78.03	.005	.03
27.25	.00	78.03	.005	.03
27.30	.00	78.03	.005	.02
27.35	.00	78.03	.005	.02
27.40	.00	78.02	.004	.02
27.45	.00	78.02	.004	.02
27.50	.00	78.02	.004	.02
27.55	.00	78.02	.004	.02
27.60	.00	78.02	.004	.02
27.65	.00	78.02	.004	.02
27.70	.00	78.02	.004	.02
27.75	.00	78.02	.004	.02
27.80	.00	78.02	.004	.02
27.85	.00	78.02	.004	.02
27.90	.00	78.02	.004	.02
27.95	.00	78.02	.003	.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	78.02	.003	.02
28.05	.00	78.02	.003	.02
28.10	.00	78.02	.003	.02
28.15	.00	78.02	.003	.02
28.20	.00	78.02	.003	.02
28.25	.00	78.02	.003	.02
28.30	.00	78.02	.003	.02
28.35	.00	78.02	.003	.02
28.40	.00	78.02	.003	.02
28.45	.00	78.02	.003	.01
28.50	.00	78.02	.003	.01
28.55	.00	78.02	.003	.01
28.60	.00	78.01	.003	.01
28.65	.00	78.01	.003	.01
28.70	.00	78.01	.003	.01
28.75	.00	78.01	.002	.01
28.80	.00	78.01	.002	.01
28.85	.00	78.01	.002	.01
28.90	.00	78.01	.002	.01
28.95	.00	78.01	.002	.01
29.00	.00	78.01	.002	.01

29.05	.00	78.01	.002	.01
29.10	.00	78.01	.002	.01
29.15	.00	78.01	.002	.01
29.20	.00	78.01	.002	.01
29.25	.00	78.01	.002	.01
29.30	.00	78.01	.002	.01
29.35	.00	78.01	.002	.01
29.40	.00	78.01	.002	.01
29.45	.00	78.01	.002	.01
29.50	.00	78.01	.002	.01
29.55	.00	78.01	.002	.01
29.60	.00	78.01	.002	.01
29.65	.00	78.01	.002	.01
29.70	.00	78.01	.002	.01
29.75	.00	78.01	.002	.01
29.80	.00	78.01	.002	.01
29.85	.00	78.01	.002	.01
29.90	.00	78.01	.001	.01
29.95	.00	78.01	.001	.01

PEAK DISCHARGE = 2.322 CFS - PEAK OCCURS AT HOUR 3.00
MAXIMUM WATER SURFACE ELEVATION = 84.034
MAXIMUM STORAGE = 2.3615 AC-FT INCREMENTAL TIME= .050000HRS

APPENDIX B

STREET FLOW, INLET, & STORM DRAIN CALCULATIONS

Shaded cells require user input. Non-shaded cells cannot be edited.*

TIMARRON WEST UNIT 5
FLOW TO SOUTHERN POND

***** HYDRAULIC GRADE LINE CALCULATIONS *****

Manning's n = 0.013
for pipe

Station	Structure	Diam. (in.)	Q (cfs)	Area	Vel.	K	Sf	Length (ft.)	MH Dia. (ft.)	JNCT Angle	Hf	Hb	Hj	Hmh	Ht	Total Losses	HGL-dn	HGL-up	Low Point	HV	EGL(dn)	EGL(up)
0.00	OUTFALL								4.00	0.00		0.00	0.00	0.00	0.00	0.00		84.03	85.00	0.42	84.45	84.45
		36	36.9	7.07	5.22	667	0.0031	130.10			0.40					0.40						
0.00	INLET1								4.00	0.00		0.00	0.00	0.00	0.00	0.00	84.43	84.51	86.59	0.34	84.85	84.85
		36	33.2	7.07	4.70	667	0.0025	28.00			0.07					0.07						
0.00	INLET2								4.00	0.00		0.00	0.00	0.00	0.00	0.00	84.58	84.65	86.59	0.27	84.92	84.92
		36	29.6	7.07	4.18	667	0.0020	247.63			0.49					0.49						
0.00	INLET3								4.00	0.00		0.00	0.00	0.00	0.00	0.00	85.13	84.99	86.01	0.42	85.41	85.41
		30	25.6	4.91	5.22	410	0.0039	28.00			0.11					0.11						
0.00	INLET4								4.00	0.00		0.00	0.00	0.00	0.00	0.00	85.10	85.22	86.01	0.30	85.52	85.52
		30	21.7	4.91	4.42	410	0.0028	247.82			0.69					0.69						
0.00	INLET5								4.00	45.00		0.04	0.00	0.00	0.00	0.04	85.91	86.04	87.03	0.21	86.21	86.25
		30	17.9	4.91	3.65	410	0.0019	36.88			0.07					0.07						
0.00	INLET6								4.00	45.00		0.02	0.00	0.00	0.00	0.02	86.11	86.21	88.03	0.13	86.32	86.34
		30	14.2	4.91	2.89	410	0.0012	247.85			0.30					0.30						
0.00	INLET7								4.00	0.00		0.00	0.00	0.00	0.00	0.00	86.51	86.57	88.75	0.07	86.64	86.64
		30	10.5	4.91	2.14	410	0.0007	28.00			0.02					0.02						
0.00	INLET8								4.00	0.00		0.00	0.00	0.00	0.00	0.00	86.58	86.58	88.75	0.07	86.66	86.66
		24	6.9	3.14	2.19	226	0.0009	247.87			0.23					0.23						
0.00	INLET9								4.00	0.00		0.00	0.00	0.00	0.00	0.00	86.81	86.83	91.76	0.06	86.89	86.89
		18	3.4	1.77	1.92	105	0.0010	35.40			0.04					0.04						

B-1

(1)
FFS.

TIMARRON WEST UNIT 5
STREET FLOW & INLET ANALYSIS
5/24/00

BOHANNAN HUSTON
Courtyard One
7500 JEFFERSON NE
Albuquerque
NEW MEXICO 87109
voice 505.823.1000
fax 505 821 0892

BASIN 1

PELICAN COURT

Q= 10.05 cfs

lots = 20

Energy head = 0.58 < .85 no inlets required.

Some standard curb is required.

E = 0.51 @ Q= 6.5 cfs.

at 6.5 cfs, the flow is too much for roll curbs.

$\frac{Q}{lot} = \frac{10.05 cfs}{20 lots} = 0.5$ cfs/Lot

At 12.94 Lots, standard curb is required.

HORNBILL COURT

Q= 10.27 cfs.

lots= 21 Lots.

$\frac{Q}{lot} = \frac{10.27}{21} = 0.49$ cfs/lot

Energy = 0.59 < .85 no inlets required

Standard curb required when

E > 0.51 @ Q= 7.2 cfs.

7.2/0.49 = 14.69 Lots

Osprey Slope/s to the north

Q = 23.47 cfs.

E = 0.165 < 0.83 - will not flood the road

Add inlets to divert flow into Unit 4 pond.

Space inlets to 20 ft each -

3, total 4 inlets

BOHANNAN HUSTON

Courtyard One

7500 JEFFERSON NE

Albuquerque

NEW MEXICO 87109

voice 505.823.1000

fax 505 821.0892

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

□ MANNING'S N= .017 SLOPE= .0421

□POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.51	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.80	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.05	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.28	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.48	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.67	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.86	2.19	0.05	0.12
0.08	0.08	0.10	0.2	2.63	2.03	2.50	0.06	0.14
0.09	0.09	0.13	0.3	2.96	2.19	2.81	0.07	0.16
0.10	0.10	0.16	0.4	3.29	2.35	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.51	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.66	3.75	0.11	0.23
0.13	0.13	0.26	0.7	4.28	2.80	4.07	0.12	0.25
0.14	0.14	0.31	0.9	5.15	2.75	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.75	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.79	6.65	0.12	0.28
0.17	0.17	0.50	1.4	7.79	2.86	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	2.94	8.38	0.13	0.31
0.19	0.19	0.66	2.0	9.54	3.03	9.24	0.14	0.33
0.20	0.20	0.76	2.4	10.42	3.13	10.10	0.15	0.35
0.21	0.21	0.87	2.8	11.30	3.23	10.96	0.16	0.37
0.22	0.22	0.98	3.3	12.18	3.34	11.83	0.17	0.39
0.23	0.23	1.10	3.8	13.06	3.45	12.69	0.18	0.41
0.24	0.24	1.23	4.4	13.93	3.56	13.55	0.20	0.44
0.25	0.25	1.37	5.0	14.81	3.67	14.41	0.21	0.46
0.26	0.26	1.52	5.8	15.69	3.79	15.27	0.22	0.48
0.27	0.27	1.68	6.5	16.57	3.90	16.14	0.24	0.51
0.28	0.28	1.84	7.4	17.45	4.01	17.00	0.25	0.53
0.29	0.29	2.02	8.3	18.32	4.12	17.86	0.26	0.55
0.30	0.30	2.20	9.3	19.20	4.23	18.72	0.28	0.58
0.31	0.31	2.39	10.4	20.08	4.34	19.59	0.29	0.60
0.32	0.32	2.59	11.5	20.96	4.45	20.45	0.31	0.63
0.33	0.33	2.80	12.8	21.84	4.56	21.31	0.32	0.65
0.34	0.34	3.02	14.1	22.71	4.67	22.17	0.34	0.68
0.35	0.35	3.25	15.5	23.59	4.78	23.03	0.35	0.70
0.36	0.36	3.48	17.0	24.47	4.89	23.90	0.37	0.73
0.37	0.37	3.72	18.6	25.35	4.99	24.76	0.39	0.76
0.38	0.38	3.98	20.3	26.23	5.10	25.62	0.40	0.78
0.39	0.39	4.24	22.0	27.10	5.20	26.48	0.42	0.81
0.40	0.40	4.50	23.9	27.98	5.31	27.35	0.44	0.84
0.41	0.41	4.78	25.9	28.86	5.41	28.21	0.45	0.86
0.42	0.42	5.06	28.5	28.88	5.62	28.21	0.49	0.91
0.43	0.43	5.35	31.1	28.90	5.82	28.22	0.53	0.96

□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	36.8	28.94	6.22	28.23	0.60	1.05
0.46	0.46	6.19	39.7	28.96	6.41	28.23	0.64	1.10
0.47	0.47	6.48	42.8	28.98	6.60	28.24	0.68	1.15
0.48	0.48	6.76	45.9	29.01	6.79	28.24	0.72	1.20
0.49	0.49	7.04	49.1	29.03	6.98	28.25	0.76	1.25
0.50	0.50	7.32	52.4	29.05	7.16	28.25	0.80	1.30
0.51	0.51	7.61	55.8	29.07	7.34	28.26	0.84	1.35

0.52	0.52	7.89	59.3	29.09	7.51	28.26	0.88	1.40
0.53	0.53	8.17	62.8	29.11	7.69	28.27	0.92	1.45
0.54	0.54	8.45	66.5	29.13	7.86	28.27	0.96	1.50
0.55	0.55	8.74	70.2	29.15	8.03	28.28	1.00	1.55
0.56	0.56	9.02	74.0	29.17	8.20	28.28	1.04	1.60
0.57	0.57	9.30	77.8	29.19	8.37	28.29	1.09	1.66
0.58	0.58	9,59	81.8	29.21	8.53	28.29	1.13	1.71
0.59	0.59	9.87	85.8	29.23	8.70	28.30	1.17	1.76
0.60	0.60	10.15	89.9	29.25	8.86	28.30	1.22	1.82
0.61	0.61	10.43	94.1	29.27	9.02	28.31	1.26	1.87
0.62	0.62	10.72	98.3	29.29	9.17	28.31	1.31	1.93
0.63	0.63	11.00	102.6	29.31	9.33	28.32	1.35	1.98
0.64	0.64	11.28	107.0	29.34	9.49	28.32	1.40	2.04
0.65	0.65	11.57	111.5	29.36	9.64	28.33	1.44	2.09
0.66	0.66	11.85	116.0	29.38	9.79	28.33	1.49	2.15
0.67	0.67	12.13	120.6	29.40	9.94	28.34	1.54	2.21
0.68	0.68	12.42	122.6	30.44	9.87	30.30	1.51	2.19
0.69	0.69	12.72	124.7	31.49	9.80	31.34	1.49	2.18
0.70	0.70	13.06	125.1	33.45	9.58	32.39	1.43	2.13
0.71	0.71	13.39	127.8	34.50	9.54	33.44	1.41	2.12
0.72	0.72	13.73	130.6	35.54	9.51	34.48	1.40	2.12
0.73	0.73	14.08	133.6	36.59	9.49	35.53	1.40	2.13
0.74	0.74	14.44	136.7	37.64	9.47	36.58	1.39	2.13
0.75	0.75	14.81	140.0	38.68	9.46	37.62	1.39	2.14
0.76	0.76	15.19	143.5	39.73	9.45	38.67	1.39	2.15
0.77	0.77	15.58	147.2	40.78	9.44	39.72	1.39	2.16
0.78	0.78	15.98	151.0	41.83	9.45	40.77	1.39	2.17
0.79	0.79	16.40	155.0	42.87	9.45	41.81	1.39	2.18
0.80	0.80	16.82	159.1	43.92	9.46	42.86	1.39	2.19
0.81	0.81	17.25	163.4	44.97	9.47	43.91	1.39	2.20
0.82	0.82	17.70	167.9	46.01	9.49	44.95	1.40	2.22
0.83	0.83	18.15	172.5	47.06	9.50	46.00	1.40	2.23

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .04

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.49	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.78	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.03	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.25	1.25	0.02	0.06
0.05	0.05	0.04	0.1	1.64	1.45	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.63	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.81	2.19	0.05	0.12
0.08	0.08	0.10	0.2	2.63	1.98	2.50	0.06	0.14
0.09	0.09	0.13	0.3	2.96	2.14	2.81	0.07	0.16
0.10	0.10	0.16	0.4	3.29	2.29	3.13	0.08	0.18
0.11	0.11	0.19	0.5	3.62	2.44	3.44	0.09	0.20
0.12	0.12	0.23	0.6	3.95	2.59	3.75	0.10	0.22
0.13	0.13	0.26	0.7	4.28	2.73	4.07	0.12	0.25
0.14	0.14	0.31	0.8	5.15	2.68	4.93	0.11	0.25
0.15	0.15	0.36	1.0	6.03	2.68	5.79	0.11	0.26
0.16	0.16	0.43	1.2	6.91	2.72	6.65	0.12	0.28
0.17	0.17	0.50	1.4	7.79	2.79	7.51	0.12	0.29
0.18	0.18	0.58	1.6	8.67	2.87	8.38	0.13	0.31
0.19	0.19	0.66	2.0	9.54	2.96	9.24	0.14	0.33
0.20	0.20	0.76	2.3	10.42	3.05	10.10	0.14	0.34
0.21	0.21	0.87	2.7	11.30	3.15	10.96	0.15	0.36
0.22	0.22	0.98	3.2	12.18	3.26	11.83	0.16	0.38
0.23	0.23	1.10	3.7	13.06	3.36	12.69	0.18	0.41
0.24	0.24	1.23	4.3	13.93	3.47	13.55	0.19	0.43
0.25	0.25	1.37	4.9	14.81	3.58	14.41	0.20	0.45
0.26	0.26	1.52	5.6	15.69	3.69	15.27	0.21	0.47
0.27	0.27	1.68	6.4	16.57	3.80	16.14	0.22	0.49
0.28	0.28	1.84	7.2	17.45	3.91	17.00	0.24	0.52
0.29	0.29	2.02	8.1	18.32	4.02	17.86	0.25	0.54
0.30	0.30	2.20	9.1	19.20	4.13	18.72	0.26	0.56
0.31	0.31	2.39	10.1	20.08	4.23	19.59	0.28	0.59
0.32	0.32	2.59	11.3	20.96	4.34	20.45	0.29	0.61
0.33	0.33	2.80	12.5	21.84	4.45	21.31	0.31	0.64
0.34	0.34	3.02	13.7	22.71	4.55	22.17	0.32	0.66
0.35	0.35	3.25	15.1	23.59	4.66	23.03	0.34	0.69
0.36	0.36	3.48	16.6	24.47	4.76	23.90	0.35	0.71
0.37	0.37	3.72	18.1	25.35	4.87	24.76	0.37	0.74
0.38	0.38	3.98	19.8	26.23	4.97	25.62	0.38	0.76
0.39	0.39	4.24	21.5	27.10	5.07	26.48	0.40	0.79
0.40	0.40	4.50	23.3	27.98	5.17	27.35	0.42	0.82
0.41	0.41	4.78	25.2	28.86	5.27	28.21	0.43	0.84
0.42	0.42	5.06	27.7	28.88	5.48	28.21	0.47	0.89
0.43	0.43	5.35	30.3	28.90	5.68	28.22	0.50	0.93

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	35.8	28.94	6.06	28.23	0.57	1.02
0.46	0.46	6.19	38.7	28.96	6.25	28.23	0.61	1.07
0.47	0.47	6.48	41.7	28.98	6.44	28.24	0.64	1.11
0.48	0.48	6.76	44.7	29.01	6.62	28.24	0.68	1.16
0.49	0.49	7.04	47.9	29.03	6.80	28.25	0.72	1.21
0.50	0.50	7.32	51.1	29.05	6.98	28.25	0.76	1.26
0.51	0.51	7.61	54.4	29.07	7.15	28.26	0.79	1.30

0.52	0.52	7.89	57.8	29.09	7.32	28.26	0.83	1.35
0.53	0.53	8.17	61.2	29.11	7.50	28.27	0.87	1.40
0.54	0.54	8.45	64.8	29.13	7.66	28.27	0.91	1.45
0.55	0.55	8.74	68.4	29.15	7.83	28.28	0.95	1.50
0.56	0.56	9.02	72.1	29.17	7.99	28.28	0.99	1.55
0.57	0.57	9.30	75.9	29.19	8.16	28.29	1.03	1.60
0.58	0.58	9.59	79.7	29.21	8.32	28.29	1.07	1.65
0.59	0.59	9.87	83.6	29.23	8.48	28.30	1.12	1.71
0.60	0.60	10.15	87.6	29.25	8.63	28.30	1.16	1.76
0.61	0.61	10.43	91.7	29.27	8.79	28.31	1.20	1.81
0.62	0.62	10.72	95.8	29.29	8.94	28.31	1.24	1.86
0.63	0.63	11.00	100.1	29.31	9.10	28.32	1.28	1.91
0.64	0.64	11.28	104.3	29.34	9.25	28.32	1.33	1.97
0.65	0.65	11.57	108.7	29.36	9.40	28.33	1.37	2.02
0.66	0.66	11.85	113.1	29.38	9.54	28.33	1.41	2.07
0.67	0.67	12.13	117.6	29.40	9.69	28.34	1.46	2.13
0.68	0.68	12.42	119.5	30.44	9.62	30.30	1.44	2.12
0.69	0.69	12.72	121.5	31.49	9.55	31.34	1.42	2.11
0.70	0.70	13.06	121.9	33.45	9.34	32.39	1.35	2.05
0.71	0.71	13.39	124.5	34.50	9.30	33.44	1.34	2.05
0.72	0.72	13.73	127.3	35.54	9.27	34.48	1.33	2.05
0.73	0.73	14.08	130.2	36.59	9.25	35.53	1.33	2.06
0.74	0.74	14.44	133.3	37.64	9.23	36.58	1.32	2.06
0.75	0.75	14.81	136.5	38.68	9.22	37.62	1.32	2.07
0.76	0.76	15.19	139.9	39.73	9.21	38.67	1.32	2.08
0.77	0.77	15.58	143.5	40.78	9.21	39.72	1.32	2.09
0.78	0.78	15.98	147.2	41.83	9.21	40.77	1.32	2.10
0.79	0.79	16.40	151.0	42.87	9.21	41.81	1.32	2.11
0.80	0.80	16.82	155.1	43.92	9.22	42.86	1.32	2.12
0.81	0.81	17.25	159.3	44.97	9.23	43.91	1.32	2.13
0.82	0.82	17.70	163.7	46.01	9.25	44.95	1.33	2.15
0.83	0.83	18.15	168.2	47.06	9.26	46.00	1.33	2.16

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .005

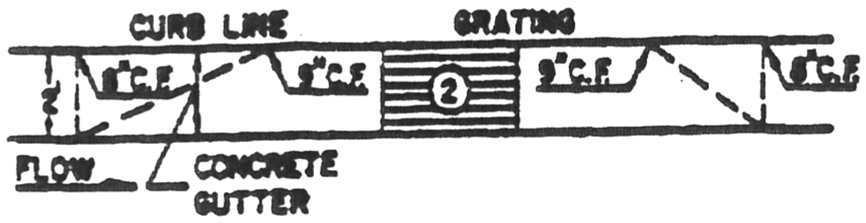
POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.17	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.28	0.63	0.00	0.02
0.03	0.03	0.01	0.0	0.99	0.36	0.94	0.00	0.03
0.04	0.04	0.03	0.0	1.32	0.44	1.25	0.00	0.04
0.05	0.05	0.04	0.0	1.64	0.51	1.56	0.00	0.05
0.06	0.06	0.06	0.0	1.97	0.58	1.88	0.01	0.07
0.07	0.07	0.08	0.0	2.30	0.64	2.19	0.01	0.08
0.08	0.08	0.10	0.1	2.63	0.70	2.50	0.01	0.09
0.09	0.09	0.13	0.1	2.96	0.76	2.81	0.01	0.10
0.10	0.10	0.16	0.1	3.29	0.81	3.13	0.01	0.11
0.11	0.11	0.19	0.2	3.62	0.86	3.44	0.01	0.12
0.12	0.12	0.23	0.2	3.95	0.92	3.75	0.01	0.13
0.13	0.13	0.26	0.3	4.28	0.97	4.07	0.01	0.14
0.14	0.14	0.31	0.3	5.15	0.95	4.93	0.01	0.15
0.15	0.15	0.36	0.3	6.03	0.95	5.79	0.01	0.16
0.16	0.16	0.43	0.4	6.91	0.96	6.65	0.01	0.17
0.17	0.17	0.50	0.5	7.79	0.99	7.51	0.02	0.19
0.18	0.18	0.58	0.6	8.67	1.01	8.38	0.02	0.20
0.19	0.19	0.66	0.7	9.54	1.04	9.24	0.02	0.21
0.20	0.20	0.76	0.8	10.42	1.08	10.10	0.02	0.22
0.21	0.21	0.87	1.0	11.30	1.11	10.96	0.02	0.23
0.22	0.22	0.98	1.1	12.18	1.15	11.83	0.02	0.24
0.23	0.23	1.10	1.3	13.06	1.19	12.69	0.02	0.25
0.24	0.24	1.23	1.5	13.93	1.23	13.55	0.02	0.26
0.25	0.25	1.37	1.7	14.81	1.27	14.41	0.02	0.27
0.26	0.26	1.52	2.0	15.69	1.30	15.27	0.03	0.29
0.27	0.27	1.68	2.3	16.57	1.34	16.14	0.03	0.30
0.28	0.28	1.84	2.5	17.45	1.38	17.00	0.03	0.31
0.29	0.29	2.02	2.9	18.32	1.42	17.86	0.03	0.32
0.30	0.30	2.20	3.2	19.20	1.46	18.72	0.03	0.33
0.31	0.31	2.39	3.6	20.08	1.50	19.59	0.03	0.34
0.32	0.32	2.59	4.0	20.96	1.53	20.45	0.04	0.36
0.33	0.33	2.80	4.4	21.84	1.57	21.31	0.04	0.37
0.34	0.34	3.02	4.9	22.71	1.61	22.17	0.04	0.38
0.35	0.35	3.25	5.3	23.59	1.65	23.03	0.04	0.39
0.36	0.36	3.48	5.9	24.47	1.68	23.90	0.04	0.40
0.37	0.37	3.72	6.4	25.35	1.72	24.76	0.05	0.42
0.38	0.38	3.98	7.0	26.23	1.76	25.62	0.05	0.43
0.39	0.39	4.24	7.6	27.10	1.79	26.48	0.05	0.44
0.40	0.40	4.50	8.2	27.98	1.83	27.35	0.05	0.45
0.41	0.41	4.78	8.9	28.86	1.86	28.21	0.05	0.46
0.42	0.42	5.06	9.8	28.88	1.94	28.21	0.06	0.48
0.43	0.43	5.35	10.7	28.90	2.01	28.22	0.06	0.49

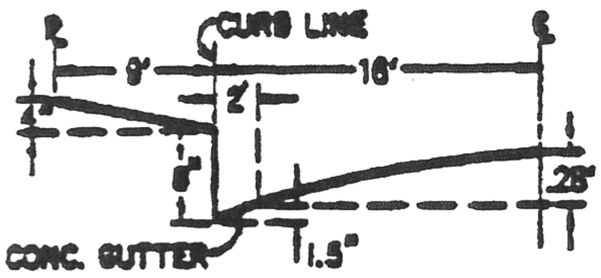
WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.45	0.45	5.91	12.7	28.94	2.14	28.23	0.07	0.52
0.46	0.46	6.19	13.7	28.96	2.21	28.23	0.08	0.54
0.47	0.47	6.48	14.7	28.98	2.28	28.24	0.08	0.55
0.48	0.48	6.76	15.8	29.01	2.34	28.24	0.09	0.57
0.49	0.49	7.04	16.9	29.03	2.40	28.25	0.09	0.58
0.50	0.50	7.32	18.1	29.05	2.47	28.25	0.09	0.59
0.51	0.51	7.61	19.2	29.07	2.53	28.26	0.10	0.61

0.52	0.52	7.89	20.4	29.09	2.59	28.26	0.10	0.62
0.53	0.53	8.17	21.7	29.11	2.65	28.27	0.11	0.64
0.54	0.54	8.45	22.9	29.13	2.71	28.27	0.11	0.65
0.55	0.55	8.74	24.2	29.15	2.77	28.28	0.12	0.67
0.56	0.56	9.02	25.5	29.17	2.83	28.28	0.12	0.68
0.57	0.57	9.30	26.8	29.19	2.88	28.29	0.13	0.70
0.58	0.58	9.59	28.2	29.21	2.94	28.29	0.13	0.71
0.59	0.59	9.87	29.6	29.23	3.00	28.30	0.14	0.73
0.60	0.60	10.15	31.0	29.25	3.05	28.30	0.14	0.74
0.61	0.61	10.43	32.4	29.27	3.11	28.31	0.15	0.76
0.62	0.62	10.72	33.9	29.29	3.16	28.31	0.16	0.78
0.63	0.63	11.00	35.4	29.31	3.22	28.32	0.16	0.79
0.64	0.64	11.28	36.9	29.34	3.27	28.32	0.17	0.81
0.65	0.65	11.57	38.4	29.36	3.32	28.33	0.17	0.82
0.66	0.66	11.85	40.0	29.38	3.37	28.33	0.18	0.84
0.67	0.67	12.13	41.6	29.40	3.43	28.34	0.18	0.85
0.68	0.68	12.42	42.2	30.44	3.40	30.30	0.18	0.86
0.69	0.69	12.72	43.0	31.49	3.38	31.34	0.18	0.87
0.70	0.70	13.06	43.1	33.45	3.30	32.39	0.17	0.87
0.71	0.71	13.39	44.0	34.50	3.29	33.44	0.17	0.88
0.72	0.72	13.73	45.0	35.54	3.28	34.48	0.17	0.89
0.73	0.73	14.08	46.0	36.59	3.27	35.53	0.17	0.90
0.74	0.74	14.44	47.1	37.64	3.26	36.58	0.17	0.91
0.75	0.75	14.81	48.3	38.68	3.26	37.62	0.16	0.91
0.76	0.76	15.19	49.5	39.73	3.26	38.67	0.16	0.92
0.77	0.77	15.58	50.7	40.78	3.25	39.72	0.16	0.93
0.78	0.78	15.98	52.0	41.83	3.26	40.77	0.16	0.94
0.79	0.79	16.40	53.4	42.87	3.26	41.81	0.16	0.95
0.80	0.80	16.82	54.8	43.92	3.26	42.86	0.17	0.97
0.81	0.81	17.25	56.3	44.97	3.26	43.91	0.17	0.98
0.82	0.82	17.70	57.9	46.01	3.27	44.95	0.17	0.99
0.83	0.83	18.15	59.5	47.06	3.28	46.00	0.17	1.00

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

D = DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

PLATE 22.3 D-5

IBIS ROAD - West half

Q = 6.89 cfs

S = 4.3%

E = 0.51 = 0.51 (max energy for roll curb)

Inlets required to divert flow to detention pond.

Grates take 3.5 cfs each -

two grates installed

EGRET COURT - West half

Q = 7.29 cfs

S = 4.4%

E = 0.52 > 0.51 (max for roll curb)

install standard curb 1 lot before inlets

Inlets can handle 3.5 cfs each -

install 2 inlets.

BOHANNAN HUSTON

Courtyard One

7500 JEFFERSON NE

Albuquerque

NEW MEXICO 87109

voice 505.823.1000

fax 505.821.0892

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .043

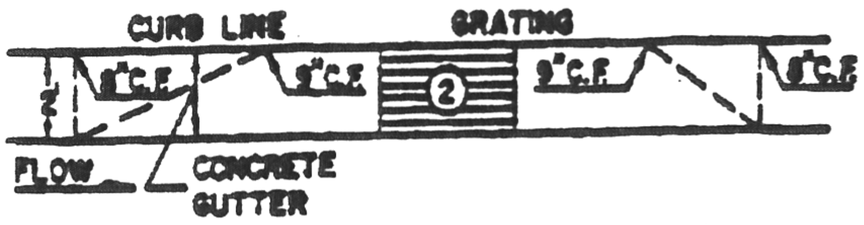
POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.51	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.81	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.07	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.29	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.50	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.69	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.88	2.19	0.05	0.12
0.08	0.08	0.10	0.2	2.63	2.05	2.50	0.07	0.15
0.09	0.09	0.13	0.3	2.96	2.22	2.81	0.08	0.17
0.10	0.10	0.16	0.4	3.29	2.38	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.53	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.69	3.75	0.11	0.23
0.13	0.13	0.26	0.7	4.28	2.83	4.07	0.12	0.25
0.14	0.14	0.31	0.9	5.15	2.78	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.78	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.82	6.65	0.12	0.28
0.17	0.17	0.50	1.4	7.79	2.89	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	2.97	8.38	0.14	0.32
0.19	0.19	0.66	2.0	9.54	3.06	9.24	0.15	0.34
0.20	0.20	0.76	2.4	10.42	3.16	10.10	0.16	0.36
0.21	0.21	0.87	2.8	11.30	3.27	10.96	0.17	0.38
0.22	0.22	0.98	3.3	12.18	3.38	11.83	0.18	0.40
0.23	0.23	1.10	3.8	13.06	3.49	12.69	0.19	0.42
0.24	0.24	1.23	4.4	13.93	3.60	13.55	0.20	0.44
0.25	0.25	1.37	5.1	14.81	3.71	14.41	0.21	0.46
0.26	0.26	1.52	5.8	15.69	3.83	15.27	0.23	0.49
0.27	0.27	1.68	6.6	16.57	3.94	16.14	0.24	0.51
0.28	0.28	1.84	7.5	17.45	4.05	17.00	0.25	0.53
0.29	0.29	2.02	8.4	18.32	4.17	17.86	0.27	0.56
0.30	0.30	2.20	9.4	19.20	4.28	18.72	0.28	0.58
0.31	0.31	2.39	10.5	20.08	4.39	19.59	0.30	0.61
0.32	0.32	2.59	11.7	20.96	4.50	20.45	0.31	0.63
0.33	0.33	2.80	12.9	21.84	4.61	21.31	0.33	0.66
0.34	0.34	3.02	14.3	22.71	4.72	22.17	0.35	0.69
0.35	0.35	3.25	15.7	23.59	4.83	23.03	0.36	0.71
0.36	0.36	3.48	17.2	24.47	4.94	23.90	0.38	0.74
0.37	0.37	3.72	18.8	25.35	5.05	24.76	0.40	0.77
0.38	0.38	3.98	20.5	26.23	5.15	25.62	0.41	0.79
0.39	0.39	4.24	22.3	27.10	5.26	26.48	0.43	0.82
0.40	0.40	4.50	24.2	27.98	5.36	27.35	0.45	0.85
0.41	0.41	4.78	26.2	28.86	5.47	28.21	0.46	0.87
0.42	0.42	5.06	28.8	28.88	5.68	28.21	0.50	0.92
0.43	0.43	5.35	31.5	28.90	5.89	28.22	0.54	0.97

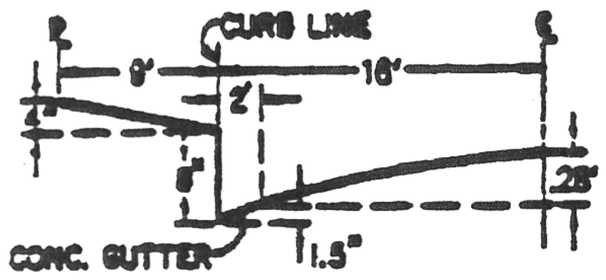
WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	37.2	28.94	6.29	28.23	0.61	1.06
0.46	0.46	6.19	40.1	28.96	6.48	28.23	0.65	1.11
0.47	0.47	6.48	43.2	28.98	6:67	28.24	0.69	1.16
0.48	0.48	6.76	46.4	29.01	6.86	28.24	0.73	1.21
0.49	0.49	7.04	49.6	29.03	7.05	28.25	0.77	1.26
0.50	0.50	7.32	53.0	29.05	7.23	28.25	0.81	1.31
0.51	0.51	7.61	56.4	29.07	7.42	28.26	0.85	1.36

0.52	0.52	7.89	59.9	29.09	7.59	28.26	0.90	1.42
0.53	0.53	8.17	63.5	29.11	7.77	28.27	0.94	1.47
0.54	0.54	8.45	67.2	29.13	7.95	28.27	0.98	1.52
0.55	0.55	8.74	70.9	29.15	8.12	28.28	1.02	1.57
0.56	0.56	9.02	74.8	29.17	8.29	28.28	1.07	1.63
0.57	0.57	9.30	78.7	29.19	8.46	28.29	1.11	1.68
0.58	0.58	9.59	82.7	29.21	8.62	28.29	1.15	1.73
0.59	0.59	9.87	86.7	29.23	8.79	28.30	1.20	1.79
0.60	0.60	10.15	90.9	29.25	8.95	28.30	1.24	1.84
0.61	0.61	10.43	95.1	29.27	9.11	28.31	1.29	1.90
0.62	0.62	10.72	99.4	29.29	9.27	28.31	1.33	1.95
0.63	0.63	11.00	103.7	29.31	9.43	28.32	1.38	2.01
0.64	0.64	11.28	108.2	29.34	9.59	28.32	1.43	2.07
0.65	0.65	11.57	112.7	29.36	9.74	28.33	1.47	2.12
0.66	0.66	11.85	117.3	29.38	9.90	28.33	1.52	2.18
0.67	0.67	12.13	121.9	29.40	10.05	28.34	1.57	2.24
0.68	0.68	12.42	123.9	30.44	9.97	30.30	1.54	2.22
0.69	0.69	12.72	126.0	31.49	9.91	31.34	1.52	2.21
0.70	0.70	13.06	126.4	33.45	9.68	32.39	1.46	2.16
0.71	0.71	13.39	129.1	34.50	9.64	33.44	1.44	2.15
0.72	0.72	13.73	132.0	35.54	9.61	34.48	1.43	2.15
0.73	0.73	14.08	135.0	36.59	9.59	35.53	1.43	2.16
0.74	0.74	14.44	138.2	37.64	9.57	36.58	1.42	2.16
0.75	0.75	14.81	141.5	38.68	9.56	37.62	1.42	2.17
0.76	0.76	15.19	145.0	39.73	9.55	38.67	1.42	2.18
0.77	0.77	15.58	148.7	40.78	9.54	39.72	1.41	2.18
0.78	0.78	15.98	152.6	41.83	9.55	40.77	1.41	2.19
0.79	0.79	16.40	156.6	42.87	9.55	41.81	1.42	2.21
0.80	0.80	16.82	160.8	43.92	9.56	42.86	1.42	2.22
0.81	0.81	17.25	165.2	44.97	9.57	43.91	1.42	2.23
0.82	0.82	17.70	169.7	46.01	9.59	44.95	1.43	2.25
0.83	0.83	18.15	174.4	47.06	9.61	46.00	1.43	2.26

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

PLATE 22.3 D-5

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

□ MANNING'S N= .017 SLOPE= .044

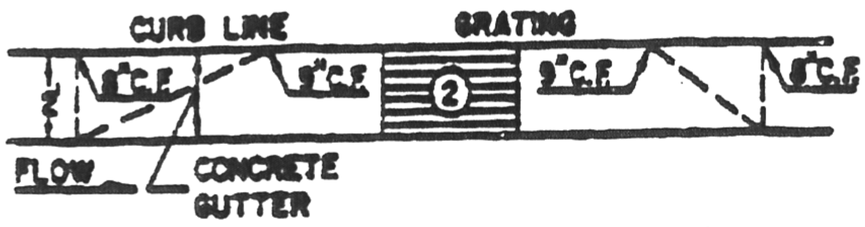
□POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.52	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.82	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.08	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.31	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.52	1.56	0.04	0.09
0.06	0.06	0.06	0.1	1.97	1.71	1.88	0.05	0.11
0.07	0.07	0.08	0.1	2.30	1.90	2.19	0.06	0.13
0.08	0.08	0.10	0.2	2.63	2.07	2.50	0.07	0.15
0.09	0.09	0.13	0.3	2.96	2.24	2.81	0.08	0.17
0.10	0.10	0.16	0.4	3.29	2.41	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.56	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.72	3.75	0.11	0.23
0.13	0.13	0.26	0.8	4.28	2.87	4.07	0.13	0.26
0.14	0.14	0.31	0.9	5.15	2.81	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.81	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.86	6.65	0.13	0.29
0.17	0.17	0.50	1.4	7.79	2.92	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	3.01	8.38	0.14	0.32
0.19	0.19	0.66	2.1	9.54	3.10	9.24	0.15	0.34
0.20	0.20	0.76	2.4	10.42	3.20	10.10	0.16	0.36
0.21	0.21	0.87	2.9	11.30	3.31	10.96	0.17	0.38
0.22	0.22	0.98	3.3	12.18	3.42	11.83	0.18	0.40
0.23	0.23	1.10	3.9	13.06	3.53	12.69	0.19	0.42
0.24	0.24	1.23	4.5	13.93	3.64	13.55	0.21	0.45
0.25	0.25	1.37	5.2	14.81	3.76	14.41	0.22	0.47
0.26	0.26	1.52	5.9	15.69	3.87	15.27	0.23	0.49
0.27	0.27	1.68	6.7	16.57	3.98	16.14	0.25	0.52
0.28	0.28	1.84	7.6	17.45	4.10	17.00	0.26	0.54
0.29	0.29	2.02	8.5	18.32	4.21	17.86	0.28	0.57
0.30	0.30	2.20	9.5	19.20	4.33	18.72	0.29	0.59
0.31	0.31	2.39	10.6	20.08	4.44	19.59	0.31	0.62
0.32	0.32	2.59	11.8	20.96	4.55	20.45	0.32	0.64
0.33	0.33	2.80	13.1	21.84	4.66	21.31	0.34	0.67
0.34	0.34	3.02	14.4	22.71	4.78	22.17	0.35	0.69
0.35	0.35	3.25	15.9	23.59	4.89	23.03	0.37	0.72
0.36	0.36	3.48	17.4	24.47	5.00	23.90	0.39	0.75
0.37	0.37	3.72	19.0	25.35	5.10	24.76	0.40	0.77
0.38	0.38	3.98	20.7	26.23	5.21	25.62	0.42	0.80
0.39	0.39	4.24	22.5	27.10	5.32	26.48	0.44	0.83
0.40	0.40	4.50	24.4	27.98	5.43	27.35	0.46	0.86
0.41	0.41	4.78	26.5	28.86	5.53	28.21	0.48	0.89
0.42	0.42	5.06	29.1	28.88	5.74	28.21	0.51	0.93
0.43	0.43	5.35	31.8	28.90	5.95	28.22	0.55	0.98

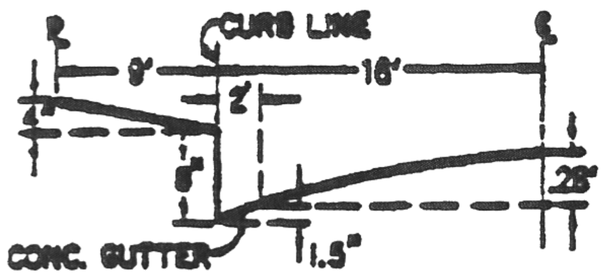
□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	37.6	28.94	6.36	28.23	0.63	1.08
0.46	0.46	6.19	40.6	28.96	6.56	28.23	0.67	1.13
0.47	0.47	6.48	43.7	28.98	6.75	28.24	0.71	1.18
0.48	0.48	6.76	46.9	29.01	6.94	28.24	0.75	1.23
0.49	0.49	7.04	50.2	29.03	7.13	28.25	0.79	1.28
0.50	0.50	7.32	53.6	29.05	7.32	28.25	0.83	1.33
0.51	0.51	7.61	57.1	29.07	7.50	28.26	0.87	1.38

0.52	0.52	7.89	60.6	29.09	7.68	28.26	0.92	1.44
0.53	0.53	8.17	64.2	29.11	7.86	28.27	0.96	1.49
0.54	0.54	8.45	67.9	29.13	8.04	28.27	1.00	1.54
0.55	0.55	8.74	71.7	29.15	8.21	28.28	1.05	1.60
0.56	0.56	9.02	75.6	29.17	8.38	28.28	1.09	1.65
0.57	0.57	9.30	79.6	29.19	8.55	28.29	1.14	1.71
0.58	0.58	9.59	83.6	29.21	8.72	28.29	1.18	1.76
0.59	0.59	9.87	87.7	29.23	8.89	28.30	1.23	1.82
0.60	0.60	10.15	91.9	29.25	9.05	28.30	1.27	1.87
0.61	0.61	10.43	96.2	29.27	9.22	28.31	1.32	1.93
0.62	0.62	10.72	100.5	29.29	9.38	28.31	1.37	1.99
0.63	0.63	11.00	104.9	29.31	9.54	28.32	1.41	2.04
0.64	0.64	11.28	109.4	29.34	9.70	28.32	1.46	2.10
0.65	0.65	11.57	114.0	29.36	9.85	28.33	1.51	2.16
0.66	0.66	11.85	118.6	29.38	10.01	28.33	1.56	2.22
0.67	0.67	12.13	123.3	29.40	10.16	28.34	1.60	2.27
0.68	0.68	12.42	125.3	30.44	10.09	30.30	1.58	2.26
0.69	0.69	12.72	127.5	31.49	10.02	31.34	1.56	2.25
0.70	0.70	13.06	127.9	33.45	9.79	32.39	1.49	2.19
0.71	0.71	13.39	130.6	34.50	9.76	33.44	1.48	2.19
0.72	0.72	13.73	133.5	35.54	9.72	34.48	1.47	2.19
0.73	0.73	14.08	136.5	36.59	9.70	35.53	1.46	2.19
0.74	0.74	14.44	139.8	37.64	9.68	36.58	1.46	2.20
0.75	0.75	14.81	143.2	38.68	9.67	37.62	1.45	2.20
0.76	0.76	15.19	146.7	39.73	9.66	38.67	1.45	2.21
0.77	0.77	15.58	150.5	40.78	9.66	39.72	1.45	2.22
0.78	0.78	15.98	154.4	41.83	9.66	40.77	1.45	2.23
0.79	0.79	16.40	158.4	42.87	9.66	41.81	1.45	2.24
0.80	0.80	16.82	162.7	43.92	9.67	42.86	1.45	2.25
0.81	0.81	17.25	167.1	44.97	9.68	43.91	1.46	2.27
0.82	0.82	17.70	171.6	46.01	9.70	44.95	1.46	2.28
0.83	0.83	18.15	176.4	47.06	9.72	46.00	1.47	2.30

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

D=DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

PLATE 22.3 D-5

BOHANNAN HUSTON

Courtyard One

7500 JEFFERSON NE

Albuquerque

NEW MEXICO 87109

voice 505.823.1000

fax 505 821.0892

Whimbrel Court - west half

Q = 7.49 cfs 15 lots

S = 4.21%

E = 0.53 > 0.51 (max for roll curb)

standard curb required when E = 0.51, Q = 6.5 cfs.

$$\frac{Q}{lot} = \frac{7.49}{15} = 0.5 \text{ cfs/lot}$$

# of lots before std. curb = 6.5/0.5 = 13 lots.

Inlets take 3.5 cfs each, install two

Goldfinch CT - west half

Q = 7.9 cfs

S = 4.42%

E = 0.54 > 0.51 (roll curb max)

standard curb reqd' at E = .51 Q = 6.6 cfs.

$$\frac{Q}{lot} = \frac{7.9}{16} = 0.49 \text{ cfs}$$

$$\frac{6.6}{.49} = 13.5 \text{ lots accommodated by roll curb}$$

Inlets take 3.8 cfs each, install two.

KING RAIL RD - west half

Q = 7.29 cfs

S = 4.26%

E = 0.51 : 0.51 roll curb sufficient

Inlets take 3.5 cfs each, install 2 inlets

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .0421

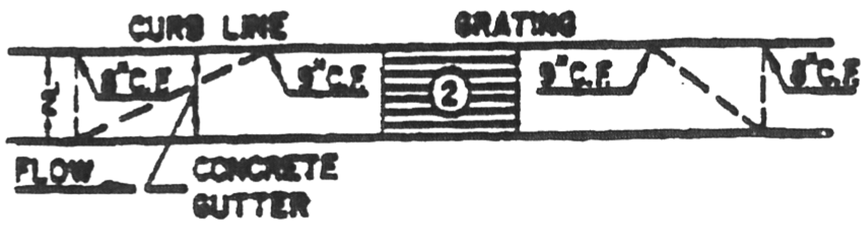
POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.51	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.80	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.05	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.28	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.48	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.67	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.86	2.19	0.05	0.12
0.08	0.08	0.10	0.2	2.63	2.03	2.50	0.06	0.14
0.09	0.09	0.13	0.3	2.96	2.19	2.81	0.07	0.16
0.10	0.10	0.16	0.4	3.29	2.35	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.51	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.66	3.75	0.11	0.23
0.13	0.13	0.26	0.7	4.28	2.80	4.07	0.12	0.25
0.14	0.14	0.31	0.9	5.15	2.75	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.75	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.79	6.65	0.12	0.28
0.17	0.17	0.50	1.4	7.79	2.86	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	2.94	8.38	0.13	0.31
0.19	0.19	0.66	2.0	9.54	3.03	9.24	0.14	0.33
0.20	0.20	0.76	2.4	10.42	3.13	10.10	0.15	0.35
0.21	0.21	0.87	2.8	11.30	3.23	10.96	0.16	0.37
0.22	0.22	0.98	3.3	12.18	3.34	11.83	0.17	0.39
0.23	0.23	1.10	3.8	13.06	3.45	12.69	0.18	0.41
0.24	0.24	1.23	4.4	13.93	3.56	13.55	0.20	0.44
0.25	0.25	1.37	5.0	14.81	3.67	14.41	0.21	0.46
0.26	0.26	1.52	5.8	15.69	3.79	15.27	0.22	0.48
0.27	0.27	1.68	6.5	16.57	3.90	16.14	0.24	0.51
0.28	0.28	1.84	7.4	17.45	4.01	17.00	0.25	0.53
0.29	0.29	2.02	8.3	18.32	4.12	17.86	0.26	0.55
0.30	0.30	2.20	9.3	19.20	4.23	18.72	0.28	0.58
0.31	0.31	2.39	10.4	20.08	4.34	19.59	0.29	0.60
0.32	0.32	2.59	11.5	20.96	4.45	20.45	0.31	0.63
0.33	0.33	2.80	12.8	21.84	4.56	21.31	0.32	0.65
0.34	0.34	3.02	14.1	22.71	4.67	22.17	0.34	0.68
0.35	0.35	3.25	15.5	23.59	4.78	23.03	0.35	0.70
0.36	0.36	3.48	17.0	24.47	4.89	23.90	0.37	0.73
0.37	0.37	3.72	18.6	25.35	4.99	24.76	0.39	0.76
0.38	0.38	3.98	20.3	26.23	5.10	25.62	0.40	0.78
0.39	0.39	4.24	22.0	27.10	5.20	26.48	0.42	0.81
0.40	0.40	4.50	23.9	27.98	5.31	27.35	0.44	0.84
0.41	0.41	4.78	25.9	28.86	5.41	28.21	0.45	0.86
0.42	0.42	5.06	28.5	28.88	5.62	28.21	0.49	0.91
0.43	0.43	5.35	31.1	28.90	5.82	28.22	0.53	0.96

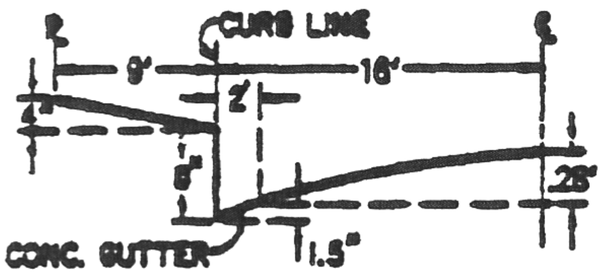
WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.45	0.45	5.91	36.8	28.94	6.22	28.23	0.60	1.05
0.46	0.46	6.19	39.7	28.96	6.41	28.23	0.64	1.10
0.47	0.47	6.48	42.8	28.98	6.60	28.24	0.68	1.15
0.48	0.48	6.76	45.9	29.01	6.79	28.24	0.72	1.20
0.49	0.49	7.04	49.1	29.03	6.98	28.25	0.76	1.25
0.50	0.50	7.32	52.4	29.05	7.16	28.25	0.80	1.30
0.51	0.51	7.61	55.8	29.07	7.34	28.26	0.84	1.35

0.52	0.52	7.89	59.3	29.09	7.51	28.26	0.88	1.40
0.53	0.53	8.17	62.8	29.11	7.69	28.27	0.92	1.45
0.54	0.54	8.45	66.5	29.13	7.86	28.27	0.96	1.50
0.55	0.55	8.74	70.2	29.15	8.03	28.28	1.00	1.55
0.56	0.56	9.02	74.0	29.17	8.20	28.28	1.04	1.60
0.57	0.57	9.30	77.8	29.19	8.37	28.29	1.09	1.66
0.58	0.58	9.59	81.8	29.21	8.53	28.29	1.13	1.71
0.59	0.59	9.87	85.8	29.23	8.70	28.30	1.17	1.76
0.60	0.60	10.15	89.9	29.25	8.86	28.30	1.22	1.82
0.61	0.61	10.43	94.1	29.27	9.02	28.31	1.26	1.87
0.62	0.62	10.72	98.3	29.29	9.17	28.31	1.31	1.93
0.63	0.63	11.00	102.6	29.31	9.33	28.32	1.35	1.98
0.64	0.64	11.28	107.0	29.34	9.49	28.32	1.40	2.04
0.65	0.65	11.57	111.5	29.36	9.64	28.33	1.44	2.09
0.66	0.66	11.85	116.0	29.38	9.79	28.33	1.49	2.15
0.67	0.67	12.13	120.6	29.40	9.94	28.34	1.54	2.21
0.68	0.68	12.42	122.6	30.44	9.87	30.30	1.51	2.19
0.69	0.69	12.72	124.7	31.49	9.80	31.34	1.49	2.18
0.70	0.70	13.06	125.1	33.45	9.58	32.39	1.43	2.13
0.71	0.71	13.39	127.8	34.50	9.54	33.44	1.41	2.12
0.72	0.72	13.73	130.6	35.54	9.51	34.48	1.40	2.12
0.73	0.73	14.08	133.6	36.59	9.49	35.53	1.40	2.13
0.74	0.74	14.44	136.7	37.64	9.47	36.58	1.39	2.13
0.75	0.75	14.81	140.0	38.68	9.46	37.62	1.39	2.14
0.76	0.76	15.19	143.5	39.73	9.45	38.67	1.39	2.15
0.77	0.77	15.58	147.2	40.78	9.44	39.72	1.39	2.16
0.78	0.78	15.98	151.0	41.83	9.45	40.77	1.39	2.17
0.79	0.79	16.40	155.0	42.87	9.45	41.81	1.39	2.18
0.80	0.80	16.82	159.1	43.92	9.46	42.86	1.39	2.19
0.81	0.81	17.25	163.4	44.97	9.47	43.91	1.39	2.20
0.82	0.82	17.70	167.9	46.01	9.49	44.95	1.40	2.22
0.83	0.83	18.15	172.5	47.06	9.50	46.00	1.40	2.23

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

PLATE 22.3 D-5

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .0442

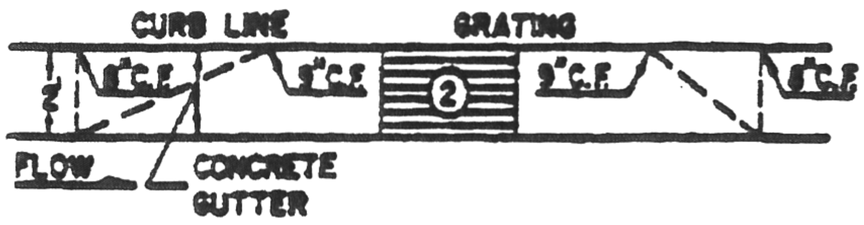
POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.52	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.82	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.08	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.31	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.52	1.56	0.04	0.09
0.06	0.06	0.06	0.1	1.97	1.72	1.88	0.05	0.11
0.07	0.07	0.08	0.1	2.30	1.90	2.19	0.06	0.13
0.08	0.08	0.10	0.2	2.63	2.08	2.50	0.07	0.15
0.09	0.09	0.13	0.3	2.96	2.25	2.81	0.08	0.17
0.10	0.10	0.16	0.4	3.29	2.41	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.57	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.72	3.75	0.12	0.24
0.13	0.13	0.26	0.8	4.28	2.87	4.07	0.13	0.26
0.14	0.14	0.31	0.9	5.15	2.82	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.82	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.86	6.65	0.13	0.29
0.17	0.17	0.50	1.5	7.79	2.93	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	3.01	8.38	0.14	0.32
0.19	0.19	0.66	2.1	9.54	3.11	9.24	0.15	0.34
0.20	0.20	0.76	2.4	10.42	3.21	10.10	0.16	0.36
0.21	0.21	0.87	2.9	11.30	3.31	10.96	0.17	0.38
0.22	0.22	0.98	3.4	12.18	3.42	11.83	0.18	0.40
0.23	0.23	1.10	3.9	13.06	3.54	12.69	0.19	0.42
0.24	0.24	1.23	4.5	13.93	3.65	13.55	0.21	0.45
0.25	0.25	1.37	5.2	14.81	3.76	14.41	0.22	0.47
0.26	0.26	1.52	5.9	15.69	3.88	15.27	0.23	0.49
0.27	0.27	1.68	6.7	16.57	3.99	16.14	0.25	0.52
0.28	0.28	1.84	7.6	17.45	4.11	17.00	0.26	0.54
0.29	0.29	2.02	8.5	18.32	4.22	17.86	0.28	0.57
0.30	0.30	2.20	9.5	19.20	4.34	18.72	0.29	0.59
0.31	0.31	2.39	10.6	20.08	4.45	19.59	0.31	0.62
0.32	0.32	2.59	11.8	20.96	4.56	20.45	0.32	0.64
0.33	0.33	2.80	13.1	21.84	4.68	21.31	0.34	0.67
0.34	0.34	3.02	14.5	22.71	4.79	22.17	0.36	0.70
0.35	0.35	3.25	15.9	23.59	4.90	23.03	0.37	0.72
0.36	0.36	3.48	17.4	24.47	5.01	23.90	0.39	0.75
0.37	0.37	3.72	19.0	25.35	5.12	24.76	0.41	0.78
0.38	0.38	3.98	20.8	26.23	5.22	25.62	0.42	0.80
0.39	0.39	4.24	22.6	27.10	5.33	26.48	0.44	0.83
0.40	0.40	4.50	24.5	27.98	5.44	27.35	0.46	0.86
0.41	0.41	4.78	26.5	28.86	5.54	28.21	0.48	0.89
0.42	0.42	5.06	29.2	28.88	5.76	28.21	0.51	0.93
0.43	0.43	5.35	31.9	28.90	5.97	28.22	0.55	0.98

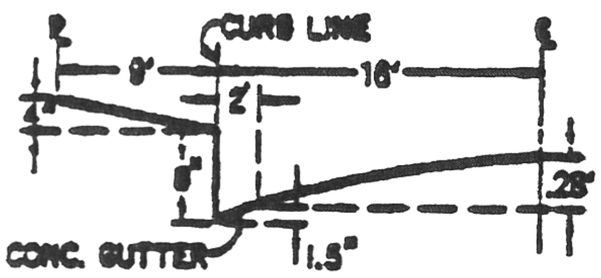
WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	37.7	28.94	6.37	28.23	0.63	1.08
0.46	0.46	6.19	40.7	28.96	6.57	28.23	0.67	1.13
0.47	0.47	6.48	43.8	28.98	6.77	28.24	0.71	1.18
0.48	0.48	6.76	47.0	29.01	6.96	28.24	0.75	1.23
0.49	0.49	7.04	50.3	29.03	7.15	28.25	0.79	1.28
0.50	0.50	7.32	53.7	29.05	7.33	28.25	0.84	1.34
0.51	0.51	7.61	57.2	29.07	7.52	28.26	0.88	1.39

0.52	0.52	7.89	60.7	29.09	7.70	28.26	0.92	1.44
0.53	0.53	8.17	64.4	29.11	7.88	28.27	0.96	1.49
0.54	0.54	8.45	68.1	29.13	8.06	28.27	1.01	1.55
0.55	0.55	8.74	71.9	29.15	8.23	28.28	1.05	1.60
0.56	0.56	9.02	75.8	29.17	8.40	28.28	1.10	1.66
0.57	0.57	9.30	79.8	29.19	8.57	28.29	1.14	1.71
0.58	0.58	9.59	83.8	29.21	8.74	28.29	1.19	1.77
0.59	0.59	9.87	87.9	29.23	8.91	28.30	1.23	1.82
0.60	0.60	10.15	92.1	29.25	9.08	28.30	1.28	1.88
0.61	0.61	10.43	96.4	29.27	9.24	28.31	1.33	1.94
0.62	0.62	10.72	100.8	29.29	9.40	28.31	1.37	1.99
0.63	0.63	11.00	105.2	29.31	9.56	28.32	1.42	2.05
0.64	0.64	11.28	109.7	29.34	9.72	28.32	1.47	2.11
0.65	0.65	11.57	114.3	29.36	9.88	28.33	1.51	2.16
0.66	0.66	11.85	118.9	29.38	10.03	28.33	1.56	2.22
0.67	0.67	12.13	123.6	29.40	10.19	28.34	1.61	2.28
0.68	0.68	12.42	125.6	30.44	10.11	30.30	1.59	2.27
0.69	0.69	12.72	127.8	31.49	10.04	31.34	1.57	2.26
0.70	0.70	13.06	128.2	33.45	9.82	32.39	1.50	2.20
0.71	0.71	13.39	130.9	34.50	9.78	33.44	1.48	2.19
0.72	0.72	13.73	133.8	35.54	9.75	34.48	1.47	2.19
0.73	0.73	14.08	136.8	36.59	9.72	35.53	1.47	2.20
0.74	0.74	14.44	140.1	37.64	9.70	36.58	1.46	2.20
0.75	0.75	14.81	143.5	38.68	9.69	37.62	1.46	2.21
0.76	0.76	15.19	147.1	39.73	9.68	38.67	1.46	2.22
0.77	0.77	15.58	150.8	40.78	9.68	39.72	1.45	2.22
0.78	0.78	15.98	154.7	41.83	9.68	40.77	1.45	2.23
0.79	0.79	16.40	158.8	42.87	9.68	41.81	1.46	2.25
0.80	0.80	16.82	163.0	43.92	9.69	42.86	1.46	2.26
0.81	0.81	17.25	167.4	44.97	9.70	43.91	1.46	2.27
0.82	0.82	17.70	172.0	46.01	9.72	44.95	1.47	2.29
0.83	0.83	18.15	176.8	47.06	9.74	46.00	1.47	2.30

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

D = DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

PLATE 22.3 D-5

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .0426

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

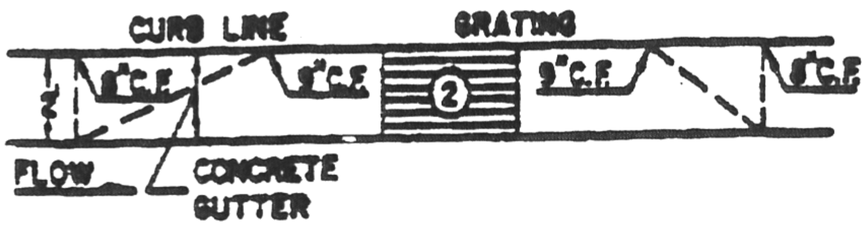
WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.51	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.81	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	1.06	0.94	0.02	0.05
0.04	0.04	0.03	0.0	1.32	1.29	1.25	0.03	0.07
0.05	0.05	0.04	0.1	1.64	1.49	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.68	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.87	2.19	0.05	0.12
0.08	0.08	0.10	0.2	2.63	2.04	2.50	0.06	0.14
0.09	0.09	0.13	0.3	2.96	2.21	2.81	0.08	0.17
0.10	0.10	0.16	0.4	3.29	2.37	3.13	0.09	0.19
0.11	0.11	0.19	0.5	3.62	2.52	3.44	0.10	0.21
0.12	0.12	0.23	0.6	3.95	2.67	3.75	0.11	0.23
0.13	0.13	0.26	0.7	4.28	2.82	4.07	0.12	0.25
0.14	0.14	0.31	0.9	5.15	2.76	4.93	0.12	0.26
0.15	0.15	0.36	1.0	6.03	2.77	5.79	0.12	0.27
0.16	0.16	0.43	1.2	6.91	2.81	6.65	0.12	0.28
0.17	0.17	0.50	1.4	7.79	2.88	7.51	0.13	0.30
0.18	0.18	0.58	1.7	8.67	2.96	8.38	0.14	0.32
0.19	0.19	0.66	2.0	9.54	3.05	9.24	0.14	0.33
0.20	0.20	0.76	2.4	10.42	3.15	10.10	0.15	0.35
0.21	0.21	0.87	2.8	11.30	3.25	10.96	0.16	0.37
0.22	0.22	0.98	3.3	12.18	3.36	11.83	0.18	0.40
0.23	0.23	1.10	3.8	13.06	3.47	12.69	0.19	0.42
0.24	0.24	1.23	4.4	13.93	3.58	13.55	0.20	0.44
0.25	0.25	1.37	5.1	14.81	3.70	14.41	0.21	0.46
0.26	0.26	1.52	5.8	15.69	3.81	15.27	0.23	0.49
0.27	0.27	1.68	6.6	16.57	3.92	16.14	0.24	0.51
0.28	0.28	1.84	7.4	17.45	4.03	17.00	0.25	0.53
0.29	0.29	2.02	8.4	18.32	4.15	17.86	0.27	0.56
0.30	0.30	2.20	9.4	19.20	4.26	18.72	0.28	0.58
0.31	0.31	2.39	10.5	20.08	4.37	19.59	0.30	0.61
0.32	0.32	2.59	11.6	20.96	4.48	20.45	0.31	0.63
0.33	0.33	2.80	12.9	21.84	4.59	21.31	0.33	0.66
0.34	0.34	3.02	14.2	22.71	4.70	22.17	0.34	0.68
0.35	0.35	3.25	15.6	23.59	4.81	23.03	0.36	0.71
0.36	0.36	3.48	17.1	24.47	4.92	23.90	0.38	0.74
0.37	0.37	3.72	18.7	25.35	5.02	24.76	0.39	0.76
0.38	0.38	3.98	20.4	26.23	5.13	25.62	0.41	0.79
0.39	0.39	4.24	22.2	27.10	5.23	26.48	0.43	0.82
0.40	0.40	4.50	24.1	27.98	5.34	27.35	0.44	0.84
0.41	0.41	4.78	26.0	28.86	5.44	28.21	0.46	0.87
0.42	0.42	5.06	28.6	28.88	5.65	28.21	0.50	0.92
0.43	0.43	5.35	31.3	28.90	5.86	28.22	0.53	0.96

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	37.0	28.94	6.26	28.23	0.61	1.06
0.46	0.46	6.19	40.0	28.96	6.45	28.23	0.65	1.11
0.47	0.47	6.48	43.0	28.98	6.64	28.24	0.69	1.16
0.48	0.48	6.76	46.2	29.01	6.83	28.24	0.72	1.20
0.49	0.49	7.04	49.4	29.03	7.02	28.25	0.76	1.25
0.50	0.50	7.32	52.7	29.05	7.20	28.25	0.81	1.31
0.51	0.51	7.61	56.1	29.07	7.38	28.26	0.85	1.36

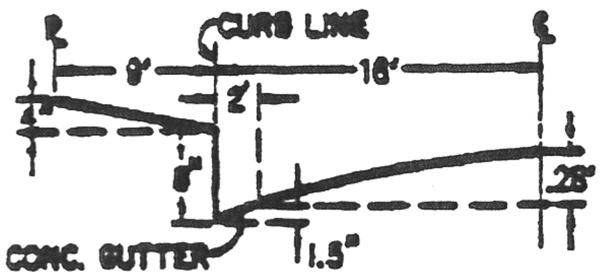
B-25

0.52	0.52	7.89	59.6	29.09	7.56	28.26	0.89	1.41
0.53	0.53	8.17	63.2	29.11	7.73	28.27	0.93	1.46
0.54	0.54	8.45	66.9	29.13	7.91	28.27	0.97	1.51
0.55	0.55	8.74	70.6	29.15	8.08	28.28	1.01	1.56
0.56	0.56	9.02	74.4	29.17	8.25	28.28	1.06	1.62
0.57	0.57	9.30	78.3	29.19	8.42	28.29	1.10	1.67
0.58	0.58	9.59	82.3	29.21	8.58	28.29	1.14	1.72
0.59	0.59	9.87	86.3	29.23	8.75	28.30	1.19	1.78
0.60	0.60	10.15	90.4	29.25	8.91	28.30	1.23	1.83
0.61	0.61	10.43	94.6	29.27	9.07	28.31	1.28	1.89
0.62	0.62	10.72	98.9	29.29	9.23	28.31	1.32	1.94
0.63	0.63	11.00	103.3	29.31	9.39	28.32	1.37	2.00
0.64	0.64	11.28	107.7	29.34	9.54	28.32	1.41	2.05
0.65	0.65	11.57	112.2	29.36	9.70	28.33	1.46	2.11
0.66	0.66	11.85	116.7	29.38	9.85	28.33	1.51	2.17
0.67	0.67	12.13	121.4	29.40	10.00	28.34	1.55	2.22
0.68	0.68	12.42	123.3	30.44	9.93	30.30	1.53	2.21
0.69	0.69	12.72	125.4	31.49	9.86	31.34	1.51	2.20
0.70	0.70	13.06	125.8	33.45	9.64	32.39	1.44	2.14
0.71	0.71	13.39	128.5	34.50	9.60	33.44	1.43	2.14
0.72	0.72	13.73	131.3	35.54	9.57	34.48	1.42	2.14
0.73	0.73	14.08	134.3	36.59	9.54	35.53	1.41	2.14
0.74	0.74	14.44	137.5	37.64	9.53	36.58	1.41	2.15
0.75	0.75	14.81	140.9	38.68	9.51	37.62	1.40	2.15
0.76	0.76	15.19	144.4	39.73	9.50	38.67	1.40	2.16
0.77	0.77	15.58	148.0	40.78	9.50	39.72	1.40	2.17
0.78	0.78	15.98	151.9	41.83	9.50	40.77	1.40	2.18
0.79	0.79	16.40	155.9	42.87	9.51	41.81	1.40	2.19
0.80	0.80	16.82	160.1	43.92	9.51	42.86	1.41	2.21
0.81	0.81	17.25	164.4	44.97	9.53	43.91	1.41	2.22
0.82	0.82	17.70	168.9	46.01	9.54	44.95	1.41	2.23
0.83	0.83	18.15	173.6	47.06	9.56	46.00	1.42	2.25

GRATING CAPACITIES FOR TYPE 'A' , 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

D=DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

PLATE 22.3 D-5

Courtyard One

7500 JEFFERSON NE

Albuquerque

NEW MEXICO 87109

voice 505.823.1000

fax 505.821.0892

Osprey Drive and East half of culdesacs

Osprey just North of Whimbrel CT.

Q = 11.54 cfs.

S = 3.27 %

E = 0.53 < 0.83 (max height for Std. Curb)

No inlets are required to prevent flooding.

(PRINTOUTS for other slopes included as a check - no flooding at other slopes)

Osprey South of El Moro Lane (NEAR KING RAIN)

Q = 13.76 cfs

S = 1.91%

E = 0.56 < 0.83 standard curb sufficient

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

□ MANNING'S N= .017 SLOPE= .0289

□POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.42	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.67	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	0.87	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	1.06	1.25	0.02	0.06
0.05	0.05	0.04	0.0	1.64	1.23	1.56	0.02	0.07
0.06	0.06	0.06	0.1	1.97	1.39	1.88	0.03	0.09
0.07	0.07	0.08	0.1	2.30	1.54	2.19	0.04	0.11
0.08	0.08	0.10	0.2	2.63	1.68	2.50	0.04	0.12
0.09	0.09	0.13	0.2	2.96	1.82	2.81	0.05	0.14
0.10	0.10	0.16	0.3	3.29	1.95	3.13	0.06	0.16
0.11	0.11	0.19	0.4	3.62	2.08	3.44	0.07	0.18
0.12	0.12	0.23	0.5	3.95	2.20	3.75	0.08	0.20
0.13	0.13	0.26	0.6	4.28	2.32	4.07	0.08	0.21
0.14	0.14	0.31	0.7	5.15	2.28	4.93	0.08	0.22
0.15	0.15	0.36	0.8	6.03	2.28	5.79	0.08	0.23
0.16	0.16	0.43	1.0	6.91	2.32	6.65	0.08	0.24
0.17	0.17	0.50	1.2	7.79	2.37	7.51	0.09	0.26
0.18	0.18	0.58	1.4	8.67	2.44	8.38	0.09	0.27
0.19	0.19	0.66	1.7	9.54	2.51	9.24	0.10	0.29
0.20	0.20	0.76	2.0	10.42	2.59	10.10	0.10	0.30
0.21	0.21	0.87	2.3	11.30	2.68	10.96	0.11	0.32
0.22	0.22	0.98	2.7	12.18	2.77	11.83	0.12	0.34
0.23	0.23	1.10	3.2	13.06	2.86	12.69	0.13	0.36
0.24	0.24	1.23	3.6	13.93	2.95	13.55	0.14	0.38
0.25	0.25	1.37	4.2	14.81	3.04	14.41	0.14	0.39
0.26	0.26	1.52	4.8	15.69	3.14	15.27	0.15	0.41
0.27	0.27	1.68	5.4	16.57	3.23	16.14	0.16	0.43
0.28	0.28	1.84	6.1	17.45	3.32	17.00	0.17	0.45
0.29	0.29	2.02	6.9	18.32	3.41	17.86	0.18	0.47
0.30	0.30	2.20	7.7	19.20	3.51	18.72	0.19	0.49
0.31	0.31	2.39	8.6	20.08	3.60	19.59	0.20	0.51
0.32	0.32	2.59	9.6	20.96	3.69	20.45	0.21	0.53
0.33	0.33	2.80	10.6	21.84	3.78	21.31	0.22	0.55
0.34	0.34	3.02	11.7	22.71	3.87	22.17	0.23	0.57
0.35	0.35	3.25	12.9	23.59	3.96	23.03	0.24	0.59
0.36	0.36	3.48	14.1	24.47	4.05	23.90	0.25	0.61
0.37	0.37	3.72	15.4	25.35	4.14	24.76	0.27	0.64
0.38	0.38	3.98	16.8	26.23	4.22	25.62	0.28	0.66
0.39	0.39	4.24	18.3	27.10	4.31	26.48	0.29	0.68
0.40	0.40	4.50	19.8	27.98	4.40	27.35	0.30	0.70
0.41	0.41	4.78	21.4	28.86	4.48	28.21	0.31	0.72
0.42	0.42	5.06	23.6	28.88	4.66	28.21	0.34	0.76
0.43	0.43	5.35	25.8	28.90	4.82	28.22	0.36	0.79

□ WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	30.5	28.94	5.15	28.23	0.41	0.86
0.46	0.46	6.19	32.9	28.96	5.31	28.23	0.44	0.90
0.47	0.47	6.48	35.4	28.98	5.47	28.24	0.46	0.93
0.48	0.48	6.76	38.0	29.01	5.63	28.24	0.49	0.97
0.49	0.49	7.04	40.7	29.03	5.78	28.25	0.52	1.01
0.50	0.50	7.32	43.4	29.05	5.93	28.25	0.55	1.05
0.51	0.51	7.61	46.2	29.07	6.08	28.26	0.57	1.08

$d = 11.94$ cfs

0.52	0.52	7.89	49.1	29.09	6.23	28.26	0.60	1.12
0.53	0.53	8.17	52.1	29.11	6.37	28.27	0.63	1.16
0.54	0.54	8.45	55.1	29.13	6.51	28.27	0.66	1.20
0.55	0.55	8.74	58.1	29.15	6.66	28.28	0.69	1.24
0.56	0.56	9.02	61.3	29.17	6.79	28.28	0.72	1.28
0.57	0.57	9.30	64.5	29.19	6.93	28.29	0.75	1.32
0.58	0.58	9.59	67.8	29.21	7.07	28.29	0.78	1.36
0.59	0.59	9.87	71.1	29.23	7.20	28.30	0.81	1.40
0.60	0.60	10.15	74.5	29.25	7.34	28.30	0.84	1.44
0.61	0.61	10.43	77.9	29.27	7.47	28.31	0.87	1.48
0.62	0.62	10.72	81.5	29.29	7.60	28.31	0.90	1.52
0.63	0.63	11.00	85.0	29.31	7.73	28.32	0.93	1.56
0.64	0.64	11.28	88.7	29.34	7.86	28.32	0.96	1.60
0.65	0.65	11.57	92.4	29.36	7.99	28.33	0.99	1.64
0.66	0.66	11.85	96.1	29.38	8.11	28.33	1.02	1.68
0.67	0.67	12.13	100.0	29.40	8.24	28.34	1.05	1.72
0.68	0.68	12.42	101.6	30.44	8.17	30.30	1.04	1.72
0.69	0.69	12.72	103.3	31.49	8.12	31.34	1.02	1.71
0.70	0.70	13.06	103.7	33.45	7.94	32.39	0.98	1.68
0.71	0.71	13.39	105.8	34.50	7.91	33.44	0.97	1.68
0.72	0.72	13.73	108.2	35.54	7.88	34.48	0.96	1.68
0.73	0.73	14.08	110.7	36.59	7.86	35.53	0.96	1.69
0.74	0.74	14.44	113.3	37.64	7.85	36.58	0.96	1.70
0.75	0.75	14.81	116.0	38.68	7.83	37.62	0.95	1.70
0.76	0.76	15.19	118.9	39.73	7.83	38.67	0.95	1.71
0.77	0.77	15.58	121.9	40.78	7.83	39.72	0.95	1.72
0.78	0.78	15.98	125.1	41.83	7.83	40.77	0.95	1.73
0.79	0.79	16.40	128.4	42.87	7.83	41.81	0.95	1.74
0.80	0.80	16.82	131.8	43.92	7.84	42.86	0.95	1.75
0.81	0.81	17.25	135.4	44.97	7.85	43.91	0.96	1.77
0.82	0.82	17.70	139.1	46.01	7.86	44.95	0.96	1.78
0.83	0.83	18.15	143.0	47.06	7.87	46.00	0.96	1.79

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .005

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.17	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.28	0.63	0.00	0.02
0.03	0.03	0.01	0.0	0.99	0.36	0.94	0.00	0.03
0.04	0.04	0.03	0.0	1.32	0.44	1.25	0.00	0.04
0.05	0.05	0.04	0.0	1.64	0.51	1.56	0.00	0.05
0.06	0.06	0.06	0.0	1.97	0.58	1.88	0.01	0.07
0.07	0.07	0.08	0.0	2.30	0.64	2.19	0.01	0.08
0.08	0.08	0.10	0.1	2.63	0.70	2.50	0.01	0.09
0.09	0.09	0.13	0.1	2.96	0.76	2.81	0.01	0.10
0.10	0.10	0.16	0.1	3.29	0.81	3.13	0.01	0.11
0.11	0.11	0.19	0.2	3.62	0.86	3.44	0.01	0.12
0.12	0.12	0.23	0.2	3.95	0.92	3.75	0.01	0.13
0.13	0.13	0.26	0.3	4.28	0.97	4.07	0.01	0.14
0.14	0.14	0.31	0.3	5.15	0.95	4.93	0.01	0.15
0.15	0.15	0.36	0.3	6.03	0.95	5.79	0.01	0.16
0.16	0.16	0.43	0.4	6.91	0.96	6.65	0.01	0.17
0.17	0.17	0.50	0.5	7.79	0.99	7.51	0.02	0.19
0.18	0.18	0.58	0.6	8.67	1.01	8.38	0.02	0.20
0.19	0.19	0.66	0.7	9.54	1.04	9.24	0.02	0.21
0.20	0.20	0.76	0.8	10.42	1.08	10.10	0.02	0.22
0.21	0.21	0.87	1.0	11.30	1.11	10.96	0.02	0.23
0.22	0.22	0.98	1.1	12.18	1.15	11.83	0.02	0.24
0.23	0.23	1.10	1.3	13.06	1.19	12.69	0.02	0.25
0.24	0.24	1.23	1.5	13.93	1.23	13.55	0.02	0.26
0.25	0.25	1.37	1.7	14.81	1.27	14.41	0.02	0.27
0.26	0.26	1.52	2.0	15.69	1.30	15.27	0.03	0.29
0.27	0.27	1.68	2.3	16.57	1.34	16.14	0.03	0.30
0.28	0.28	1.84	2.5	17.45	1.38	17.00	0.03	0.31
0.29	0.29	2.02	2.9	18.32	1.42	17.86	0.03	0.32
0.30	0.30	2.20	3.2	19.20	1.46	18.72	0.03	0.33
0.31	0.31	2.39	3.6	20.08	1.50	19.59	0.03	0.34
0.32	0.32	2.59	4.0	20.96	1.53	20.45	0.04	0.36
0.33	0.33	2.80	4.4	21.84	1.57	21.31	0.04	0.37
0.34	0.34	3.02	4.9	22.71	1.61	22.17	0.04	0.38
0.35	0.35	3.25	5.3	23.59	1.65	23.03	0.04	0.39
0.36	0.36	3.48	5.9	24.47	1.68	23.90	0.04	0.40
0.37	0.37	3.72	6.4	25.35	1.72	24.76	0.05	0.42
0.38	0.38	3.98	7.0	26.23	1.76	25.62	0.05	0.43
0.39	0.39	4.24	7.6	27.10	1.79	26.48	0.05	0.44
0.40	0.40	4.50	8.2	27.98	1.83	27.35	0.05	0.45
0.41	0.41	4.78	8.9	28.86	1.86	28.21	0.05	0.46
0.42	0.42	5.06	9.8	28.88	1.94	28.21	0.06	0.48
0.43	0.43	5.35	10.7	28.90	2.01	28.22	0.06	0.49

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	12.7	28.94	2.14	28.23	0.07	0.52
0.46	0.46	6.19	13.7	28.96	2.21	28.23	0.08	0.54
0.47	0.47	6.48	14.7	28.98	2.28	28.24	0.08	0.55
0.48	0.48	6.76	15.8	29.01	2.34	28.24	0.09	0.57
0.49	0.49	7.04	16.9	29.03	2.40	28.25	0.09	0.58
0.50	0.50	7.32	18.1	29.05	2.47	28.25	0.09	0.59
0.51	0.51	7.61	19.2	29.07	2.53	28.26	0.10	0.61
0.52	0.52	7.89	20.4	29.09	2.59	28.26	0.10	0.62
0.53	0.53	8.17	21.7	29.11	2.65	28.27	0.11	0.64
0.54	0.54	8.45	22.9	29.13	2.71	28.27	0.11	0.65
0.55	0.55	8.74	24.2	29.15	2.77	28.28	0.12	0.67
0.56	0.56	9.02	25.5	29.17	2.83	28.28	0.12	0.68
0.57	0.57	9.30	26.8	29.19	2.88	28.29	0.13	0.70
0.58	0.58	9.59	28.2	29.21	2.94	28.29	0.13	0.71
0.59	0.59	9.87	29.6	29.23	3.00	28.30	0.14	0.73
0.60	0.60	10.15	31.0	29.25	3.05	28.30	0.14	0.74
0.61	0.61	10.43	32.4	29.27	3.11	28.31	0.15	0.76
0.62	0.62	10.72	33.9	29.29	3.16	28.31	0.16	0.78
0.63	0.63	11.00	35.4	29.31	3.22	28.32	0.16	0.79
0.64	0.64	11.28	36.9	29.34	3.27	28.32	0.17	0.81
0.65	0.65	11.57	38.4	29.36	3.32	28.33	0.17	0.82
0.66	0.66	11.85	40.0	29.38	3.37	28.33	0.18	0.84
0.67	0.67	12.13	41.6	29.40	3.43	28.34	0.18	0.85
0.68	0.68	12.42	42.2	30.44	3.40	30.30	0.18	0.86
0.69	0.69	12.72	43.0	31.49	3.38	31.34	0.18	0.87
0.70	0.70	13.06	43.1	33.45	3.30	32.39	0.17	0.87
0.71	0.71	13.39	44.0	34.50	3.29	33.44	0.17	0.88
0.72	0.72	13.73	45.0	35.54	3.28	34.48	0.17	0.89
0.73	0.73	14.08	46.0	36.59	3.27	35.53	0.17	0.90
0.74	0.74	14.44	47.1	37.64	3.26	36.58	0.17	0.91
0.75	0.75	14.81	48.3	38.68	3.26	37.62	0.16	0.91
0.76	0.76	15.19	49.5	39.73	3.26	38.67	0.16	0.92
0.77	0.77	15.58	50.7	40.78	3.25	39.72	0.16	0.93
0.78	0.78	15.98	52.0	41.83	3.26	40.77	0.16	0.94
0.79	0.79	16.40	53.4	42.87	3.26	41.81	0.16	0.95
0.80	0.80	16.82	54.8	43.92	3.26	42.86	0.17	0.97
0.81	0.81	17.25	56.3	44.97	3.26	43.91	0.17	0.98
0.82	0.82	17.70	57.9	46.01	3.27	44.95	0.17	0.99
0.83	0.83	18.15	59.5	47.06	3.28	46.00	0.17	1.00

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .0327

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.45	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.71	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	0.93	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	1.13	1.25	0.02	0.06
0.05	0.05	0.04	0.1	1.64	1.31	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.48	1.88	0.03	0.09
0.07	0.07	0.08	0.1	2.30	1.64	2.19	0.04	0.11
0.08	0.08	0.10	0.2	2.63	1.79	2.50	0.05	0.13
0.09	0.09	0.13	0.2	2.96	1.93	2.81	0.06	0.15
0.10	0.10	0.16	0.3	3.29	2.07	3.13	0.07	0.17
0.11	0.11	0.19	0.4	3.62	2.21	3.44	0.08	0.19
0.12	0.12	0.23	0.5	3.95	2.34	3.75	0.09	0.21
0.13	0.13	0.26	0.7	4.28	2.47	4.07	0.09	0.22
0.14	0.14	0.31	0.7	5.15	2.42	4.93	0.09	0.23
0.15	0.15	0.36	0.9	6.03	2.43	5.79	0.09	0.24
0.16	0.16	0.43	1.0	6.91	2.46	6.65	0.09	0.25
0.17	0.17	0.50	1.2	7.79	2.52	7.51	0.10	0.27
0.18	0.18	0.58	1.5	8.67	2.59	8.38	0.10	0.28
0.19	0.19	0.66	1.8	9.54	2.67	9.24	0.11	0.30
0.20	0.20	0.76	2.1	10.42	2.76	10.10	0.12	0.32
0.21	0.21	0.87	2.5	11.30	2.85	10.96	0.13	0.34
0.22	0.22	0.98	2.9	12.18	2.95	11.83	0.13	0.35
0.23	0.23	1.10	3.4	13.06	3.04	12.69	0.14	0.37
0.24	0.24	1.23	3.9	13.93	3.14	13.55	0.15	0.39
0.25	0.25	1.37	4.4	14.81	3.24	14.41	0.16	0.41
0.26	0.26	1.52	5.1	15.69	3.34	15.27	0.17	0.43
0.27	0.27	1.68	5.8	16.57	3.44	16.14	0.18	0.45
0.28	0.28	1.84	6.5	17.45	3.53	17.00	0.19	0.47
0.29	0.29	2.02	7.3	18.32	3.63	17.86	0.20	0.49
0.30	0.30	2.20	8.2	19.20	3.73	18.72	0.22	0.52
0.31	0.31	2.39	9.2	20.08	3.83	19.59	0.23	0.54
0.32	0.32	2.59	10.2	20.96	3.92	20.45	0.24	0.56
0.33	0.33	2.80	11.3	21.84	4.02	21.31	0.25	0.58
0.34	0.34	3.02	12.4	22.71	4.12	22.17	0.26	0.60
0.35	0.35	3.25	13.7	23.59	4.21	23.03	0.28	0.63
0.36	0.36	3.48	15.0	24.47	4.31	23.90	0.29	0.65
0.37	0.37	3.72	16.4	25.35	4.40	24.76	0.30	0.67
0.38	0.38	3.98	17.9	26.23	4.49	25.62	0.31	0.69
0.39	0.39	4.24	19.4	27.10	4.59	26.48	0.33	0.72
0.40	0.40	4.50	21.1	27.98	4.68	27.35	0.34	0.74
0.41	0.41	4.78	22.8	28.86	4.77	28.21	0.35	0.76
0.42	0.42	5.06	25.1	28.88	4.95	28.21	0.38	0.80
0.43	0.43	5.35	27.4	28.90	5.13	28.22	0.41	0.84

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	32.4	28.94	5.48	28.23	0.47	0.92
0.46	0.46	6.19	35.0	28.96	5.65	28.23	0.50	0.96
0.47	0.47	6.48	37.7	28.98	5.82	28.24	0.53	1.00
0.48	0.48	6.76	40.5	29.01	5.99	28.24	0.56	1.04
0.49	0.49	7.04	43.3	29.03	6.15	28.25	0.59	1.08
0.50	0.50	7.32	46.2	29.05	6.31	28.25	0.62	1.12
0.51	0.51	7.61	49.2	29.07	6.47	28.26	0.65	1.16

1.54

0.52	0.52	7.89	52.2	29.09	6.62	28.26	0.68	1.20
0.53	0.53	8.17	55.4	29.11	6.78	28.27	0.71	1.24
0.54	0.54	8.45	58.6	29.13	6.93	28.27	0.75	1.29
0.55	0.55	8.74	61.8	29.15	7.08	28.28	0.78	1.33
0.56	0.56	9.02	65.2	29.17	7.23	28.28	0.81	1.37
0.57	0.57	9.30	68.6	29.19	7.37	28.29	0.84	1.41
0.58	0.58	9.59	72.1	29.21	7.52	28.29	0.88	1.46
0.59	0.59	9.87	75.6	29.23	7.66	28.30	0.91	1.50
0.60	0.60	10.15	79.2	29.25	7.81	28.30	0.95	1.55
0.61	0.61	10.43	82.9	29.27	7.95	28.31	0.98	1.59
0.62	0.62	10.72	86.7	29.29	8.09	28.31	1.02	1.64
0.63	0.63	11.00	90.5	29.31	8.22	28.32	1.05	1.68
0.64	0.64	11.28	94.3	29.34	8.36	28.32	1.09	1.73
0.65	0.65	11.57	98.3	29.36	8.50	28.33	1.12	1.77
0.66	0.66	11.85	102.3	29.38	8.63	28.33	1.16	1.82
0.67	0.67	12.13	106.3	29.40	8.76	28.34	1.19	1.86
0.68	0.68	12.42	108.0	30.44	8.70	30.30	1.17	1.85
0.69	0.69	12.72	109.9	31.49	8.64	31.34	1.16	1.85
0.70	0.70	13.06	110.3	33.45	8.44	32.39	1.11	1.81
0.71	0.71	13.39	112.6	34.50	8.41	33.44	1.10	1.81
0.72	0.72	13.73	115.1	35.54	8.38	34.48	1.09	1.81
0.73	0.73	14.08	117.7	36.59	8.36	35.53	1.09	1.82
0.74	0.74	14.44	120.5	37.64	8.35	36.58	1.08	1.82
0.75	0.75	14.81	123.4	38.68	8.33	37.62	1.08	1.83
0.76	0.76	15.19	126.5	39.73	8.33	38.67	1.08	1.84
0.77	0.77	15.58	129.7	40.78	8.32	39.72	1.08	1.85
0.78	0.78	15.98	133.1	41.83	8.32	40.77	1.08	1.86
0.79	0.79	16.40	136.6	42.87	8.33	41.81	1.08	1.87
0.80	0.80	16.82	140.2	43.92	8.34	42.86	1.08	1.88
0.81	0.81	17.25	144.0	44.97	8.35	43.91	1.08	1.89
0.82	0.82	17.70	148.0	46.01	8.36	44.95	1.09	1.91
0.83	0.83	18.15	152.1	47.06	8.38	46.00	1.09	1.92

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

MANNING'S N= .017 SLOPE= .0191

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.34	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.54	0.63	0.00	0.02
0.03	0.03	0.01	0.0	0.99	0.71	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	0.86	1.25	0.01	0.05
0.05	0.05	0.04	0.0	1.64	1.00	1.56	0.02	0.07
0.06	0.06	0.06	0.1	1.97	1.13	1.88	0.02	0.08
0.07	0.07	0.08	0.1	2.30	1.25	2.19	0.02	0.09
0.08	0.08	0.10	0.1	2.63	1.37	2.50	0.03	0.11
0.09	0.09	0.13	0.2	2.96	1.48	2.81	0.03	0.12
0.10	0.10	0.16	0.2	3.29	1.59	3.13	0.04	0.14
0.11	0.11	0.19	0.3	3.62	1.69	3.44	0.04	0.15
0.12	0.12	0.23	0.4	3.95	1.79	3.75	0.05	0.17
0.13	0.13	0.26	0.5	4.28	1.89	4.07	0.06	0.19
0.14	0.14	0.31	0.6	5.15	1.85	4.93	0.05	0.19
0.15	0.15	0.36	0.7	6.03	1.85	5.79	0.05	0.20
0.16	0.16	0.43	0.8	6.91	1.88	6.65	0.06	0.22
0.17	0.17	0.50	1.0	7.79	1.93	7.51	0.06	0.23
0.18	0.18	0.58	1.1	8.67	1.98	8.38	0.06	0.24
0.19	0.19	0.66	1.4	9.54	2.04	9.24	0.06	0.25
0.20	0.20	0.76	1.6	10.42	2.11	10.10	0.07	0.27
0.21	0.21	0.87	1.9	11.30	2.18	10.96	0.07	0.28
0.22	0.22	0.98	2.2	12.18	2.25	11.83	0.08	0.30
0.23	0.23	1.10	2.6	13.06	2.32	12.69	0.08	0.31
0.24	0.24	1.23	3.0	13.93	2.40	13.55	0.09	0.33
0.25	0.25	1.37	3.4	14.81	2.47	14.41	0.10	0.35
0.26	0.26	1.52	3.9	15.69	2.55	15.27	0.10	0.36
0.27	0.27	1.68	4.4	16.57	2.63	16.14	0.11	0.38
0.28	0.28	1.84	5.0	17.45	2.70	17.00	0.11	0.39
0.29	0.29	2.02	5.6	18.32	2.78	17.86	0.12	0.41
0.30	0.30	2.20	6.3	19.20	2.85	18.72	0.13	0.43
0.31	0.31	2.39	7.0	20.08	2.93	19.59	0.13	0.44
0.32	0.32	2.59	7.8	20.96	3.00	20.45	0.14	0.46
0.33	0.33	2.80	8.6	21.84	3.07	21.31	0.15	0.48
0.34	0.34	3.02	9.5	22.71	3.15	22.17	0.15	0.49
0.35	0.35	3.25	10.4	23.59	3.22	23.03	0.16	0.51
0.36	0.36	3.48	11.5	24.47	3.29	23.90	0.17	0.53
0.37	0.37	3.72	12.5	25.35	3.36	24.76	0.18	0.55
0.38	0.38	3.98	13.7	26.23	3.43	25.62	0.18	0.56
0.39	0.39	4.24	14.8	27.10	3.50	26.48	0.19	0.58
0.40	0.40	4.50	16.1	27.98	3.58	27.35	0.20	0.60
0.41	0.41	4.78	17.4	28.86	3.64	28.21	0.21	0.62
0.42	0.42	5.06	19.2	28.88	3.78	28.21	0.22	0.64
0.43	0.43	5.35	21.0	28.90	3.92	28.22	0.24	0.67

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.45	0.45	5.91	24.8	28.94	4.19	28.23	0.27	0.72
0.46	0.46	6.19	26.8	28.96	4.32	28.23	0.29	0.75
0.47	0.47	6.48	28.8	28.98	4.45	28.24	0.31	0.78
0.48	0.48	6.76	30.9	29.01	4.57	28.24	0.32	0.80
0.49	0.49	7.04	33.1	29.03	4.70	28.25	0.34	0.83
0.50	0.50	7.32	35.3	29.05	4.82	28.25	0.36	0.86
0.51	0.51	7.61	37.6	29.07	4.94	28.26	0.38	0.89

B-35

0.52	0.52	7.89	39.9	29.09	5.06	28.26	0.40	0.92
0.53	0.53	8.17	42.3	29.11	5.18	28.27	0.42	0.95
0.54	0.54	8.45	44.8	29.13	5.30	28.27	0.44	0.98
0.55	0.55	8.74	47.3	29.15	5.41	28.28	0.45	1.00
0.56	0.56	9.02	49.8	29.17	5.52	28.28	0.47	1.03
0.57	0.57	9.30	52.4	29.19	5.64	28.29	0.49	1.06
0.58	0.58	9.59	55.1	29.21	5.75	28.29	0.51	1.09
0.59	0.59	9.87	57.8	29.23	5.86	28.30	0.53	1.12
0.60	0.60	10.15	60.6	29.25	5.97	28.30	0.55	1.15
0.61	0.61	10.43	63.4	29.27	6.07	28.31	0.57	1.18
0.62	0.62	10.72	66.2	29.29	6.18	28.31	0.59	1.21
0.63	0.63	11.00	69.1	29.31	6.29	28.32	0.61	1.24
0.64	0.64	11.28	72.1	29.34	6.39	28.32	0.63	1.27
0.65	0.65	11.57	75.1	29.36	6.49	28.33	0.65	1.30
0.66	0.66	11.85	78.2	29.38	6.60	28.33	0.68	1.34
0.67	0.67	12.13	81.3	29.40	6.70	28.34	0.70	1.37
0.68	0.68	12.42	82.6	30.44	6.65	30.30	0.69	1.37
0.69	0.69	12.72	84.0	31.49	6.60	31.34	0.68	1.37
0.70	0.70	13.06	84.3	33.45	6.45	32.39	0.65	1.35
0.71	0.71	13.39	86.0	34.50	6.43	33.44	0.64	1.35
0.72	0.72	13.73	87.9	35.54	6.41	34.48	0.64	1.36
0.73	0.73	14.08	90.0	36.59	6.39	35.53	0.63	1.36
0.74	0.74	14.44	92.1	37.64	6.38	36.58	0.63	1.37
0.75	0.75	14.81	94.3	38.68	6.37	37.62	0.63	1.38
0.76	0.76	15.19	96.7	39.73	6.36	38.67	0.63	1.39
0.77	0.77	15.58	99.1	40.78	6.36	39.72	0.63	1.40
0.78	0.78	15.98	101.7	41.83	6.36	40.77	0.63	1.41
0.79	0.79	16.40	104.4	42.87	6.37	41.81	0.63	1.42
0.80	0.80	16.82	107.2	43.92	6.37	42.86	0.63	1.43
0.81	0.81	17.25	110.1	44.97	6.38	43.91	0.63	1.44
0.82	0.82	17.70	113.1	46.01	6.39	44.95	0.63	1.45
0.83	0.83	18.15	116.2	47.06	6.40	46.00	0.64	1.47

ATRISCO VILLAGE

STREET FLOW ANALYSIS

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

el moro

MANNING'S N= .017 SLOPE= .053

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	6	23.00	0.41	11	46.00	0.83
2	8.38	0.67	7	35.00	0.13	12	0.00	0.00
3	8.83	0.67	8	37.00	0.00	13	0.00	0.00
4	9.00	0.00	9	37.17	0.67	14	0.00	0.00
5	11.00	0.13	10	37.63	0.67	15	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	VEL (FPS)	FLOW (FT)	TOPWID	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.88	0.58	0.87	0.01	0.02	
0.02	0.02	0.02	0.0	1.77	0.92	1.73	0.01	0.03	
0.03	0.03	0.04	0.0	2.65	1.21	2.60	0.02	0.05	
0.04	0.04	0.07	0.1	3.53	1.46	3.47	0.03	0.07	
0.05	0.05	0.11	0.2	4.42	1.70	4.33	0.04	0.09	
0.06	0.06	0.16	0.3	5.30	1.92	5.20	0.06	0.12	
0.07	0.07	0.21	0.5	6.18	2.13	6.07	0.07	0.14	
0.08	0.08	0.28	0.6	7.07	2.32	6.94	0.08	0.16	
0.09	0.09	0.35	0.9	7.95	2.51	7.80	0.10	0.19	
0.10	0.10	0.43	1.2	8.83	2.70	8.67	0.11	0.21	
0.11	0.11	0.52	1.5	9.72	2.87	9.54	0.13	0.24	
0.12	0.12	0.62	1.9	10.60	3.05	10.40	0.14	0.26	
0.13	0.13	0.73	2.4	11.48	3.21	11.27	0.16	0.29	
0.14	0.14	0.85	2.8	12.91	3.29	12.69	0.17	0.31	
0.15	0.15	0.99	3.3	14.35	3.38	14.10	0.18	0.33	
0.16	0.16	1.13	3.9	15.78	3.48	15.52	0.19	0.35	
0.17	0.17	1.30	4.7	17.21	3.59	16.94	0.20	0.37	
0.18	0.18	1.47	5.5	18.64	3.71	18.35	0.21	0.39	
0.19	0.19	1.66	6.4	20.08	3.83	19.77	0.23	0.42	
0.20	0.20	1.87	7.4	21.51	3.95	21.19	0.24	0.44	
0.21	0.21	2.09	8.5	22.94	4.07	22.60	0.26	0.47	
0.22	0.22	2.32	9.7	24.37	4.20	24.02	0.27	0.49	
0.23	0.23	2.57	11.1	25.81	4.32	25.44	0.29	0.52	
0.24	0.24	2.83	12.6	27.24	4.45	26.85	0.31	0.55	
0.25	0.25	3.10	14.2	28.67	4.57	28.27	0.32	0.57	
0.26	0.26	3.39	15.9	30.10	4.70	29.68	0.34	0.60	
0.27	0.27	3.70	17.8	31.54	4.82	31.10	0.36	0.63	
0.28	0.28	4.02	19.9	32.97	4.95	32.52	0.38	0.66	
0.29	0.29	4.35	22.0	34.40	5.07	33.93	0.40	0.69	
0.30	0.30	4.70	24.4	35.83	5.19	35.35	0.42	0.72	
0.31	0.31	5.06	26.9	37.26	5.31	36.77	0.44	0.75	
0.32	0.32	5.43	29.5	38.70	5.43	38.18	0.46	0.78	
0.33	0.33	5.82	32.3	40.13	5.55	39.60	0.48	0.81	
0.34	0.34	6.22	35.3	41.56	5.67	41.02	0.50	0.84	
0.35	0.35	6.64	38.5	42.99	5.79	42.43	0.52	0.87	
0.36	0.36	7.07	41.8	44.43	5.91	43.85	0.54	0.90	
0.37	0.37	7.52	45.3	45.86	6.03	45.27	0.56	0.93	
0.38	0.38	7.98	49.0	47.29	6.14	46.68	0.59	0.97	
0.39	0.39	8.45	52.9	48.72	6.26	48.10	0.61	1.00	
0.40	0.40	8.94	57.0	50.16	6.37	49.51	0.63	1.03	
0.41	0.41	9.44	61.2	51.59	6.49	50.93	0.65	1.06	
0.42	0.42	9.95	66.4	52.16	6.67	51.49	0.69	1.11	

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.44	0.44	10.99	77.2	53.31	7.02	52.61	0.77	1.21
0.45	0.45	11.52	82.9	53.89	7.20	53.17	0.80	1.25
0.46	0.46	12.06	88.8	54.46	7.36	53.73	0.84	1.30
0.47	0.47	12.60	94.9	55.04	7.53	54.29	0.88	1.35
0.48	0.48	13.14	101.1	55.61	7.69	54.85	0.92	1.40
0.49	0.49	13.69	107.5	56.19	7.85	55.41	0.96	1.45
0.50	0.50	14.25	114.1	56.76	8.01	55.96	1.00	1.50
0.51	0.51	14.81	120.9	57.34	8.16	56.52	1.03	1.54
0.52	0.52	15.38	127.9	57.91	8.32	57.08	1.07	1.59
0.53	0.53	15.96	135.1	58.49	8.46	57.64	1.11	1.64
0.54	0.54	16.53	142.4	59.06	8.61	58.20	1.15	1.69
0.55	0.55	17.12	149.9	59.64	8.76	58.76	1.19	1.74
0.56	0.56	17.71	157.6	60.21	8.90	59.32	1.23	1.79
0.57	0.57	18.31	165.5	60.79	9.04	59.88	1.27	1.84
0.58	0.58	18.91	173.6	61.36	9.18	60.44	1.31	1.89
0.59	0.59	19.51	181.8	61.94	9.32	61.00	1.35	1.94
0.60	0.60	20.13	190.3	62.51	9.45	61.56	1.39	1.99
0.61	0.61	20.75	198.9	63.09	9.59	62.12	1.43	2.04
0.62	0.62	21.37	207.7	63.66	9.72	62.68	1.47	2.09
0.63	0.63	22.00	216.7	64.24	9.85	63.24	1.51	2.14
0.64	0.64	22.63	225.9	64.81	9.98	63.79	1.55	2.19
0.65	0.65	23.28	235.3	65.39	10.11	64.35	1.59	2.24
0.66	0.66	23.92	244.8	65.96	10.23	64.91	1.63	2.29
0.67	0.67	24.57	254.6	66.54	10.36	65.47	1.67	2.34
0.68	0.68	25.24	261.9	68.14	10.38	67.98	1.67	2.35
0.69	0.69	25.91	269.5	69.74	10.40	69.58	1.68	2.37
0.70	0.70	26.64	275.6	72.25	10.35	71.19	1.66	2.36
0.71	0.71	27.36	283.9	73.85	10.38	72.79	1.67	2.38
0.72	0.72	28.09	292.6	75.45	10.41	74.39	1.68	2.40
0.73	0.73	28.84	301.5	77.05	10.45	75.99	1.70	2.43
0.74	0.74	29.61	310.7	78.66	10.49	77.59	1.71	2.45
0.75	0.75	30.40	320.2	80.26	10.53	79.19	1.72	2.47
0.76	0.76	31.20	330.0	81.86	10.58	80.79	1.74	2.50
0.77	0.77	32.01	340.1	83.46	10.62	82.39	1.75	2.52
0.78	0.78	32.84	350.5	85.06	10.67	83.99	1.77	2.55
0.79	0.79	33.69	361.2	86.66	10.72	85.60	1.78	2.57
0.80	0.80	34.56	372.2	88.26	10.77	87.20	1.80	2.60
0.81	0.81	35.44	383.5	89.87	10.82	88.80	1.82	2.63
0.82	0.82	36.33	395.1	91.47	10.87	90.40	1.84	2.66
0.83	0.83	37.24	407.0	93.07	10.93	92.00	1.85	2.68

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

del monte

MANNING'S N= .017 SLOPE= .0136

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.29	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.46	0.63	0.00	0.02
0.03	0.03	0.01	0.0	0.99	0.60	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	0.73	1.25	0.01	0.05
0.05	0.05	0.04	0.0	1.64	0.84	1.56	0.01	0.06
0.06	0.06	0.06	0.1	1.97	0.95	1.88	0.01	0.07
0.07	0.07	0.08	0.1	2.30	1.05	2.19	0.02	0.09
0.08	0.08	0.10	0.1	2.63	1.15	2.50	0.02	0.10
0.09	0.09	0.13	0.2	2.96	1.25	2.81	0.02	0.11
0.10	0.10	0.16	0.2	3.29	1.34	3.13	0.03	0.13
0.11	0.11	0.19	0.3	3.62	1.43	3.44	0.03	0.14
0.12	0.12	0.23	0.3	3.95	1.51	3.75	0.04	0.16
0.13	0.13	0.26	0.4	4.28	1.59	4.07	0.04	0.17
0.14	0.14	0.31	0.5	5.15	1.56	4.93	0.04	0.18
0.15	0.15	0.36	0.6	6.03	1.56	5.79	0.04	0.19
0.16	0.16	0.43	0.7	6.91	1.59	6.65	0.04	0.20
0.17	0.17	0.50	0.8	7.79	1.63	7.51	0.04	0.21
0.18	0.18	0.58	1.0	8.67	1.67	8.38	0.04	0.22
0.19	0.19	0.66	1.1	9.54	1.72	9.24	0.05	0.24
0.20	0.20	0.76	1.4	10.42	1.78	10.10	0.05	0.25
0.21	0.21	0.87	1.6	11.30	1.84	10.96	0.05	0.26
0.22	0.22	0.98	1.9	12.18	1.90	11.83	0.06	0.28
0.23	0.23	1.10	2.2	13.06	1.96	12.69	0.06	0.29
0.24	0.24	1.23	2.5	13.93	2.02	13.55	0.06	0.30
0.25	0.25	1.37	2.9	14.81	2.09	14.41	0.07	0.32
0.26	0.26	1.52	3.3	15.69	2.15	15.27	0.07	0.33
0.27	0.27	1.68	3.7	16.57	2.22	16.14	0.08	0.35
0.28	0.28	1.84	4.2	17.45	2.28	17.00	0.08	0.36
0.29	0.29	2.02	4.7	18.32	2.34	17.86	0.09	0.38
0.30	0.30	2.20	5.3	19.20	2.41	18.72	0.09	0.39
0.31	0.31	2.39	5.9	20.08	2.47	19.59	0.09	0.40
0.32	0.32	2.59	6.6	20.96	2.53	20.45	0.10	0.42
0.33	0.33	2.80	7.3	21.84	2.59	21.31	0.10	0.43
0.34	0.34	3.02	8.0	22.71	2.66	22.17	0.11	0.45
0.35	0.35	3.25	8.8	23.59	2.72	23.03	0.11	0.46
0.36	0.36	3.48	9.7	24.47	2.78	23.90	0.12	0.48
0.37	0.37	3.72	10.6	25.35	2.84	24.76	0.13	0.50
0.38	0.38	3.98	11.5	26.23	2.90	25.62	0.13	0.51
0.39	0.39	4.24	12.5	27.10	2.96	26.48	0.14	0.53
0.40	0.40	4.50	13.6	27.98	3.02	27.35	0.14	0.54
0.41	0.41	4.78	14.7	28.86	3.08	28.21	0.15	0.56
0.42	0.42	5.06	16.2	28.88	3.19	28.21	0.16	0.58
0.43	0.43	5.35	17.7	28.90	3.31	28.22	0.17	0.60

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	20.9	28.94	3.54	28.23	0.19	0.64
0.46	0.46	6.19	22.6	28.96	3.65	28.23	0.21	0.67
0.47	0.47	6.48	24.3	28.98	3.75	28.24	0.22	0.69
0.48	0.48	6.76	26.1	29.01	3.86	28.24	0.23	0.71
0.49	0.49	7.04	27.9	29.03	3.96	28.25	0.24	0.73
0.50	0.50	7.32	29.8	29.05	4.07	28.25	0.26	0.76
0.51	0.51	7.61	31.7	29.07	4.17	28.26	0.27	0.78
0.52	0.52	7.89	33.7	29.09	4.27	28.26	0.28	0.80
0.53	0.53	8.17	35.7	29.11	4.37	28.27	0.30	0.83
0.54	0.54	8.45	37.8	29.13	4.47	28.27	0.31	0.85
0.55	0.55	8.74	39.9	29.15	4.57	28.28	0.32	0.87
0.56	0.56	9.02	42.0	29.17	4.66	28.28	0.34	0.90
0.57	0.57	9.30	44.2	29.19	4.76	28.29	0.35	0.92
0.58	0.58	9.59	46.5	29.21	4.85	28.29	0.37	0.95
0.59	0.59	9.87	48.8	29.23	4.94	28.30	0.38	0.97
0.60	0.60	10.15	51.1	29.25	5.03	28.30	0.39	0.99
0.61	0.61	10.43	53.5	29.27	5.12	28.31	0.41	1.02
0.62	0.62	10.72	55.9	29.29	5.21	28.31	0.42	1.04
0.63	0.63	11.00	58.3	29.31	5.30	28.32	0.44	1.07
0.64	0.64	11.28	60.8	29.34	5.39	28.32	0.45	1.09
0.65	0.65	11.57	63.4	29.36	5.48	28.33	0.47	1.12
0.66	0.66	11.85	66.0	29.38	5.57	28.33	0.48	1.14
0.67	0.67	12.13	68.6	29.40	5.65	28.34	0.50	1.17
0.68	0.68	12.42	69.7	30.44	5.61	30.30	0.49	1.17
0.69	0.69	12.72	70.9	31.49	5.57	31.34	0.48	1.17
0.70	0.70	13.06	71.1	33.45	5.45	32.39	0.46	1.16
0.71	0.71	13.39	72.6	34.50	5.42	33.44	0.46	1.17
0.72	0.72	13.73	74.2	35.54	5.41	34.48	0.45	1.17
0.73	0.73	14.08	75.9	36.59	5.39	35.53	0.45	1.18
0.74	0.74	14.44	77.7	37.64	5.38	36.58	0.45	1.19
0.75	0.75	14.81	79.6	38.68	5.37	37.62	0.45	1.20
0.76	0.76	15.19	81.6	39.73	5.37	38.67	0.45	1.21
0.77	0.77	15.58	83.6	40.78	5.37	39.72	0.45	1.22
0.78	0.78	15.98	85.8	41.83	5.37	40.77	0.45	1.23
0.79	0.79	16.40	88.1	42.87	5.37	41.81	0.45	1.24
0.80	0.80	16.82	90.4	43.92	5.38	42.86	0.45	1.25
0.81	0.81	17.25	92.9	44.97	5.38	43.91	0.45	1.26
0.82	0.82	17.70	95.4	46.01	5.39	44.95	0.45	1.27
0.83	0.83	18.15	98.1	47.06	5.40	46.00	0.45	1.28

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

Apodaca

MANNING'S N= .017 SLOPE= .034

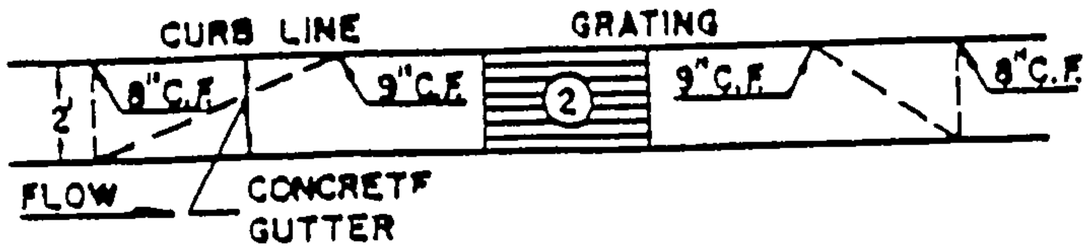
POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	0.83	5	11.00	0.13	9	37.17	0.67
2	8.38	0.67	6	23.00	0.41	10	37.63	0.67
3	8.83	0.67	7	35.00	0.13	11	46.00	0.83
4	9.00	0.00	8	37.00	0.00	12	0.00	0.00

WSEL	DEPTH INC	FLOW AREA	FLOW RATE	WETTED PER	FLOW VEL	TOPWID	VEL HEAD	ENERGY HEAD
(FT)	(FT)	SQ.FT.	(CFS)	(FT)	(FPS)	(FT)	(FT)	(FT)
0.01	0.01	0.00	0.0	0.33	0.46	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.72	0.63	0.01	0.03
0.03	0.03	0.01	0.0	0.99	0.95	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	1.15	1.25	0.02	0.06
0.05	0.05	0.04	0.1	1.64	1.33	1.56	0.03	0.08
0.06	0.06	0.06	0.1	1.97	1.50	1.88	0.04	0.10
0.07	0.07	0.08	0.1	2.30	1.67	2.19	0.04	0.11
0.08	0.08	0.10	0.2	2.63	1.82	2.50	0.05	0.13
0.09	0.09	0.13	0.2	2.96	1.97	2.81	0.06	0.15
0.10	0.10	0.16	0.3	3.29	2.12	3.13	0.07	0.17
0.11	0.11	0.19	0.4	3.62	2.25	3.44	0.08	0.19
0.12	0.12	0.23	0.5	3.95	2.39	3.75	0.09	0.21
0.13	0.13	0.26	0.7	4.28	2.52	4.07	0.10	0.23
0.14	0.14	0.31	0.8	5.15	2.47	4.93	0.09	0.23
0.15	0.15	0.36	0.9	6.03	2.47	5.79	0.10	0.25
0.16	0.16	0.43	1.1	6.91	2.51	6.65	0.10	0.26
0.17	0.17	0.50	1.3	7.79	2.57	7.51	0.10	0.27
0.18	0.18	0.58	1.5	8.67	2.64	8.38	0.11	0.29
0.19	0.19	0.66	1.8	9.54	2.72	9.24	0.12	0.31
0.20	0.20	0.76	2.1	10.42	2.81	10.10	0.12	0.32
0.21	0.21	0.87	2.5	11.30	2.91	10.96	0.13	0.34
0.22	0.22	0.98	2.9	12.18	3.00	11.83	0.14	0.36
0.23	0.23	1.10	3.4	13.06	3.10	12.69	0.15	0.38
0.24	0.24	1.23	3.9	13.93	3.20	13.55	0.16	0.40
0.25	0.25	1.37	4.5	14.81	3.30	14.41	0.17	0.42
0.26	0.26	1.52	5.2	15.69	3.40	15.27	0.18	0.44
0.27	0.27	1.68	5.9	16.57	3.50	16.14	0.19	0.46
0.28	0.28	1.84	6.6	17.45	3.60	17.00	0.20	0.48
0.29	0.29	2.02	7.5	18.32	3.70	17.86	0.21	0.50
0.30	0.30	2.20	8.4	19.20	3.80	18.72	0.22	0.52
0.31	0.31	2.39	9.3	20.08	3.90	19.59	0.24	0.55
0.32	0.32	2.59	10.4	20.96	4.00	20.45	0.25	0.57
0.33	0.33	2.80	11.5	21.84	4.10	21.31	0.26	0.59
0.34	0.34	3.02	12.7	22.71	4.20	22.17	0.27	0.61
0.35	0.35	3.25	13.9	23.59	4.30	23.03	0.29	0.64
0.36	0.36	3.48	15.3	24.47	4.39	23.90	0.30	0.66
0.37	0.37	3.72	16.7	25.35	4.49	24.76	0.31	0.68
0.38	0.38	3.98	18.2	26.23	4.58	25.62	0.33	0.71
0.39	0.39	4.24	19.8	27.10	4.68	26.48	0.34	0.73
0.40	0.40	4.50	21.5	27.98	4.77	27.35	0.35	0.75
0.41	0.41	4.78	23.3	28.86	4.86	28.21	0.37	0.78
0.42	0.42	5.06	25.6	28.88	5.05	28.21	0.40	0.82
0.43	0.43	5.35	28.0	28.90	5.23	28.22	0.43	0.86

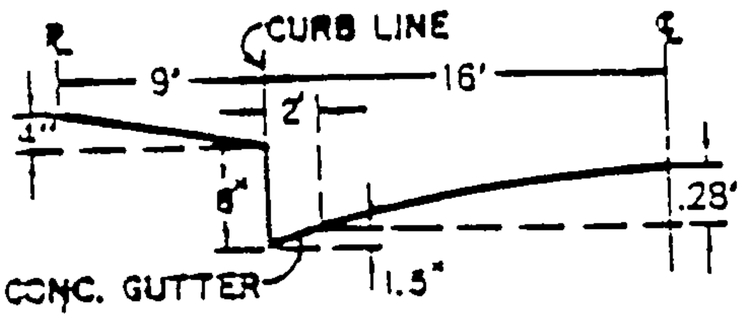
WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.45	0.45	5.91	33.0	28.94	5.59	28.23	0.49	0.94
0.46	0.46	6.19	35.7	28.96	5.76	28.23	0.52	0.98
0.47	0.47	6.48	38.4	28.98	5.93	28.24	0.55	1.02
0.48	0.48	6.76	41.2	29.01	6.10	28.24	0.58	1.06
0.49	0.49	7.04	44.1	29.03	6.27	28.25	0.61	1.10
0.50	0.50	7.32	47.1	29.05	6.43	28.25	0.64	1.14
0.51	0.51	7.61	50.2	29.07	6.59	28.26	0.68	1.19
0.52	0.52	7.89	53.3	29.09	6.75	28.26	0.71	1.23
0.53	0.53	8.17	56.5	29.11	6.91	28.27	0.74	1.27
0.54	0.54	8.45	59.7	29.13	7.07	28.27	0.78	1.32
0.55	0.55	8.74	63.1	29.15	7.22	28.28	0.81	1.36
0.56	0.56	9.02	66.5	29.17	7.37	28.28	0.84	1.40
0.57	0.57	9.30	70.0	29.19	7.52	28.29	0.88	1.45
0.58	0.58	9.59	73.5	29.21	7.67	28.29	0.91	1.49
0.59	0.59	9.87	77.1	29.23	7.81	28.30	0.95	1.54
0.60	0.60	10.15	80.8	29.25	7.96	28.30	0.98	1.58
0.61	0.61	10.43	84.5	29.27	8.10	28.31	1.02	1.63
0.62	0.62	10.72	88.4	29.29	8.24	28.31	1.06	1.68
0.63	0.63	11.00	92.2	29.31	8.39	28.32	1.09	1.72
0.64	0.64	11.28	96.2	29.34	8.52	28.32	1.13	1.77
0.65	0.65	11.57	100.2	29.36	8.66	28.33	1.17	1.82
0.66	0.66	11.85	104.3	29.38	8.80	28.33	1.20	1.86
0.67	0.67	12.13	108.4	29.40	8.94	28.34	1.24	1.91
0.68	0.68	12.42	110.2	30.44	8.87	30.30	1.22	1.90
0.69	0.69	12.72	112.1	31.49	8.81	31.34	1.20	1.89
0.70	0.70	13.06	112.4	33.45	8.61	32.39	1.15	1.85
0.71	0.71	13.39	114.8	34.50	8.58	33.44	1.14	1.85
0.72	0.72	13.73	117.3	35.54	8.55	34.48	1.13	1.85
0.73	0.73	14.08	120.0	36.59	8.53	35.53	1.13	1.86
0.74	0.74	14.44	122.9	37.64	8.51	36.58	1.12	1.86
0.75	0.75	14.81	125.8	38.68	8.50	37.62	1.12	1.87
0.76	0.76	15.19	129.0	39.73	8.49	38.67	1.12	1.88
0.77	0.77	15.58	132.3	40.78	8.49	39.72	1.12	1.89
0.78	0.78	15.98	135.7	41.83	8.49	40.77	1.12	1.90
0.79	0.79	16.40	139.3	42.87	8.49	41.81	1.12	1.91
0.80	0.80	16.82	143.0	43.92	8.50	42.86	1.12	1.92
0.81	0.81	17.25	146.9	44.97	8.51	43.91	1.12	1.93
0.82	0.82	17.70	150.9	46.01	8.52	44.95	1.13	1.95
0.83	0.83	18.15	155.1	47.06	8.54	46.00	1.13	1.96

GRATING CAPACITIES FOR TYPE "A" , "C" and "D"

Apodaca



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

d = 0.

S = 3.4%

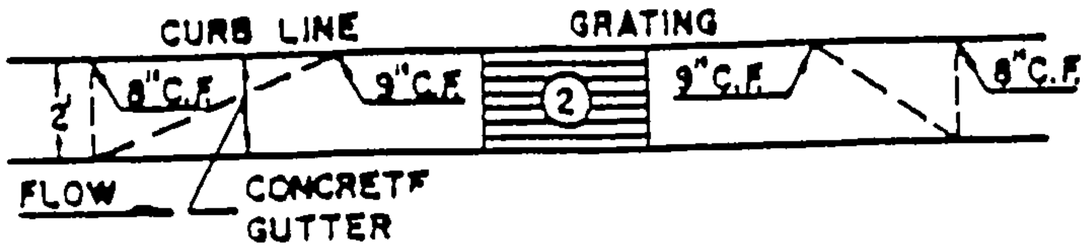
Q = 13.8 cfs in each grate

REV. 1-15

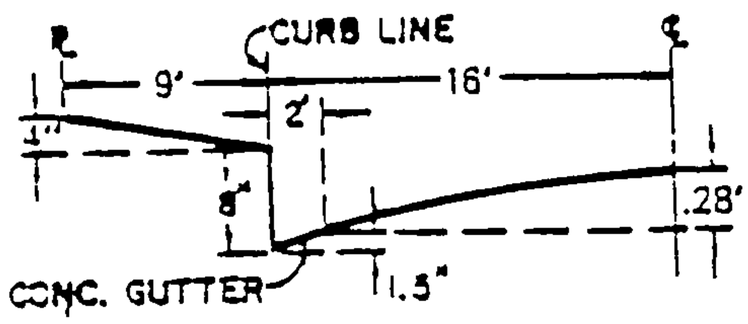
PLATE 223 D-5

GRATING CAPACITIES FOR TYPE "A" , "C" and "D"

CLEMENTE



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

S = 3.4%

D = 0.48'

Q = 8.8 cfs / grate

REV. 1-15

PLATE [illegible] D-5

B-44

***** PC PROGRAM STREAM SEPTEMBER 1994 *****

DELGADO

MANNING'S N= .017 SLOPE= .0156

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	1.00	6	11.00	0.13	11	37.63	0.67
2	0.00	0.83	7	23.00	0.41	12	46.00	0.83
3	8.38	0.67	8	35.00	0.13	13	46.00	1.00
4	8.83	0.67	9	37.00	0.00	14	0.00	0.00
5	9.00	0.00	10	37.17	0.67	15	0.00	0.00

WSEL (FT)	DEPTH INC (FT)	FLOW AREA SQ.FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID (FT)	VEL HEAD (FT)	ENERGY HEAD (FT)
0.01	0.01	0.00	0.0	0.33	0.31	0.31	0.00	0.01
0.02	0.02	0.01	0.0	0.66	0.49	0.63	0.00	0.02
0.03	0.03	0.01	0.0	0.99	0.64	0.94	0.01	0.04
0.04	0.04	0.03	0.0	1.32	0.78	1.25	0.01	0.05
0.05	0.05	0.04	0.0	1.64	0.90	1.56	0.01	0.06
0.06	0.06	0.06	0.1	1.97	1.02	1.88	0.02	0.08
0.07	0.07	0.08	0.1	2.30	1.13	2.19	0.02	0.09
0.08	0.08	0.10	0.1	2.63	1.23	2.50	0.02	0.10
0.09	0.09	0.13	0.2	2.96	1.34	2.81	0.03	0.12
0.10	0.10	0.16	0.2	3.29	1.43	3.13	0.03	0.13
0.11	0.11	0.19	0.3	3.62	1.53	3.44	0.04	0.15
0.12	0.12	0.23	0.4	3.95	1.62	3.75	0.04	0.16
0.13	0.13	0.26	0.5	4.28	1.71	4.07	0.05	0.18
0.14	0.14	0.31	0.5	5.15	1.67	4.93	0.04	0.18
0.15	0.15	0.36	0.6	6.03	1.68	5.79	0.04	0.19
0.16	0.16	0.43	0.7	6.91	1.70	6.65	0.04	0.20
0.17	0.17	0.50	0.9	7.79	1.74	7.51	0.05	0.22
0.18	0.18	0.58	1.0	8.67	1.79	8.38	0.05	0.23
0.19	0.19	0.66	1.2	9.54	1.85	9.24	0.05	0.24
0.20	0.20	0.76	1.4	10.42	1.91	10.10	0.06	0.26
0.21	0.21	0.87	1.7	11.30	1.97	10.96	0.06	0.27
0.22	0.22	0.98	2.0	12.18	2.03	11.83	0.06	0.28
0.23	0.23	1.10	2.3	13.06	2.10	12.69	0.07	0.30
0.24	0.24	1.23	2.7	13.93	2.17	13.55	0.07	0.31
0.25	0.25	1.37	3.1	14.81	2.24	14.41	0.08	0.33
0.26	0.26	1.52	3.5	15.69	2.30	15.27	0.08	0.34
0.27	0.27	1.68	4.0	16.57	2.37	16.14	0.09	0.36
0.28	0.28	1.84	4.5	17.45	2.44	17.00	0.09	0.37
0.29	0.29	2.02	5.1	18.32	2.51	17.86	0.10	0.39
0.30	0.30	2.20	5.7	19.20	2.58	18.72	0.10	0.40
0.31	0.31	2.39	6.3	20.08	2.64	19.59	0.11	0.42
0.32	0.32	2.59	7.0	20.96	2.71	20.45	0.11	0.43
0.33	0.33	2.80	7.8	21.84	2.78	21.31	0.12	0.45
0.34	0.34	3.02	8.6	22.71	2.84	22.17	0.13	0.47
0.35	0.35	3.25	9.4	23.59	2.91	23.03	0.13	0.48
0.36	0.36	3.48	10.4	24.47	2.97	23.90	0.14	0.50
0.37	0.37	3.72	11.3	25.35	3.04	24.76	0.14	0.51
0.38	0.38	3.98	12.3	26.23	3.10	25.62	0.15	0.53
0.39	0.39	4.24	13.4	27.10	3.17	26.48	0.16	0.55
0.40	0.40	4.50	14.6	27.98	3.23	27.35	0.16	0.56
0.41	0.41	4.78	15.8	28.86	3.29	28.21	0.17	0.58
0.42	0.42	5.06	17.3	28.88	3.42	28.21	0.18	0.60

0.59	0.59	9.87	72.1	29.23	7.30	28.30	0.83	1.42
0.60	0.60	10.15	75.5	29.25	7.44	28.30	0.86	1.46
0.61	0.61	10.43	79.0	29.27	7.57	28.31	0.89	1.50
0.62	0.62	10.72	82.6	29.29	7.71	28.31	0.92	1.54
0.63	0.63	11.00	86.2	29.31	7.84	28.32	0.95	1.58
0.64	0.64	11.28	89.9	29.34	7.97	28.32	0.99	1.63
0.65	0.65	11.57	93.7	29.36	8.10	28.33	1.02	1.67
0.66	0.66	11.85	97.5	29.38	8.22	28.33	1.05	1.71
0.67	0.67	12.13	101.3	29.40	8.35	28.34	1.08	1.75
0.68	0.68	12.42	102.9	30.44	8.29	30.30	1.07	1.75
0.69	0.69	12.72	104.7	31.49	8.23	31.34	1.05	1.74
0.70	0.70	13.06	105.1	33.45	8.05	32.39	1.01	1.71
0.71	0.71	13.39	107.3	34.50	8.02	33.44	1.00	1.71
0.72	0.72	13.73	109.7	35.54	7.99	34.48	0.99	1.71
0.73	0.73	14.08	112.2	36.59	7.97	35.53	0.99	1.72
0.74	0.74	14.44	114.8	37.64	7.95	36.58	0.98	1.72
0.75	0.75	14.81	117.6	38.68	7.94	37.62	0.98	1.73
0.76	0.76	15.19	120.5	39.73	7.94	38.67	0.98	1.74
0.77	0.77	15.58	123.6	40.78	7.93	39.72	0.98	1.75
0.78	0.78	15.98	126.8	41.83	7.93	40.77	0.98	1.76
0.79	0.79	16.40	130.2	42.87	7.94	41.81	0.98	1.77
0.80	0.80	16.82	133.6	43.92	7.94	42.86	0.98	1.78
0.81	0.81	17.25	137.3	44.97	7.95	43.91	0.98	1.79
0.82	0.82	17.70	141.0	46.01	7.97	44.95	0.99	1.81
0.83	0.83	18.15	144.9	47.06	7.98	46.00	0.99	1.82

TIMARRON UNIT 5

APODACA/DELGADO INTERSECTION ANALYSIS

DETERMINE THE DEPTH OF FLOW AND THE POTENTIAL FLOODING ON THE ADJACENT CARLOS RAY ELEMENTRY SCHOOL SITE. CURRENTLY APPROXIMATELY 158 cfs OF STORM WATER FLOWS DOWN APODACA ST. AND REACHES DELGADO RD. WHERE THE FLOW IS FORCED TO TURN LEFT 90° AT THE INTERSECTION. UNDER THE PROPOSED PLAN THE FLOW RATE IS REDUCED 30% TO 110 CFS.

THIS APPROXIMATE ANALYSIS ASSUMES A VELOCITY OF 0 IN THE DIRECTION OF DOWNSTREAM DELGADO. A BROADCRESTED WEIR ANALYSIS IS USED TO DETERMINE THE FLOW DEPTH NECESSARY TO ACCELERATE THE FLOW IN THE DOWNSTREAM DIRECTION. THE WEIR ANALYSIS IS TAKEN AT THE END OF THE RETURN, A CONSERVATIVE ASSUMPTION.

THE STREET GEOMETRY CONSISTS OF A ~~60'~~ 40' WIDE, FACE TO FACE, SECTION (DELGADO) WITH 0.5' HIGH CURB AND AN ADDITIONAL 0.2' DEPTH TO THE BACKSIDE EDGE OF SIDEWALK.

INITIAL ANALYSIS SHOWS THAT SOME FLOW OVERTOPS THE EXISTING CURB AND SIDEWALK AND CAUSES FLOODING ON THE SCHOOL SITE. IN ORDER TO DETERMINE THE EXTENT OF FLOODING A SECOND WEIR ANALYSIS IS PROVIDED. THE COMBINED FLOW RATE DOWN DELGADO AND THE FLOW ACROSS THE SCHOOL IS EQUAL TO 110 CFS.

Bohannan ▲ Huston

PROJECT NAME Timarron Unit 5 SHEET 1 OF 4
PROJECT NO. 9947D BY DATE 5/25/00
SUBJECT Intersection Analysis CH'D DATE

ENGINEERS PLANNERS PHOTOGRAMMETRISTS
SURVEYORS SOFTWARE DEVELOPERS

WEIR 1 DELGADO

$$Q = CLH^{3/2} = 3.0 \times 40 \times H^{3/2} = 110 \text{ cfs}$$

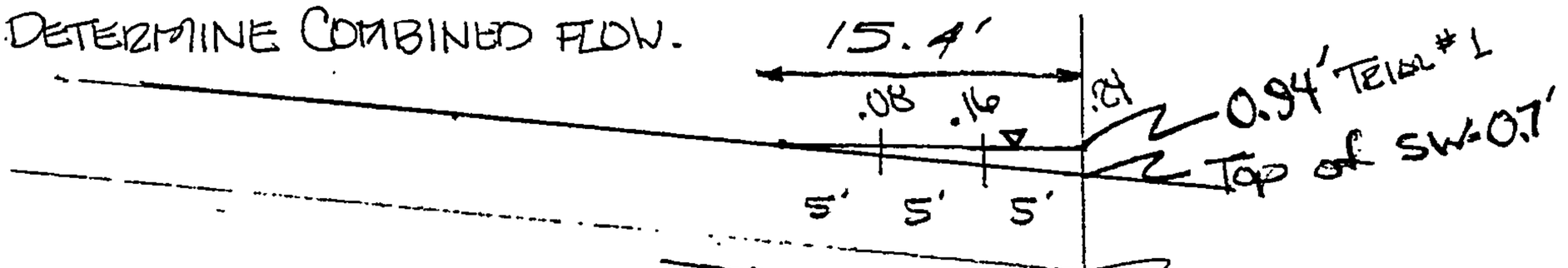
$$H = \left(\frac{110 \text{ cfs}}{3 \times 40}\right)^{2/3} = 0.94'$$

$0.94' > 0.7$ ∴ WATER OVER TOPS CURB/SIDEWALK

0.90 $Q = 102.5$ cfs

WEIR 2 SCHOOL SITE

THIS WEIR IS TRIANGULAR IN SHAPE AND WILL BE MODELED AS A RECTANGULAR BROADCRESTED WEIR. DIVIDED INTO 3 EQUAL SECTIONS. USE TRIAL AND ERROR TO DETERMINE COMBINED FLOW.



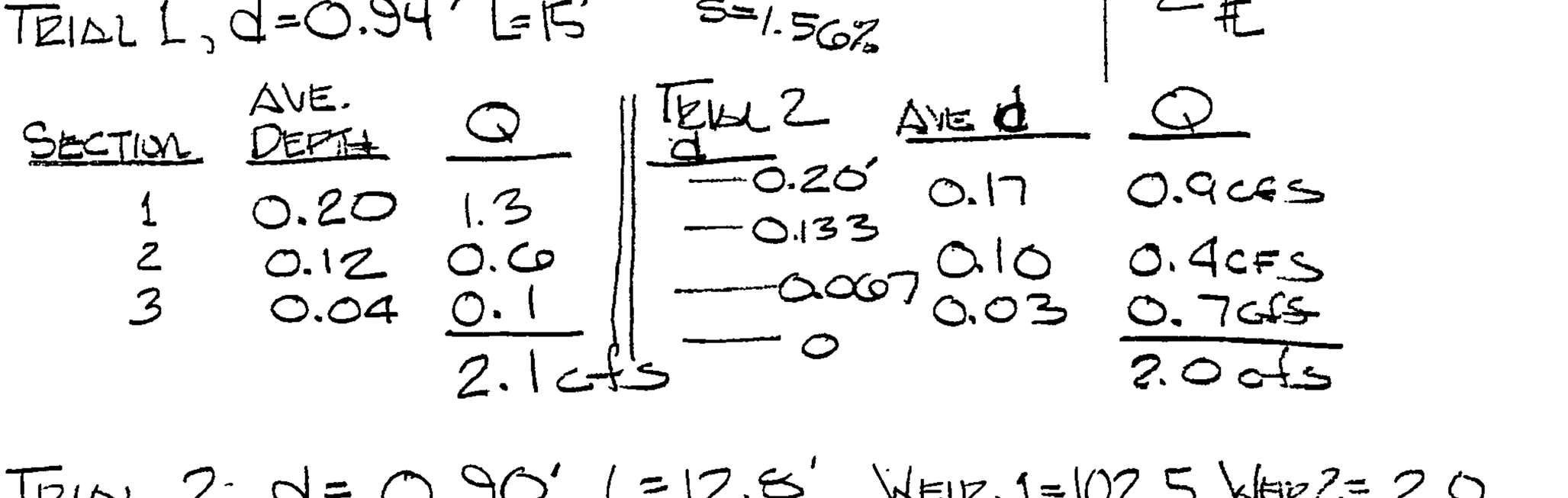
TRIAL 1, $d = 0.94'$ $L = 15'$

SECTION	AVE. DEPTH	Q
1	0.20	1.3
2	0.12	0.6
3	0.04	0.1
		2.1 cfs

TRIAL 2

d	AVE d	Q
0.20'	0.17	0.9 cfs
0.133		
	0.10	0.4 cfs
0.067	0.03	0.7 cfs
0		2.0 cfs

TRIAL 2; $d = 0.90'$ $L = 12.8'$ WEIR 1 = 102.5 WEIR 2 = 2.0



$Q_{WEIR\,1} = 107.7$ cfs
$Q_{WEIR\,2} = 2.3$ cfs
110.0 cfs

Bohannan ▲ Huston

ENGINEERS PLANNERS PROGRAMMETRISTS SURVEYORS SOFTWARE DEVELOPERS

PROJECT NAME _____ SHEET 2 OF 4
PROJECT NO. _____ BY RLB DATE 5/25/00
SUBJECT _____ CH'D _____ DATE _____

BASED ON THIS APPROXIMATE AND CONSERVATIVE ANALYSIS APPROXIMATELY 2.3 CFS LEAVES THE STREET AND CROSSES THE SCHOOL SITE. A MORE RIGOROUS ANALYSIS WOULD MOST LIKELY SHOW LESS FLOW. 2.1 CFS IS FAIRLY MINOR AND THE ON-SITE GRADING AND DRAINAGE IMPROVEMENTS SHOULD BE ADEQUATE.

IN CONCLUSION, THE PROPOSED DEVELOPMENT REDUCES RUNOFF TO THIS LOCTION BY 30% TO ACCEPTABLE LEVELS. CONSTRUCTION OF ADDITIONAL STORM PROTECTION FACILITIES BY TIMARRON UNIT 5 FOR THE SCHOOL SITE IS UNWARRANTED.

MULTI-PURPOSE FACILITY

CARLOS REY ELEMENTARY SCHOOL

1215 CERRILLOS RD, SW
ALBUQUERQUE
NEW MEXICO

SHEET TITLE

GRADING PLAN

DATE:

12/19/95

Q = 107.7cfs

ESTIMATE

WEIR 1

WEIR 2

2.3cfs

110cfs

JEFFREY G. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER

12-21-95

SHEET NO.

25

SHT 4/4

B-5 2/2

DELGADO DRIVE S.W.

ASPHALT

SIDEWALK

CONCRETE DRIVEPAD

CONCRETE WHEEL CHAIR RAMP

DIRT

MEDIAN TYPE CURB & GUTTER

~~CONSTRUCT~~ 2'-0" SIDEWALK CULVERT PER TYPICAL SECTION, SHEET C6

CONCRETE STEPS (SEE ARCHITECTURAL PLAN)

MATCH EXISTING GRADE

BASIN A

~~CONSTRUCT~~ 2'-0" TRICKLE CHANNEL PER TYPICAL SECTION, SHEET C6

~~CONSTRUCT~~ 1-SINGLE 'D' INLET PER TYPICAL SECTION, SHEET C7
GRATE @ 25.30 .51
INV @ 24.00 .16

3'-2" WIDE
INV @ 25.20

CONNECT 3" CAST IRON RDOF DRAIN PIPE TO STORM DRAIN PIPE

~~INSTALL~~ 12" PVC SDR-35
S=0.0150

~~INSTALL~~ 1-12" 45° ELL
INV @ 23.10

NEW MULTI-PURPOSE BUILDING
FF=5226.75

ROOF DRAIN

ROOF DRAINAGE

NEW CONCRETE

EXISTING BUILDING
CLASSROOMS

BASIN

~~CONSTRUCT~~ 12" ROOF DRAIN CULVERT BENEATH EXISTING ROOF DRAIN/OUTLET PER TYPICAL SE

TSW CULVERT @ 29.42

29.04 INV

1.41 INV

1/8" INV

EXISTING PORTABLE

EXISTING PORTABLE

BASIN B1

3.0' CHAINLINK FENCE

WATER METER

ELECTRIC UTILITY POLE

B-5 2/2

APPENDIX C

INFRASTRUCTURE LIST

DRB Case No
DRC Project No.
Prelim. Plat Approved:
Prelim. Plat Expires:

Date Submitted: 5-25-00

Figure 12

INFRASTRUCTURE LIST

EXHIBIT "A"
TO SUBDIVISION IMPROVEMENTS AGREEMENT
DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LIST

Timarron West Subdivision
Units 5

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRB Chair determines those appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non-essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Size	Type Improvement	Location	From	To
STREET				
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	PELICAN CT.	OSPREY DR.	STUB TERMINUS
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	HORNBILL CT.	OSPREY DR.	CUL-DE-SAC TERMINUS
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	IBIS RD.	OSPREY DR.	WEST BOUNDARY
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	EGRET CT.	OSPREY DR.	CUL-DE-SAC TERMINUS
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	WHIMBREL CT.	OSPREY DR.	STUB TERMINUS
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	GOLDFINCH CT.	OSPREY DR.	CUL-DE-SAC TERMINUS
28' F-F *4' SW NORTH SIDE ONLY	RESIDENTIAL PVMT W/PCC C&G	KING RAIL RD.	OSPREY DR.	WEST BOUNDARY
56' F-F 8' MEANDERING TRAIL WEST SIDE ONLY	ARTERIAL PVMT W/PCC NORTH C&G	OSPREY DR.	NORTH BOUNDARY	PELICAN CT.
32' F-F 8' MEANDERING TRAIL WEST SIDE ONLY	ARTERIAL PVMT W/PCC NORTH C&G	OSPREY DR.	PELICAN CT.	KING RAIL RD.
25' F-F 8' MEANDERING TRAIL WEST SIDE ONLY	ARTERIAL PVMT W/PCC NORTH C&G	OSPREY DR.	KING RAIL RD.	SOUTH BOUNDARY

*SIDEWALK TO BE DEFERRED
STREET LIGHTS AS REQUIRED BY CITY OF ALBUQUERQUE DPM

SANITARY SEWER

8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	PELICAN CT.	EX. SAS EASEMENT	STUB TERMINUS
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	HORNBILL CT.	OSPREY DR	CUL-DE-SAC TERMINUS
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	IBIS RD.	OSPREY DR	WEST BOUNDARY
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	EGRET CT.	OSPREY DR	CUL-DE-SAC TERMINUS
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	WHIMBREL CT.	EX. SAS EASEMENT	STUB TERMINUS
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	GOLDFINCH CT.	OSPREY DR	CUL-DE-SAC TERMINUS
8" DIA	SEWERLINE INCL MH'S & SERVICE LINES	KING RAIL RD.	OSPREY DR	WEST BOUNDARY

WATER

10" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	PELICAN CT.	OSPREY DR.	WATERLINE EASEMENT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	HORNBILL CT.	OSPREY DR	WATERLINE EASEMENT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	IBIS RD.	OSPREY DR	WATERLINE EASEMENT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	EGRET CT.	OSPREY DR	WATERLINE EASEMENT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	WHIMBREL CT.	OSPREY DR	WATERLINE EASEMENT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	GOLDFINCH CT.	OSPREY DR	WATERLINE EASEMENT
10" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	KING RAIL RD.	OSPREY DR	WATERLINE EASEMENT
10" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	OSPREY DR.	PELICAN CT.	CAVETT
6" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	OSPREY DR.	CAVETT	KING RAIL RD.
10" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	OSPREY DR.	KING RAIL RD.	BENEVIDES
10" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	WATER LINE EASEMENT	EX. 10" WL 175' NORTH OF HORNBILL CT.	KING RAIL RD.
16" DIA	WATERLINE INCL FIRE HYDRANTS AND WATER VALVES	PARALLEL EX. 10" WATERLINE	WATER LINE EASEMENT	FRANSICAN RESERVIOR

WATERLINES INCLUDE ALL APPURTENACES, HYDRANT, VALVES, FITTING, ETC. AS REQUIRED

DRAINAGE

18-36" RCP STORM DRAIN SYSTEM INCL MH'S AND DROP INLETS	STORM DRAIN EASEMENT	IBIS RD.	DETENTION POND
18-36" RCP STORM DRAIN SYSTEM INCL. MH'S AND DROP INLETS	OSPREY DR.	DETENTION POND TRACT 3 LANDS OF GREVEY/LIBERMAN	EL MORO
PERMANENT DETENTION PONDS W/ EASEMENTS, AGREEMENTS & COVENANTS	TRACT 3 LANDS OF GREVEY/LIBERMAN		

GRADING/DRAINAGE CERTIFICATION REQUIRED FOR RELEASE OF FINANCIAL GUARANTEES

Prepared by: Elizabeth Amat
Firm: Bohannan Huston

Development Review Board Member Approval

New Mexico Utilities Date

Utility Development Date

Transportation Development Date

Parks and Recreation Date

City Engineer Date

AMAFCA Date

DRB Chair Date

DRC REVISIONS

REVISIONS	DATE	DRC CHAIR	USER DEPT	AGENT/OWNER
1				
2				

PLATES

PLATE 1 - PRELIMINARY PLAT

PLATE 2 - GRADING PLAN

PLATE 3 - PROPOSED CONDITIONS BASIN MAP

PLATE 4 - ATRISCO VILLAGE BASIN MAP

PLATE 1

PRELIMINARY PLAT

PLATE 2

GRADING PLAN

PLATE 3

PROPOSED CONDITIONS BASIN MAP

PLATE 4

ATRISCO VILLAGE BASIN MAP

Bohannan Huston

Albuquerque
Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

Las Cruces
425 S. Telshor Blvd.
Suite C-103
Las Cruces, NM
88011-8237

voice: 575.532.8670
facsimile: 575.532.8680

Denver
Meridian One
9785 Maroon Circle
Suite 140
Englewood, CO
80112-5928

voice: 303.799.5103
facsimile: 303.799.5104
toll free: 877.799.5103

www.bhinc.com