DRAINAGE CALCULATIONS
for
CHALMERS COMMERCIAL

July 1996

4-24-97

7-1-97

9-16-97

D. MARK GOODWIN & ASSOCIATES

dmg D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT _Chalmers Commercial_
SUBJECT _Drainage Calcs_
BY _GJK_ DATE _7-23-96_
CHECKED_____ DATE _____
SHEET _1_ OF ____
Revised 4-24-97
9-16-97

- THE SITE CONSISTS OF 6.9071 AC.

    1.6669 IN Rio Rancho (SEE APPENDIX "A") OFFSITE FLOWS
    5.2402 AC IN ALBUQUERQUE

- THIS SITE IS WITHIN THE "CABEZON CHANNEL CAPACITY ANALYSIS"
  WHICH WAS COMPLETED BY EASTERLING & ASSOCIATES, JUNE 1993. THE
  SITE IS ALLOWED 0.5 CFS DISCHARGE PER ACRE. SITE IS NOT IN A 100 YR
  FLOOD PLAIN.

- THE PROJECT WILL CONSIST OF 5 LOTS. THIS REPORT WILL SET THE
  ALLOWABLE DISCHARGE FOR EACH LOT.

- EACH LOT WILL HAVE ITS OWN PONDING AREA WHICH WILL HAVE A
  CONTROLLED DISCHARGE TO A NEW STORMDRAIN IN THE AMERICAN ROAD.
  THIS STORMDRAIN WILL DISCHARGE INTO AN UNDERGROUND PIPE (STORAGE)
  AND DISCHARGE TO NM 528 ROW.

- A PORTION OF THE LOTS ALONG 528 WILL HAVE DIRECT DISCHARGE
  TO 528

    FIND ALLOWABLE DISCHARGE FOR SITE

    $$Q = 6.9071 \times 0.5 = 3.4536 \text{ CFS}$$

    FIND DIRECT DISCHARGE ALONG 528

    AREA = 9494 SF = 0.21795 AC = 0.000341 S.M.

    USE TYPE "C" FOR THIS AREA

3434	LOT 1
2160	LOT 2
3900	LOT 3
9494	

$P_1 = 1.95$ in
$P_6 = 2.20$ in
$P_{24} = 2.65$ in
$DT = 0.03333$ HR
$TP = 0.1333$ HR

THIS DATA WILL BE USED FOR ALL
AHYMO RUNS.

    FROM OUTPUT SHEETS 7-9

    $$Q = 0.66 \text{ CFS}$$

    FIND ALLOWABLE DISCHARGE OF OUTFALL POND

    $$Q = 3.4536 - 0.66$$

    $$= 2.7936 \text{ CFS} + 10.93 \text{ CFS} = 13.72 \text{ CFS}$$

    See sheet 3

D. Mark Goodwin & Associates, P.A.
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PROJECT _CHALMERS Commercial_
SUBJECT _Drainage Calcs_
BY _GJK_ DATE _7-23-96_
CHECKED _____ DATE _____
SHEET _2_ OF _____

REVISED 4-24-97

- FIND DISCHARGE FOR AMERICAN ROAD

  ROW = 0.8040 AC   "B" = 0.1608 AC   "D" = 0.6432 AC

  DIRECT RUNOFF FROM LOTS 5 & 6 = 0.2295 AC = "C"

  TOTAL = 1.0334 AC   15.56 % "B"
  22.21 % "C"
  62.23 % "D"

- POND FOR TOTAL SITE DISCHARGE WILL BE LOCATED
  AT THE NE CORNER OF SITE
  AREA = 0.2704 AC
  100 % TYPE "B"

DETERMINE A POND FOR EACH LOT.

  USE   70% D \
        15% C   > FOR LOT 1 & 2
        15% B /

  USE   60% D \
        20% C   > FOR LOT 3, 4 & 5
        20% B /

- FIND RUNOFF FOR EACH LOT

LOT	AREA	DIRECT RUNOFF	AREA FOR RUNOFF CALCS
1	0.5000	0.0788	0.4212
2	0.5733	0.0496	0.5237
3	1.0217	0.0895	0.9322
4	1.3343	0.0367	1.2976
5	0.7365	0.1928	0.5437

- SIZE POND FOR LOT 1, 2 & 5
  USE 4" ORIFICE   A = 0.087 $Q = 0.6 A \sqrt{2gh}$

ELEV	AREA	STORAGE (AC-FT)	OUTFLOW
0	1584	0	0.0
1	2100	0.04	0.38
2	2688	0.10	0.57

ᴅᴍɢ — D. Mark Goodwin & Associates, P.A.
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PROJECT _CHALMERS COMMERCIAL_
SUBJECT _DRAINAGE CALCS_
BY _GJK_ DATE _7-23-96_
CHECKED_____ DATE _____
SHEET _3_ OF ____

REVISED 4-24-97
6-26-97
9-16-97

• SIZE POND FOR LOT 3 & 4
  USE 4" ORIFICE A = 0.087 $Q = 0.6 A \sqrt{2gh}$

ELEV	AREA	STORAGE (AC-FT)	OUTFLOW
0	1950	0	0.0
1	2556	0.05	0.38
2	3234	0.12	0.57

• SIZE UNDERGROUND PIPE (STORAGE) FOR DISCHARGE TO NM528

  USE 16" ORIFICE A = 1.396 $Q = 0.6 A \sqrt{2gh}$

ELEV	USE 282 LF OF 60" RCP TO STORE RUNOFF	VOLUME	OUTFLOW
64		0	0
65		0.02	3.88
66		0.05	7.76
67		0.08	10.27
68		0.11	12.27
69		0.13	13.99

• WE WILL COMBINE THE TWO LOTS FROM
  RIO RANCHO AND THE EXISTING CHURCH SITE WILL
  BE ALLOWED DIRECT DISCHARGE BECAUSE IT WAS
  EXISTING WHEN THE "CABEZON CHANNEL CAPACITY
  ANALYSIS" WAS COMPLETED.
  FROM APPENDIX "A"

LOT A-1A CHURCH	LOT A-2A WEST LOT	LOT A-3A EAST LOT	ROW
A = 3.3364 AC	A = 0.5362 AC	A = 0.4060 AC	0.4764 AC
B = 42.85%	B = 15%	B = 15%	B = 20%
C = 13.76%	D = 85%	D = 85%	D = 80%
D = 43.39%			

  FROM SHEETS 10-25

RIO Rancho
$\left\{ \begin{array}{l} Q = A-1A = 10.93 \text{ CFS} \\ Q = A-2A = 0.42 \text{ CFS} \\ Q A-3A = 0.36 \text{ CFS} \\ Q ROW = 1.95 \text{ CFS} \end{array} \right.$

$\left. \begin{array}{l} Q_{LOT1} = 0.34 \text{ CFS} \\ Q_{LOT2} = 0.40 \text{ CFS} \\ Q_{LOT3} = 0.47 \text{ CFS} \\ Q_{LOT4} = 0.53 \text{ CFS} \\ Q_{LOT5} = 0.39 \text{ CFS} \\ Q_{ROW} = 3.95 \text{ CFS} \end{array} \right\}$ ALB

PEAK DISCHARGE = 13.67 CFS

MAX WATER SURFACE
ELEVATION = 68.81
THIS IS LESS THAN
THE 13.72 CFS OK
ALLOWABLE

• SIZE EMERGENCY SPILLWAY

  SPILLWAY WILL BE TWO SGL C INLETS IN ROADWAY

  IF POND FILLS, THE FLOW WILL EXIT THE
  TWO INLETS BEFORE IT SPILLS ONTO ANY LOTS.

dmg — D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT _CHALMERS Commercial_
SUBJECT _Drainage Calcs_
BY _GSK_ DATE _7-23-96_
CHECKED _____ DATE _____
SHEET _4_ OF ____

REVISED 4-24-97
6-26-97

- SIZE INLETS

   ADD ONE DOUBLE "A" INLET ON EACH SIDE OF THE ROAD

   $Q = 3.95 + 1.95 = 5.90$ CFS

   $S = 1\%$ $n = 0.017$

   FIND Q ON EACH SIDE OF ROAD
   $Q = \frac{5.9}{2} = 2.95$ CFS

   $d = 0.32$
   $WP = 12.07$
   $A = 1.4454$
   $V = 2.1434$ F/S
   $Q = 3.14$ CFS $\propto 2.95$ CFS   OK

   $d + \frac{V^2}{2g} = 0.34 < 0.67$ OK

   FROM SHEET 5

      Q INLET $= 2.45$ CFS

      $2 \times 2.45 = 4.90$ CFS < 5.90 CFS

   ADD A SINGLE "C" INLET DOWN STREAM ON EACH SIDE OF THE ROAD TO CATCH THE LAST 1.0 CFS.

- SINCE THE LOTS ARE NOT DEVELOPED AT THIS TIME IT WILL BE NECESSARY TO RETAIN THE RUNOFF FOR EACH LOT ON EACH LOT.

   THIS WILL BE ACCOMPLISHED BY A ONE FOOT DEEP DEPRESSION ON EACH PAD.

- THE PONDS SIZED IN THIS REPORT WERE TO ESTABLISH THE ALLOWABLE DISCHARGE FOR EACH LOT.

LOT	DISCHARGE (CFS)
1	0.34
2	0.40
3	0.47
4	0.53
5	0.39
	2.13

- SIZE STORMDRAIN UP TO INLETS
   TOTAL Q IN STORMDRAIN $= 2.13$ CFS $+ 10.93 + 0.42 + 0.36 = 13.84$ CFS

      USE 18" RCP AT A MIN SLOPE OF 1.7%
      FROM NOMO SHEET 6.
      18" @ 1.7% CARRIES 14 CFS

AHYMO PROGRAM (AHYMO194) — AMAFCA Hydrologic Model — January, 1994
RUN DATE (MON/DAY/YR) = 04/24/1997
START TIME (HR:MIN:SEC) = 08:34:44   USER NO.= M_GOODWN.IO1
INPUT FILE = chal528.dat

START   TIME=0.0

***** HYDROGRAPH FOR CHALMERS COMMERCIAL 528 DISCHARGE

RAINFALL   TYPE=1 RAIN QUARTER=0.0 IN

                   RAIN ONE=1.95 IN RAIN SIX=2.20 IN

                   RAIN DAY=2.65 IN DT=0.03333 HR

                   COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2
EAK AT 1.40 HR.
                   DT =   .033330 HOURS   END TIME =   5.999400 HOURS
                     .0000   .0009   .0018   .0028   .0037   .0047   .0057
                     .0068   .0078   .0089   .0101   .0112   .0124   .0136
                     .0149   .0161   .0175   .0188   .0203   .0217   .0233
                     .0248   .0265   .0282   .0300   .0319   .0338   .0359
                     .0380   .0403   .0427   .0481   .0539   .0600   .0733
                     .1028   .1484   .2138   .3031   .4204   .5700   .7563
                     .9836   1.1946   1.2828   1.3572   1.4233   1.4835   1.5390
                    1.5904   1.6385   1.6836   1.7260   1.7660   1.8038   1.8396
                    1.8735   1.9056   1.9361   1.9651   1.9926   1.9981   2.0032
                    2.0081   2.0126   2.0170   2.0211   2.0251   2.0289   2.0325
                    2.0360   2.0394   2.0427   2.0459   2.0489   2.0519   2.0548
                    2.0576   2.0604   2.0630   2.0656   2.0681   2.0706   2.0730
                    2.0754   2.0777   2.0799   2.0821   2.0843   2.0864   2.0885
                    2.0905   2.0925   2.0945   2.0964   2.0983   2.1002   2.1021
                    2.1039   2.1056   2.1074   2.1091   2.1108   2.1125   2.1141
                    2.1158   2.1174   2.1189   2.1205   2.1220   2.1236   2.1251
                    2.1265   2.1280   2.1295   2.1309   2.1323   2.1337   2.1351
                    2.1364   2.1378   2.1391   2.1404   2.1417   2.1430   2.1443
                    2.1456   2.1468   2.1480   2.1493   2.1505   2.1517   2.1529
                    2.1541   2.1552   2.1564   2.1575   2.1587   2.1598   2.1609
                    2.1620   2.1631   2.1642   2.1653   2.1664   2.1674   2.1685
                    2.1695   2.1705   2.1716   2.1726   2.1736   2.1746   2.1756
                    2.1766   2.1776   2.1785   2.1795   2.1805   2.1814   2.1824
                    2.1833   2.1842   2.1852   2.1861   2.1870   2.1879   2.1888
                    2.1897   2.1906   2.1915   2.1923   2.1932   2.1941   2.1949
                    2.1958   2.1966   2.1975   2.1983   2.1992   2.2000

COMPUTE NM HYD   ID=1 HYD NO=101.1 AREA=0.000341 SQ MI

                     PER A=00.00 B=0 C=100 D=0

                     TP=0.1333 HR MASS RAINFALL=-1

     K =   .106769HR   TP =   .133300HR   K/TP RATIO =   .800969   SHAPE
C NSTANT, N =   4.472154
          UNIT PEAK =   .98617   CFS   UNIT VOLUME =   .9868   B =   385.50
     P60 = 1.9500
          AREA =   .000341 SQ MI   IA =   .35000 INCHES   INF =   .83000 I
CHES PER HOUR

.033330

PRINT HYD   ID=1 CODE=1

                              PARTIAL HYDROGRAPH   101.10

      RUNOFF VOLUME =   1.04522 INCHES   =   .0190 ACRE-FEET
      PEAK DISCHARGE RATE =   .66 CFS   AT   1.500 HOURS   BASIN AREA =
.0003 SQ. MI.

    FINISH

      NORMAL PROGRAM FINISH   END TIME (HR:MIN:SEC) = 08:34:51

```
TART                TIME=0.0

 ****
 ****    HYDROGRAPH FOR DISCHARGE FROM CHALMERS POND
*****    INTO STORM DRAIN IN NM 528.
*****
 AINFALL            TYPE=1 RAIN QUARTER=0.0 IN
                    RAIN ONE=1.95 IN RAIN SIX=2.20 IN
                    RAIN DAY=2.65 IN DT=0.03333 HR
 LOT 1
 OMPUTE NM HYD      ID=1 HYD NO=101 AREA=0.000658 SQ MI
                    PER A=0 PER B=15 PER C=15 PER D=70
                    TP=0.1333 HR MASS RAINFALL=-1
 RINT HYD           ID=1 CODE=1
*4" ORIFICE
ROUTE RESERVOIR     ID=2 HYD NO=102 INFLOW ID=1 CODE=24
                    OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                        0.00              0.00              89.0
                        0.38              0.04              90.0
                        0.57              0.10              91.0

PRINT HYD           ID=2 CODE=1
*LOT 2
 OMPUTE NM HYD      ID=3 HYD NO=103 AREA=0.000818 SQ MI
                    PER A=0 PER B=15 PER C=15 PER D=70
                    TP=0.1333 HR MASS RAINFALL=-1
 RINT HYD           ID=3 CODE=1
 4" ORIFICE
ROUTE RESERVOIR     ID=4 HYD NO=104 INFLOW ID=3 CODE=24
                    OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                        0.00              0.00              78.0
                        0.38              0.04              79.0
                        0.57              0.10              80.0

PRINT HYD           ID=4 CODE=1
*LOT 3
 OMPUTE NM HYD      ID=5 HYD NO=105 AREA=0.001457 SQ MI
                    PER A=0 PER B=20 PER C=20 PER D=60
                    TP=0.1333 HR MASS RAINFALL=-1
 RINT HYD           ID=5 CODE=1
 4" ORIFICE
ROUTE RESERVOIR     ID=6 HYD NO=106 INFLOW ID=5 CODE=24
                    OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                        0.00              0.00              75.0
                        0.38              0.05              76.0
                        0.57              0.12              77.0

 RINT HYD           ID=6 CODE=1
*LOT 4
 OMPUTE NM HYD      ID=7 HYD NO=107 AREA=0.002028 SQ MI
                    PER A=0 PER B=20 PER C=20 PER D=60
                    TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD           ID=7 CODE=1
 4" ORIFICE
 ROUTE RESERVOIR    ID=8 HYD NO=108 INFLOW ID=7 CODE=24
                    OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                        0.00              0.00              83.0
                        0.38              0.06              84.0
                        0.57              0.14              85.0
```

```
 RINT HYD          ID=8 CODE=1
*LOT 5
 OMPUTE NM HYD     ID=9 HYD NO=109 AREA=0.000850 SQ MI
                   PER A=0 PER B=20 PER C=20 PER D=60
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=9 CODE=1
 4" ORIFICE
ROUTE RESERVOIR    ID=10 HYD NO=110 INFLOW ID=9 CODE=24
                   OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                       0.00              0.00              83.0
                       0.38              0.04              84.0
                       0.57              0.10              85.0
PRINT HYD          ID=10 CODE=1
 AMERICAN ROAD ROW
COMPUTE NM HYD     ID=11 HYD NO=111 AREA=0.001615 SQ MI
                   PER A=0 PER B=15.56 PER C=22.21 PER D=62.23
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=11 CODE=1
*LOT A-1A
 OMPUTE NM HYD     ID=12 HYD NO=112 AREA=0.005213 SQ MI
                   PER A=0 PER B=42.85 PER C=13.76 D=43.39
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=12 CODE=1
 LOT A-2A
COMPUTE NM HYD     ID=13 HYD NO=113 AREA=0.000838 SQ MI
                   PER A=0 PER B=15 PER C=0 D=85
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=13 CODE=1
*4" ORIFICE
ROUTE RESERVOIR    ID=14 HYD NO=114 INFLOW ID=13 CODE=24
                   OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                       0.00              0.00              06.0
                       0.38              0.04              07.0
                       0.57              0.10              08.0

PRINT HYD          ID=14 CODE=1
*LOT A-3A
 OMPUTE NM HYD     ID=15 HYD NO=115 AREA=0.000634 SQ MI
                   PER A=0 PER B=15 PER C=0 PER D=85
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=15 CODE=1
*4" ORIFICE
ROUTE RESERVOIR    ID=16 HYD NO=116 INFLOW ID=15 CODE=24
                   OUTFLOW (CFS)     STORAGE(AC-FT)    ELEVATION(FT)
                       0.00              0.00              83.0
                       0.38              0.04              84.0
                       0.57              0.10              85.0
PRINT HYD          ID=16 CODE=1
*RIO RANCHO ROW
 OMPUTE NM HYD     ID=17 HYD NO=117 AREA=0.000744 SQ MI
                   PER A=0 PER B=20 PER C=0 PER D=80
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=17 CODE=1
*
*SITE POND
COMPUTE NM HYD     ID=18 HYD NO=118 AREA=0.000423 SQ MI
                   PER A=0 PER B=100 PER C=0 PER D=0
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=18 CODE=1
*
```

```
 DD HYD              ID=19  HYD NO=119  ID=2 ID=4
PRINT HYD            ID=19  CODE=1

 DD HYD              ID=20  HYD NO=120  ID=6 ID=8
PRINT HYD            ID=20  CODE=1
*
 DD HYD              ID=21  HYD NO=121  ID=10 ID=11
rRINT HYD            ID=21  CODE=1
*
 DD HYD              ID=22  HYD NO=122  ID=12 ID=14
 RINT HYD            ID=22  CODE=1
*
`DD HYD              ID=23  HYD NO=123  ID=16 ID=17
 RINT HYD            ID=23  CODE=1
*
ADD HYD              ID=24  HYD NO=124  ID=18 ID=19
 RINT HYD            ID=24  CODE=1
..
ADD HYD              ID=25  HYD NO=124  ID=20 ID=21
 RINT HYD            ID=25  CODE=1

ADD HYD              ID=26  HYD NO=126  ID=22 ID=23
RINT HYD             ID=26  CODE=1

ADD HYD              ID=27  HYD NO=127  ID=24 ID=25
PRINT HYD            ID=27  CODE=1

..DD HYD             ID=28  HYD NO=128  ID=26 ID=27
PRINT HYD            ID=28  CODE=1

 15" ORIFICE
ROUTE RESERVOIR     ID=29 HYD NO=129 INFLOW ID=28 CODE=24
                    OUTFLOW (CFS)    STORAGE(AC-FT)   ELEVATION(FT)
                       0.00             0.00             64.0
                       3.88             0.02             65.0
                       7.76             0.05             66.0
                      10.27             0.08             67.0
                      12.27             0.11             68.0
                      13.99             0.13             69.0
RINT HYD             ID=29 CODE=1
FINISH
```

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
        RUN DATE (MON/DAY/YR) = 09/16/1997
        START TIME (HR:MIN:SEC) = 14:08:02   USER NO.= M_GOODWN.I01
        INPUT FILE = CHALCOM.DAT

START   TIME=0.0

*****
*****   HYDROGRAPH FOR DISCHARGE FROM CHALMERS POND
*****   INTO STORM DRAIN IN NM 528.
*****
RAINFALL   TYPE=1 RAIN QUARTER=0.0 IN
                        RAIN ONE=1.95 IN RAIN SIX=2.20 IN
                        RAIN DAY=2.65 IN DT=0.03333 HR

            COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 H
            DT =   .033330 HOURS   END TIME =   5.999400 HOURS
                .0000   .0009   .0018   .0028   .0037   .0047   .0057
                .0068   .0078   .0089   .0101   .0112   .0124   .0136
                .0149   .0161   .0175   .0188   .0203   .0217   .0233
                .0248   .0265   .0282   .0300   .0319   .0338   .0359
                .0380   .0403   .0427   .0481   .0539   .0600   .0733
                .1028   .1484   .2138   .3031   .4204   .5700   .7563
                .9836 1.1946 1.2828 1.3572 1.4233 1.4835 1.5390
               1.5904 1.6385 1.6836 1.7260 1.7660 1.8038 1.8396
               1.8735 1.9056 1.9361 1.9651 1.9926 1.9981 2.0032
               2.0081 2.0126 2.0170 2.0211 2.0251 2.0289 2.0325
               2.0360 2.0394 2.0427 2.0459 2.0489 2.0519 2.0548
               2.0576 2.0604 2.0630 2.0656 2.0681 2.0706 2.0730
               2.0754 2.0777 2.0799 2.0821 2.0843 2.0864 2.0885
               2.0905 2.0925 2.0945 2.0964 2.0983 2.1002 2.1021
               2.1039 2.1056 2.1074 2.1091 2.1108 2.1125 2.1141
               2.1158 2.1174 2.1189 2.1205 2.1220 2.1236 2.1251
               2.1265 2.1280 2.1295 2.1309 2.1323 2.1337 2.1351
               2.1364 2.1378 2.1391 2.1404 2.1417 2.1430 2.1443
               2.1456 2.1468 2.1480 2.1493 2.1505 2.1517 2.1529
               2.1541 2.1552 2.1564 2.1575 2.1587 2.1598 2.1609
               2.1620 2.1631 2.1642 2.1653 2.1664 2.1674 2.1685
               2.1695 2.1705 2.1716 2.1726 2.1736 2.1746 2.1756
               2.1766 2.1776 2.1785 2.1795 2.1805 2.1814 2.1824
               2.1833 2.1842 2.1852 2.1861 2.1870 2.1879 2.1888
               2.1897 2.1906 2.1915 2.1923 2.1932 2.1941 2.1949
               2.1958 2.1966 2.1975 2.1983 2.1992 2.2000

*LOT 1
COMPUTE NM HYD   ID=1 HYD NO=101 AREA=0.000658 SQ MI
                        PER A=0 PER B=15 PER C=15 PER D=70
                        TP=0.1333 HR MASS RAINFALL=-1

    K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
    UNIT PEAK =   1.8185   CFS   UNIT VOLUME =   .9933   B =   526.28   P60 = 1.95
    AREA =   .000461 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

    K =   .119066HR   TP =   .133300HR   K/TP RATIO =   .893222   SHAPE CONSTANT, N =
    UNIT PEAK =   .52296   CFS   UNIT VOLUME =   .9748   B =   353.14   P60 = 1.95
    AREA =   .000197 SQ MI   IA =   .42500 INCHES   INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD   *ID=1 CODE=1*

<div align="center">

PARTIAL HYDROGRAPH   101.00
</div>

    RUNOFF VOLUME =   1.63537 INCHES   =   .0574 ACRE-FEET
    PEAK DISCHARGE RATE =   1.68 CFS AT   1.500 HOURS   BASIN AREA =   .0007 SQ. MI.

*4" ORIFICE
ROUTE RESERVOIR   ID=2 HYD NO=102 INFLOW ID=1 CODE=24

OUTFLOW (CFS)	STORAGE(AC-FT)	ELEVATION(FT)
0.00	0.00	89.0
0.38	0.04	90.0
0.57	0.10	91.0

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

TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
.00	.00	89.00	.000	.00
.80	.00	89.00	.000	.00
1.60	1.18	89.64	.026	.24
2.40	.05	89.78	.031	.30
3.20	.01	89.43	.017	.17
4.00	.00	89.24	.010	.09
4.80	.00	89.13	.005	.05
5.60	.01	89.08	.003	.03
6.40	.00	89.05	.002	.02
7.20	.00	89.02	.001	.01
8.00	.00	89.01	.001	.01
8.80	.00	89.01	.000	.00

PEAK DISCHARGE =   .344 CFS - PEAK OCCURS AT HOUR   2.03
MAXIMUM WATER SURFACE ELEVATION =   89.906
MAXIMUM STORAGE =   .0362 AC-FT   INCREMENTAL TIME=   .033330HRS

PRINT HYD   ID=2 CODE=1

<div align="center">

PARTIAL HYDROGRAPH   102.00
</div>

    RUNOFF VOLUME =   1.63495 INCHES   =   .0574 ACRE-FEET
    PEAK DISCHARGE RATE =   .34 CFS AT 2.033 HOURS   BASIN AREA =   .0007 SQ. MI.

*LOT 2
COMPUTE NM HYD   ID=3 HYD NO=103 AREA=0.000818 SQ MI
                      PER A=0 PER B=15 PER C=15 PER D=70
                      TP=0.1333 HR MASS RAINFALL=-1

K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
UNIT PEAK =   2.2607   CFS   UNIT VOLUME =   .9941   B =   526.28   P60 = 1.95
AREA =   .000573 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

```
     K =  .119066HR    TP =  .133300HR   K/TP RATIO =  .893222     SHAPE CONSTANT, N =
     UNIT PEAK =  .65012   CFS   UNIT VOLUME =  .9792      B =  353.14      P60 = 1.95
     AREA =    .000245 SQ MI    IA =  .42500 INCHES   INF =  1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .033330
```

PRINT HYD   ID=3 CODE=1

                    PARTIAL HYDROGRAPH   103.00

     RUNOFF VOLUME =   1.63537 INCHES   =   .0713 ACRE-FEET
     PEAK DISCHARGE RATE =   2.08 CFS AT   1.500 HOURS   BASIN AREA =   .0008 SQ. MI.

*4" ORIFICE
ROUTE RESERVOIR   ID=4 HYD NO=104 INFLOW ID=3 CODE=24
                     OUTFLOW (CFS)   STORAGE(AC-FT)   ELEVATION(FT)
                        0.00   0.00   78.0
                        0.38   0.04   79.0
                        0.57   0.10   80.0

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

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

     .00   .00   78.00   .000   .00
     .80   .00   78.00   .000   .00
    1.60   1.46   78.80   .032   .30
    2.40   .07   78.99   .040   .38
    3.20   .01   78.55   .022   .21
    4.00   .01   78.30   .012   .12
    4.80   .01   78.17   .007   .06
    5.60   .01   78.10   .004   .04
    6.40   .00   78.06   .002   .02
    7.20   .00   78.03   .001   .01
    8.00   .00   78.02   .001   .01
    8.80   .00   78.01   .000   .00
PEAK DISCHARGE =   .398 CFS - PEAK OCCURS AT HOUR   2.07
MAXIMUM WATER SURFACE ELEVATION =   79.093
MAXIMUM STORAGE =   .0456 AC-FT   INCREMENTAL TIME=   .033330HRS

PRINT HYD   ID=4 CODE=1

                    PARTIAL HYDROGRAPH   104.00

     RUNOFF VOLUME =   1.63501 INCHES   =   .0713 ACRE-FEET
     PEAK DISCHARGE RATE =   .40 CFS AT   2.066 HOURS   BASIN AREA =   .0008 SQ. MI.

*LOT 3
COMPUTE NM HYD   ID=5 HYD NO=105 AREA=0.001457 SQ MI
                     PER A=0 PER B=20 PER C=20 PER D=60
                     TP=0.1333 HR MASS RAINFALL=-1

```
K =   .072649HR    TP =  .133300HR    K/TP RATIO =   .545000    SHAPE CONSTANT, N =
UNIT PEAK =   3.4514    CFS    UNIT VOLUME =     .9961      B =   526.28    P60 = 1.95
AREA =     .000874 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033330


K =   .119066HR    TP =  .133300HR    K/TP RATIO =   .893222    SHAPE CONSTANT, N =
UNIT PEAK =   1.5440    CFS    UNIT VOLUME =     .9921      B =   353.14    P60 = 1.95
AREA =     .000583 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033330
```

PRINT HYD   ID=5 CODE=1

                    PARTIAL HYDROGRAPH   105.00

    RUNOFF VOLUME =   1.52475 INCHES   =   .1185 ACRE-FEET
    PEAK DISCHARGE RATE =   3.50 CFS   AT   1.500 HOURS   BASIN AREA =   .0015 SQ. MI.

*4" ORIFICE
ROUTE RESERVOIR   ID=6 HYD NO=106 INFLOW ID=5 CODE=24
                       OUTFLOW (CFS)   STORAGE(AC-FT)   ELEVATION(FT)
                       0.00   0.00   75.0
                       0.38   0.05   76.0
                       0.57   0.12   77.0

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

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

    .00   .00   75.00   .000   .00
    .80   .00   75.00   .000   .00
   1.60   2.49   76.06   .054   .39
   2.40   .12   76.41   .079   .46
   3.20   .01   76.05   .054   .39
   4.00   .01   75.66   .033   .25
   4.80   .01   75.41   .020   .15
   5.60   .01   75.26   .013   .10
   6.40   .00   75.16   .008   .06
   7.20   .00   75.10   .005   .04
   8.00   .00   75.06   .003   .02
   8.80   .00   75.04   .002   .01
   9.60   .00   75.02   .001   .01
  10.40   .00   75.01   .001   .01
  11.20   .00   75.01   .000   .00
PEAK DISCHARGE =   .473 CFS - PEAK OCCURS AT HOUR   2.10
MAXIMUM WATER SURFACE ELEVATION =   76.488
MAXIMUM STORAGE =   .0842 AC-FT   INCREMENTAL TIME=   .033330HRS

PRINT HYD   ID=6 CODE=1

                    PARTIAL HYDROGRAPH   106.00

    RUNOFF VOLUME =   1.52454 INCHES   =   .1185 ACRE-FEET
    PEAK DISCHARGE RATE =   .47 CFS   AT   2.100 HOURS   BASIN AREA =   .0015 SQ. MI.

*LOT 4
COMPUTE NM HYD   ID=7 HYD NO=107 AREA=0.002028 SQ MI
                     PER A=0 PER B=20 PER C=20 PER D=60
                     TP=0.1333 HR MASS RAINFALL=-1

    K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
    UNIT PEAK =   4.8040   CFS   UNIT VOLUME =   .9969   B =   526.28   P60 = 1.95
    AREA =   .001217 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

    K =   .119066HR   TP =   .133300HR   K/TP RATIO =   .893222   SHAPE CONSTANT, N =
    UNIT PEAK =   2.1491   CFS   UNIT VOLUME =   .9941   B =   353.14   P60 = 1.95
    AREA =   .000811 SQ MI   IA =   .42500 INCHES   INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD   ID=7 CODE=1

                              PARTIAL HYDROGRAPH   107.00

    RUNOFF VOLUME =   1.52475 INCHES   =   .1649 ACRE-FEET
    PEAK DISCHARGE RATE =   4.87 CFS AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.

*4" ORIFICE
ROUTE RESERVOIR   ID=8 HYD NO=108 INFLOW ID=7 CODE=24
                       OUTFLOW (CFS)   STORAGE(AC-FT)   ELEVATION(FT)
                       0.00   0.00   83.0
                       0.38   0.06   84.0
                       0.57   0.14   85.0

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

TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
.00	.00	83.00	.000	.00
.80	.00	83.00	.000	.00
1.60	3.47	84.21	.076	.42
2.40	.17	84.74	.119	.52
3.20	.02	84.39	.091	.45
4.00	.01	84.05	.064	.39
4.80	.01	83.71	.043	.27
5.60	.02	83.48	.029	.18
6.40	.00	83.33	.020	.12
7.20	.00	83.22	.013	.08
8.00	.00	83.14	.009	.05
8.80	.00	83.09	.006	.04
9.60	.00	83.06	.004	.02
10.40	.00	83.04	.002	.02
11.20	.00	83.03	.002	.01
12.00	.00	83.02	.001	.01
12.80	.00	83.01	.001	.00

PEAK DISCHARGE =   .531 CFS - PEAK OCCURS AT HOUR   2.13

```
MAXIMUM WATER SURFACE ELEVATION =        84.797
MAXIMUM STORAGE =           .1238 AC-FT      INCREMENTAL TIME=      .033330HRS

PRINT HYD            ID=8 CODE=1


                           PARTIAL HYDROGRAPH    108.00


    RUNOFF VOLUME =     1.52446 INCHES     =        .1649 ACRE-FEET
    PEAK DISCHARGE RATE =          .53 CFS  AT   2.133 HOURS   BASIN AREA =   .0020 SQ. MI.



*LOT 5
COMPUTE NM HYD        ID=9 HYD NO=109 AREA=0.000850 SQ MI
                     PER A=0 PER B=20 PER C=20 PER D=60
                     TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR    TP =   .133300HR    K/TP RATIO =   .545000    SHAPE CONSTANT, N =
    UNIT PEAK =   2.0135    CFS    UNIT VOLUME =    .9933       B =    526.28      P60 = 1.95
    AREA =      .000510 SQ MI    IA =    .10000 INCHES    INF =   .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = ､ .033330


    K =    .119066HR    TP =   .133300HR    K/TP RATIO =   .893222    SHAPE CONSTANT, N =
    UNIT PEAK =   .90074    CFS    UNIT VOLUME =    .9858       B =    353.14      P60 = 1.95
    AREA =      .000340 SQ MI    IA =    .42500 INCHES    INF =  1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD            ID=9 CODE=1


                           PARTIAL HYDROGRAPH    109.00


    RUNOFF VOLUME =     1.52475 INCHES     =        .0691 ACRE-FEET
    PEAK DISCHARGE RATE =        2.05 CFS  AT   1.500 HOURS   BASIN AREA =   .0009 SQ. MI.



*4" ORIFICE
ROUTE RESERVOIR       ID=10 HYD NO=110 INFLOW ID=9 CODE=24
                      OUTFLOW (CFS)     STORAGE(AC-FT)   ELEVATION(FT)
                      0.00              0.00             83.0
                      0.38              0.04             84.0
                      0.57              0.10             85.0

    *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
```

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	83.00	.000	.00
.80	.00	83.00	.000	.00
1.60	1.46	83.78	.031	.30
2.40	.07	83.95	.038	.36
3.20	.01	83.53	.021	.20
4.00	.00	83.29	.012	.11
4.80	.01	83.16	.006	.06
5.60	.01	83.09	.004	.04
6.40	.00	83.06	.002	.02

```
    7.20          .00      83.03      .001        .01
    8.00          .00      83.02      .001        .01
    8.80          .00      83.01      .000        .00
 PEAK DISCHARGE =              .393 CFS - PEAK OCCURS AT HOUR    2.03
 MAXIMUM WATER SURFACE ELEVATION =       84.069
 MAXIMUM STORAGE =            .0442 AC-FT     INCREMENTAL TIME=      .033330HRS
```

PRINT HYD   ID=10 CODE=1

                      PARTIAL HYDROGRAPH   110.00

     RUNOFF VOLUME =   1.52439 INCHES   =   .0691 ACRE-FEET
     PEAK DISCHARGE RATE =   .39 CFS AT   2.033 HOURS   BASIN AREA =   .0009 SQ. MI.

*AMERICAN ROAD ROW
COMPUTE NM HYD   ID=11 HYD NO=111 AREA=0.001615 SQ MI
                     PER A=0 PER B=15.56 PER C=22.21 PER D=62.23
                     TP=0.1333 HR MASS RAINFALL=-1

  K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
  UNIT PEAK =   3.9679   CFS   UNIT VOLUME =   .9965   B =   526.28   P60 = 1.95
  AREA =   .001005 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
  RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

  K =   .116901HR   TP =   .133300HR   K/TP RATIO =   .876979   SHAPE CONSTANT, N =
  UNIT PEAK =   1.6400   CFS   UNIT VOLUME =   .9926   B =   358.39   P60 = 1.95
  AREA =   .000610 SQ MI   IA =   .41180 INCHES   INF =   1.00303 INCHES PER HOUR
  RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD   ID=11 CODE=1

                      PARTIAL HYDROGRAPH   111.00

     RUNOFF VOLUME =   1.56070 INCHES   =   .1344 ACRE-FEET
     PEAK DISCHARGE RATE =   3.95 CFS AT   1.500 HOURS   BASIN AREA =   .0016 SQ. MI.

*LOT A-1A
COMPUTE NM HYD   ID=12 HYD NO=112 AREA=0.005213 SQ MI
                     PER A=0 PER B=42.85 PER C=13.76 D=43.39
                     TP=0.1333 HR MASS RAINFALL=-1

  K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
  UNIT PEAK =   8.9302   CFS   UNIT VOLUME =   .9981   B =   526.28   P60 = 1.95
  AREA =   .002262 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
  RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

  K =   .125386HR   TP =   .133300HR   K/TP RATIO =   .940628   SHAPE CONSTANT, N =
  UNIT PEAK =   7.5000   CFS   UNIT VOLUME =   .9985   B =   338.78   P60 = 1.95
  AREA =   .002951 SQ MI   IA =   .46354 INCHES   INF =   1.14791 INCHES PER HOUR
  RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD   ID=12 CODE=1

PARTIAL HYDROGRAPH   112.00

RUNOFF VOLUME =   1.29392 INCHES   =   .3597 ACRE-FEET
PEAK DISCHARGE RATE =   10.93 CFS AT   1.500 HOURS   BASIN AREA =   .0052 SQ. MI.

*LOT A-2A
COMPUTE NM HYD   ID=13 HYD NO=113 AREA=0.000838 SQ MI
                     PER A=0 PER B=15 PER C=0 D=85
                     TP=0.1333 HR MASS RAINFALL=-1

K =   .072649HR   TP =   .133300HR   K/TP RATIO =   .545000   SHAPE CONSTANT, N =
UNIT PEAK =   2.8122   CFS   UNIT VOLUME =   .9955   B =   526.28   P60 = 1.95
AREA =   .000712 SQ MI   IA =   .10000 INCHES   INF =   .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

K =   .131364HR   TP =   .133300HR   K/TP RATIO =   .985475   SHAPE CONSTANT, N =
UNIT PEAK =   .30774   CFS   UNIT VOLUME =   .9575   B =.   326.34   P60 = 1.95
AREA =   .000126 SQ MI   IA =   .50000 INCHES   INF =   1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD   ID=13 CODE=1

PARTIAL HYDROGRAPH   113.00

RUNOFF VOLUME =   1.77812 INCHES   =   .0795 ACRE-FEET
PEAK DISCHARGE RATE =   2.26 CFS AT   1.500 HOURS   BASIN AREA =   .0008 SQ. MI.

*4" ORIFICE
ROUTE RESERVOIR   ID=14 HYD NO=114 INFLOW ID=13 CODE=24
                       OUTFLOW (CFS)   STORAGE(AC-FT)   ELEVATION(FT)
                       0.00   0.00   06.0
                       0.38   0.04   07.0
                       0.57   0.10   08.0

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

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	6.00	.000	.00
.80	.00	6.00	.000	.00
1.60	1.57	6.88	.035	.33
2.40	.08	7.09	.045	.40
3.20	.01	6.64	.026	.24
4.00	.01	6.35	.014	.13
4.80	.01	6.20	.008	.07
5.60	.01	6.11	.005	.04
6.40	.00	6.07	.003	.03
7.20	.00	6.04	.001	.01
8.00	.00	6.02	.001	.01
8.80	.00	6.01	.000	.00

```
    PEAK DISCHARGE =           .415 CFS - PEAK OCCURS AT HOUR    2.10
    MAXIMUM WATER SURFACE ELEVATION =        7.186
    MAXIMUM STORAGE =          .0512 AC-FT     INCREMENTAL TIME=       .033330HRS

  PRINT HYD            ID=14 CODE=1


                            PARTIAL HYDROGRAPH   114.00


      RUNOFF VOLUME =      1.77774 INCHES      =         .0795 ACRE-FEET
      PEAK DISCHARGE RATE =          .42 CFS  AT   2.100 HOURS   BASIN AREA =   .0008 SQ. MI.



  *LOT A-3A
  COMPUTE NM HYD       ID=15 HYD NO=115 AREA=0.000634 SQ MI
                       PER A=0 PER B=15 PER C=0 PER D=85
                       TP=0.1333 HR MASS RAINFALL=-1

    K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000    SHAPE CONSTANT, N =
    UNIT PEAK =   2.1276    CFS   UNIT VOLUME =    .9941      B =   526.28     P60 = 1.95
    AREA =       .000539 SQ MI    IA =    .10000 INCHES    INF =   .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330


    K =   .131364HR    TP =   .133300HR    K/TP RATIO =   .985475    SHAPE CONSTANT, N =
    UNIT PEAK =   .23282   CFS   UNIT VOLUME =    .9403      B =   326.34     P60 = 1.95
    AREA =       .000095 SQ MI    IA =    .50000 INCHES    INF =  1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

  PRINT HYD            ID=15 CODE=1


                            PARTIAL HYDROGRAPH   115.00


      RUNOFF VOLUME =      1.77812 INCHES      =         .0601 ACRE-FEET
      PEAK DISCHARGE RATE =         1.71 CFS  AT   1.500 HOURS   BASIN AREA =   .0006 SQ. MI.



  *4" ORIFICE
  ROUTE RESERVOIR      ID=16 HYD NO=116 INFLOW ID=15 CODE=24
                       OUTFLOW (CFS)     STORAGE(AC-FT)   ELEVATION(FT)
                       0.00              0.00             83.0
                       0.38              0.04             84.0
                       0.57              0.10             85.0

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

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

       .00       .00      83.00      .000      .00
       .80       .00      83.00      .000      .00
      1.60      1.19      83.67      .027      .25
      2.40       .06      83.81      .032      .31
      3.20       .01      83.46      .018      .17
      4.00       .00      83.25      .010      .10
      4.80       .01      83.14      .006      .05
      5.60       .01      83.08      .003      .03
```

```
    6.40         .00      83.05        .002       .02
    7.20         .00      83.03        .001       .01
    8.00         .00      83.01        .001       .01
    8.80         .00      83.01        .000       .00
PEAK DISCHARGE =           .358 CFS - PEAK OCCURS AT HOUR    2.07
MAXIMUM WATER SURFACE ELEVATION =         83.943
MAXIMUM STORAGE =          .0377 AC-FT      INCREMENTAL TIME=       .033330HRS


PRINT HYD          ID=16 CODE=1


                        PARTIAL HYDROGRAPH    116.00



    RUNOFF VOLUME =      1.77768 INCHES     =        .0601 ACRE-FEET
    PEAK DISCHARGE RATE =          .36 CFS   AT   2.066 HOURS   BASIN AREA =   .0006 SQ. MI.




*RIO RANCHO ROW
COMPUTE NM HYD        ID=17 HYD NO=117 AREA=0.000744 SQ MI
                     PER A=0 PER B=20 PER C=0 PER D=80
                     TP=0.1333 HR MASS RAINFALL=-1

    K =   .072649HR    TP =   .133300HR   K/TP RATIO =   .545000    SHAPE CONSTANT, N =
    UNIT PEAK =   2.3499   CFS   UNIT VOLUME =    .9949     B =   526.28     P60 = 1.95
    AREA =      .000595 SQ MI   IA =    .10000 INCHES   INF =   .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330


    K =   .131364HR    TP =   .133300HR   K/TP RATIO =   .985475    SHAPE CONSTANT, N =
    UNIT PEAK =   .36429   CFS   UNIT VOLUME =    .9642     B =   326.34     P60 = 1.95
    AREA =      .000149 SQ MI   IA =    .50000 INCHES   INF =  1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD          ID=17 CODE=1

                        PARTIAL HYDROGRAPH    117.00



    RUNOFF VOLUME =      1.71509 INCHES     =        .0681 ACRE-FEET
    PEAK DISCHARGE RATE =         1.95 CFS   AT   1.500 HOURS   BASIN AREA =   .0007 SQ. MI.



*
*SITE POND
COMPUTE NM HYD        ID=18 HYD NO=118 AREA=0.000423 SQ MI.
                     PER A=0 PER B=100 PER C=0 PER D=0
                     TP=0.1333 HR MASS RAINFALL=-1

    K =   .131364HR    TP =   .133300HR   K/TP RATIO =   .985475    SHAPE CONSTANT, N =
    UNIT PEAK =   1.0356   CFS   UNIT VOLUME =    .9872     B =   326.34     P60 = 1.95
    AREA =      .000423 SQ MI   IA =    .50000 INCHES   INF =  1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033330

PRINT HYD          ID=18 CODE=1

                        PARTIAL HYDROGRAPH    118.00
```

```
     RUNOFF VOLUME =      .70656 INCHES      =           .0159 ACRE-FEET
     PEAK DISCHARGE RATE =        .58 CFS   AT   1.533 HOURS    BASIN AREA =   .0004 SQ. MI.




*
ADD HYD              ID=19  HYD NO=119  ID=2 ID=4
PRINT HYD            ID=19  CODE=1


                           PARTIAL HYDROGRAPH   119.00


     RUNOFF VOLUME =     1.63230 INCHES      =           .1285 ACRE-FEET
     PEAK DISCHARGE RATE =        .74 CFS   AT   2.033 HOURS    BASIN AREA =   .0015 SQ. MI.



*
ADD HYD              ID=20  HYD NO=120  ID=6 ID=8
PRINT HYD            ID=20  CODE=1


                           PARTIAL HYDROGRAPH   120.00


     RUNOFF VOLUME =     1.52303 INCHES      =           .2831 ACRE-FEET
     PEAK DISCHARGE RATE =       1.00 CFS   AT   2.133 HOURS    BASIN AREA =   .0035 SQ. MI.



*
ADD HYD              ID=21  HYD NO=121  ID=10 ID=11
PRINT HYD            ID=21  CODE=1


                           PARTIAL HYDROGRAPH   121.00


     RUNOFF VOLUME =     1.54727 INCHES      =           .2034 ACRE-FEET
     PEAK DISCHARGE RATE =       4.13 CFS   AT   1.500 HOURS    BASIN AREA =   .0025 SQ. MI.



*
ADD HYD              ID=22  HYD NO=122  ID=12 ID=14
PRINT HYD            ID=22  CODE=1


                           PARTIAL HYDROGRAPH   122.00


     RUNOFF VOLUME =     1.36054 INCHES      =           .4391 ACRE-FEET
     PEAK DISCHARGE RATE =      11.13 CFS   AT   1.500 HOURS    BASIN AREA =   .0061 SQ. MI.



*
ADD HYD              ID=23  HYD NO=123  ID=16 ID=17
PRINT HYD            ID=23  CODE=1


                           PARTIAL HYDROGRAPH   123.00
```

```
     RUNOFF VOLUME =      1.74223 INCHES     =         .1280 ACRE-FEET
     PEAK DISCHARGE RATE =       2.10 CFS  AT   1.500 HOURS   BASIN AREA =   .0014 SQ. MI.




*
ADD HYD             ID=24  HYD NO=124  ID=18 ID=19
PRINT HYD           ID=24  CODE=1


                         PARTIAL HYDROGRAPH   124.00



     RUNOFF VOLUME =      1.42603 INCHES     =         .1444 ACRE-FEET
     PEAK DISCHARGE RATE =       1.02 CFS  AT   1.567 HOURS   BASIN AREA =   .0019 SQ. MI.




*
ADD HYD             ID=25  HYD NO=124  ID=20 ID=21
PRINT HYD           ID=25  CODE=1


                         PARTIAL HYDROGRAPH   124.00



     RUNOFF VOLUME =      1.53307 INCHES     =         .4865 ACRE-FEET
     PEAK DISCHARGE RATE =       4.68 CFS  AT   1.533 HOURS   BASIN AREA =   .0060 SQ. MI.




*
ADD HYD             ID=26  HYD NO=126  ID=22 ID=23
PRINT HYD           ID=26  CODE=1


                         PARTIAL HYDROGRAPH   126.00



     RUNOFF VOLUME =      1.43134 INCHES     =         .5671 ACRE-FEET
     PEAK DISCHARGE RATE =      13.23 CFS  AT   1.500 HOURS   BASIN AREA =   .0074 SQ. MI.




*
ADD HYD             ID=27  HYD NO=127  ID=24 ID=25
PRINT HYD           ID=27  CODE=1


                         PARTIAL HYDROGRAPH   127.00
                                    .


     RUNOFF VOLUME =      1.50717 INCHES     =         .6309 ACRE-FEET
     PEAK DISCHARGE RATE =       5.67 CFS  AT   1.533 HOURS   BASIN AREA =   .0078 SQ. MI.




*
ADD HYD             ID=28  HYD NO=128  ID=26 ID=27
PRINT HYD           ID=28  CODE=1


                         PARTIAL HYDROGRAPH   128.00
```

```
     RUNOFF VOLUME =      1.47030 INCHES      =         1.1980 ACRE-FEET
     PEAK DISCHARGE RATE =        18.77 CFS  AT   1.500 HOURS   BASIN AREA =   .0153 SQ. MI.
```

```
*
*15" ORIFICE
ROUTE RESERVOIR         ID=29 HYD NO=129 INFLOW ID=28 CODE=24
                        OUTFLOW (CFS)      STORAGE(AC-FT)   ELEVATION(FT)
                          0.00                0.00              64.0
                          3.88                0.02              65.0
                          7.76                0.05              66.0
                         10.27                0.08              67.0
                         12.27                0.11              68.0
                         13.99                0.13              69.0
```

```
    *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *


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

      .00         .00        64.00        .000         .00
      .80         .00        64.00        .000         .00
     1.60       14.87        68.76        .125       13.58
     2.40        3.33        64.96        .019        3.72
     3.20        1.91        64.51        .010        1.98
     4.00        1.22        64.33        .007        1.26
     4.80         .77        64.20        .004         .80
     5.60         .51        64.13        .003         .52
     6.40         .30        64.08        .002         .31
     7.20         .18        64.05        .001         .18
     8.00         .11        64.03        .001         .11
     8.80         .07        64.02        .000         .07
     9.60         .04        64.01        .000         .04
    10.40         .02        64.01        .000         .02
    11.20         .01        64.00        .000         .01
    12.00         .01        64.00        .000         .01
    12.80         .01        64.00        .000         .01
    13.60         .00        64.00        .000         .00
PEAK DISCHARGE =         13.669 CFS - PEAK OCCURS AT HOUR     1.63
MAXIMUM WATER SURFACE ELEVATION =        68.813
MAXIMUM STORAGE =          .1263 AC-FT·     INCREMENTAL TIME=      .033330HRS

PRINT HYD              ID=29 CODE=1


                        PARTIAL HYDROGRAPH    129.00


     RUNOFF VOLUME =      1.47030 INCHES      =         1.1980 ACRE-FEET
     PEAK DISCHARGE RATE =        13.67 CFS  AT   1.633 HOURS   BASIN AREA =   .0153 SQ. MI.



FINISH

     NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 14:08:09
```