INDEX

INTRODUCTION

The Persimmon Pointe Market project (lot 1) consists of a 33,800 s.f. retail/restaurant building with associated parking and service drives. The detention basin will be a shared basin between lots 1,2, and 5.

The detained site is within the Crooked Creek watershed with the terrain of the site sloping from west to east with an elevation difference of approximately 15 feet. The existing site is currently undeveloped. The proposed site impervious area was determined from the improvement plans. Lots 2 and 5 impervious areas were determined by assuming a maximum of 80% coverage.

The detention basin will be constructed on the east side of the property. The basin will have a modular block retaining wall along all sides that varies from 8' to 13'. There is an access ramp located along the east side of the basin. The entire basin will be enclosed with a 4' high wrought iron fence. The bottom of the basin will be seeded for the entire area of the basin at a minimum slope of 2 percent.

The outflow structure will be a 48" diameter pre-cast manhole with a 12" diameter low flow orifice and one (1), intermediate weir cut into the structure with a length of 0'-9". The detention basin will discharge into a 24" Reinforced Concrete pipe that will, through a proposed manhole, tie into the existing MoDOT storm water system along Highway "K".

Haestad Quick TR-55 version 7.0 was used to analyze the existing 2-year, 15-year, 25-year and 100-year stormwater runoff conditions. The existing site consists of one drainage basin. This existing runoff amount establishes the maximum developed runoff release rate from the proposed basin.

Using the TR-55 software, the developed (pavement, buildings, basins, etc.) 2-year, 15-year, 25-year, and 100-year stormwater runoff conditions were calculated. Then using Haestad Pondpack version 7.0, the detention routings were calculated for the basin. The basin was routed for the 2-year, 15-year, 25-year, and 100-year developed runoff conditions with a free outfall. The 100-year high water elevation was then calculated assuming the low flow orifice was 100% blocked and the water ponded to the intermediate weir of the structure.

STORMWATER RUNOFF SUMMARY

2 Year - 24 Hour Storm Event

Existing Condition	7.46 cfs	(Allowable Discharge)
Proposed Basin Discharge Rate	6.61 cfs	(Free Outfall)

15 Year - 24 Hour Storm Event

Existing Condition	14.49 cfs	(Allowable Discharge)
Proposed Basin Discharge Rate	12.59 cfs	(Free Outfall)

25 Year - 24 Hour Storm Event

Existing Condition	16.65 cfs	(Allowable Discharge)
Proposed Basin Discharge Rate	14.88 cfs	(Free Outfall)

100 Year - 24 Hour Storm Event

Existing Condition	23.22 cfs	(Allowable Discharge)
Proposed Basin Discharge Rate	22.34 cfs	(Free Outfall)

Note: 2 year sediment storage has been provided in basin

Note: 6.24 acres are being detained

Maximum 100 Year 24 Hour Storm Event Highwater

Elevation   551.51 ft

Undeveloped Conditions

Table 2-2a.—Runoff curve numbers for urban areas[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.)[3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)...........		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way).		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way).................................		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders).		96	96	96	96
Urban districts:					
Commercial and business..........................	85	89	92	94	95
Industrial.......................................	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)......................	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation)[5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1]Average runoff condition, and $I_a = 0.2S$.

[2]The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3]CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4]Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5]Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

```
Type.... Tc Calcs
Name.... TC EX 01

File.... R:\0675I\0675I.PPW
Title... Existing POI 1


 :::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
 TIME OF CONCENTRATION CALCULATOR
 :::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

 Existing POI 1
 -------------------------------------------------------------------------



 Segment #1:  Tc: TR-55 Shallow
 Description: Segment 1B

 Hydraulic Length   289.00 ft
 Slope             .032000 ft/ft
 Unpaved

 Avg.Velocity        2.89 ft/sec

                                   Segment #1 Time:    .0278 hrs
 -------------------------------------------------------------------------

 Segment #2:  Tc: TR-55 Sheet
 Description: Segment 1A

 Mannings n          .2400
 Hydraulic Length   300.00 ft
 2yr, 24hr P        3.5000 in
 Slope             .021000 ft/ft

 Avg.Velocity        .16 ft/sec

                                   Segment #2 Time:    .5371 hrs
 -------------------------------------------------------------------------

                         =========================
                         Total Tc:    .5649 hrs
                         =========================
```

```
Type.... Tc Calcs
Name.... TC EX 01

File.... R:\0675I\0675I.PPW
Title... Existing POI 1

 -----------------------------------------------------------------------
 Tc Equations used...
 -----------------------------------------------------------------------


==== SCS TR-55 Sheet Flow ==============================================

     Tc = (.007 * ((n * Lf)**0.8)) / ((P**.5) * (Sf**.4))

     Where:  Tc = Time of concentration, hrs
             n  = Mannings n
             Lf = Flow length, ft
             P  = 2yr, 24hr Rain depth, inches
             Sf = Slope, %


==== SCS TR-55 Shallow Concentrated Flow ===============================

     Unpaved surface:
     V  = 16.1345 * (Sf**0.5)

     Paved surface:
     V  = 20.3282 * (Sf**0.5)

     Tc = (Lf / V) / (3600sec/hr)

     Where:  V  = Velocity, ft/sec
             Sf = Slope, ft/ft
             Tc = Time of concentration, hrs
             Lf = Flow length, ft
```

```
Type.... Runoff CN-Area
Name.... CN EX 01

File.... R:\0675I\0675I.PPW

RUNOFF CURVE NUMBER DATA
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

---------------------------------------------------------------------

                                        Impervious
                              Area      Adjustment  Adjusted
Soil/Surface Description     CN  acres    %C   %UC     CN
------------------------     ---- ------- ----- ----- ------
Grass Group - C              79  6.200                79.00


COMPOSITE AREA & WEIGHTED CN --->    6.200            79.00 (79)
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
```

2-Year

```
Type.... SCS Unit Hyd. Summary
Name.... EX 01              Tag: 2                      Event: 2 yr
File.... R:\0675I\0675I.PPW

        SCS UNIT HYDROGRAPH METHOD

        STORM EVENT: 2 year storm
        Duration      = 24.0000 hrs     Rain Depth = 3.5000 in
        Rain Dir      = C:\HAESTAD\PPKW\RAINFALL\
        Rain File -ID = SCSTYPES.RNF - TypeII  24hr
        Unit Hyd Type = Default Curvilinear
        HYG Dir       = R:\0675I\
        HYG File - ID = 0675i.HYG - EX 01 2
        Tc            = .5649 hrs
        Drainage Area = 6.200 acres  Runoff CN= 79


        ===================================================
        Computational Time Increment   =    .07532 hrs
        Computed Peak Time             =   12.2018 hrs
        Computed Peak Flow             =      7.46 cfs

        Time Increment for HYG File    =    .0400 hrs
        Peak Time, Interpolated Output =   12.2000 hrs
        Peak Flow, Interpolated Output =      7.45 cfs
        ===================================================

                    DRAINAGE AREA
                    --------------------
        ID:CN Ex 01
        CN   =    79
        Area =        6.200 acres
        S    =    2.6582 in
        0.2S =     .5316 in


            Cumulative Runoff
            --------------------
                1.5660 in
                 .809 ac-ft

        HYG Volume...          .809 ac-ft (area under HYG curve)

        ***** UNIT HYDROGRAPH PARAMETERS *****

        Time Concentration, Tc =   .56490 hrs (ID: Tc Ex 01)
        Computational Incr, Tm =   .07532 hrs = 0.20000 Tp

        Unit Hyd. Shape Factor =  483.432 (37.46% under rising limb)
        K =  483.43/645.333,  K =    .7491 (also, K = 2/(1+(Tr/Tp))
        Receding/Rising, Tr/Tp =   1.6698 (solved from K =   .7491)

        Unit peak,        qp =   12.44 cfs
        Unit peak time    Tp =   .37660 hrs
        Unit receding limb, Tr = 1.50640 hrs
        Total unit time,  Tb =  1.88299 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 2                        Event: 2 yr
File.... R:\0675I\0675I.PPW

                 SCS UNIT HYDROGRAPH METHOD

          STORM EVENT: 2 year storm
          Duration      = 24.0000 hrs    Rain Depth = 3.5000 in
          Rain Dir      = C:\HAESTAD\PPKW\RAINFALL\
          Rain File -ID = SCSTYPES.RNF - TypeII  24hr
          Unit Hyd Type = Default Curvilinear
          HYG Dir       = R:\0675I\
          HYG File - ID = 0675i.HYG - EX 01 2
          Tc            = .5649 hrs
          Drainage Area = 6.200 acres   Runoff CN= 79
          Calc.Increment= .07532 hrs      Out.Incr.= .0400 hrs
          HYG Volume    = .809 ac-ft

                     HYDROGRAPH ORDINATES (cfs)
      Time   |          Output Time increment = .0400 hrs
      hrs    |    Time on left represents time for first value in each row.
   ----------|---------------------------------------------------------------
```

Time hrs					
9.4000	.00	.00	.00	.00	.00
9.6000	.01	.01	.01	.01	.01
9.8000	.01	.02	.02	.02	.02
10.0000	.03	.03	.03	.04	.04
10.2000	.04	.05	.05	.05	.06
10.4000	.06	.07	.07	.08	.08
10.6000	.09	.09	.10	.11	.11
10.8000	.12	.13	.14	.15	.15
11.0000	.16	.17	.19	.20	.21
11.2000	.22	.24	.25	.27	.29
11.4000	.31	.33	.35	.38	.42
11.6000	.45	.52	.60	.75	.92
11.8000	1.20	1.55	2.05	2.67	3.40
12.0000	4.23	5.11	5.89	6.64	7.08
12.2000	7.45	7.41	7.34	6.98	6.60
12.4000	6.08	5.56	5.04	4.55	4.12
12.6000	3.74	3.40	3.11	2.85	2.62
12.8000	2.41	2.23	2.06	1.93	1.80
13.0000	1.69	1.59	1.51	1.43	1.36
13.2000	1.30	1.24	1.19	1.15	1.11
13.4000	1.07	1.03	1.00	.97	.94
13.6000	.92	.89	.87	.84	.82
13.8000	.80	.79	.77	.75	.74
14.0000	.73	.71	.70	.69	.67
14.2000	.66	.65	.64	.63	.62
14.4000	.61	.60	.60	.59	.58
14.6000	.58	.57	.56	.56	.55
14.8000	.55	.54	.54	.54	.53
15.0000	.53	.52	.52	.51	.51
15.2000	.51	.50	.50	.49	.49
15.4000	.48	.48	.48	.47	.47
15.6000	.46	.46	.45	.45	.45

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 2                    Event: 2 yr
File.... R:\0675I\0675I.PPW
```

                         HYDROGRAPH ORDINATES (cfs)
     Time | Output Time increment = .0400 hrs
hrs	Time on left represents time for first value in each row.

Time hrs					
15.8000	.44	.44	.43	.43	.42
16.0000	.42	.42	.41	.41	.40
16.2000	.40	.40	.39	.39	.39
16.4000	.38	.38	.38	.37	.37
16.6000	.37	.37	.37	.36	.36
16.8000	.36	.36	.36	.36	.35
17.0000	.35	.35	.35	.35	.35
17.2000	.34	.34	.34	.34	.34
17.4000	.34	.34	.33	.33	.33
17.6000	.33	.33	.33	.32	.32
17.8000	.32	.32	.32	.32	.32
18.0000	.31	.31	.31	.31	.31
18.2000	.31	.30	.30	.30	.30
18.4000	.30	.30	.30	.29	.29
18.6000	.29	.29	.29	.29	.28
18.8000	.28	.28	.28	.28	.28
19.0000	.27	.27	.27	.27	.27
19.2000	.27	.27	.26	.26	.26
19.4000	.26	.26	.26	.25	.25
19.6000	.25	.25	.25	.25	.24
19.8000	.24	.24	.24	.24	.24
20.0000	.24	.23	.23	.23	.23
20.2000	.23	.23	.22	.22	.22
20.4000	.22	.22	.22	.22	.22
20.6000	.22	.22	.22	.22	.22
20.8000	.22	.21	.21	.21	.21
21.0000	.21	.21	.21	.21	.21
21.2000	.21	.21	.21	.21	.21
21.4000	.21	.21	.21	.21	.21
21.6000	.21	.21	.21	.21	.21
21.8000	.21	.21	.21	.21	.21
22.0000	.21	.21	.21	.20	.20
22.2000	.20	.20	.20	.20	.20
22.4000	.20	.20	.20	.20	.20
22.6000	.20	.20	.20	.20	.20
22.8000	.20	.20	.20	.20	.20
23.0000	.20	.20	.20	.20	.20
23.2000	.20	.20	.20	.20	.20
23.4000	.20	.19	.19	.19	.19
23.6000	.19	.19	.19	.19	.19
23.8000	.19	.19	.19	.19	.19
24.0000	.19	.19	.19	.18	.17
24.2000	.16	.15	.14	.12	.11
24.4000	.10	.08	.07	.06	.05
24.6000	.04	.03	.03	.02	.02
24.8000	.02	.01	.01	.01	.01
25.0000	.01	.01	.00	.00	.00

15-Year

```
Type.... SCS Unit Hyd. Summary
Name.... EX 01            Tag: 15                        Event: 15 yr
File.... R:\0675I\0675I.PPW

            SCS UNIT HYDROGRAPH METHOD

            STORM EVENT: 15 year storm
            Duration     = 24.0000 hrs     Rain Depth = 5.2000 in
            Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
            Rain File -ID = SCSTYPES.RNF - TypeII  24hr
            Unit Hyd Type = Default Curvilinear
            HYG Dir      = R:\0675I\
            HYG File - ID = 0675i.HYG - EX 01 15
            Tc           = .5649 hrs
            Drainage Area = 6.200 acres   Runoff CN= 79


            ==========================================
            Computational Time Increment   =   .07532 hrs
            Computed Peak Time             = 12.2018 hrs
            Computed Peak Flow             =   14.49 cfs

            Time Increment for HYG File    =   .0400 hrs
            Peak Time, Interpolated Output = 12.2000 hrs
            Peak Flow, Interpolated Output =   14.47 cfs
            ==========================================

                        DRAINAGE AREA
                     -------------------
            ID:CN Ex 01
            CN   =   79
            Area =       6.200 acres
            S    =    2.6582 in
            0.2S =     .5316 in

                Cumulative Runoff
                -------------------
                     2.9746 in
                     1.537 ac-ft

            HYG Volume...        1.537 ac-ft (area under HYG curve)

            ***** UNIT HYDROGRAPH PARAMETERS *****

            Time Concentration, Tc =   .56490 hrs (ID: Tc Ex 01)
            Computational Incr, Tm =   .07532 hrs = 0.20000 Tp

            Unit Hyd. Shape Factor =  483.432 (37.46% under rising limb)
            K =  483.43/645.333,  K =    .7491 (also, K = 2/(1+(Tr/Tp))
            Receding/Rising, Tr/Tp =   1.6698 (solved from K =   .7491)

            Unit peak,        qp =    12.44 cfs
            Unit peak time    Tp =    .37660 hrs
            Unit receding limb, Tr = 1.50640 hrs
            Total unit time,    Tb = 1.88299 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01            Tag: 15                    Event: 15 yr
File.... R:\0675I\0675I.PPW

              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 15 year storm
              Duration      = 24.0000 hrs    Rain Depth = 5.2000 in
              Rain Dir      = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID = SCSTYPES.RNF - TypeII  24hr
              Unit Hyd Type = Default Curvilinear
              HYG Dir       = R:\0675I\
              HYG File - ID = 0675i.HYG - EX 01 15
              Tc            = .5649 hrs
              Drainage Area = 6.200 acres  Runoff CN= 79
              Calc.Increment= .07532 hrs     Out.Incr.= .0400 hrs
              HYG Volume    = 1.537 ac-ft
```

```
                     HYDROGRAPH ORDINATES (cfs)
    Time  |          Output Time increment = .0400 hrs
    hrs   |   Time on left represents time for first value in each row.
 ---------|-----------------------------------------------------------
   7.4000 |       .00       .00       .00       .00       .00
   7.6000 |       .00       .01       .01       .01       .01
   7.8000 |       .01       .01       .02       .02       .02
   8.0000 |       .02       .02       .03       .03       .03
   8.2000 |       .03       .04       .04       .04       .04
   8.4000 |       .05       .05       .05       .06       .06
   8.6000 |       .06       .07       .07       .07       .08
   8.8000 |       .08       .09       .09       .09       .10
   9.0000 |       .10       .11       .11       .12       .12
   9.2000 |       .13       .13       .14       .14       .15
   9.4000 |       .15       .16       .16       .17       .17
   9.6000 |       .17       .18       .18       .19       .19
   9.8000 |       .20       .20       .21       .22       .22
  10.0000 |       .23       .24       .24       .25       .26
  10.2000 |       .27       .28       .29       .30       .31
  10.4000 |       .32       .33       .35       .36       .37
  10.6000 |       .39       .40       .42       .43       .45
  10.8000 |       .47       .48       .50       .52       .55
  11.0000 |       .57       .59       .62       .64       .67
  11.2000 |       .70       .74       .77       .81       .85
  11.4000 |       .90       .94      1.00      1.06      1.14
  11.6000 |      1.23      1.38      1.56      1.87      2.25
  11.8000 |      2.83      3.57      4.57      5.79      7.22
  12.0000 |      8.77     10.41     11.83     13.17     13.88
  12.2000 |     14.47     14.30     14.05     13.29     12.48
  12.4000 |     11.45     10.42      9.40      8.46      7.62
  12.6000 |      6.89      6.25      5.70      5.19      4.76
  12.8000 |      4.36      4.03      3.71      3.46      3.21
  13.0000 |      3.02      2.83      2.67      2.53      2.40
  13.2000 |      2.29      2.19      2.09      2.01      1.93
  13.4000 |      1.86      1.80      1.74      1.69      1.63
  13.6000 |      1.59      1.54      1.50      1.46      1.42
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 15                    Event: 15 yr
File.... R:\0675I\0675I.PPW
```

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0400 hrs Time on left represents time for first value in each row.				
13.8000	1.39	1.36	1.33	1.30	1.28
14.0000	1.25	1.23	1.20	1.18	1.16
14.2000	1.14	1.12	1.10	1.08	1.06
14.4000	1.05	1.03	1.02	1.01	1.00
14.6000	.99	.98	.97	.96	.95
14.8000	.94	.93	.92	.91	.91
15.0000	.90	.89	.88	.88	.87
15.2000	.86	.85	.85	.84	.83
15.4000	.82	.82	.81	.80	.79
15.6000	.79	.78	.77	.77	.76
15.8000	.75	.74	.74	.73	.72
16.0000	.71	.71	.70	.69	.68
16.2000	.68	.67	.66	.66	.65
16.4000	.65	.64	.64	.63	.63
16.6000	.63	.62	.62	.62	.61
16.8000	.61	.61	.60	.60	.60
17.0000	.60	.59	.59	.59	.58
17.2000	.58	.58	.58	.57	.57
17.4000	.57	.57	.56	.56	.56
17.6000	.56	.55	.55	.55	.54
17.8000	.54	.54	.54	.53	.53
18.0000	.53	.53	.52	.52	.52
18.2000	.52	.51	.51	.51	.50
18.4000	.50	.50	.50	.49	.49
18.6000	.49	.49	.48	.48	.48
18.8000	.48	.47	.47	.47	.46
19.0000	.46	.46	.46	.45	.45
19.2000	.45	.45	.44	.44	.44
19.4000	.43	.43	.43	.43	.42
19.6000	.42	.42	.42	.41	.41
19.8000	.41	.40	.40	.40	.40
20.0000	.39	.39	.39	.39	.38
20.2000	.38	.38	.38	.37	.37
20.4000	.37	.37	.37	.37	.36
20.6000	.36	.36	.36	.36	.36
20.8000	.36	.36	.36	.36	.36
21.0000	.36	.36	.36	.35	.35
21.2000	.35	.35	.35	.35	.35
21.4000	.35	.35	.35	.35	.35
21.6000	.35	.35	.35	.35	.35
21.8000	.35	.34	.34	.34	.34
22.0000	.34	.34	.34	.34	.34
22.2000	.34	.34	.34	.34	.34
22.4000	.34	.34	.34	.34	.34
22.6000	.34	.33	.33	.33	.33
22.8000	.33	.33	.33	.33	.33
23.0000	.33	.33	.33	.33	.33

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 15                      Event: 15 yr
File.... R:\0675I\0675I.PPW

                        HYDROGRAPH ORDINATES (cfs)
     Time  |            Output Time increment = .0400 hrs
     hrs   |    Time on left represents time for first value in each row.
----------|------------------------------------------------------------
  23.2000  |        .33         .33         .33         .33         .33
  23.4000  |        .32         .32         .32         .32         .32
  23.6000  |        .32         .32         .32         .32         .32
  23.8000  |        .32         .32         .32         .32         .32
  24.0000  |        .32         .31         .31         .30         .29
  24.2000  |        .27         .25         .23         .21         .18
  24.4000  |        .16         .14         .12         .10         .08
  24.6000  |        .07         .06         .05         .04         .03
  24.8000  |        .03         .02         .02         .02         .01
  25.0000  |        .01         .01         .01         .01         .01
  25.2000  |        .00         .00         .00         .00         .00
  25.4000  |        .00         .00         .00         .00
```

25-Year

```
Type.... SCS Unit Hyd. Summary
Name.... EX 01              Tag: 25                      Event: 25 yr
File.... R:\0675I\0675I.PPW

            SCS UNIT HYDROGRAPH METHOD

            STORM EVENT: 25 year storm
            Duration     = 24.0000 hrs     Rain Depth = 5.7000 in
            Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
            Rain File -ID = SCSTYPES.RNF - TypeII  24hr
            Unit Hyd Type = Default Curvilinear
            HYG Dir      = R:\0675I\
            HYG File - ID = 0675i.HYG - EX 01 25
            Tc           = .5649 hrs
            Drainage Area = 6.200 acres  Runoff CN= 79


            =================================================
            Computational Time Increment   =   .07532 hrs
            Computed Peak Time             = 12.2018 hrs
            Computed Peak Flow             =   16.65 cfs

            Time Increment for HYG File    =   .0400 hrs
            Peak Time, Interpolated Output = 12.2000 hrs
            Peak Flow, Interpolated Output =   16.62 cfs
            =================================================

                        DRAINAGE AREA
                        -------------------
            ID:CN Ex 01
            CN   =    79
            Area =       6.200 acres
            S    =    2.6582 in
            0.2S =     .5316 in

              Cumulative Runoff
              -------------------
                    3.4130 in
                    1.763 ac-ft

    HYG Volume...         1.764 ac-ft (area under HYG curve)

    ***** UNIT HYDROGRAPH PARAMETERS *****

    Time Concentration, Tc =   .56490 hrs (ID: Tc Ex 01)
    Computational Incr, Tm =   .07532 hrs = 0.20000 Tp

    Unit Hyd. Shape Factor =  483.432 (37.46% under rising limb)
    K =  483.43/645.333,  K =    .7491 (also, K = 2/(1+(Tr/Tp)))
    Receding/Rising, Tr/Tp =  1.6698 (solved from K =   .7491)

    Unit peak,           qp =   12.44 cfs
    Unit peak time       Tp =   .37660 hrs
    Unit receding limb, Tr =  1.50640 hrs
    Total unit time,     Tb =  1.88299 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01            Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW

              SCS UNIT HYDROGRAPH METHOD

        STORM EVENT: 25 year storm
        Duration     = 24.0000 hrs    Rain Depth = 5.7000 in
        Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
        Rain File -ID = SCSTYPES.RNF - TypeII  24hr
        Unit Hyd Type = Default Curvilinear
        HYG Dir      = R:\0675I\
        HYG File - ID = 0675i.HYG - EX 01 25
        Tc           = .5649 hrs
        Drainage Area = 6.200 acres  Runoff CN= 79
        Calc.Increment= .07532 hrs     Out.Incr.= .0400 hrs
        HYG Volume   = 1.764 ac-ft
```

                    HYDROGRAPH ORDINATES (cfs)

| Time | Output Time increment = .0400 hrs | | | | |
hrs	Time on left represents time for first value in each row.				
6.9200	.00	.00	.00	.00	.00
7.1200	.00	.01	.01	.01	.01
7.3200	.01	.01	.02	.02	.02
7.5200	.02	.03	.03	.03	.03
7.7200	.03	.04	.04	.04	.04
7.9200	.05	.05	.05	.06	.06
8.1200	.06	.06	.07	.07	.07
8.3200	.08	.08	.08	.09	.09
8.5200	.09	.10	.10	.11	.11
8.7200	.12	.12	.13	.13	.14
8.9200	.14	.15	.15	.16	.16
9.1200	.17	.18	.18	.19	.19
9.3200	.20	.21	.21	.22	.22
9.5200	.23	.23	.24	.24	.25
9.7200	.25	.26	.26	.27	.28
9.9200	.29	.29	.30	.31	.32
10.1200	.33	.34	.35	.36	.37
10.3200	.39	.40	.41	.43	.44
10.5200	.46	.47	.49	.51	.53
10.7200	.54	.56	.59	.61	.63
10.9200	.65	.68	.71	.74	.76
11.1200	.80	.83	.87	.90	.95
11.3200	.99	1.04	1.09	1.15	1.22
11.5200	1.28	1.38	1.48	1.66	1.87
11.7200	2.24	2.68	3.36	4.22	5.38
11.9200	6.77	8.41	10.19	12.06	13.67
12.1200	15.18	15.97	16.62	16.40	16.10
12.3200	15.22	14.27	13.08	11.89	10.72
12.5200	9.64	8.68	7.84	7.11	6.48
12.7200	5.90	5.41	4.94	4.57	4.20
12.9200	3.92	3.64	3.41	3.20	3.02
13.1200	2.86	2.71	2.58	2.47	2.36

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01          Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW
```

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0400 hrs

Time hrs					
Time on left represents time for first value in each row.					
13.3200	2.27	2.18	2.10	2.03	1.96
13.5200	1.90	1.84	1.79	1.73	1.68
13.7200	1.64	1.60	1.56	1.53	1.49
13.9200	1.46	1.43	1.40	1.38	1.35
14.1200	1.32	1.30	1.28	1.25	1.23
14.3200	1.21	1.19	1.18	1.16	1.15
14.5200	1.13	1.12	1.11	1.10	1.08
14.7200	1.07	1.06	1.05	1.05	1.04
14.9200	1.03	1.02	1.01	1.00	.99
15.1200	.98	.97	.97	.96	.95
15.3200	.94	.93	.92	.92	.91
15.5200	.90	.89	.88	.87	.87
15.7200	.86	.85	.84	.83	.82
15.9200	.82	.81	.80	.79	.78
16.1200	.78	.77	.76	.75	.74
16.3200	.74	.73	.73	.72	.72
16.5200	.71	.71	.70	.70	.69
16.7200	.69	.69	.68	.68	.68
16.9200	.67	.67	.67	.66	.66
17.1200	.66	.65	.65	.65	.65
17.3200	.64	.64	.64	.63	.63
17.5200	.63	.62	.62	.62	.62
17.7200	.61	.61	.61	.60	.60
17.9200	.60	.59	.59	.59	.59
18.1200	.58	.58	.58	.57	.57
18.3200	.57	.56	.56	.56	.56
18.5200	.55	.55	.55	.54	.54
18.7200	.54	.53	.53	.53	.53
18.9200	.52	.52	.52	.51	.51
19.1200	.51	.50	.50	.50	.50
19.3200	.49	.49	.49	.48	.48
19.5200	.48	.47	.47	.47	.46
19.7200	.46	.46	.46	.45	.45
19.9200	.45	.44	.44	.44	.43
20.1200	.43	.43	.43	.42	.42
20.3200	.42	.42	.41	.41	.41
20.5200	.41	.41	.41	.41	.40
20.7200	.40	.40	.40	.40	.40
20.9200	.40	.40	.40	.40	.40
21.1200	.40	.40	.40	.39	.39
21.3200	.39	.39	.39	.39	.39
21.5200	.39	.39	.39	.39	.39
21.7200	.39	.39	.39	.39	.38
21.9200	.38	.38	.38	.38	.38
22.1200	.38	.38	.38	.38	.38
22.3200	.38	.38	.38	.38	.38
22.5200	.38	.37	.37	.37	.37

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 25                        Event: 25 yr
File.... R:\0675I\0675I.PPW

                          HYDROGRAPH ORDINATES (cfs)
    Time  |            Output Time increment = .0400 hrs
    hrs   |    Time on left represents time for first value in each row.
 ---------|-----------------------------------------------------------------
  22.7200 |        .37          .37          .37          .37          .37
  22.9200 |        .37          .37          .37          .37          .37
  23.1200 |        .37          .37          .37          .36          .36
  23.3200 |        .36          .36          .36          .36          .36
  23.5200 |        .36          .36          .36          .36          .36
  23.7200 |        .36          .36          .36          .36          .36
  23.9200 |        .35          .35          .35          .35          .34
  24.1200 |        .34          .32          .31          .28          .26
  24.3200 |        .23          .20          .18          .15          .13
  24.5200 |        .11          .09          .08          .06          .05
  24.7200 |        .04          .04          .03          .03          .02
  24.9200 |        .02          .02          .01          .01          .01
  25.1200 |        .01          .01          .01          .00          .00
  25.3200 |        .00          .00          .00          .00          .00
  25.5200 |        .00
```

100-Year

```
Type.... SCS Unit Hyd. Summary
Name.... EX 01              Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
```

              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 100 year storm
              Duration   = 24.0000 hrs   Rain Depth = 7.2000 in
              Rain Dir   = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID = SCSTYPES.RNF - TypeII 24hr
              Unit Hyd Type = Default Curvilinear
              HYG Dir   = R:\0675I\
              HYG File - ID = 0675i.HYG - EX 01 100
              Tc   = .5649 hrs
              Drainage Area = 6.200 acres Runoff CN= 79

              ===
              Computational Time Increment   =   .07532 hrs
              Computed Peak Time   = 12.2018 hrs
              Computed Peak Flow   =   23.22 cfs

              Time Increment for HYG File   =   .0400 hrs
              Peak Time, Interpolated Output = 12.2000 hrs
              Peak Flow, Interpolated Output =   23.19 cfs
              ===

                       DRAINAGE AREA

                   ID:CN Ex 01
                   CN   =   79
                   Area =   6.200 acres
                   S   =   2.6582 in
                   0.2S =   .5316 in

                     Cumulative Runoff

                           4.7678 in
                           2.463 ac-ft

              HYG Volume...   2.464 ac-ft (area under HYG curve)

              ***** UNIT HYDROGRAPH PARAMETERS *****

              Time Concentration, Tc =   .56490 hrs (ID: Tc Ex 01)
              Computational Incr, Tm =   .07532 hrs = 0.20000 Tp

              Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
              K = 483.43/645.333, K =   .7491 (also, K = 2/(1+(Tr/Tp))
              Receding/Rising, Tr/Tp = 1.6698 (solved from K =   .7491)

              Unit peak,   qp =   12.44 cfs
              Unit peak time   Tp =   .37660 hrs
              Unit receding limb, Tr = 1.50640 hrs
              Total unit time,   Tb = 1.88299 hrs

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01              Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW

            SCS UNIT HYDROGRAPH METHOD

            STORM EVENT: 100 year storm
            Duration     = 24.0000 hrs    Rain Depth = 7.2000 in
            Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
            Rain File -ID = SCSTYPES.RNF - TypeII  24hr
            Unit Hyd Type = Default Curvilinear
            HYG Dir      = R:\0675I\
            HYG File - ID = 0675i.HYG - EX 01 100
            Tc           = .5649 hrs
            Drainage Area = 6.200 acres  Runoff CN= 79
            Calc.Increment= .07532 hrs     Out.Incr.= .0400 hrs
            HYG Volume   = 2.464 ac-ft


                     HYDROGRAPH ORDINATES (cfs)
      Time  |        Output Time increment = .0400 hrs
      hrs   |   Time on left represents time for first value in each row.
    --------|------------------------------------------------------------
     5.8800 |        .00        .00        .00        .00        .00
     6.0800 |        .01        .01        .01        .01        .01
     6.2800 |        .02        .02        .02        .02        .03
     6.4800 |        .03        .03        .04        .04        .04
     6.6800 |        .05        .05        .05        .06        .06
     6.8800 |        .06        .07        .07        .07        .08
     7.0800 |        .08        .08        .09        .09        .09
     7.2800 |        .10        .10        .10        .11        .11
     7.4800 |        .11        .12        .12        .13        .13
     7.6800 |        .13        .14        .14        .14        .15
     7.8800 |        .15        .16        .16        .16        .17
     8.0800 |        .17        .18        .18        .18        .19
     8.2800 |        .19        .20        .20        .21        .22
     8.4800 |        .22        .23        .23        .24        .25
     8.6800 |        .26        .26        .27        .28        .29
     8.8800 |        .30        .31        .32        .33        .33
     9.0800 |        .34        .35        .36        .37        .38
     9.2800 |        .39        .40        .41        .42        .42
     9.4800 |        .43        .44        .45        .45        .46
     9.6800 |        .47        .47        .48        .49        .50
     9.8800 |        .51        .52        .53        .55        .56
    10.0800 |        .57        .59        .60        .62        .64
    10.2800 |        .66        .67        .70        .72        .74
    10.4800 |        .76        .78        .81        .83        .86
    10.6800 |        .89        .91        .94        .97       1.01
    10.8800 |       1.04       1.08       1.12       1.16       1.20
    11.0800 |       1.24       1.29       1.34       1.39       1.45
    11.2800 |       1.51       1.58       1.65       1.73       1.81
    11.4800 |       1.91       2.01       2.15       2.29       2.56
    11.6800 |       2.87       3.39       4.04       5.01       6.24
    11.8800 |       7.88       9.84      12.12      14.57      17.13
    12.0800 |      19.31      21.34      22.36      23.19      22.82
```

Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01   Tag: 100   Event: 100 yr
File.... R:\0675I\0675I.PPW

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0400 hrs Time on left represents time for first value in each row.				
12.2800	22.34	21.06	19.71	18.03	16.36
12.4800	14.72	13.22	11.89	10.73	9.71
12.6800	8.83	8.03	7.35	6.71	6.19
12.8800	5.69	5.30	4.91	4.60	4.31
13.0800	4.07	3.84	3.65	3.47	3.31
13.2800	3.17	3.03	2.92	2.81	2.71
13.4800	2.62	2.54	2.45	2.38	2.31
13.6800	2.24	2.18	2.13	2.08	2.03
13.8800	1.99	1.95	1.91	1.87	1.83
14.0800	1.79	1.76	1.73	1.70	1.67
14.2800	1.64	1.61	1.59	1.56	1.54
14.4800	1.52	1.50	1.49	1.47	1.45
14.6800	1.44	1.43	1.41	1.40	1.39
14.8800	1.37	1.36	1.35	1.34	1.33
15.0800	1.31	1.30	1.29	1.28	1.27
15.2800	1.26	1.25	1.24	1.22	1.21
15.4800	1.20	1.19	1.18	1.17	1.16
15.6800	1.15	1.14	1.12	1.11	1.10
15.8800	1.09	1.08	1.07	1.06	1.05
16.0800	1.04	1.03	1.01	1.00	.99
16.2800	.98	.98	.97	.96	.95
16.4800	.95	.94	.93	.93	.92
16.6800	.92	.91	.91	.90	.90
16.8800	.89	.89	.88	.88	.88
17.0800	.87	.87	.86	.86	.86
17.2800	.85	.85	.84	.84	.84
17.4800	.83	.83	.82	.82	.82
17.6800	.81	.81	.80	.80	.80
17.8800	.79	.79	.78	.78	.78
18.0800	.77	.77	.76	.76	.76
18.2800	.75	.75	.74	.74	.74
18.4800	.73	.73	.72	.72	.72
18.6800	.71	.71	.70	.70	.70
18.8800	.69	.69	.68	.68	.68
19.0800	.67	.67	.66	.66	.66
19.2800	.65	.65	.64	.64	.64
19.4800	.63	.63	.62	.62	.62
19.6800	.61	.61	.60	.60	.60
19.8800	.59	.59	.58	.58	.58
20.0800	.57	.57	.56	.56	.56
20.2800	.55	.55	.55	.54	.54
20.4800	.54	.54	.54	.53	.53
20.6800	.53	.53	.53	.53	.53
20.8800	.53	.53	.52	.52	.52
21.0800	.52	.52	.52	.52	.52
21.2800	.52	.52	.52	.52	.51
21.4800	.51	.51	.51	.51	.51

```
Type.... SCS Unit Hyd. (HYG output)
Name.... EX 01            Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW

                        HYDROGRAPH ORDINATES (cfs)
    Time  |           Output Time increment = .0400 hrs
    hrs   |     Time on left represents time for first value in each row.
 ---------|-------------------------------------------------------------
  21.6800 |        .51          .51          .51          .51          .51
  21.8800 |        .51          .51          .50          .50          .50
  22.0800 |        .50          .50          .50          .50          .50
  22.2800 |        .50          .50          .50          .50          .49
  22.4800 |        .49          .49          .49          .49          .49
  22.6800 |        .49          .49          .49          .49          .49
  22.8800 |        .49          .49          .48          .48          .48
  23.0800 |        .48          .48          .48          .48          .48
  23.2800 |        .48          .48          .48          .48          .47
  23.4800 |        .47          .47          .47          .47          .47
  23.6800 |        .47          .47          .47          .47          .47
  23.8800 |        .47          .47          .46          .46          .46
  24.0800 |        .45          .44          .42          .40          .37
  24.2800 |        .34          .30          .27          .23          .20
  24.4800 |        .17          .14          .12          .10          .08
  24.6800 |        .07          .06          .05          .04          .03
  24.8800 |        .03          .02          .02          .02          .01
  25.0800 |        .01          .01          .01          .01          .01
  25.2800 |        .00          .00          .00          .00          .00
  25.4800 |        .00          .00          .00
```

Developed Conditions

Table 2-2a.—Runoff curve numbers for urban areas[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D

Fully developed urban areas (vegetation established)

Open space (lawns, parks, golf courses, cemeteries, etc.)[3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)..........		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way).		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way).................................		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders).		96	96	96	96
Urban districts:					
Commercial and business.........................	85	89	92	94	95
Industrial.......................................	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses).....................	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre..	20	51	68	79	84
2 acres	12	46	65	77	82

Developing urban areas

Newly graded areas (pervious areas only, no vegetation)[5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1]Average runoff condition, and $I_a = 0.2S$.

[2]The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3]CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4]Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5]Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

```
Type.... Tc Calcs
Name.... TC PR 01

File.... R:\0675I\0675I.PPW
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
 TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
-------------------------------------------------------------------------

 Segment #1:  Tc: TR-55 Channel
 Description: Segment 1C

 Flow Area          2.3100 sq.ft
 Wetted Perimeter    3.92 ft
 Hydraulic Radius     .59 ft
 Slope              .010000 ft/ft
 Mannings n          .0130
 Hydraulic Length   116.00 ft

 Avg.Velocity        8.06 ft/sec

                                     Segment #1 Time:    .0040 hrs
-------------------------------------------------------------------------


 Segment #2:  Tc: TR-55 Sheet
 Description: Segment 1B

 Mannings n          .0240
 Hydraulic Length   229.00 ft
 2yr, 24hr P         3.5000 in
 Slope              .025000 ft/ft

 Avg.Velocity         .99 ft/sec

                                     Segment #2 Time:    .0640 hrs
-------------------------------------------------------------------------

 Segment #3:  Tc: TR-55 Sheet
 Description: Segment 1A

 Mannings n          .0110
 Hydraulic Length    41.00 ft
 2yr, 24hr P         3.5000 in
 Slope              .045000 ft/ft

 Avg.Velocity        1.66 ft/sec

                                     Segment #3 Time:    .0068 hrs
-------------------------------------------------------------------------
                              ==============================
                              Total Tc:     .0748 hrs

                              Calculated Tc < Min.Tc:
                              Use Minimum Tc...
                              Use Tc =      .0833 hrs
                              ==============================
```

```
Type.... Tc Calcs
Name.... TC PR 01

File.... R:\0675I\0675I.PPW

---------------------------------------------------------------------------
Tc Equations used...
---------------------------------------------------------------------------


==== SCS TR-55 Sheet Flow ==================================================

     Tc = (.007 * ((n * Lf)**0.8)) / ((P**.5) * (Sf**.4))

     Where:  Tc = Time of concentration, hrs
             n  = Mannings n
             Lf = Flow length, ft
             P  = 2yr, 24hr Rain depth, inches
             Sf = Slope, %


==== SCS Channel Flow ======================================================

     R  = Aq / Wp
     V  = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

     Tc = (Lf / V) / (3600sec/hr)

     Where:  R  = Hydraulic radius
             Aq = Flow area, sq.ft.
             Wp = Wetted perimeter, ft
             V  = Velocity, ft/sec
             Sf = Slope, ft/ft
             n  = Mannings n
             Tc = Time of concentration, hrs
             Lf = Flow length, ft
```

```
Type.... Runoff CN-Area
Name.... CN PR 01

File.... R:\0675I\0675I.PPW

RUNOFF CURVE NUMBER DATA
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

------------------------------------------------------------------------

                                               Impervious
                                     Area    Adjustment   Adjusted
Soil/Surface Description       CN     acres    %C    %UC      CN
--------------------------------     ----  ---------   -----  -----   ------
Grass Group - B                79    1.310                            79.00
Pavement                       98    4.930                            98.00


COMPOSITE AREA & WEIGHTED CN --->          6.240                  94.01 (94)
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
```

2 YEAR

```
Type.... SCS Unit Hyd. Summary
Name.... PR 01              Tag: 2                      Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2


              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 2 year storm
              Duration       = 24.0000 hrs    Rain Depth = 3.5000 in
              Rain Dir       = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID  = SCSTYPES.RNF - TypeII  24hr
              Unit Hyd Type  = Default Curvilinear
              HYG Dir        = R:\0675I\
              HYG File - ID  =  - PR 01 2
              Tc (Min. Tc)   = .0833 hrs
              Drainage Area  = 6.240 acres  Runoff CN= 94


              ==============================================
              Computational Time Increment   =    .01111 hrs
              Computed Peak Time             =  11.9175 hrs
              Computed Peak Flow             =    26.29 cfs

              Time Increment for HYG File    =    .0400 hrs
              Peak Time, Interpolated Output =  11.9200 hrs
              Peak Flow, Interpolated Output =    26.24 cfs
              ==============================================

                        DRAINAGE AREA
                        --------------------
                   ID:CN Pr 01
                   CN   =   94
                   Area =        6.240 acres
                   S    =      .6383 in
                   0.2S =      .1277 in

                    Cumulative Runoff
                    --------------------
                          2.8356 in
                          1.475 ac-ft

              HYG Volume...          1.475 ac-ft (area under HYG curve)

              ***** UNIT HYDROGRAPH PARAMETERS *****

              Time Concentration, Tc =   .08330 hrs (ID: Tc Pr 01)
              Computational Incr, Tm =   .01111 hrs = 0.20000 Tp

              Unit Hyd. Shape Factor =  483.432 (37.46% under rising limb)
              K =  483.43/645.333,  K =    .7491 (also, K = 2/(1+(Tr/Tp))
              Receding/Rising, Tr/Tp =   1.6698 (solved from K =   .7491)

              Unit peak,        qp =    84.88 cfs
              Unit peak time    Tp =   .05553 hrs
              Unit receding limb, Tr =   .22213 hrs
              Total unit time,   Tb =   .27767 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01            Tag: 2                      Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2

              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 2 year storm
              Duration    = 24.0000 hrs    Rain Depth = 3.5000 in
              Rain Dir    = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID = SCSTYPES.RNF - TypeII  24hr
              Unit Hyd Type = Default Curvilinear
              HYG Dir      = R:\0675I\
              HYG File - ID =  - PR 01 2
              Tc (Min. Tc)  = .0833 hrs
              Drainage Area = 6.240 acres  Runoff CN= 94
              Calc.Increment= .01111 hrs      Out.Incr.= .0400 hrs
              HYG Volume   = 1.475 ac-ft


                    HYDROGRAPH ORDINATES (cfs)
    Time  |          Output Time increment = .0400 hrs
    hrs   |    Time on left represents time for first value in each row.
 ---------|----------------------------------------------------------------
   3.2000 |       .00         .00         .00         .00         .01
   3.4000 |       .01         .01         .01         .01         .01
   3.6000 |       .02         .02         .02         .02         .02
   3.8000 |       .02         .03         .03         .03         .03
   4.0000 |       .03         .03         .04         .04         .04
   4.2000 |       .04         .04         .05         .05         .05
   4.4000 |       .05         .05         .05         .06         .06
   4.6000 |       .06         .06         .06         .07         .07
   4.8000 |       .07         .07         .07         .08         .08
   5.0000 |       .08         .08         .08         .09         .09
   5.2000 |       .09         .09         .10         .10         .10
   5.4000 |       .10         .10         .11         .11         .11
   5.6000 |       .11         .11         .12         .12         .12
   5.8000 |       .12         .13         .13         .13         .13
   6.0000 |       .13         .14         .14         .14         .14
   6.2000 |       .15         .15         .15         .15         .15
   6.4000 |       .16         .16         .16         .16         .17
   6.6000 |       .17         .17         .17         .18         .18
   6.8000 |       .18         .18         .19         .19         .19
   7.0000 |       .19         .19         .20         .20         .20
   7.2000 |       .20         .21         .21         .21         .21
   7.4000 |       .22         .22         .22         .22         .23
   7.6000 |       .23         .23         .23         .24         .24
   7.8000 |       .24         .24         .25         .25         .25
   8.0000 |       .25         .26         .26         .26         .27
   8.2000 |       .28         .28         .29         .30         .30
   8.4000 |       .31         .32         .32         .33         .34
   8.6000 |       .35         .35         .36         .37         .37
   8.8000 |       .38         .39         .40         .40         .41
   9.0000 |       .42         .42         .43         .43         .44
   9.2000 |       .44         .44         .44         .45         .45
   9.4000 |       .45         .45         .45         .46         .46
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 2                          Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2

                         HYDROGRAPH ORDINATES (cfs)
    Time  |        Output Time increment = .0400 hrs
    hrs   |   Time on left represents time for first value in each row.
 ---------|-----------------------------------------------------------------
   9.6000 |        .47        .48        .49        .50        .52
   9.8000 |        .53        .54        .55        .56        .58
  10.0000 |        .59        .60        .62        .63        .65
  10.2000 |        .67        .68        .70        .72        .74
  10.4000 |        .76        .77        .80        .81        .84
  10.6000 |        .86        .89        .92        .94        .98
  10.8000 |       1.01       1.04       1.08       1.10       1.14
  11.0000 |       1.17       1.21       1.27       1.31       1.40
  11.2000 |       1.46       1.53       1.62       1.67       1.77
  11.4000 |       1.84       1.91       2.01       2.18       3.20
  11.6000 |       4.01       5.35       7.57       8.89      11.77
  11.8000 |      13.97      17.72      23.94      26.24      23.43
  12.0000 |      20.86      16.29       8.55       5.32       4.14
  12.2000 |       3.68       3.43       3.17       3.04       2.80
  12.4000 |       2.63       2.46       2.21       2.10       1.94
  12.6000 |       1.83       1.77       1.71       1.68       1.62
  12.8000 |       1.58       1.54       1.49       1.46       1.40
  13.0000 |       1.36       1.33       1.29       1.27       1.23
  13.2000 |       1.21       1.19       1.16       1.15       1.12
  13.4000 |       1.09       1.07       1.04       1.03       1.00
  13.6000 |        .98        .97        .95        .93        .91
  13.8000 |        .90        .88        .86        .85        .83
  14.0000 |        .81        .80        .79        .78        .77
  14.2000 |        .77        .76        .75        .75        .74
  14.4000 |        .74        .73        .72        .72        .71
  14.6000 |        .71        .70        .70        .69        .68
  14.8000 |        .68        .67        .67        .66        .65
  15.0000 |        .65        .64        .64        .63        .62
  15.2000 |        .62        .61        .61        .60        .59
  15.4000 |        .59        .58        .58        .57        .56
  15.6000 |        .56        .55        .55        .54        .54
  15.8000 |        .53        .52        .52        .51        .51
  16.0000 |        .50        .50        .49        .49        .49
  16.2000 |        .48        .48        .48        .48        .47
  16.4000 |        .47        .47        .47        .47        .46
  16.6000 |        .46        .46        .46        .46        .45
  16.8000 |        .45        .45        .45        .45        .44
  17.0000 |        .44        .44        .44        .44        .43
  17.2000 |        .43        .43        .43        .43        .42
  17.4000 |        .42        .42        .42        .41        .41
  17.6000 |        .41        .41        .41        .40        .40
  17.8000 |        .40        .40        .39        .39        .39
  18.0000 |        .39        .39        .38        .38        .38
  18.2000 |        .38        .38        .37        .37        .37
  18.4000 |        .37        .36        .36        .36        .36
  18.6000 |        .36        .35        .35        .35        .35
  18.8000 |        .35        .34        .34        .34        .34
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01            Tag: 2                        Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2

                        HYDROGRAPH ORDINATES (cfs)
     Time  |            Output Time increment = .0400 hrs
      hrs  |    Time on left represents time for first value in each row.
  ---------|-------------------------------------------------------------
   19.0000 |        .33         .33         .33         .33         .33
   19.2000 |        .32         .32         .32         .32         .32
   19.4000 |        .31         .31         .31         .31         .31
   19.6000 |        .30         .30         .30         .30         .29
   19.8000 |        .29         .29         .29         .29         .28
   20.0000 |        .28         .28         .28         .28         .28
   20.2000 |        .28         .28         .28         .28         .28
   20.4000 |        .27         .27         .27         .27         .27
   20.6000 |        .27         .27         .27         .27         .27
   20.8000 |        .27         .27         .27         .27         .27
   21.0000 |        .27         .27         .27         .27         .27
   21.2000 |        .27         .27         .27         .27         .26
   21.4000 |        .26         .26         .26         .26         .26
   21.6000 |        .26         .26         .26         .26         .26
   21.8000 |        .26         .26         .26         .26         .26
   22.0000 |        .26         .26         .26         .26         .26
   22.2000 |        .26         .26         .26         .26         .25
   22.4000 |        .25         .25         .25         .25         .25
   22.6000 |        .25         .25         .25         .25         .25
   22.8000 |        .25         .25         .25         .25         .25
   23.0000 |        .25         .25         .25         .25         .25
   23.2000 |        .24         .24         .24         .24         .24
   23.4000 |        .24         .24         .24         .24         .24
   23.6000 |        .24         .24         .24         .24         .24
   23.8000 |        .24         .24         .24         .24         .24
   24.0000 |        .24         .18         .07         .02         .01
   24.2000 |        .00         .00
```

15 YEAR

```
Type.... SCS Unit Hyd. Summary
Name.... PR 01              Tag: 15                    Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15
```

               SCS UNIT HYDROGRAPH METHOD

```
           STORM EVENT: 15 year storm
           Duration      = 24.0000 hrs    Rain Depth = 5.2000 in
           Rain Dir      = C:\HAESTAD\PPKW\RAINFALL\
           Rain File -ID = SCSTYPES.RNF - TypeII  24hr
           Unit Hyd Type = Default Curvilinear
           HYG Dir       = R:\0675I\
           HYG File - ID =  - PR 01 15
           Tc (Min. Tc)  = .0833 hrs
           Drainage Area = 6.240 acres  Runoff CN= 94
```

```
           =============================================
           Computational Time Increment   =   .01111 hrs
           Computed Peak Time             = 11.9175 hrs
           Computed Peak Flow             =   40.65 cfs

           Time Increment for HYG File    =   .0400 hrs
           Peak Time, Interpolated Output = 11.9200 hrs
           Peak Flow, Interpolated Output =   40.55 cfs
           =============================================
```

                      DRAINAGE AREA

                 ID:CN Pr 01
                 CN   =   94
                 Area =   6.240 acres
                 S   =   .6383 in
                 0.2S =   .1277 in

                  Cumulative Runoff

                       4.5054 in
                       2.343 ac-ft

           HYG Volume...   2.343 ac-ft (area under HYG curve)

           ***** UNIT HYDROGRAPH PARAMETERS *****

           Time Concentration, Tc =   .08330 hrs (ID: Tc Pr 01)
           Computational Incr, Tm =   .01111 hrs = 0.20000 Tp

           Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
           K = 483.43/645.333, K =   .7491 (also, K = 2/(1+(Tr/Tp))
           Receding/Rising, Tr/Tp = 1.6698 (solved from K =   .7491)

           Unit peak,   qp =   84.88 cfs
           Unit peak time   Tp =   .05553 hrs
           Unit receding limb, Tr =   .22213 hrs
           Total unit time,   Tb =   .27767 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 15                        Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 15
```

                    SCS UNIT HYDROGRAPH METHOD

```
            STORM EVENT: 15 year storm
            Duration     = 24.0000 hrs     Rain Depth = 5.2000 in
            Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
            Rain File -ID = SCSTYPES.RNF - TypeII  24hr
            Unit Hyd Type = Default Curvilinear
            HYG Dir       = R:\0675I\
            HYG File - ID =  - PR 01 15
            Tc (Min. Tc)  = .0833 hrs
            Drainage Area = 6.240 acres  Runoff CN= 94
            Calc.Increment= .01111 hrs      Out.Incr.= .0400 hrs
            HYG Volume    = 2.343 ac-ft
```

                    HYDROGRAPH ORDINATES (cfs)
Time hrs	Output Time increment = .0400 hrs Time on left represents time for first value in each row.				
2.2400	.00	.00	.00	.01	.01
2.4400	.01	.02	.02	.02	.03
2.6400	.03	.03	.03	.04	.04
2.8400	.04	.05	.05	.05	.06
3.0400	.06	.06	.07	.07	.07
3.2400	.07	.08	.08	.08	.09
3.4400	.09	.09	.10	.10	.10
3.6400	.10	.11	.11	.11	.12
3.8400	.12	.12	.12	.13	.13
4.0400	.13	.14	.14	.14	.15
4.2400	.15	.15	.16	.16	.16
4.4400	.17	.17	.17	.18	.18
4.6400	.18	.19	.19	.19	.20
4.8400	.20	.20	.21	.21	.21
5.0400	.22	.22	.22	.23	.23
5.2400	.24	.24	.24	.25	.25
5.4400	.25	.26	.26	.26	.27
5.6400	.27	.27	.28	.28	.29
5.8400	.29	.29	.30	.30	.30
6.0400	.31	.31	.31	.32	.32
6.2400	.33	.33	.33	.34	.34
6.4400	.34	.35	.35	.35	.36
6.6400	.36	.37	.37	.37	.38
6.8400	.38	.38	.39	.39	.39
7.0400	.40	.40	.41	.41	.41
7.2400	.42	.42	.42	.43	.43
7.4400	.43	.44	.44	.45	.45
7.6400	.45	.46	.46	.46	.47
7.8400	.47	.48	.48	.48	.49
8.0400	.49	.50	.51	.52	.53
8.2400	.54	.55	.56	.57	.58
8.4400	.60	.61	.62	.63	.64

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01          Tag: 15                    Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15

                       HYDROGRAPH ORDINATES (cfs)
    Time  |            Output Time increment = .0400 hrs
    hrs   |   Time on left represents time for first value in each row.
 ---------|---------------------------------------------------------------
   8.6400 |        .65       .67       .68       .69       .70
   8.8400 |        .71       .73       .74       .75       .76
   9.0400 |        .77       .78       .79       .79       .79
   9.2400 |        .80       .80       .80       .80       .81
   9.4400 |        .81       .81       .81       .83       .84
   9.6400 |        .85       .87       .89       .91       .93
   9.8400 |        .94       .97       .98      1.01      1.02
  10.0400 |       1.04      1.07      1.09      1.13      1.15
  10.2400 |       1.18      1.21      1.23      1.27      1.30
  10.4400 |       1.32      1.36      1.38      1.43      1.47
  10.6400 |       1.51      1.56      1.60      1.66      1.70
  10.8400 |       1.75      1.81      1.84      1.91      1.95
  11.0400 |       2.02      2.12      2.18      2.32      2.42
  11.2400 |       2.53      2.68      2.76      2.91      3.02
  11.4400 |       3.12      3.27      3.55      5.20      6.49
  11.6400 |       8.62     12.15     14.19     18.67     22.02
  11.8400 |      27.74     37.23     40.55     36.05     31.97
  12.0400 |      24.91     13.05      8.12      6.30      5.61
  12.2400 |       5.21      4.82      4.62      4.25      3.99
  12.4400 |       3.73      3.36      3.19      2.94      2.78
  12.6400 |       2.68      2.59      2.54      2.46      2.40
  12.8400 |       2.34      2.25      2.21      2.13      2.07
  13.0400 |       2.02      1.95      1.92      1.87      1.84
  13.2400 |       1.80      1.76      1.74      1.69      1.66
  13.4400 |       1.63      1.58      1.56      1.52      1.49
  13.6400 |       1.47      1.43      1.41      1.38      1.36
  13.8400 |       1.34      1.30      1.29      1.25      1.23
  14.0400 |       1.21      1.19      1.18      1.17      1.16
  14.2400 |       1.15      1.14      1.13      1.12      1.11
  14.4400 |       1.11      1.10      1.09      1.08      1.07
  14.6400 |       1.06      1.05      1.05      1.03      1.02
  14.8400 |       1.02      1.01      1.00       .99       .98
  15.0400 |        .97       .96       .96       .94       .93
  15.2400 |        .93       .92       .91       .90       .89
  15.4400 |        .88       .87       .87       .85       .84
  15.6400 |        .84       .83       .82       .81       .80
  15.8400 |        .79       .78       .78       .76       .75
  16.0400 |        .75       .74       .74       .73       .73
  16.2400 |        .73       .72       .72       .72       .71
  16.4400 |        .71       .71       .71       .70       .70
  16.6400 |        .69       .69       .69       .68       .68
  16.8400 |        .68       .68       .67       .67       .67
  17.0400 |        .66       .66       .66       .65       .65
  17.2400 |        .65       .64       .64       .64       .63
  17.4400 |        .63       .63       .63       .62       .62
  17.6400 |        .61       .61       .61       .60       .60
  17.8400 |        .60       .60       .59       .59       .59
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 15                              Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 15

                           HYDROGRAPH ORDINATES (cfs)
        Time  |            Output Time increment = .0400 hrs
        hrs   |    Time on left represents time for first value in each row.
     ---------|----------------------------------------------------------------
      18.0400 |       .58         .58         .58         .57         .57
      18.2400 |       .57         .56         .56         .56         .55
      18.4400 |       .55         .55         .55         .54         .54
      18.6400 |       .53         .53         .53         .52         .52
      18.8400 |       .52         .51         .51         .51         .50
      19.0400 |       .50         .50         .50         .49         .49
      19.2400 |       .49         .48         .48         .48         .47
      19.4400 |       .47         .47         .46         .46         .46
      19.6400 |       .45         .45         .45         .44         .44
      19.8400 |       .44         .43         .43         .43         .42
      20.0400 |       .42         .42         .42         .42         .42
      20.2400 |       .42         .42         .42         .41         .41
      20.4400 |       .41         .41         .41         .41         .41
      20.6400 |       .41         .41         .41         .41         .41
      20.8400 |       .41         .41         .41         .41         .40
      21.0400 |       .40         .40         .40         .40         .40
      21.2400 |       .40         .40         .40         .40         .40
      21.4400 |       .40         .40         .40         .40         .39
      21.6400 |       .39         .39         .39         .39         .39
      21.8400 |       .39         .39         .39         .39         .39
      22.0400 |       .39         .39         .39         .39         .38
      22.2400 |       .38         .38         .38         .38         .38
      22.4400 |       .38         .38         .38         .38         .38
      22.6400 |       .38         .38         .38         .38         .38
      22.8400 |       .37         .37         .37         .37         .37
      23.0400 |       .37         .37         .37         .37         .37
      23.2400 |       .37         .37         .37         .37         .37
      23.4400 |       .37         .37         .36         .36         .36
      23.6400 |       .36         .36         .36         .36         .36
      23.8400 |       .36         .36         .36         .36         .36
      24.0400 |       .27         .10         .03         .01         .00
      24.2400 |       .00
```

25 YEAR

```
Type.... SCS Unit Hyd. Summary
Name.... PR 01              Tag: 25                        Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 25

              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 25 year storm
              Duration     = 24.0000 hrs     Rain Depth = 5.7000 in
              Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID = SCSTYPES.RNF - TypeII  24hr
              Unit Hyd Type = Default Curvilinear
              HYG Dir      = R:\0675I\
              HYG File - ID =  - PR 01 25
              Tc (Min. Tc)  = .0833 hrs
              Drainage Area = 6.240 acres  Runoff CN= 94


              ================================================
              Computational Time Increment   =   .01111 hrs
              Computed Peak Time             =  11.9175 hrs
              Computed Peak Flow             =    44.84 cfs

              Time Increment for HYG File    =   .0400 hrs
              Peak Time, Interpolated Output =  11.9200 hrs
              Peak Flow, Interpolated Output =    44.73 cfs
              ================================================

                        DRAINAGE AREA
                      --------------------
              ID:CN Pr 01
              CN   =    94
              Area =        6.240 acres
              S    =      .6383 in
              0.2S =      .1277 in

                   Cumulative Runoff
                  --------------------
                        4.9996 in
                        2.600 ac-ft

       HYG Volume...          2.600 ac-ft (area under HYG curve)

       ***** UNIT HYDROGRAPH PARAMETERS *****

       Time Concentration, Tc =   .08330 hrs (ID: Tc Pr 01)
       Computational Incr, Tm =   .01111 hrs = 0.20000 Tp

       Unit Hyd. Shape Factor =  483.432 (37.46% under rising limb)
       K =   483.43/645.333,  K =    .7491 (also, K = 2/(1+(Tr/Tp))
       Receding/Rising, Tr/Tp =  1.6698 (solved from K =   .7491)

       Unit peak,         qp =    84.88 cfs
       Unit peak time     Tp =   .05553 hrs
       Unit receding limb, Tr =   .22213 hrs
       Total unit time,    Tb =   .27767 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01            Tag: 25                         Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 25

                    SCS UNIT HYDROGRAPH METHOD

            STORM EVENT: 25 year storm
            Duration       = 24.0000 hrs    Rain Depth = 5.7000 in
            Rain Dir       = C:\HAESTAD\PPKW\RAINFALL\
            Rain File -ID = SCSTYPES.RNF - TypeII  24hr
            Unit Hyd Type = Default Curvilinear
            HYG Dir        = R:\0675I\
            HYG File - ID =  - PR 01 25
            Tc (Min. Tc)  = .0833 hrs
            Drainage Area = 6.240 acres  Runoff CN= 94
            Calc.Increment= .01111 hrs     Out.Incr.= .0400 hrs
            HYG Volume    = 2.600 ac-ft


                      HYDROGRAPH ORDINATES (cfs)
       Time  |          Output Time increment = .0400 hrs
       hrs   |   Time on left represents time for first value in each row.
    ---------|-------------------------------------------------------------
     2.0800 |      .00        .00        .01        .01        .01
     2.2800 |      .02        .02        .02        .03        .03
     2.4800 |      .03        .04        .04        .05        .05
     2.6800 |      .05        .06        .06        .06        .07
     2.8800 |      .07        .07        .08        .08        .08
     3.0800 |      .09        .09        .09        .10        .10
     3.2800 |      .11        .11        .11        .11        .12
     3.4800 |      .12        .13        .13        .13        .13
     3.6800 |      .14        .14        .14        .15        .15
     3.8800 |      .15        .16        .16        .16        .17
     4.0800 |      .17        .17        .18        .18        .19
     4.2800 |      .19        .19        .20        .20        .20
     4.4800 |      .21        .21        .22        .22        .22
     4.6800 |      .23        .23        .24        .24        .24
     4.8800 |      .25        .25        .25        .26        .26
     5.0800 |      .27        .27        .27        .28        .28
     5.2800 |      .29        .29        .29        .30        .30
     5.4800 |      .31        .31        .31        .32        .32
     5.6800 |      .33        .33        .33        .34        .34
     5.8800 |      .35        .35        .35        .36        .36
     6.0800 |      .37        .37        .37        .38        .38
     6.2800 |      .39        .39        .39        .40        .40
     6.4800 |      .41        .41        .41        .42        .42
     6.6800 |      .43        .43        .43        .44        .44
     6.8800 |      .45        .45        .45        .46        .46
     7.0800 |      .47        .47        .47        .48        .48
     7.2800 |      .49        .49        .49        .50        .50
     7.4800 |      .51        .51        .51        .52        .52
     7.6800 |      .53        .53        .53        .54        .54
     7.8800 |      .55        .55        .55        .56        .56
     8.0800 |      .57        .58        .59        .61        .62
     8.2800 |      .63        .64        .66        .67        .68
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 25                     Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 25
```

```
                          HYDROGRAPH ORDINATES (cfs)
      Time  |             Output Time increment = .0400 hrs
      hrs   |   Time on left represents time for first value in each row.
   ---------|-----------------------------------------------------------
    8.4800  |        .70          .70         .72         .73        .74
    8.6800  |        .76          .77         .79         .80        .81
    8.8800  |        .83          .84         .86         .87        .88
    9.0800  |        .89          .89         .90         .90        .90
    9.2800  |        .90          .91         .91         .91        .91
    9.4800  |        .92          .92         .93         .94        .96
    9.6800  |        .98         1.00        1.03        1.05       1.06
    9.8800  |       1.09         1.11        1.13        1.15       1.18
   10.0800  |       1.21         1.23        1.27        1.30       1.32
   10.2800  |       1.36         1.39        1.43        1.46       1.49
   10.4800  |       1.53         1.55        1.60        1.64       1.69
   10.6800  |       1.75         1.79        1.86        1.91       1.96
   10.8800  |       2.03         2.06        2.13        2.18       2.25
   11.0800  |       2.37         2.43        2.59        2.71       2.82
   11.2800  |       2.98         3.07        3.24        3.36       3.48
   11.4800  |       3.65         3.96        5.79        7.22       9.57
   11.6800  |      13.49        15.73       20.68       24.37      30.66
   11.8800  |      41.10        44.73       39.74       35.22      27.42
   12.0800  |      14.36         8.94        6.94        6.17       5.74
   12.2800  |       5.30         5.09        4.68        4.39       4.11
   12.4800  |       3.70         3.51        3.24        3.05       2.95
   12.6800  |       2.85         2.80        2.70        2.64       2.57
   12.8800  |       2.48         2.43        2.34        2.27       2.22
   13.0800  |       2.14         2.11        2.06        2.02       1.98
   13.2800  |       1.93         1.91        1.86        1.82       1.79
   13.4800  |       1.74         1.71        1.67        1.64       1.61
   13.6800  |       1.57         1.56        1.52        1.49       1.47
   13.8800  |       1.43         1.41        1.38        1.35       1.33
   14.0800  |       1.31         1.30        1.28        1.27       1.26
   14.2800  |       1.25         1.25        1.23        1.22       1.22
   14.4800  |       1.20         1.20        1.18        1.17       1.17
   14.6800  |       1.16         1.15        1.14        1.13       1.12
   14.8800  |       1.11         1.10        1.09        1.08       1.07
   15.0800  |       1.06         1.05        1.04        1.03       1.02
   15.2800  |       1.01         1.00         .99         .98        .97
   15.4800  |        .96          .95         .94         .93        .92
   15.6800  |        .91          .90         .89         .88        .87
   15.8800  |        .86          .85         .84         .83        .82
   16.0800  |        .81          .81         .81         .80        .80
   16.2800  |        .79          .79         .79         .78        .78
   16.4800  |        .78          .78         .77         .77        .76
   16.6800  |        .76          .76         .75         .75        .75
   16.8800  |        .74          .74         .73         .73        .73
   17.0800  |        .72          .72         .72         .71        .71
   17.2800  |        .71          .70         .70         .70        .69
   17.4800  |        .69          .69         .68         .68        .68
   17.6800  |        .67          .67         .66         .66        .66
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 25
```

<pre>
                     HYDROGRAPH ORDINATES (cfs)
    Time | Output Time increment = .0400 hrs
hrs	Time on left represents time for first value in each row.
17.8800	.65 .65 .65 .64 .64
18.0800	.64 .63 .63 .63 .62
18.2800	.62 .62 .61 .61 .60
18.4800	.60 .60 .59 .59 .59
18.6800	.58 .58 .58 .57 .57
18.8800	.57 .56 .56 .55 .55
19.0800	.55 .55 .54 .54 .53
19.2800	.53 .53 .52 .52 .52
19.4800	.51 .51 .51 .50 .50
19.6800	.49 .49 .49 .48 .48
19.8800	.48 .48 .47 .47 .46
20.0800	.46 .46 .46 .46 .46
20.2800	.46 .46 .46 .45 .45
20.4800	.45 .45 .45 .45 .45
20.6800	.45 .45 .45 .45 .45
20.8800	.45 .45 .44 .44 .44
21.0800	.44 .44 .44 .44 .44
21.2800	.44 .44 .44 .44 .44
21.4800	.44 .44 .43 .43 .43
21.6800	.43 .43 .43 .43 .43
21.8800	.43 .43 .43 .43 .43
22.0800	.43 .43 .42 .42 .42
22.2800	.42 .42 .42 .42 .42
22.4800	.42 .42 .42 .42 .42
22.6800	.42 .41 .41 .41 .41
22.8800	.41 .41 .41 .41 .41
23.0800	.41 .41 .41 .41 .40
23.2800	.40 .40 .40 .40 .40
23.4800	.40 .40 .40 .40 .40
23.6800	.40 .40 .40 .39 .39
23.8800	.39 .39 .39 .39 .29
24.0800	.11 .03 .01 .00 .00
</pre>

100 YEAR

```
Type.... SCS Unit Hyd. Summary
Name.... PR 01              Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100
```

                    SCS UNIT HYDROGRAPH METHOD

```
STORM EVENT: 100 year storm
Duration      = 24.0000 hrs    Rain Depth = 7.2000 in
Rain Dir      = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII  24hr
Unit Hyd Type = Default Curvilinear
HYG Dir       = R:\0675I\
HYG File - ID =  - PR 01 100
Tc (Min. Tc)  = .0833 hrs
Drainage Area = 6.240 acres  Runoff CN= 94
```

```
================================================
Computational Time Increment  =   .01111 hrs
Computed Peak Time            =  11.9175 hrs
Computed Peak Flow            =    57.34 cfs

Time Increment for HYG File   =   .0400 hrs
Peak Time, Interpolated Output =  11.9200 hrs
Peak Flow, Interpolated Output =    57.19 cfs
================================================
```

                        DRAINAGE AREA

```
ID:CN Pr 01
CN   =   94
Area =        6.240 acres
S    =    .6383 in
0.2S =    .1277 in
```

                    Cumulative Runoff

                        6.4869 in
                        3.373 ac-ft

HYG Volume...   3.373 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

```
Time Concentration, Tc =   .08330 hrs (ID: Tc Pr 01)
Computational Incr, Tm =   .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333,  K =   .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp =  1.6698 (solved from K =   .7491)

Unit peak,         qp =   84.88 cfs
Unit peak time     Tp =   .05553 hrs
Unit receding limb, Tr =  .22213 hrs
Total unit time,   Tb =   .27767 hrs
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01            Tag: 100                        Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100

              SCS UNIT HYDROGRAPH METHOD

              STORM EVENT: 100 year storm
              Duration     = 24.0000 hrs    Rain Depth = 7.2000 in
              Rain Dir     = C:\HAESTAD\PPKW\RAINFALL\
              Rain File -ID = SCSTYPES.RNF - TypeII  24hr
              Unit Hyd Type = Default Curvilinear
              HYG Dir      = R:\0675I\
              HYG File - ID =  - PR 01 100
              Tc (Min. Tc)  = .0833 hrs
              Drainage Area = 6.240 acres  Runoff CN= 94
              Calc.Increment= .01111 hrs     Out.Incr.= .0400 hrs
              HYG Volume    = 3.373 ac-ft

                        HYDROGRAPH ORDINATES (cfs)
      Time  |           Output Time increment = .0400 hrs
      hrs   |   Time on left represents time for first value in each row.
   ---------|---------------------------------------------------------------
    1.6800 |        .00         .00         .01         .01         .02
    1.8800 |        .02         .03         .03         .04         .05
    2.0800 |        .05         .06         .06         .07         .07
    2.2800 |        .08         .08         .09         .09         .10
    2.4800 |        .10         .11         .11         .12         .12
    2.6800 |        .13         .13         .14         .14         .15
    2.8800 |        .15         .16         .16         .16         .17
    3.0800 |        .17         .18         .18         .19         .19
    3.2800 |        .20         .20         .21         .21         .21
    3.4800 |        .22         .22         .23         .23         .24
    3.6800 |        .24         .25         .25         .25         .26
    3.8800 |        .26         .27         .27         .27         .28
    4.0800 |        .28         .29         .29         .30         .30
    4.2800 |        .31         .31         .32         .32         .33
    4.4800 |        .33         .34         .34         .35         .35
    4.6800 |        .36         .36         .37         .37         .38
    4.8800 |        .38         .39         .39         .40         .40
    5.0800 |        .41         .41         .42         .42         .43
    5.2800 |        .43         .44         .44         .45         .45
    5.4800 |        .46         .46         .47         .48         .48
    5.6800 |        .49         .49         .50         .50         .51
    5.8800 |        .51         .52         .52         .53         .53
    6.0800 |        .54         .54         .55         .55         .56
    6.2800 |        .56         .57         .57         .58         .58
    6.4800 |        .59         .59         .60         .60         .61
    6.6800 |        .61         .62         .62         .63         .63
    6.8800 |        .64         .64         .65         .65         .66
    7.0800 |        .66         .67         .67         .68         .68
    7.2800 |        .69         .69         .70         .70         .71
    7.4800 |        .71         .71         .72         .73         .73
    7.6800 |        .74         .74         .74         .75         .75
    7.8800 |        .76         .76         .77         .77         .78
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100

                        HYDROGRAPH ORDINATES (cfs)
     Time  |            Output Time increment = .0400 hrs
     hrs   |   Time on left represents time for first value in each row.
  ---------|-------------------------------------------------------------
    8.0800 |       .79       .80       .82       .84       .85
    8.2800 |       .87       .88       .90       .92       .94
    8.4800 |       .96       .97       .99      1.00      1.02
    8.6800 |      1.04      1.05      1.08      1.09      1.11
    8.8800 |      1.13      1.14      1.16      1.18      1.19
    9.0800 |      1.20      1.21      1.22      1.22      1.22
    9.2800 |      1.22      1.23      1.23      1.23      1.23
    9.4800 |      1.24      1.24      1.26      1.27      1.29
    9.6800 |      1.32      1.34      1.38      1.40      1.43
    9.8800 |      1.46      1.48      1.52      1.54      1.57
   10.0800 |      1.61      1.64      1.69      1.73      1.76
   10.2800 |      1.82      1.84      1.90      1.93      1.97
   10.4800 |      2.03      2.06      2.12      2.18      2.23
   10.6800 |      2.32      2.37      2.45      2.52      2.58
   10.8800 |      2.67      2.72      2.81      2.87      2.96
   11.0800 |      3.11      3.19      3.40      3.54      3.69
   11.2800 |      3.90      4.02      4.23      4.39      4.54
   11.4800 |      4.75      5.15      7.53      9.38     12.42
   11.6800 |     17.47     20.34     26.67     31.37     39.37
   11.8800 |     52.65     57.19     50.73     44.90     34.94
   12.0800 |     18.29     11.38      8.83      7.85      7.30
   12.2800 |      6.74      6.47      5.95      5.58      5.22
   12.4800 |      4.70      4.46      4.11      3.88      3.75
   12.6800 |      3.62      3.55      3.43      3.35      3.27
   12.8800 |      3.15      3.09      2.97      2.89      2.82
   13.0800 |      2.72      2.68      2.61      2.57      2.52
   13.2800 |      2.46      2.42      2.36      2.31      2.27
   13.4800 |      2.21      2.17      2.12      2.08      2.05
   13.6800 |      2.00      1.98      1.93      1.90      1.87
   13.8800 |      1.82      1.80      1.75      1.72      1.69
   14.0800 |      1.66      1.65      1.63      1.62      1.61
   14.2800 |      1.59      1.58      1.57      1.55      1.54
   14.4800 |      1.53      1.52      1.50      1.49      1.48
   14.6800 |      1.47      1.46      1.44      1.43      1.42
   14.8800 |      1.40      1.40      1.38      1.37      1.36
   15.0800 |      1.34      1.33      1.32      1.30      1.29
   15.2800 |      1.28      1.27      1.25      1.24      1.23
   15.4800 |      1.22      1.21      1.19      1.18      1.17
   15.6800 |      1.15      1.15      1.13      1.11      1.10
   15.8800 |      1.09      1.08      1.06      1.05      1.04
   16.0800 |      1.03      1.03      1.02      1.02      1.01
   16.2800 |      1.01      1.01      1.00       .99       .99
   16.4800 |       .99       .98       .98       .97       .97
   16.6800 |       .96       .96       .95       .95       .95
   16.8800 |       .94       .94       .93       .93       .92
   17.0800 |       .92       .92       .91       .91       .90
   17.2800 |       .90       .89       .89       .88       .88
```

```
Type.... SCS Unit Hyd. (HYG output)
Name.... PR 01              Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100

                    HYDROGRAPH ORDINATES (cfs)
     Time |          Output Time increment = .0400 hrs
     hrs  |   Time on left represents time for first value in each row.
   -------|------------------------------------------------------------
   17.4800 |        .87           .87           .87           .86           .86
   17.6800 |        .85           .85           .84           .84           .83
   17.8800 |        .83           .83           .82           .82           .81
   18.0800 |        .81           .80           .80           .79           .79
   18.2800 |        .78           .78           .78           .77           .77
   18.4800 |        .76           .76           .75           .75           .74
   18.6800 |        .74           .74           .73           .73           .72
   18.8800 |        .72           .71           .71           .70           .70
   19.0800 |        .69           .69           .69           .68           .68
   19.2800 |        .67           .67           .66           .66           .65
   19.4800 |        .65           .65           .64           .64           .63
   19.6800 |        .63           .62           .62           .61           .61
   19.8800 |        .61           .60           .60           .59           .59
   20.0800 |        .59           .58           .58           .58           .58
   20.2800 |        .58           .58           .58           .58           .58
   20.4800 |        .58           .58           .57           .57           .57
   20.6800 |        .57           .57           .57           .57           .57
   20.8800 |        .57           .57           .56           .56           .56
   21.0800 |        .56           .56           .56           .56           .56
   21.2800 |        .56           .56           .56           .55           .55
   21.4800 |        .55           .55           .55           .55           .55
   21.6800 |        .55           .55           .55           .54           .54
   21.8800 |        .54           .54           .54           .54           .54
   22.0800 |        .54           .54           .54           .54           .54
   22.2800 |        .54           .54           .53           .53           .53
   22.4800 |        .53           .53           .53           .53           .53
   22.6800 |        .53           .53           .52           .52           .52
   22.8800 |        .52           .52           .52           .52           .52
   23.0800 |        .52           .52           .52           .51           .51
   23.2800 |        .51           .51           .51           .51           .51
   23.4800 |        .51           .51           .51           .50           .50
   23.6800 |        .50           .50           .50           .50           .50
   23.8800 |        .50           .50           .50           .49           .37
   24.0800 |        .14           .04           .01           .00           .00
```

BASIN ROUTING CALCULATIONS

DETENTION POND VOLUME

```
Type.... Vol: Elev-Area
Name.... BASIN 01

File.... R:\0675I\0675I.PPW


Elevation    Planimeter    Area    A1+A2+sqr(A1*A2)    Volume    Volume Sum
  (ft)        (sq.in)     (sq.ft)      (sq.ft)         (ac-ft)    (ac-ft)
----------------------------------------------------------------------------
  546.00       -----          0            0            .000       .000
  547.00       -----       3805         3805            .029       .029
  548.00       -----       7885        17167            .131       .160
  549.00       -----       7970        23782            .182       .342
  550.00       -----       8055        24037            .184       .526
  551.00       -----       8145        24300            .186       .712
  552.00       -----       8230        24562            .188       .900
  553.00       -----       8315        24817            .190      1.090
  554.00       -----       8405        25080            .192      1.282
  555.00       -----       8490        25342            .194      1.476


                      POND VOLUME EQUATIONS

 * Incremental volume computed by the Conic Method for Reservoir Volumes.

   Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

   where: EL1, EL2     = Lower and upper elevations of the increment
          Area1,Area2  = Areas computed for EL1, EL2, respectively
          Volume       = Incremental volume between EL1 and EL2
```

DETENTION OUTFLOW STRUCTURE

```
Type.... Outlet Input Data
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


                 REQUESTED POND WS ELEVATIONS:

                 Min. Elev.=     546.00 ft
                 Increment =        .10 ft
                 Max. Elev.=     555.00 ft



        **********************************************
                      OUTLET CONNECTIVITY
        **********************************************


          ---> Forward Flow Only (UpStream to DnStream)
          <---  Reverse Flow Only (DnStream to UpStream)
          <---> Forward and Reverse Both Allowed


      Structure         No.       Outfall   E1, ft     E2, ft
      ------------------ ----      -------  ---------  ---------
      Orifice-Circular   LF   --->    TW     546.000    555.000
      Weir-Rectangular   IW   --->    TW     549.600    555.000
      TW SETUP, DS Channel
```

```
Type.... Outlet Input Data
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


        OUTLET STRUCTURE INPUT DATA



        Structure ID      = LF
        Structure Type    = Orifice-Circular
        ------------------------------------
        # of Openings     =         1
        Invert Elev.      =    546.00 ft
        Diameter          =    1.0000 ft
        Orifice Coeff.    =      .600



        Structure ID      = IW
        Structure Type    = Weir-Rectangular
        ------------------------------------
        # of Openings     =         1
        Crest Elev.       =    549.60 ft
        Weir Length       =       .75 ft
        Weir Coeff.       =   3.330000

        Weir TW effects     (Use adjustment equation)



        Structure ID      = TW
        Structure Type    = TW SETUP, DS Channel
        ------------------------------------
        FREE OUTFALL CONDITIONS SPECIFIED

        CONVERGENCE TOLERANCES...
        Maximum Iterations=    30
        Min. TW tolerance =    .01 ft
        Max. TW tolerance =    .01 ft
        Min. HW tolerance =    .01 ft
        Max. HW tolerance =    .01 ft
        Min.  Q tolerance =    .10 cfs
        Max.  Q tolerance =    .10 cfs
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


              RATING TABLE FOR ONE OUTLET TYPE

         Structure ID  = LF  (Orifice-Circular)
         ----------------------------------------
         Upstream  ID  =     (Pond Water Surface)
         DNstream  ID  = TW  (Pond Outfall)


WS Elev,Device Q    Tail Water               Notes
----------------    ------------    ----------------------------
WS Elev.   Q        TW Elev Converge
   ft     cfs         ft    +/-ft   Computation Messages
--------  -------   --------  -----  ----------------------------
 546.00     .00    Free Outfall    Upstream HW & DNstream TW < Inv.El
 546.10     .03    Free Outfall    CRIT.DEPTH CONTROL   Vh= .026ft   Dcr= .074ft CRIT.DEPTH
 546.20     .13    Free Outfall    CRIT.DEPTH CONTROL   Vh= .052ft   Dcr= .148ft CRIT.DEPTH
 546.30     .29    Free Outfall    CRIT.DEPTH CONTROL   Vh= .078ft   Dcr= .223ft CRIT.DEPTH
 546.40     .50    Free Outfall    CRIT.DEPTH CONTROL   Vh= .106ft   Dcr= .293ft CRIT.DEPTH
 546.50     .76    Free Outfall    CRIT.DEPTH CONTROL   Vh= .134ft   Dcr= .365ft CRIT.DEPTH
 546.60    1.07    Free Outfall    CRIT.DEPTH CONTROL   Vh= .165ft   Dcr= .435ft CRIT.DEPTH
 546.70    1.41    Free Outfall    CRIT.DEPTH CONTROL   Vh= .198ft   Dcr= .503ft CRIT.DEPTH
 546.80    1.78    Free Outfall    CRIT.DEPTH CONTROL   Vh= .232ft   Dcr= .568ft CRIT.DEPTH
 546.90    2.17    Free Outfall    CRIT.DEPTH CONTROL   Vh= .270ft   Dcr= .630ft CRIT.DEPTH
 547.00    2.67    Free Outfall    H =.50
 547.10    2.93    Free Outfall    H =.60
 547.20    3.16    Free Outfall    H =.70
 547.30    3.38    Free Outfall    H =.80
 547.40    3.59    Free Outfall    H =.90
 547.50    3.78    Free Outfall    H =1.00
 547.60    3.96    Free Outfall    H =1.10
 547.70    4.14    Free Outfall    H =1.20
 547.80    4.31    Free Outfall    H =1.30
 547.90    4.47    Free Outfall    H =1.40
 548.00    4.63    Free Outfall    H =1.50
 548.10    4.78    Free Outfall    H =1.60
 548.20    4.93    Free Outfall    H =1.70
 548.30    5.07    Free Outfall    H =1.80
 548.40    5.21    Free Outfall    H =1.90
 548.50    5.35    Free Outfall    H =2.00
 548.60    5.48    Free Outfall    H =2.10
 548.70    5.61    Free Outfall    H =2.20
 548.80    5.73    Free Outfall    H =2.30
 548.90    5.86    Free Outfall    H =2.40
 549.00    5.98    Free Outfall    H =2.50
 549.10    6.10    Free Outfall    H =2.60
 549.20    6.21    Free Outfall    H =2.70
 549.30    6.33    Free Outfall    H =2.80
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


              RATING TABLE FOR ONE OUTLET TYPE

              Structure ID  = LF  (Orifice-Circular)
              -------------------------------------
              Upstream  ID  =     (Pond Water Surface)
              DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q    Tail Water                 Notes
---------------     ---------------     --------------------------
WS Elev.    Q       TW Elev Converge
   ft      cfs         ft     +/-ft    Computation Messages
--------  -------    --------  -----    --------------------------
 549.40    6.44     Free Outfall        H =2.90
 549.50    6.55     Free Outfall        H =3.00
 549.60    6.66     Free Outfall        H =3.10
 549.70    6.76     Free Outfall        H =3.20
 549.80    6.87     Free Outfall        H =3.30
 549.90    6.97     Free Outfall        H =3.40
 550.00    7.07     Free Outfall        H =3.50
 550.10    7.17     Free Outfall        H =3.60
 550.20    7.27     Free Outfall        H =3.70
 550.30    7.37     Free Outfall        H =3.80
 550.40    7.47     Free Outfall        H =3.90
 550.50    7.56     Free Outfall        H =4.00
 550.60    7.65     Free Outfall        H =4.10
 550.70    7.75     Free Outfall        H =4.20
 550.80    7.84     Free Outfall        H =4.30
 550.90    7.93     Free Outfall        H =4.40
 551.00    8.02     Free Outfall        H =4.50
 551.10    8.11     Free Outfall        H =4.60
 551.20    8.20     Free Outfall        H =4.70
 551.30    8.28     Free Outfall        H =4.80
 551.40    8.37     Free Outfall        H =4.90
 551.50    8.45     Free Outfall        H =5.00
 551.60    8.54     Free Outfall        H =5.10
 551.70    8.62     Free Outfall        H =5.20
 551.80    8.70     Free Outfall        H =5.30
 551.90    8.78     Free Outfall        H =5.40
 552.00    8.87     Free Outfall        H =5.50
 552.10    8.95     Free Outfall        H =5.60
 552.20    9.02     Free Outfall        H =5.70
 552.30    9.10     Free Outfall        H =5.80
 552.40    9.18     Free Outfall        H =5.90
 552.50    9.26     Free Outfall        H =6.00
 552.60    9.34     Free Outfall        H =6.10
 552.70    9.41     Free Outfall        H =6.20
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


              RATING TABLE FOR ONE OUTLET TYPE

              Structure ID  = LF  (Orifice-Circular)
              ---------------------------------------
              Upstream  ID  =     (Pond Water Surface)
              DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q    Tail Water                 Notes
----------------    ---------------  --------------------------
WS Elev.   Q        TW Elev Converge
  ft      cfs         ft    +/-ft    Computation Messages
--------  -------   --------  -----  --------------------------
 552.80    9.49    Free Outfall     H =6.30
 552.90    9.56    Free Outfall     H =6.40
 553.00    9.64    Free Outfall     H =6.50
 553.10    9.71    Free Outfall     H =6.60
 553.20    9.78    Free Outfall     H =6.70
 553.30    9.86    Free Outfall     H =6.80
 553.40    9.93    Free Outfall     H =6.90
 553.50   10.00    Free Outfall     H =7.00
 553.60   10.07    Free Outfall     H =7.10
 553.70   10.14    Free Outfall     H =7.20
 553.80   10.21    Free Outfall     H =7.30
 553.90   10.28    Free Outfall     H =7.40
 554.00   10.35    Free Outfall     H =7.50
 554.10   10.42    Free Outfall     H =7.60
 554.20   10.49    Free Outfall     H =7.70
 554.30   10.56    Free Outfall     H =7.80
 554.40   10.62    Free Outfall     H =7.90
 554.50   10.69    Free Outfall     H =8.00
 554.60   10.76    Free Outfall     H =8.10
 554.70   10.82    Free Outfall     H =8.20
 554.80   10.89    Free Outfall     H =8.30
 554.90   10.96    Free Outfall     H =8.40
 555.00   11.02    Free Outfall     H =8.50
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


                RATING TABLE FOR ONE OUTLET TYPE

                Structure ID  = IW  (Weir-Rectangular)
                -----------------------------------------
                Upstream  ID  =     (Pond Water Surface)
                DNstream  ID  = TW  (Pond Outfall)


WS Elev,Device Q     Tail Water                 Notes
----------------     ---------------   -----------------------------
WS Elev.   Q         TW Elev Converge
   ft      cfs          ft     +/-ft   Computation Messages
--------  --------    --------  -----   ---------------------------
546.00      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.10      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.20      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.30      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.40      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.50      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.60      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.70      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.80      .00      Free Outfall      HW & TW below Inv.El.=549.600
546.90      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.00      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.10      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.20      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.30      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.40      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.50      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.60      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.70      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.80      .00      Free Outfall      HW & TW below Inv.El.=549.600
547.90      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.00      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.10      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.20      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.30      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.40      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.50      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.60      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.70      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.80      .00      Free Outfall      HW & TW below Inv.El.=549.600
548.90      .00      Free Outfall      HW & TW below Inv.El.=549.600
549.00      .00      Free Outfall      HW & TW below Inv.El.=549.600
549.10      .00      Free Outfall      HW & TW below Inv.El.=549.600
549.20      .00      Free Outfall      HW & TW below Inv.El.=549.600
549.30      .00      Free Outfall      HW & TW below Inv.El.=549.600
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


                    RATING TABLE FOR ONE OUTLET TYPE

                    Structure ID  = IW  (Weir-Rectangular)
                    ------------------------------------------
                    Upstream  ID  =     (Pond Water Surface)
                    DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q     Tail Water              Notes
----------------    ----------------    --------------------------
WS Elev.    Q       TW Elev Converge
  ft       cfs        ft     +/-ft    Computation Messages
--------  --------  --------  -----   --------------------------
 549.40      .00    Free Outfall      HW & TW below Inv.El.=549.600
 549.50      .00    Free Outfall      HW & TW below Inv.El.=549.600
 549.60      .00    Free Outfall      H=.00; Htw=.00; Qfree=.00;
 549.70      .08    Free Outfall      H=.10; Htw=.00; Qfree=.08;
 549.80      .22    Free Outfall      H=.20; Htw=.00; Qfree=.22;
 549.90      .41    Free Outfall      H=.30; Htw=.00; Qfree=.41;
 550.00      .63    Free Outfall      H=.40; Htw=.00; Qfree=.63;
 550.10      .88    Free Outfall      H=.50; Htw=.00; Qfree=.88;
 550.20     1.16    Free Outfall      H=.60; Htw=.00; Qfree=1.16;
 550.30     1.46    Free Outfall      H=.70; Htw=.00; Qfree=1.46;
 550.40     1.79    Free Outfall      H=.80; Htw=.00; Qfree=1.79;
 550.50     2.13    Free Outfall      H=.90; Htw=.00; Qfree=2.13;
 550.60     2.50    Free Outfall      H=1.00; Htw=.00; Qfree=2.50;
 550.70     2.88    Free Outfall      H=1.10; Htw=.00; Qfree=2.88;
 550.80     3.28    Free Outfall      H=1.20; Htw=.00; Qfree=3.28;
 550.90     3.70    Free Outfall      H=1.30; Htw=.00; Qfree=3.70;
 551.00     4.14    Free Outfall      H=1.40; Htw=.00; Qfree=4.14;
 551.10     4.59    Free Outfall      H=1.50; Htw=.00; Qfree=4.59;
 551.20     5.05    Free Outfall      H=1.60; Htw=.00; Qfree=5.05;
 551.30     5.54    Free Outfall      H=1.70; Htw=.00; Qfree=5.54;
 551.40     6.03    Free Outfall      H=1.80; Htw=.00; Qfree=6.03;
 551.50     6.54    Free Outfall      H=1.90; Htw=.00; Qfree=6.54;
 551.60     7.06    Free Outfall      H=2.00; Htw=.00; Qfree=7.06;
 551.70     7.60    Free Outfall      H=2.10; Htw=.00; Qfree=7.60;
 551.80     8.15    Free Outfall      H=2.20; Htw=.00; Qfree=8.15;
 551.90     8.71    Free Outfall      H=2.30; Htw=.00; Qfree=8.71;
 552.00     9.29    Free Outfall      H=2.40; Htw=.00; Qfree=9.29;
 552.10     9.87    Free Outfall      H=2.50; Htw=.00; Qfree=9.87;
 552.20    10.47    Free Outfall      H=2.60; Htw=.00; Qfree=10.47;
 552.30    11.08    Free Outfall      H=2.70; Htw=.00; Qfree=11.08;
 552.40    11.70    Free Outfall      H=2.80; Htw=.00; Qfree=11.70;
 552.50    12.33    Free Outfall      H=2.90; Htw=.00; Qfree=12.33;
 552.60    12.98    Free Outfall      H=3.00; Htw=.00; Qfree=12.98;
 552.70    13.63    Free Outfall      H=3.10; Htw=.00; Qfree=13.63;
```

```
Type.... Individual Outlet Curves
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


            RATING TABLE FOR ONE OUTLET TYPE

            Structure ID  = IW  (Weir-Rectangular)
            ----------------------------------------
            Upstream  ID  =     (Pond Water Surface)
            DNstream  ID  = TW  (Pond Outfall)


WS Elev,Device Q     Tail Water                 Notes
---------------    ---------------   ----------------------------
WS Elev.   Q       TW Elev Converge
  ft      cfs        ft     +/-ft    Computation Messages
--------  -------   --------  -----   ----------------------------
552.80    14.30    Free Outfall      H=3.20; Htw=.00; Qfree=14.30;
552.90    14.97    Free Outfall      H=3.30; Htw=.00; Qfree=14.97;
553.00    15.66    Free Outfall      H=3.40; Htw=.00; Qfree=15.66;
553.10    16.35    Free Outfall      H=3.50; Htw=.00; Qfree=16.35;
553.20    17.06    Free Outfall      H=3.60; Htw=.00; Qfree=17.06;
553.30    17.78    Free Outfall      H=3.70; Htw=.00; Qfree=17.78;
553.40    18.50    Free Outfall      H=3.80; Htw=.00; Qfree=18.50;
553.50    19.24    Free Outfall      H=3.90; Htw=.00; Qfree=19.24;
553.60    19.98    Free Outfall      H=4.00; Htw=.00; Qfree=19.98;
553.70    20.73    Free Outfall      H=4.10; Htw=.00; Qfree=20.73;
553.80    21.50    Free Outfall      H=4.20; Htw=.00; Qfree=21.50;
553.90    22.27    Free Outfall      H=4.30; Htw=.00; Qfree=22.27;
554.00    23.05    Free Outfall      H=4.40; Htw=.00; Qfree=23.05;
554.10    23.84    Free Outfall      H=4.50; Htw=.00; Qfree=23.84;
554.20    24.64    Free Outfall      H=4.60; Htw=.00; Qfree=24.64;
554.30    25.45    Free Outfall      H=4.70; Htw=.00; Qfree=25.45;
554.40    26.26    Free Outfall      H=4.80; Htw=.00; Qfree=26.26;
554.50    27.09    Free Outfall      H=4.90; Htw=.00; Qfree=27.09;
554.60    27.92    Free Outfall      H=5.00; Htw=.00; Qfree=27.92;
554.70    28.77    Free Outfall      H=5.10; Htw=.00; Qfree=28.77;
554.80    29.62    Free Outfall      H=5.20; Htw=.00; Qfree=29.62;
554.90    30.47    Free Outfall      H=5.30; Htw=.00; Qfree=30.47;
555.00    31.34    Free Outfall      H=5.40; Htw=.00; Qfree=31.34;
```

```
Type.... Composite Rating Curve
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


          ***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q                              Notes
----------------- -------- Converge -------------------------
  Elev.     Q      TW Elev  Error
   ft      cfs       ft     +/-ft   Contributing Structures
 --------  -------  --------  -----  -------------------------
 546.00     .00    Free Outfall    None contributing
 546.10     .03    Free Outfall    LF
 546.20     .13    Free Outfall    LF
 546.30     .29    Free Outfall    LF
 546.40     .50    Free Outfall    LF
 546.50     .76    Free Outfall    LF
 546.60    1.07    Free Outfall    LF
 546.70    1.41    Free Outfall    LF
 546.80    1.78    Free Outfall    LF
 546.90    2.17    Free Outfall    LF
 547.00    2.67    Free Outfall    LF
 547.10    2.93    Free Outfall    LF
 547.20    3.16    Free Outfall    LF
 547.30    3.38    Free Outfall    LF
 547.40    3.59    Free Outfall    LF
 547.50    3.78    Free Outfall    LF
 547.60    3.96    Free Outfall    LF
 547.70    4.14    Free Outfall    LF
 547.80    4.31    Free Outfall    LF
 547.90    4.47    Free Outfall    LF
 548.00    4.63    Free Outfall    LF
 548.10    4.78    Free Outfall    LF
 548.20    4.93    Free Outfall    LF
 548.30    5.07    Free Outfall    LF
 548.40    5.21    Free Outfall    LF
 548.50    5.35    Free Outfall    LF
 548.60    5.48    Free Outfall    LF
 548.70    5.61    Free Outfall    LF
 548.80    5.73    Free Outfall    LF
 548.90    5.86    Free Outfall    LF
 549.00    5.98    Free Outfall    LF
 549.10    6.10    Free Outfall    LF
 549.20    6.21    Free Outfall    LF
 549.30    6.33    Free Outfall    LF
 549.40    6.44    Free Outfall    LF
 549.50    6.55    Free Outfall    LF
 549.60    6.66    Free Outfall    LF +IW
 549.70    6.84    Free Outfall    LF +IW
```

```
Type.... Composite Rating Curve
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


            ***** COMPOSITE OUTFLOW SUMMARY ****


WS Elev, Total Q                              Notes
----------------    -------- Converge --------------------------
  Elev.      Q      TW Elev  Error
   ft       cfs        ft     +/-ft   Contributing Structures
--------   -------   --------  -----  --------------------------
 549.80      7.09   Free Outfall    LF +IW
 549.90      7.38   Free Outfall    LF +IW
 550.00      7.70   Free Outfall    LF +IW
 550.10      8.06   Free Outfall    LF +IW
 550.20      8.43   Free Outfall    LF +IW
 550.30      8.83   Free Outfall    LF +IW
 550.40      9.25   Free Outfall    LF +IW
 550.50      9.69   Free Outfall    LF +IW
 550.60     10.15   Free Outfall    LF +IW
 550.70     10.63   Free Outfall    LF +IW
 550.80     11.12   Free Outfall    LF +IW
 550.90     11.63   Free Outfall    LF +IW
 551.00     12.16   Free Outfall    LF +IW
 551.10     12.70   Free Outfall    LF +IW
 551.20     13.25   Free Outfall    LF +IW
 551.30     13.82   Free Outfall    LF +IW
 551.40     14.40   Free Outfall    LF +IW
 551.50     14.99   Free Outfall    LF +IW
 551.60     15.60   Free Outfall    LF +IW
 551.70     16.22   Free Outfall    LF +IW
 551.80     16.85   Free Outfall    LF +IW
 551.90     17.50   Free Outfall    LF +IW
 552.00     18.15   Free Outfall    LF +IW
 552.10     18.82   Free Outfall    LF +IW
 552.20     19.50   Free Outfall    LF +IW
 552.30     20.18   Free Outfall    LF +IW
 552.40     20.88   Free Outfall    LF +IW
 552.50     21.59   Free Outfall    LF +IW
 552.60     22.31   Free Outfall    LF +IW
 552.70     23.04   Free Outfall    LF +IW
 552.80     23.78   Free Outfall    LF +IW
 552.90     24.54   Free Outfall    LF +IW
 553.00     25.30   Free Outfall    LF +IW
 553.10     26.06   Free Outfall    LF +IW
 553.20     26.84   Free Outfall    LF +IW
 553.30     27.63   Free Outfall    LF +IW
 553.40     28.43   Free Outfall    LF +IW
 553.50     29.24   Free Outfall    LF +IW
```

```
Type.... Composite Rating Curve
Name.... OUTLET 01

File.... R:\0675I\0675I.PPW


          ***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q                          Notes
-----------------  -------- Converge --------------------------
  Elev.     Q      TW Elev  Error
   ft      cfs       ft     +/-ft   Contributing Structures
--------  -------  --------  -----  --------------------------
 553.60    30.05   Free Outfall    LF +IW
 553.70    30.88   Free Outfall    LF +IW
 553.80    31.71   Free Outfall    LF +IW
 553.90    32.55   Free Outfall    LF +IW
 554.00    33.40   Free Outfall    LF +IW
 554.10    34.26   Free Outfall    LF +IW
 554.20    35.13   Free Outfall    LF +IW
 554.30    36.01   Free Outfall    LF +IW
 554.40    36.89   Free Outfall    LF +IW
 554.50    37.78   Free Outfall    LF +IW
 554.60    38.68   Free Outfall    LF +IW
 554.70    39.59   Free Outfall    LF +IW
 554.80    40.51   Free Outfall    LF +IW
 554.90    41.43   Free Outfall    LF +IW
 555.00    42.36   Free Outfall    LF +IW
```

2 YEAR STORM ROUTING

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01     IN  2
  Outflow HYG file = NONE STORED - BASIN 01     OUT 2

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = OUTLET 01

  No Infiltration

  INITIAL CONDITIONS
  ---------------------------------
  Starting WS Elev   =    546.00 ft
  Starting Volume    =      .000 ac-ft
  Starting Outflow   =      .00 cfs
  Starting Infiltr.  =      .00 cfs
  Starting Total Qout=      .00 cfs
  Time Increment     =    .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
546.00	.00	.000	0	.00	.00	.00
546.10	.03	.000	38	.00	.03	.05
546.20	.13	.000	152	.00	.13	.27
546.30	.29	.001	342	.00	.29	.77
546.40	.50	.002	609	.00	.50	1.63
546.50	.76	.004	951	.00	.76	2.96
546.60	1.07	.006	1370	.00	1.07	4.87
546.70	1.41	.010	1865	.00	1.41	7.45
546.80	1.78	.015	2435	.00	1.78	10.80
546.90	2.17	.021	3082	.00	2.17	15.01
547.00	2.67	.029	3805	.00	2.67	20.29
547.10	2.93	.038	4147	.00	2.93	26.06
547.20	3.16	.048	4503	.00	3.16	32.31
547.30	3.38	.059	4875	.00	3.38	39.03
547.40	3.59	.071	5261	.00	3.59	46.28
547.50	3.78	.083	5661	.00	3.78	54.05
547.60	3.96	.097	6076	.00	3.96	62.38
547.70	4.14	.111	6507	.00	4.14	71.30
547.80	4.31	.126	6951	.00	4.31	80.81
547.90	4.47	.143	7411	.00	4.47	90.95
548.00	4.63	.160	7885	.00	4.63	101.72
548.10	4.78	.179	7893	.00	4.78	112.83
548.20	4.93	.197	7902	.00	4.93	123.95

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01      IN  2
  Outflow HYG file = NONE STORED - BASIN 01      OUT 2

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = OUTLET 01

  No Infiltration

  INITIAL CONDITIONS
  ---------------------------------
  Starting WS Elev   =    546.00 ft
  Starting Volume    =       .000 ac-ft
  Starting Outflow   =       .00 cfs
  Starting Infiltr.  =       .00 cfs
  Starting Total Qout=       .00 cfs
  Time Increment     =      .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
548.30	5.07	.215	7910	.00	5.07	135.07
548.40	5.21	.233	7919	.00	5.21	146.21
548.50	5.35	.251	7927	.00	5.35	157.34
548.60	5.48	.269	7936	.00	5.48	168.49
548.70	5.61	.288	7944	.00	5.61	179.65
548.80	5.73	.306	7953	.00	5.73	190.81
548.90	5.86	.324	7961	.00	5.86	201.99
549.00	5.98	.342	7970	.00	5.98	213.18
549.10	6.10	.361	7978	.00	6.10	224.37
549.20	6.21	.379	7987	.00	6.21	235.57
549.30	6.33	.397	7995	.00	6.33	246.78
549.40	6.44	.416	8004	.00	6.44	258.01
549.50	6.55	.434	8012	.00	6.55	269.24
549.60	6.66	.453	8021	.00	6.66	280.48
549.70	6.84	.471	8029	.00	6.84	291.82
549.80	7.09	.489	8038	.00	7.09	303.22
549.90	7.38	.508	8046	.00	7.38	314.68
550.00	7.70	.526	8055	.00	7.70	326.19
550.10	8.06	.545	8064	.00	8.06	337.73
550.20	8.43	.563	8073	.00	8.43	349.32
550.30	8.83	.582	8082	.00	8.83	360.93
550.40	9.25	.601	8091	.00	9.25	372.59
550.50	9.69	.619	8100	.00	9.69	384.27

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01      IN  2
  Outflow HYG file = NONE STORED - BASIN 01      OUT 2

  Pond Node    Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = OUTLET 01

  No Infiltration

  INITIAL CONDITIONS
  ----------------------------------
  Starting WS Elev    =    546.00 ft
  Starting Volume     =      .000 ac-ft
  Starting Outflow    =      .00 cfs
  Starting Infiltr.   =      .00 cfs
  Starting Total Qout=      .00 cfs
  Time Increment      =     .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
550.60	10.15	.638	8109	.00	10.15	395.98
550.70	10.63	.656	8118	.00	10.63	407.73
550.80	11.12	.675	8127	.00	11.12	419.50
550.90	11.63	.694	8136	.00	11.63	431.31
551.00	12.16	.712	8145	.00	12.16	443.14
551.10	12.70	.731	8153	.00	12.70	454.99
551.20	13.25	.750	8162	.00	13.25	466.88
551.30	13.82	.769	8170	.00	13.82	478.79
551.40	14.40	.787	8179	.00	14.40	490.73
551.50	14.99	.806	8187	.00	14.99	502.69
551.60	15.60	.825	8196	.00	15.60	514.67
551.70	16.22	.844	8204	.00	16.22	526.68
551.80	16.85	.863	8213	.00	16.85	538.71
551.90	17.50	.881	8221	.00	17.50	550.77
552.00	18.15	.900	8230	.00	18.15	562.85
552.10	18.82	.919	8238	.00	18.82	574.95
552.20	19.50	.938	8247	.00	19.50	587.08
552.30	20.18	.957	8255	.00	20.18	599.22
552.40	20.88	.976	8264	.00	20.88	611.40
552.50	21.59	.995	8272	.00	21.59	623.59
552.60	22.31	1.014	8281	.00	22.31	635.80
552.70	23.04	1.033	8289	.00	23.04	648.05
552.80	23.78	1.052	8298	.00	23.78	660.30

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                       LEVEL POOL ROUTING DATA

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01     IN  2
  Outflow HYG file = NONE STORED - BASIN 01     OUT 2

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = OUTLET 01


  No Infiltration

  INITIAL CONDITIONS
  ------------------------------------
  Starting WS Elev   =    546.00 ft
  Starting Volume    =      .000 ac-ft
  Starting Outflow   =       .00 cfs
  Starting Infiltr.  =       .00 cfs
  Starting Total Qout=       .00 cfs
  Time Increment     =     .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
552.90	24.54	1.071	8306	.00	24.54	672.59
553.00	25.30	1.090	8315	.00	25.30	684.89
553.10	26.06	1.109	8324	.00	26.06	697.21
553.20	26.84	1.128	8333	.00	26.84	709.56
553.30	27.63	1.148	8342	.00	27.63	721.93
553.40	28.43	1.167	8351	.00	28.43	734.32
553.50	29.24	1.186	8360	.00	29.24	746.73
553.60	30.05	1.205	8369	.00	30.05	759.16
553.70	30.88	1.224	8378	.00	30.88	771.62
553.80	31.71	1.244	8387	.00	31.71	784.09
553.90	32.55	1.263	8396	.00	32.55	796.59
554.00	33.40	1.282	8405	.00	33.40	809.11
554.10	34.26	1.301	8413	.00	34.26	821.64
554.20	35.13	1.321	8422	.00	35.13	834.20
554.30	36.01	1.340	8430	.00	36.01	846.78
554.40	36.89	1.359	8439	.00	36.89	859.38
554.50	37.78	1.379	8447	.00	37.78	872.00
554.60	38.68	1.398	8456	.00	38.68	884.64
554.70	39.59	1.418	8464	.00	39.59	897.30
554.80	40.51	1.437	8473	.00	40.51	909.97
554.90	41.43	1.457	8481	.00	41.43	922.68
555.00	42.36	1.476	8490	.00	42.36	935.39

```
Type.... Pond Routing Summary
Name.... BASIN 01    OUT   Tag: 2                          Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2

                    LEVEL POOL ROUTING SUMMARY

 HYG Dir            = R:\0675I\
 Inflow  HYG file = NONE STORED - BASIN 01      IN  2
 Outflow HYG file = NONE STORED - BASIN 01      OUT 2


 Pond Node   Data = BASIN 01
 Pond Volume Data = Basin 01
 Pond Outlet Data = OUTLET 01


 No Infiltration

 INITIAL CONDITIONS
 ----------------------------------
 Starting WS Elev   =   546.00 ft
 Starting Volume    =     .000 ac-ft
 Starting Outflow   =     .00 cfs
 Starting Infiltr.  =     .00 cfs
 Starting Total Qout=     .00 cfs
 Time Increment     =    .0400 hrs



 INFLOW/OUTFLOW HYDROGRAPH SUMMARY
 ==================================================
 Peak Inflow    =      26.24 cfs   at   11.9200 hrs
 Peak Outflow   =       6.61 cfs   at   12.1200 hrs
 --------------------------------------------------
 Peak Elevation =   549.56 ft
 Peak Storage =      .445 ac-ft
 ==================================================



 MASS BALANCE (ac-ft)
 ------------------------
+ Initial Vol  =        .000
+ HYG Vol IN   =       1.475
- Infiltration =        .000
- HYG Vol OUT  =       1.475
- Retained Vol =        .000
                   ----------
 Unrouted Vol =       -.000 ac-ft  (.000% of Inflow Volume)
```

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```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01     OUT   Tag: 2                        Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2


             POND ROUTED TOTAL OUTFLOW HYG...
             HYG file =
             HYG ID   = BASIN 01       OUT
             HYG Tag  = 2
             ----------------------------------
             Peak Discharge =        6.61 cfs
             Time to Peak   =    12.1200 hrs
             HYG Volume     =       1.475 ac-ft
             ----------------------------------


                    HYDROGRAPH ORDINATES (cfs)
     Time  |        Output Time increment = .0400 hrs
     hrs   |   Time on left represents time for first value in each row.
   --------|------------------------------------------------------------
    3.2000 |      .00         .00         .00         .00         .01
    3.4000 |      .01         .01         .01         .01         .01
    3.6000 |      .02         .02         .02         .02         .02
    3.8000 |      .02         .03         .03         .03         .03
    4.0000 |      .03         .03         .04         .04         .04
    4.2000 |      .04         .04         .04         .05         .05
    4.4000 |      .05         .05         .05         .06         .06
    4.6000 |      .06         .06         .06         .07         .07
    4.8000 |      .07         .07         .07         .08         .08
    5.0000 |      .08         .08         .08         .09         .09
    5.2000 |      .09         .09         .09         .10         .10
    5.4000 |      .10         .10         .10         .11         .11
    5.6000 |      .11         .11         .12         .12         .12
    5.8000 |      .12         .12         .13         .13         .13
    6.0000 |      .13         .13         .14         .14         .14
    6.2000 |      .14         .15         .15         .15         .15
    6.4000 |      .15         .16         .16         .16         .16
    6.6000 |      .17         .17         .17         .17         .18
    6.8000 |      .18         .18         .18         .19         .19
    7.0000 |      .19         .19         .19         .20         .20
    7.2000 |      .20         .20         .21         .21         .21
    7.4000 |      .21         .22         .22         .22         .22
    7.6000 |      .23         .23         .23         .23         .24
    7.8000 |      .24         .24         .24         .25         .25
    8.0000 |      .25         .25         .26         .26         .27
    8.2000 |      .27         .28         .28         .29         .30
    8.4000 |      .30         .31         .31         .32         .33
    8.6000 |      .33         .34         .35         .36         .36
    8.8000 |      .37         .38         .38         .39         .40
    9.0000 |      .41         .41         .42         .43         .43
    9.2000 |      .43         .44         .44         .44         .44
    9.4000 |      .45         .45         .45         .45         .46
    9.6000 |      .46         .47         .48         .49         .50
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 2                          Event: 2 yr
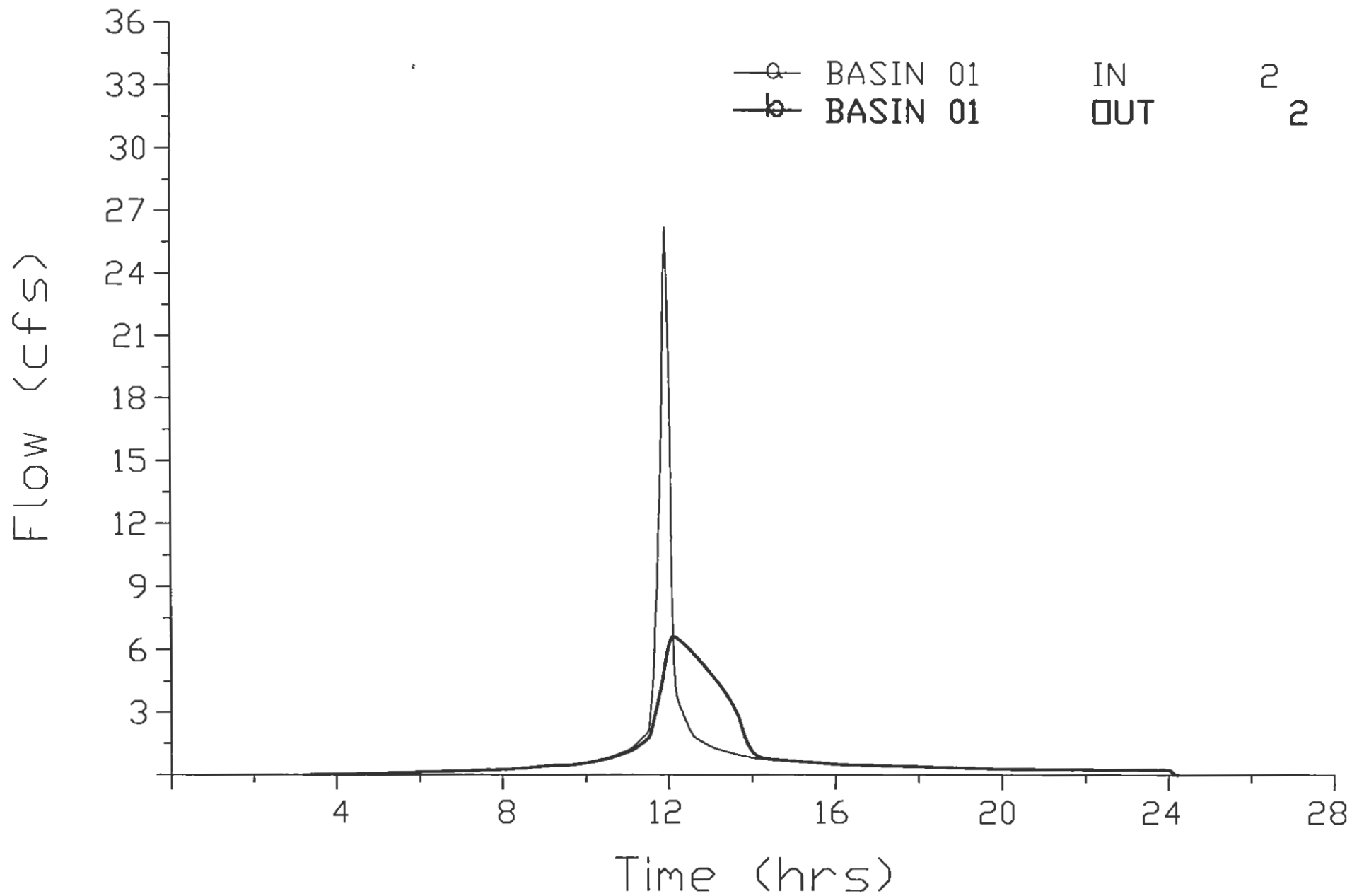File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 2
```

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0400 hrs Time on left represents time for first value in each row.				
9.8000	.51	.52	.53	.54	.55
10.0000	.56	.57	.59	.60	.62
10.2000	.63	.65	.67	.68	.70
10.4000	.72	.74	.76	.77	.79
10.6000	.81	.83	.85	.88	.91
10.8000	.94	.96	.99	1.02	1.06
11.0000	1.08	1.11	1.15	1.18	1.23
11.2000	1.28	1.34	1.40	1.46	1.52
11.4000	1.58	1.65	1.71	1.80	1.96
11.6000	2.27	2.70	3.02	3.37	3.75
11.8000	4.13	4.52	4.97	5.46	5.90
12.0000	6.24	6.49	6.60	6.61	6.57
12.2000	6.52	6.46	6.40	6.34	6.27
12.4000	6.19	6.12	6.04	5.96	5.87
12.6000	5.78	5.69	5.60	5.51	5.42
12.8000	5.33	5.24	5.15	5.06	4.96
13.0000	4.87	4.78	4.68	4.59	4.49
13.2000	4.38	4.28	4.17	4.05	3.93
13.4000	3.81	3.68	3.54	3.40	3.25
13.6000	3.09	2.93	2.76	2.51	2.21
13.8000	1.97	1.76	1.57	1.41	1.26
14.0000	1.14	1.05	.97	.91	.87
14.2000	.83	.81	.79	.78	.77
14.4000	.76	.75	.74	.73	.73
14.6000	.72	.71	.71	.70	.70
14.8000	.69	.68	.68	.67	.67
15.0000	.66	.65	.65	.64	.64
15.2000	.63	.62	.62	.61	.61
15.4000	.60	.60	.59	.58	.58
15.6000	.57	.57	.56	.55	.55
15.8000	.54	.54	.53	.52	.52
16.0000	.51	.51	.50	.50	.49
16.2000	.49	.49	.48	.48	.48
16.4000	.48	.47	.47	.47	.47
16.6000	.47	.46	.46	.46	.46
16.8000	.46	.45	.45	.45	.45
17.0000	.44	.44	.44	.44	.44
17.2000	.43	.43	.43	.43	.43
17.4000	.42	.42	.42	.42	.42
17.6000	.41	.41	.41	.41	.40
17.8000	.40	.40	.40	.40	.39
18.0000	.39	.39	.39	.39	.38
18.2000	.38	.38	.38	.37	.37
18.4000	.37	.37	.37	.36	.36
18.6000	.36	.36	.36	.35	.35
18.8000	.35	.35	.34	.34	.34
19.0000	.34	.34	.33	.33	.33

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01     OUT   Tag: 2                    Event: 2 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 2


                        HYDROGRAPH ORDINATES (cfs)
      Time  |           Output Time increment = .0400 hrs
      hrs   |   Time on left represents time for first value in each row.
   ---------|-------------------------------------------------------------
   19.2000 |        .33          .33          .32          .32          .32
   19.4000 |        .32          .31          .31          .31          .31
   19.6000 |        .31          .30          .30          .30          .30
   19.8000 |        .30          .29          .29          .29          .29
   20.0000 |        .28          .28          .28          .28          .28
   20.2000 |        .28          .28          .28          .28          .28
   20.4000 |        .28          .27          .27          .27          .27
   20.6000 |        .27          .27          .27          .27          .27
   20.8000 |        .27          .27          .27          .27          .27
   21.0000 |        .27          .27          .27          .27          .27
   21.2000 |        .27          .27          .27          .27          .27
   21.4000 |        .26          .26          .26          .26          .26
   21.6000 |        .26          .26          .26          .26          .26
   21.8000 |        .26          .26          .26          .26          .26
   22.0000 |        .26          .26          .26          .26          .26
   22.2000 |        .26          .26          .26          .26          .25
   22.4000 |        .25          .25          .25          .25          .25
   22.6000 |        .25          .25          .25          .25          .25
   22.8000 |        .25          .25          .25          .25          .25
   23.0000 |        .25          .25          .25          .25          .25
   23.2000 |        .25          .25          .24          .24          .24
   23.4000 |        .24          .24          .24          .24          .24
   23.6000 |        .24          .24          .24          .24          .24
   23.8000 |        .24          .24          .24          .24          .24
   24.0000 |        .24          .22          .16          .06          .01
   24.2000 |        .00          .00
```

Hydrograph

BASIN 01   OUT   2

Legend:
- ⊶ BASIN 01   IN   2
- **⊶ BASIN 01   OUT   2**

Y-axis: Flow (cfs), values 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36

X-axis: Time (hrs), values 4, 8, 12, 16, 20, 24, 28

15 YEAR STORM ROUTING

```
Type.... Pond Routing Summary
Name.... BASIN 01      OUT   Tag: 15                           Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15


                     LEVEL POOL ROUTING SUMMARY

 HYG Dir         = R:\0675I\
 Inflow  HYG file = NONE STORED - BASIN 01      IN  15
 Outflow HYG file = NONE STORED - BASIN 01      OUT 15


 Pond Node    Data = BASIN 01
 Pond Volume Data = Basin 01
 Pond Outlet Data = OUTLET 01


 No Infiltration

 INITIAL CONDITIONS
 -----------------------------------

 Starting WS Elev  =   546.00 ft
 Starting Volume   =     .000 ac-ft
 Starting Outflow  =     .00 cfs
 Starting Infiltr. =     .00 cfs
 Starting Total Qout=    .00 cfs
 Time Increment    =   .0400 hrs



 INFLOW/OUTFLOW HYDROGRAPH SUMMARY
 ==================================================================
 Peak Inflow   =     40.55 cfs   at    11.9200 hrs
 Peak Outflow  =     12.59 cfs   at    12.0800 hrs
 ------------------------------------------------------------------
 Peak Elevation  =    551.08 ft
 Peak Storage =         .727 ac-ft
 ==================================================================



 MASS BALANCE (ac-ft)
 --------------------------
+ Initial Vol  =        .000
+ HYG Vol IN   =       2.343
- Infiltration =        .000
- HYG Vol OUT  =       2.343
- Retained Vol =        .000
                   ----------
 Unrouted Vol =       -.000 ac-ft  (.000% of Inflow Volume)
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01     OUT   Tag: 15                          Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15
```

```
            POND ROUTED TOTAL OUTFLOW HYG...
            HYG file =
            HYG ID   = BASIN 01     OUT
            HYG Tag  = 15
            ------------------------------------
            Peak Discharge =       12.59 cfs
            Time to Peak   =     12.0800 hrs
            HYG Volume     =       2.343 ac-ft
            ------------------------------------
```

                      HYDROGRAPH ORDINATES (cfs)
     Time | Output Time increment = .0400 hrs
hrs	Time on left represents time for first value in each row.
2.2400	.00 .00 .00 .01 .01
2.4400	.01 .01 .02 .02 .02
2.6400	.03 .03 .03 .04 .04
2.8400	.04 .05 .05 .05 .05
3.0400	.06 .06 .06 .07 .07
3.2400	.07 .08 .08 .08 .08
3.4400	.09 .09 .09 .10 .10
3.6400	.10 .11 .11 .11 .11
3.8400	.12 .12 .12 .13 .13
4.0400	.13 .13 .14 .14 .14
4.2400	.15 .15 .15 .16 .16
4.4400	.16 .17 .17 .17 .18
4.6400	.18 .18 .19 .19 .19
4.8400	.20 .20 .20 .21 .21
5.0400	.21 .22 .22 .22 .23
5.2400	.23 .24 .24 .24 .25
5.4400	.25 .25 .26 .26 .26
5.6400	.27 .27 .27 .28 .28
5.8400	.29 .29 .29 .30 .30
6.0400	.30 .31 .31 .31 .32
6.2400	.32 .32 .33 .33 .33
6.4400	.34 .34 .35 .35 .35
6.6400	.36 .36 .36 .37 .37
6.8400	.37 .38 .38 .39 .39
7.0400	.39 .40 .40 .40 .41
7.2400	.41 .41 .42 .42 .43
7.4400	.43 .43 .44 .44 .44
7.6400	.45 .45 .45 .46 .46
7.8400	.47 .47 .47 .48 .48
8.0400	.48 .49 .50 .50 .51
8.2400	.52 .53 .54 .55 .56
8.4400	.57 .58 .60 .61 .62
8.6400	.63 .64 .65 .67 .68
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01     OUT   Tag: 15                      Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15

                        HYDROGRAPH ORDINATES (cfs)
      Time  |          Output Time increment = .0400 hrs
      hrs   |    Time on left represents time for first value in each row.
    --------|-------------------------------------------------------------
      8.8400 |      .69        .70        .71        .73        .74
      9.0400 |      .75        .76        .77        .78        .78
      9.2400 |      .79        .79        .79        .80        .80
      9.4400 |      .80        .80        .81        .81        .82
      9.6400 |      .83        .84        .85        .87        .88
      9.8400 |      .90        .92        .94        .95        .97
     10.0400 |      .99       1.01       1.04       1.06       1.08
     10.2400 |     1.10       1.13       1.15       1.18       1.21
     10.4400 |     1.23       1.26       1.29       1.32       1.35
     10.6400 |     1.39       1.42       1.46       1.50       1.54
     10.8400 |     1.58       1.62       1.67       1.71       1.76
     11.0400 |     1.81       1.86       1.91       1.97       2.05
     11.2400 |     2.13       2.22       2.31       2.41       2.51
     11.4400 |     2.62       2.70       2.76       2.91       3.13
     11.6400 |     3.42       3.78       4.17       4.57       4.99
     11.8400 |     5.48       6.08       6.79       8.51      10.42
     12.0400 |    11.95      12.59      12.40      11.94      11.41
     12.2400 |    10.90      10.41       9.96       9.53       9.13
     12.4400 |     8.75       8.40       8.06       7.76       7.48
     12.6400 |     7.23       7.01       6.82       6.68       6.59
     12.8400 |     6.51       6.42       6.34       6.26       6.17
     13.0400 |     6.08       6.00       5.91       5.82       5.74
     13.2400 |     5.65       5.56       5.47       5.38       5.29
     13.4400 |     5.20       5.11       5.02       4.93       4.84
     13.6400 |     4.75       4.66       4.57       4.48       4.38
     13.8400 |     4.28       4.17       4.06       3.95       3.83
     14.0400 |     3.71       3.58       3.45       3.31       3.17
     14.2400 |     3.02       2.87       2.72       2.46       2.21
     14.4400 |     2.00       1.84       1.68       1.55       1.44
     14.6400 |     1.35       1.27       1.21       1.17       1.13
     14.8400 |     1.10       1.08       1.06       1.04       1.02
     15.0400 |     1.00        .99        .98        .97        .96
     15.2400 |      .95        .94        .93        .92        .91
     15.4400 |      .90        .90        .89        .88        .87
     15.6400 |      .86        .85        .84        .83        .82
     15.8400 |      .81        .81        .80        .79        .78
     16.0400 |      .77        .76        .75        .75        .74
     16.2400 |      .74        .73        .73        .72        .72
     16.4400 |      .72        .71        .71        .71        .70
     16.6400 |      .70        .70        .70        .69        .69
     16.8400 |      .69        .68        .68        .68        .67
     17.0400 |      .67        .67        .66        .66        .66
     17.2400 |      .65        .65        .65        .64        .64
     17.4400 |      .64        .63        .63        .63        .62
     17.6400 |      .62        .62        .61        .61        .61
     17.8400 |      .61        .60        .60        .60        .59
     18.0400 |      .59        .59        .58        .58        .58
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 15                    Event: 15 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 15

                        HYDROGRAPH ORDINATES (cfs)
     Time  |            Output Time increment = .0400 hrs
     hrs   |    Time on left represents time for first value in each row.
  ---------|-----------------------------------------------------------------
   18.2400 |      .57         .57         .57         .56         .56
   18.4400 |      .56         .55         .55         .55         .54
   18.6400 |      .54         .54         .53         .53         .53
   18.8400 |      .52         .52         .52         .52         .51
   19.0400 |      .51         .51         .50         .50         .49
   19.2400 |      .49         .49         .48         .48         .48
   19.4400 |      .47         .47         .47         .47         .46
   19.6400 |      .46         .46         .45         .45         .45
   19.8400 |      .44         .44         .44         .43         .43
   20.0400 |      .43         .42         .42         .42         .42
   20.2400 |      .42         .42         .42         .42         .42
   20.4400 |      .41         .41         .41         .41         .41
   20.6400 |      .41         .41         .41         .41         .41
   20.8400 |      .41         .41         .41         .41         .41
   21.0400 |      .40         .40         .40         .40         .40
   21.2400 |      .40         .40         .40         .40         .40
   21.4400 |      .40         .40         .40         .40         .40
   21.6400 |      .40         .39         .39         .39         .39
   21.8400 |      .39         .39         .39         .39         .39
   22.0400 |      .39         .39         .39         .39         .39
   22.2400 |      .39         .38         .38         .38         .38
   22.4400 |      .38         .38         .38         .38         .38
   22.6400 |      .38         .38         .38         .38         .38
   22.8400 |      .38         .38         .37         .37         .37
   23.0400 |      .37         .37         .37         .37         .37
   23.2400 |      .37         .37         .37         .37         .37
   23.4400 |      .37         .37         .37         .36         .36
   23.6400 |      .36         .36         .36         .36         .36
   23.8400 |      .36         .36         .36         .36         .36
   24.0400 |      .34         .25         .13         .02         .01
   24.2400 |      .00
```

Hydrograph
BASIN 01   OUT   15
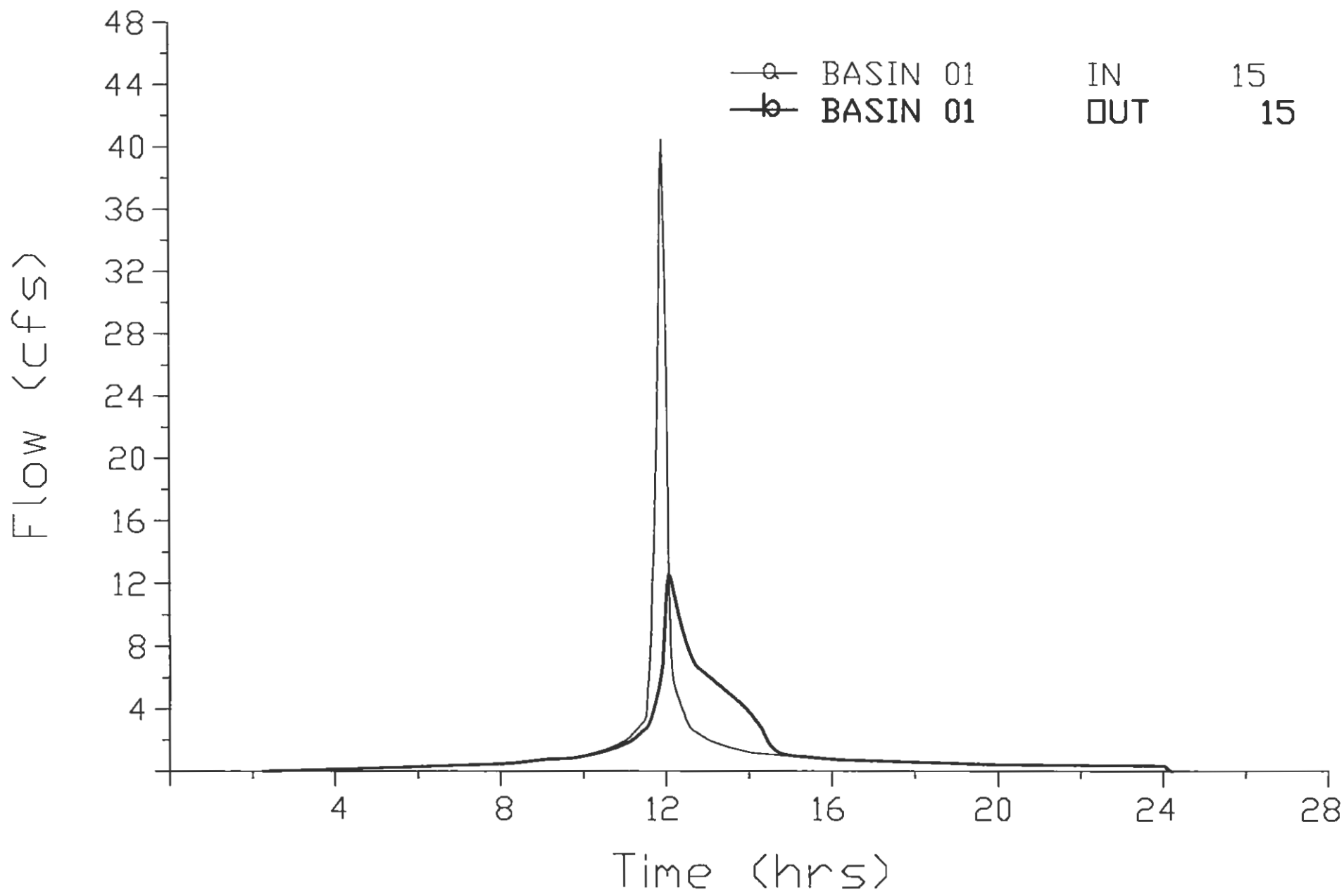
25 YEAR STORM ROUTING

```
Type.... Pond Routing Summary
Name.... BASIN 01      OUT    Tag: 25                          Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 25

                      LEVEL POOL ROUTING SUMMARY

 HYG Dir           = R:\0675I\
 Inflow  HYG file = NONE STORED - BASIN 01      IN  25
 Outflow HYG file = NONE STORED - BASIN 01      OUT 25

 Pond Node   Data = BASIN 01
 Pond Volume Data = Basin 01
 Pond Outlet Data = OUTLET 01

 No Infiltration

 INITIAL CONDITIONS
 ----------------------------------
 Starting WS Elev  =   546.00 ft
 Starting Volume   =     .000 ac-ft
 Starting Outflow  =     .00 cfs
 Starting Infiltr. =     .00 cfs
 Starting Total Qout=    .00 cfs
 Time Increment    =   .0400 hrs


 INFLOW/OUTFLOW HYDROGRAPH SUMMARY
 ===================================================
 Peak Inflow    =     44.73 cfs    at   11.9200 hrs
 Peak Outflow   =     14.88 cfs    at   12.0800 hrs
 ---------------------------------------------------
 Peak Elevation =    551.48 ft
 Peak Storage =       .803 ac-ft
 ===================================================


 MASS BALANCE (ac-ft)
 --------------------------
 + Initial Vol  =      .000
 + HYG Vol IN   =     2.600
 - Infiltration =      .000
 - HYG Vol OUT  =     2.600
 - Retained Vol =      .000
                  ----------
   Unrouted Vol =     -.000 ac-ft  (.000% of Inflow Volume)
```
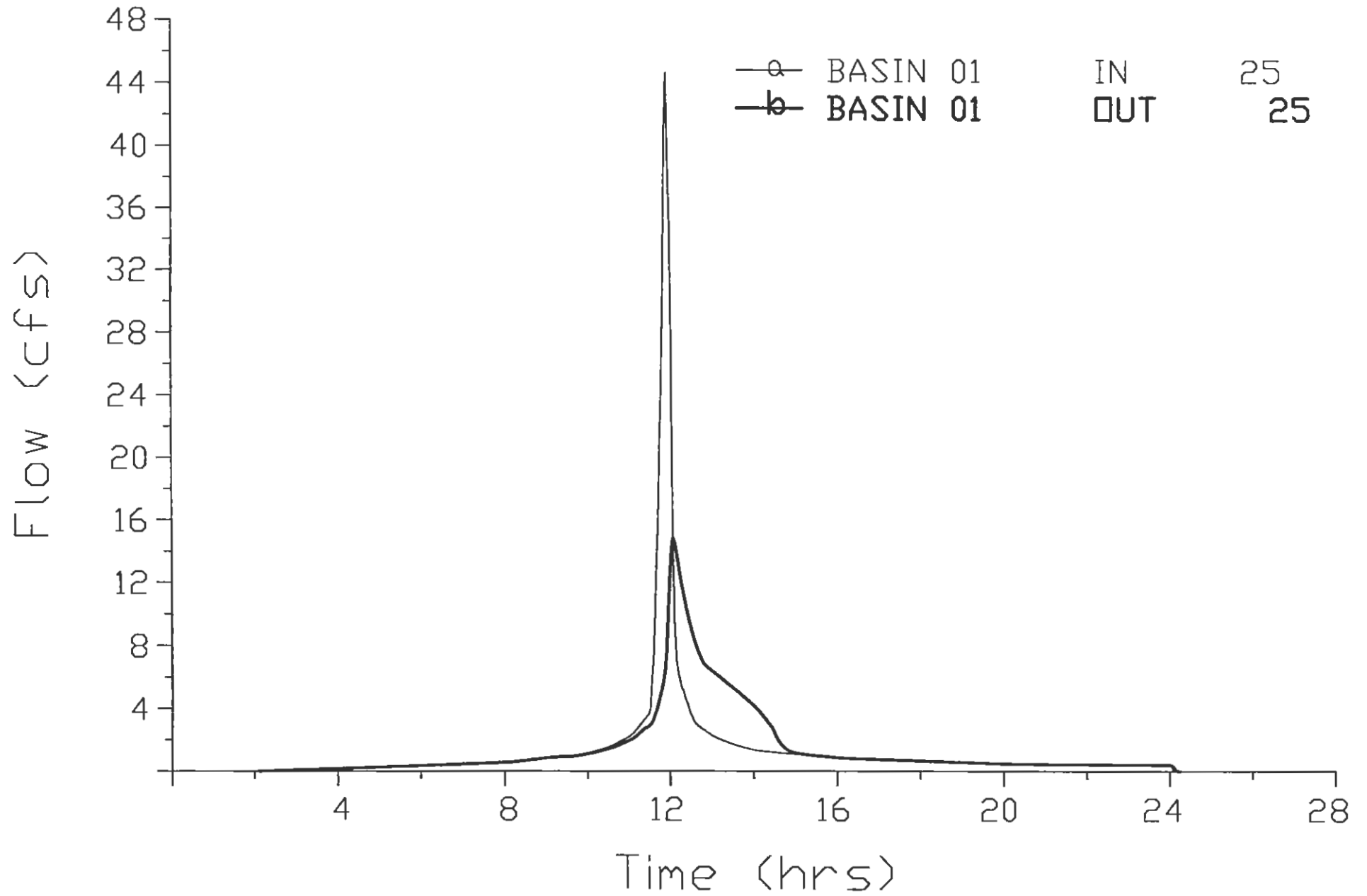
```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01      OUT    Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr    Tag: 25


          POND ROUTED TOTAL OUTFLOW HYG...
          HYG file =
          HYG ID   = BASIN 01      OUT
          HYG Tag  = 25
          ------------------------------------
          Peak Discharge =        14.88 cfs
          Time to Peak   =      12.0800 hrs
          HYG Volume     =        2.600 ac-ft
          ------------------------------------

                     HYDROGRAPH ORDINATES (cfs)
     Time  |          Output Time increment = .0400 hrs
     hrs   |   Time on left represents time for first value in each row.
   --------|------------------------------------------------------------
    2.0800 |         .00         .00         .00         .01         .01
    2.2800 |         .01         .02         .02         .03         .03
    2.4800 |         .03         .04         .04         .04         .05
    2.6800 |         .05         .05         .06         .06         .06
    2.8800 |         .07         .07         .08         .08         .08
    3.0800 |         .09         .09         .09         .10         .10
    3.2800 |         .10         .11         .11         .11         .12
    3.4800 |         .12         .12         .13         .13         .13
    3.6800 |         .14         .14         .14         .14         .15
    3.8800 |         .15         .15         .16         .16         .16
    4.0800 |         .17         .17         .17         .18         .18
    4.2800 |         .19         .19         .19         .20         .20
    4.4800 |         .20         .21         .21         .22         .22
    4.6800 |         .22         .23         .23         .23         .24
    4.8800 |         .24         .25         .25         .25         .26
    5.0800 |         .26         .27         .27         .27         .28
    5.2800 |         .28         .29         .29         .29         .30
    5.4800 |         .30         .30         .31         .31         .32
    5.6800 |         .32         .32         .33         .33         .34
    5.8800 |         .34         .34         .35         .35         .36
    6.0800 |         .36         .36         .37         .37         .38
    6.2800 |         .38         .38         .39         .39         .40
    6.4800 |         .40         .40         .41         .41         .42
    6.6800 |         .42         .42         .43         .43         .44
    6.8800 |         .44         .44         .45         .45         .46
    7.0800 |         .46         .46         .47         .47         .48
    7.2800 |         .48         .48         .49         .49         .50
    7.4800 |         .50         .50         .51         .51         .51
    7.6800 |         .52         .52         .53         .53         .53
    7.8800 |         .54         .54         .55         .55         .55
    8.0800 |         .56         .57         .57         .58         .59
    8.2800 |         .61         .62         .63         .64         .65
    8.4800 |         .67         .68         .69         .71         .72
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 25
```

<div align="center">HYDROGRAPH ORDINATES (cfs)</div>

Time hrs	Output Time increment = .0400 hrs Time on left represents time for first value in each row.				
8.6800	.73	.75	.76	.77	.78
8.8800	.79	.81	.82	.83	.85
9.0800	.86	.87	.88	.88	.89
9.2800	.89	.90	.90	.90	.91
9.4800	.91	.91	.92	.92	.93
9.6800	.95	.96	.98	1.00	1.02
9.8800	1.04	1.06	1.08	1.09	1.11
10.0800	1.13	1.16	1.18	1.21	1.23
10.2800	1.26	1.29	1.32	1.35	1.38
10.4800	1.42	1.44	1.47	1.51	1.54
10.6800	1.58	1.62	1.67	1.72	1.76
10.8800	1.81	1.85	1.90	1.95	2.00
11.0800	2.06	2.12	2.19	2.28	2.37
11.2800	2.47	2.58	2.68	2.73	2.80
11.4800	2.86	2.94	3.09	3.32	3.61
11.6800	3.98	4.37	4.77	5.23	5.75
11.8800	6.38	7.68	10.10	12.44	14.22
12.0800	14.88	14.56	13.91	13.21	12.54
12.2800	11.90	11.32	10.77	10.26	9.79
12.4800	9.34	8.92	8.54	8.18	7.86
12.6800	7.57	7.31	7.08	6.89	6.73
12.8800	6.62	6.54	6.46	6.38	6.29
13.0800	6.21	6.13	6.04	5.96	5.87
13.2800	5.78	5.70	5.61	5.52	5.44
13.4800	5.35	5.26	5.17	5.09	5.00
13.6800	4.91	4.82	4.73	4.65	4.55
13.8800	4.46	4.37	4.27	4.16	4.05
14.0800	3.94	3.83	3.71	3.58	3.45
14.2800	3.32	3.19	3.04	2.90	2.76
14.4800	2.56	2.30	2.09	1.92	1.78
14.6800	1.64	1.54	1.45	1.37	1.31
14.8800	1.25	1.21	1.18	1.16	1.13
15.0800	1.11	1.10	1.08	1.07	1.05
15.2800	1.04	1.03	1.02	1.01	1.00
15.4800	.99	.98	.97	.95	.94
15.6800	.93	.93	.92	.91	.90
15.8800	.89	.88	.87	.86	.85
16.0800	.84	.83	.82	.82	.81
16.2800	.81	.80	.80	.79	.79
16.4800	.79	.78	.78	.78	.77
16.6800	.77	.77	.76	.76	.75
16.8800	.75	.75	.74	.74	.74
17.0800	.73	.73	.73	.72	.72
17.2800	.71	.71	.71	.70	.70
17.4800	.70	.69	.69	.69	.68
17.6800	.68	.68	.67	.67	.66
17.8800	.66	.66	.65	.65	.65

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 25                    Event: 25 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 25
```

<pre>
                        HYDROGRAPH ORDINATES (cfs)
     Time | Output Time increment = .0400 hrs
hrs	Time on left represents time for first value in each row.
18.0800	.64 .64 .64 .63 .63
18.2800	.63 .62 .62 .62 .61
18.4800	.61 .60 .60 .60 .59
18.6800	.59 .59 .58 .58 .58
18.8800	.57 .57 .57 .56 .56
19.0800	.56 .55 .55 .54 .54
19.2800	.54 .53 .53 .53 .52
19.4800	.52 .52 .51 .51 .51
19.6800	.50 .50 .49 .49 .49
19.8800	.48 .48 .48 .47 .47
20.0800	.47 .46 .46 .46 .46
20.2800	.46 .46 .46 .46 .46
20.4800	.45 .45 .45 .45 .45
20.6800	.45 .45 .45 .45 .45
20.8800	.45 .45 .45 .45 .44
21.0800	.44 .44 .44 .44 .44
21.2800	.44 .44 .44 .44 .44
21.4800	.44 .44 .44 .43 .43
21.6800	.43 .43 .43 .43 .43
21.8800	.43 .43 .43 .43 .43
22.0800	.43 .43 .43 .42 .42
22.2800	.42 .42 .42 .42 .42
22.4800	.42 .42 .42 .42 .42
22.6800	.42 .42 .41 .41 .41
22.8800	.41 .41 .41 .41 .41
23.0800	.41 .41 .41 .41 .41
23.2800	.41 .40 .40 .40 .40
23.4800	.40 .40 .40 .40 .40
23.6800	.40 .40 .40 .40 .40
23.8800	.39 .39 .39 .39 .37
24.0800	.29 .15 .03 .01 .00
</pre>

Hydrograph
BASIN 01   OUT   25

100 YEAR STORM ROUTING

```
Type.... Pond Routing Summary
Name.... BASIN 01     OUT   Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100

                    LEVEL POOL ROUTING SUMMARY

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01     IN  100
  Outflow HYG file = NONE STORED - BASIN 01     OUT 100

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = OUTLET 01

  No Infiltration

  INITIAL CONDITIONS
  --------------------------------
  Starting WS Elev  =    546.00 ft
  Starting Volume   =      .000 ac-ft
  Starting Outflow  =      .00 cfs
  Starting Infiltr. =      .00 cfs
  Starting Total Qout=     .00 cfs
  Time Increment    =     .0400 hrs


  INFLOW/OUTFLOW HYDROGRAPH SUMMARY
  ================================================
  Peak Inflow    =      57.19 cfs   at   11.9200 hrs
  Peak Outflow   =      22.34 cfs   at   12.0800 hrs
  -----------------------------------------------
  Peak Elevation =    552.60 ft
  Peak Storage =      1.015 ac-ft
  ================================================


  MASS BALANCE (ac-ft)
  --------------------------
+ Initial Vol  =        .000
+ HYG Vol IN   =       3.373
- Infiltration =        .000
- HYG Vol OUT  =       3.373
- Retained Vol =        .000
                   ----------
  Unrouted Vol =      -.000 ac-ft  (.000% of Inflow Volume)
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100


          POND ROUTED TOTAL OUTFLOW HYG...
          HYG file =
          HYG ID   = BASIN 01     OUT
          HYG Tag  = 100
          ------------------------------------
          Peak Discharge =       22.34 cfs
          Time to Peak   =     12.0800 hrs
          HYG Volume     =       3.373 ac-ft
          ------------------------------------


                    HYDROGRAPH ORDINATES (cfs)
     Time  |         Output Time increment = .0400 hrs
     hrs   |   Time on left represents time for first value in each row.
  ---------|-------------------------------------------------------------
   1.6800 |       .00        .00        .01        .01        .02
   1.8800 |       .02        .03        .03        .04        .04
   2.0800 |       .05        .05        .06        .06        .07
   2.2800 |       .07        .08        .08        .09        .09
   2.4800 |       .10        .10        .11        .11        .12
   2.6800 |       .12        .13        .13        .14        .14
   2.8800 |       .15        .15        .16        .16        .16
   3.0800 |       .17        .17        .18        .18        .19
   3.2800 |       .19        .20        .20        .21        .21
   3.4800 |       .21        .22        .22        .23        .23
   3.6800 |       .24        .24        .25        .25        .25
   3.8800 |       .26        .26        .27        .27        .27
   4.0800 |       .28        .28        .29        .29        .30
   4.2800 |       .30        .31        .31        .32        .32
   4.4800 |       .33        .33        .34        .34        .35
   4.6800 |       .35        .36        .36        .37        .37
   4.8800 |       .38        .38        .39        .39        .40
   5.0800 |       .40        .41        .41        .42        .42
   5.2800 |       .43        .43        .44        .44        .45
   5.4800 |       .45        .46        .46        .47        .47
   5.6800 |       .48        .48        .49        .49        .50
   5.8800 |       .50        .51        .51        .52        .52
   6.0800 |       .53        .53        .54        .54        .55
   6.2800 |       .55        .56        .56        .57        .57
   6.4800 |       .58        .58        .59        .59        .60
   6.6800 |       .60        .61        .61        .62        .62
   6.8800 |       .63        .63        .64        .64        .65
   7.0800 |       .65        .66        .66        .67        .67
   7.2800 |       .68        .68        .69        .69        .70
   7.4800 |       .70        .71        .71        .72        .72
   7.6800 |       .72        .73        .73        .74        .74
   7.8800 |       .75        .75        .76        .76        .77
   8.0800 |       .77        .78        .79        .80        .82
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01      OUT   Tag: 100                          Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII 24hr  Tag: 100

                        HYDROGRAPH ORDINATES (cfs)
       Time  |          Output Time increment = .0400 hrs
       hrs   |   Time on left represents time for first value in each row.
    ---------|-------------------------------------------------------------
      8.2800 |      .83        .85        .86        .88        .89
      8.4800 |      .91        .93        .94        .96        .98
      8.6800 |      .99       1.01       1.03       1.05       1.06
      8.8800 |     1.08       1.09       1.11       1.13       1.14
      9.0800 |     1.16       1.17       1.18       1.19       1.20
      9.2800 |     1.21       1.21       1.22       1.22       1.22
      9.4800 |     1.23       1.23       1.23       1.24       1.25
      9.6800 |     1.27       1.28       1.30       1.33       1.35
      9.8800 |     1.37       1.40       1.42       1.45       1.47
     10.0800 |     1.50       1.53       1.56       1.59       1.62
     10.2800 |     1.66       1.70       1.74       1.78       1.81
     10.4800 |     1.84       1.88       1.92       1.96       2.01
     10.6800 |     2.06       2.11       2.17       2.23       2.29
     10.8800 |     2.35       2.42       2.48       2.55       2.62
     11.0800 |     2.68       2.73       2.78       2.84       2.91
     11.2800 |     2.98       3.05       3.13       3.21       3.29
     11.4800 |     3.38       3.47       3.63       3.86       4.15
     11.6800 |     4.51       4.90       5.37       5.91       6.51
     11.8800 |     8.28      11.92      15.97      19.41      21.77
     12.0800 |    22.34      21.46      20.15      18.82      17.59
     12.2800 |    16.46      15.44      14.52      13.67      12.89
     12.4800 |    12.16      11.49      10.88      10.31       9.80
     12.6800 |     9.33       8.91       8.54       8.20       7.89
     12.8800 |     7.61       7.36       7.14       6.95       6.79
     13.0800 |     6.66       6.58       6.50       6.43       6.35
     13.2800 |     6.27       6.19       6.11       6.04       5.96
     13.4800 |     5.88       5.79       5.71       5.63       5.55
     13.6800 |     5.47       5.39       5.30       5.22       5.14
     13.8800 |     5.06       4.97       4.89       4.81       4.72
     14.0800 |     4.64       4.55       4.47       4.37       4.28
     14.2800 |     4.19       4.09       3.99       3.89       3.78
     14.4800 |     3.67       3.56       3.45       3.33       3.21
     14.6800 |     3.09       2.96       2.84       2.71       2.51
     14.8800·|     2.30       2.13       1.99       1.88       1.78
     15.0800 |     1.69       1.61       1.55       1.49       1.45
     15.2800 |     1.41       1.38       1.35       1.32       1.30
     15.4800 |     1.28       1.26       1.24       1.23       1.21
     15.6800 |     1.20       1.19       1.17       1.16       1.15
     15.8800 |     1.13       1.12       1.11       1.10       1.08
     16.0800 |     1.07       1.06       1.05       1.04       1.03
     16.2800 |     1.02       1.02       1.01       1.01       1.00
     16.4800 |     1.00        .99        .99        .98        .98
     16.6800 |      .98        .97        .97        .96        .96
     16.8800 |      .95        .95        .94        .94        .94
     17.0800 |      .93        .93        .92        .92        .91
     17.2800 |      .91        .90        .90        .90        .89
     17.4800 |      .89        .88        .88        .87        .87
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII 24hr   Tag: 100


                        HYDROGRAPH ORDINATES (cfs)
      Time  |          Output Time increment = .0400 hrs
      hrs   |   Time on left represents time for first value in each row.
  ---------|----------------------------------------------------------
   17.6800 |       .86         .86         .86         .85         .85
   17.8800 |       .84         .84         .83         .83         .82
   18.0800 |       .82         .81         .81         .81         .80
   18.2800 |       .80         .79         .79         .78         .78
   18.4800 |       .77         .77         .77         .76         .75
   18.6800 |       .75         .75         .74         .74         .73
   18.8800 |       .73         .72         .72         .71         .71
   19.0800 |       .70         .70         .70         .69         .69
   19.2800 |       .68         .68         .67         .67         .66
   19.4800 |       .66         .66         .65         .65         .64
   19.6800 |       .64         .63         .63         .62         .62
   19.8800 |       .61         .61         .61         .60         .60
   20.0800 |       .59         .59         .59         .59         .58
   20.2800 |       .58         .58         .58         .58         .58
   20.4800 |       .58         .58         .58         .57         .57
   20.6800 |       .57         .57         .57         .57         .57
   20.8800 |       .57         .57         .57         .57         .56
   21.0800 |       .56         .56         .56         .56         .56
   21.2800 |       .56         .56         .56         .56         .56
   21.4800 |       .55         .55         .55         .55         .55
   21.6800 |       .55         .55         .55         .55         .55
   21.8800 |       .55         .55         .54         .54         .54
   22.0800 |       .54         .54         .54         .54         .54
   22.2800 |       .54         .54         .54         .53         .53
   22.4800 |       .53         .53         .53         .53         .53
   22.6800 |       .53         .53         .53         .53         .52
   22.8800 |       .52         .52         .52         .52         .52
   23.0800 |       .52         .52         .52         .52         .52
   23.2800 |       .51         .51         .51         .51         .51
   23.4800 |       .51         .51         .51         .51         .51
   23.6800 |       .51         .50         .50         .50         .50
   23.8800 |       .50         .50         .50         .50         .47
   24.0800 |       .36         .21         .07         .01         .00
```

Hydrograph
BASIN 01   OUT   100
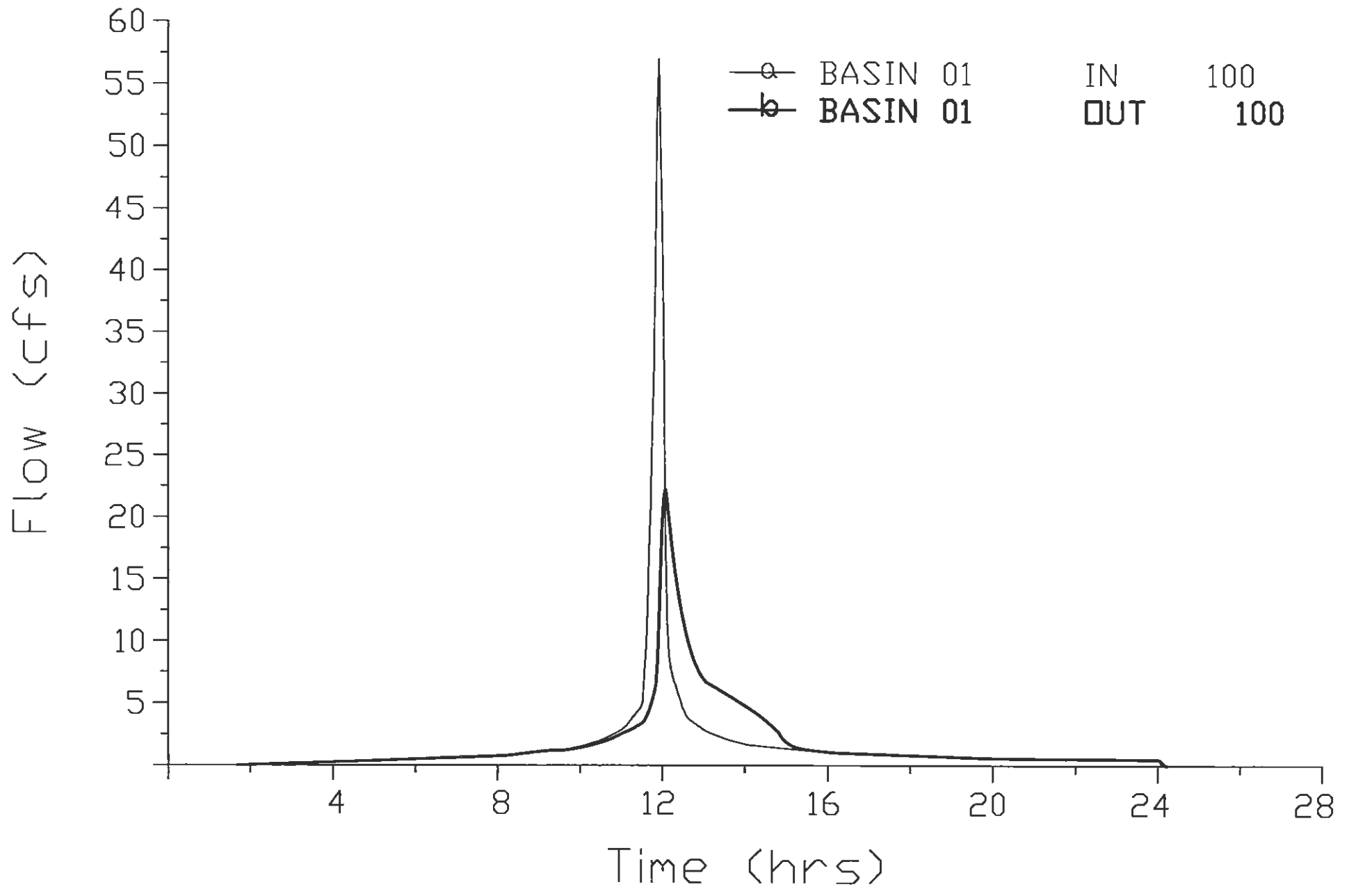
100 YEAR HIGH WATER ELEVATION
ASSUMED BLOCKED

```
Type.... Outlet Input Data
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


              REQUESTED POND WS ELEVATIONS:

                  Min. Elev.=     546.00 ft
                  Increment =        .10 ft
                  Max. Elev.=     555.00 ft



        **********************************************
                    OUTLET CONNECTIVITY
        **********************************************


         ---> Forward Flow Only (UpStream to DnStream)
         <--- Reverse Flow Only (DnStream to UpStream)
         <---> Forward and Reverse Both Allowed


       Structure          No.         Outfall    E1, ft     E2, ft
       ------------------  ----        -------   ---------  ---------
       Inlet Box           OF   --->     TW      552.650    555.000
       Weir-Rectangular    IW   --->     TW      549.600    555.000
       TW SETUP, DS Channel
```

```
Type.... Outlet Input Data
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


        OUTLET STRUCTURE INPUT DATA



        Structure ID      = OF
        Structure Type    = Inlet Box
        ------------------------------------
        # of Openings     =          1
        Invert Elev.      =     552.65 ft
        Orifice Area      =    12.5700 sq.ft
        Orifice Coeff.    =       .600
        Weir Length       =      11.82 ft
        Weir Coeff.       =      3.330
        K, Submerged      =       .000
        K, Reverse        =      1.000
        Kb,Barrel         =    .000000  (per ft of full flow)
        Barrel Length     =        .00 ft
        Mannings n        =      .0000




        Structure ID      = IW
        Structure Type    = Weir-Rectangular
        ------------------------------------
        # of Openings     =          1
        Crest Elev.       =     549.60 ft
        Weir Length       =        .75 ft
        Weir Coeff.       =   3.330000

        Weir TW effects      (Use adjustment equation)




        Structure ID      = TW
        Structure Type    = TW SETUP, DS Channel
        ------------------------------------
        FREE OUTFALL CONDITIONS SPECIFIED

        CONVERGENCE TOLERANCES...
        Maximum Iterations=    30
        Min. TW tolerance =    .01 ft
        Max. TW tolerance =    .01 ft
        Min. HW tolerance =    .01 ft
        Max. HW tolerance =    .01 ft
        Min.  Q tolerance =    .10 cfs
        Max.  Q tolerance =    .10 cfs
```

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


          RATING TABLE FOR ONE OUTLET TYPE

          Structure ID  = OF  (Inlet Box)
          ---------------------------------------
          Upstream  ID  =    (Pond Water Surface)
          DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q      Tail Water              Notes
---------------      ---------------      ---------------------------
WS Elev.    Q        TW Elev Converge
   ft      cfs          ft    +/-ft     Computation Messages
--------  -------    --------  -----     ---------------------------
546.00      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.10      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.20      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.30      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.40      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.50      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.60      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.70      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.80      .00      Free Outfall     HW & TW < Inv.El.=552.650
546.90      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.00      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.10      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.20      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.30      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.40      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.50      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.60      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.70      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.80      .00      Free Outfall     HW & TW < Inv.El.=552.650
547.90      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.00      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.10      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.20      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.30      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.40      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.50      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.60      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.70      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.80      .00      Free Outfall     HW & TW < Inv.El.=552.650
548.90      .00      Free Outfall     HW & TW < Inv.El.=552.650
549.00      .00      Free Outfall     HW & TW < Inv.El.=552.650
549.10      .00      Free Outfall     HW & TW < Inv.El.=552.650
549.20      .00      Free Outfall     HW & TW < Inv.El.=552.650
549.30      .00      Free Outfall     HW & TW < Inv.El.=552.650
```

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


              RATING TABLE FOR ONE OUTLET TYPE

          Structure ID  = OF  (Inlet Box)
          ----------------------------------------
          Upstream  ID  =    (Pond Water Surface)
          DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q    Tail Water              Notes
---------------    ---------------    --------------------------

WS Elev.    Q      TW Elev Converge
   ft      cfs        ft     +/-ft    Computation Messages
--------  -------   --------  -----   --------------------------
 549.40    .00     Free Outfall    HW & TW < Inv.El.=552.650
 549.50    .00     Free Outfall    HW & TW < Inv.El.=552.650
 549.60    .00     Free Outfall    HW & TW < Inv.El.=552.650
 549.70    .00     Free Outfall    HW & TW < Inv.El.=552.650
 549.80    .00     Free Outfall    HW & TW < Inv.El.=552.650
 549.90    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.00    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.10    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.20    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.30    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.40    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.50    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.60    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.70    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.80    .00     Free Outfall    HW & TW < Inv.El.=552.650
 550.90    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.00    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.10    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.20    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.30    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.40    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.50    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.60    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.70    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.80    .00     Free Outfall    HW & TW < Inv.El.=552.650
 551.90    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.00    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.10    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.20    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.30    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.40    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.50    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.60    .00     Free Outfall    HW & TW < Inv.El.=552.650
 552.65    .00     Free Outfall    Weir: H =.00
```

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


              RATING TABLE FOR ONE OUTLET TYPE

              Structure ID  = OF  (Inlet Box)
              ------------------------------------
              Upstream  ID  =     (Pond Water Surface)
              DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q     Tail Water                Notes
----------------     ---------------     -----------------------------
WS Elev.    Q        TW Elev Converge
   ft       cfs        ft    +/-ft    Computation Messages
--------   -------    --------  -----  ----------------------------
  552.70      .44    Free Outfall    Weir:  H =.05
  552.80     2.29    Free Outfall    Weir:  H =.15
  552.90     4.92    Free Outfall    Weir:  H =.25
  553.00     8.15    Free Outfall    Weir:  H =.35
  553.10    11.88    Free Outfall    Weir:  H =.45
  553.20    16.05    Free Outfall    Weir:  H =.55
  553.30    20.63    Free Outfall    Weir:  H =.65
  553.40    25.57    Free Outfall    Weir:  H =.75
  553.50    30.84    Free Outfall    Weir:  H =.85
  553.60    36.44    Free Outfall    Weir:  H =.95
  553.70    42.35    Free Outfall    Weir:  H =1.05
  553.80    48.54    Free Outfall    Weir:  H =1.15
  553.90    55.01    Free Outfall    Weir:  H =1.25
  554.00    61.74    Free Outfall    Weir:  H =1.35
  554.10    68.72    Free Outfall    Weir:  H =1.45
  554.20    75.32    Free Outfall    Orifice:  H =1.55
  554.30    77.71    Free Outfall    Orifice:  H =1.65
  554.40    80.03    Free Outfall    Orifice:  H =1.75
  554.50    82.29    Free Outfall    Orifice:  H =1.85
  554.60    84.48    Free Outfall    Orifice:  H =1.95
  554.70    86.62    Free Outfall    Orifice:  H =2.05
  554.80    88.71    Free Outfall    Orifice:  H =2.15
  554.90    90.75    Free Outfall    Orifice:  H =2.25
  555.00    92.74    Free Outfall    Orifice:  H =2.35
```

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


             RATING TABLE FOR ONE OUTLET TYPE

             Structure ID  = IW  (Weir-Rectangular)
             ----------------------------------------
             Upstream  ID  =     (Pond Water Surface)
             DNstream  ID  = TW (Pond Outfall)
```

WS Elev.	Q	TW Elev	Converge	
ft	cfs	ft	+/-ft	Computation Messages
546.00	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.10	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.20	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.30	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.40	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.50	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.60	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.70	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.80	.00	Free Outfall		HW & TW below Inv.El.=549.600
546.90	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.00	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.10	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.20	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.30	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.40	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.50	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.60	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.70	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.80	.00	Free Outfall		HW & TW below Inv.El.=549.600
547.90	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.00	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.10	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.20	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.30	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.40	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.50	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.60	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.70	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.80	.00	Free Outfall		HW & TW below Inv.El.=549.600
548.90	.00	Free Outfall		HW & TW below Inv.El.=549.600
549.00	.00	Free Outfall		HW & TW below Inv.El.=549.600
549.10	.00	Free Outfall		HW & TW below Inv.El.=549.600
549.20	.00	Free Outfall		HW & TW below Inv.El.=549.600
549.30	.00	Free Outfall		HW & TW below Inv.El.=549.600

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


          RATING TABLE FOR ONE OUTLET TYPE

          Structure ID  = IW  (Weir-Rectangular)
          ------------------------------------------
          Upstream  ID  =     (Pond Water Surface)
          DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q     Tail Water              Notes
---------------   ---------------   ---------------------------
WS Elev.   Q      TW Elev Converge
   ft     cfs        ft    +/-ft    Computation Messages
--------  -------  --------  -----  ---------------------------
 549.40     .00   Free Outfall   HW & TW below Inv.El.=549.600
 549.50     .00   Free Outfall   HW & TW below Inv.El.=549.600
 549.60     .00   Free Outfall   H=.00; Htw=.00; Qfree=.00;
 549.70     .08   Free Outfall   H=.10; Htw=.00; Qfree=.08;
 549.80     .22   Free Outfall   H=.20; Htw=.00; Qfree=.22;
 549.90     .41   Free Outfall   H=.30; Htw=.00; Qfree=.41;
 550.00     .63   Free Outfall   H=.40; Htw=.00; Qfree=.63;
 550.10     .88   Free Outfall   H=.50; Htw=.00; Qfree=.88;
 550.20    1.16   Free Outfall   H=.60; Htw=.00; Qfree=1.16;
 550.30    1.46   Free Outfall   H=.70; Htw=.00; Qfree=1.46;
 550.40    1.79   Free Outfall   H=.80; Htw=.00; Qfree=1.79;
 550.50    2.13   Free Outfall   H=.90; Htw=.00; Qfree=2.13;
 550.60    2.50   Free Outfall   H=1.00; Htw=.00; Qfree=2.50;
 550.70    2.88   Free Outfall   H=1.10; Htw=.00; Qfree=2.88;
 550.80    3.28   Free Outfall   H=1.20; Htw=.00; Qfree=3.28;
 550.90    3.70   Free Outfall   H=1.30; Htw=.00; Qfree=3.70;
 551.00    4.14   Free Outfall   H=1.40; Htw=.00; Qfree=4.14;
 551.10    4.59   Free Outfall   H=1.50; Htw=.00; Qfree=4.59;
 551.20    5.05   Free Outfall   H=1.60; Htw=.00; Qfree=5.05;
 551.30    5.54   Free Outfall   H=1.70; Htw=.00; Qfree=5.54;
 551.40    6.03   Free Outfall   H=1.80; Htw=.00; Qfree=6.03;
 551.50    6.54   Free Outfall   H=1.90; Htw=.00; Qfree=6.54;
 551.60    7.06   Free Outfall   H=2.00; Htw=.00; Qfree=7.06;
 551.70    7.60   Free Outfall   H=2.10; Htw=.00; Qfree=7.60;
 551.80    8.15   Free Outfall   H=2.20; Htw=.00; Qfree=8.15;
 551.90    8.71   Free Outfall   H=2.30; Htw=.00; Qfree=8.71;
 552.00    9.29   Free Outfall   H=2.40; Htw=.00; Qfree=9.29;
 552.10    9.87   Free Outfall   H=2.50; Htw=.00; Qfree=9.87;
 552.20   10.47   Free Outfall   H=2.60; Htw=.00; Qfree=10.47;
 552.30   11.08   Free Outfall   H=2.70; Htw=.00; Qfree=11.08;
 552.40   11.70   Free Outfall   H=2.80; Htw=.00; Qfree=11.70;
 552.50   12.33   Free Outfall   H=2.90; Htw=.00; Qfree=12.33;
 552.60   12.98   Free Outfall   H=3.00; Htw=.00; Qfree=12.98;
 552.65   13.30   Free Outfall   H=3.05; Htw=.00; Qfree=13.30;
```

```
Type.... Individual Outlet Curves
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


          RATING TABLE FOR ONE OUTLET TYPE

          Structure ID  = IW  (Weir-Rectangular)
          ----------------------------------------
          Upstream  ID  =     (Pond Water Surface)
          DNstream  ID  = TW (Pond Outfall)


WS Elev,Device Q      Tail Water              Notes
---------------   ----------------   ---------------------------
WS Elev.    Q      TW Elev Converge
  ft       cfs        ft    +/-ft    Computation Messages
--------  -------   --------  -----  ---------------------------
552.70    13.63    Free Outfall     H=3.10; Htw=.00; Qfree=13.63;
552.80    14.30    Free Outfall     H=3.20; Htw=.00; Qfree=14.30;
552.90    14.97    Free Outfall     H=3.30; Htw=.00; Qfree=14.97;
553.00    15.66    Free Outfall     H=3.40; Htw=.00; Qfree=15.66;
553.10    16.35    Free Outfall     H=3.50; Htw=.00; Qfree=16.35;
553.20    17.06    Free Outfall     H=3.60; Htw=.00; Qfree=17.06;
553.30    17.78    Free Outfall     H=3.70; Htw=.00; Qfree=17.78;
553.40    18.50    Free Outfall     H=3.80; Htw=.00; Qfree=18.50;
553.50    19.24    Free Outfall     H=3.90; Htw=.00; Qfree=19.24;
553.60    19.98    Free Outfall     H=4.00; Htw=.00; Qfree=19.98;
553.70    20.73    Free Outfall     H=4.10; Htw=.00; Qfree=20.73;
553.80    21.50    Free Outfall     H=4.20; Htw=.00; Qfree=21.50;
553.90    22.27    Free Outfall     H=4.30; Htw=.00; Qfree=22.27;
554.00    23.05    Free Outfall     H=4.40; Htw=.00; Qfree=23.05;
554.10    23.84    Free Outfall     H=4.50; Htw=.00; Qfree=23.84;
554.20    24.64    Free Outfall     H=4.60; Htw=.00; Qfree=24.64;
554.30    25.45    Free Outfall     H=4.70; Htw=.00; Qfree=25.45;
554.40    26.26    Free Outfall     H=4.80; Htw=.00; Qfree=26.26;
554.50    27.09    Free Outfall     H=4.90; Htw=.00; Qfree=27.09;
554.60    27.92    Free Outfall     H=5.00; Htw=.00; Qfree=27.92;
554.70    28.77    Free Outfall     H=5.10; Htw=.00; Qfree=28.77;
554.80    29.62    Free Outfall     H=5.20; Htw=.00; Qfree=29.62;
554.90    30.47    Free Outfall     H=5.30; Htw=.00; Qfree=30.47;
555.00    31.34    Free Outfall     H=5.40; Htw=.00; Qfree=31.34;
```

```
Type.... Composite Rating Curve
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


           ***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q                          Notes
----------------   -------- Converge -------------------------
   Elev.     Q     TW Elev  Error
    ft      cfs       ft    +/-ft   Contributing Structures
--------  -------  --------  -----   -------------------------
  546.00    .00    Free Outfall    None contributing
  546.10    .00    Free Outfall    None contributing
  546.20    .00    Free Outfall    None contributing
  546.30    .00    Free Outfall    None contributing
  546.40    .00    Free Outfall    None contributing
  546.50    .00    Free Outfall    None contributing
  546.60    .00    Free Outfall    None contributing
  546.70    .00    Free Outfall    None contributing
  546.80    .00    Free Outfall    None contributing
  546.90    .00    Free Outfall    None contributing
  547.00    .00    Free Outfall    None contributing
  547.10    .00    Free Outfall    None contributing
  547.20    .00    Free Outfall    None contributing
  547.30    .00    Free Outfall    None contributing
  547.40    .00    Free Outfall    None contributing
  547.50    .00    Free Outfall    None contributing
  547.60    .00    Free Outfall    None contributing
  547.70    .00    Free Outfall    None contributing
  547.80    .00    Free Outfall    None contributing
  547.90    .00    Free Outfall    None contributing
  548.00    .00    Free Outfall    None contributing
  548.10    .00    Free Outfall    None contributing
  548.20    .00    Free Outfall    None contributing
  548.30    .00    Free Outfall    None contributing
  548.40    .00    Free Outfall    None contributing
  548.50    .00    Free Outfall    None contributing
  548.60    .00    Free Outfall    None contributing
  548.70    .00    Free Outfall    None contributing
  548.80    .00    Free Outfall    None contributing
  548.90    .00    Free Outfall    None contributing
  549.00    .00    Free Outfall    None contributing
  549.10    .00    Free Outfall    None contributing
  549.20    .00    Free Outfall    None contributing
  549.30    .00    Free Outfall    None contributing
  549.40    .00    Free Outfall    None contributing
  549.50    .00    Free Outfall    None contributing
  549.60    .00    Free Outfall    IW
  549.70    .08    Free Outfall    IW
```

```
Type.... Composite Rating Curve
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


                ***** COMPOSITE OUTFLOW SUMMARY ****


WS Elev, Total Q                              Notes
----------------  -------- Converge ------------------------
Elev.      Q      TW Elev  Error
  ft      cfs        ft     +/-ft   Contributing Structures
--------  -------  --------  -----   --------------------------
 549.80     .22   Free Outfall   IW
 549.90     .41   Free Outfall   IW
 550.00     .63   Free Outfall   IW
 550.10     .88   Free Outfall   IW
 550.20    1.16   Free Outfall   IW
 550.30    1.46   Free Outfall   IW
 550.40    1.79   Free Outfall   IW
 550.50    2.13   Free Outfall   IW
 550.60    2.50   Free Outfall   IW
 550.70    2.88   Free Outfall   IW
 550.80    3.28   Free Outfall   IW
 550.90    3.70   Free Outfall   IW
 551.00    4.14   Free Outfall   IW
 551.10    4.59   Free Outfall   IW
 551.20    5.05   Free Outfall   IW
 551.30    5.54   Free Outfall   IW
 551.40    6.03   Free Outfall   IW
 551.50    6.54   Free Outfall   IW
 551.60    7.06   Free Outfall   IW
 551.70    7.60   Free Outfall   IW
 551.80    8.15   Free Outfall   IW
 551.90    8.71   Free Outfall   IW
 552.00    9.29   Free Outfall   IW
 552.10    9.87   Free Outfall   IW
 552.20   10.47   Free Outfall   IW
 552.30   11.08   Free Outfall   IW
 552.40   11.70   Free Outfall   IW
 552.50   12.33   Free Outfall   IW
 552.60   12.98   Free Outfall   IW
 552.65   13.30   Free Outfall   OF +IW
 552.70   14.07   Free Outfall   OF +IW
 552.80   16.58   Free Outfall   OF +IW
 552.90   19.89   Free Outfall   OF +IW
 553.00   23.81   Free Outfall   OF +IW
 553.10   28.23   Free Outfall   OF +IW
 553.20   33.11   Free Outfall   OF +IW
 553.30   38.40   Free Outfall   OF +IW
 553.40   44.07   Free Outfall   OF +IW
```

```
Type.... Composite Rating Curve
Name.... BLOCKED

File.... R:\0675I\0675I.PPW


              ***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q                              Notes
----------------   -------- Converge -------------------------
   Elev.     Q     TW Elev  Error
    ft      cfs       ft    +/-ft   Contributing Structures
--------  --------  --------  -----  -------------------------
 553.50    50.08   Free Outfall   OF +IW
 553.60    56.42   Free Outfall   OF +IW
 553.70    63.08   Free Outfall   OF +IW
 553.80    70.04   Free Outfall   OF +IW
 553.90    77.28   Free Outfall   OF +IW
 554.00    84.79   Free Outfall   OF +IW
 554.10    92.56   Free Outfall   OF +IW
 554.20    99.96   Free Outfall   OF +IW
 554.30   103.16   Free Outfall   OF +IW
 554.40   106.30   Free Outfall   OF +IW
 554.50   109.38   Free Outfall   OF +IW
 554.60   112.41   Free Outfall   OF +IW
 554.70   115.39   Free Outfall   OF +IW
 554.80   118.32   Free Outfall   OF +IW
 554.90   121.22   Free Outfall   OF +IW
 555.00   124.08   Free Outfall   OF +IW
```

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                      LEVEL POOL ROUTING DATA

  HYG Dir           = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01      IN  2
  Outflow HYG file = NONE STORED - BASIN 01      OUT 2

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = BLOCKED

  No Infiltration

  INITIAL CONDITIONS
  ----------------------------------
  Starting WS Elev   =    546.00 ft
  Starting Volume    =      .000 ac-ft
  Starting Outflow   =      .00 cfs
  Starting Infiltr.  =      .00 cfs
  Starting Total Qout=      .00 cfs
  Time Increment     =    .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
546.00	.00	.000	0	.00	.00	.00
546.10	.00	.000	38	.00	.00	.02
546.20	.00	.000	152	.00	.00	.14
546.30	.00	.001	342	.00	.00	.48
546.40	.00	.002	609	.00	.00	1.13
546.50	.00	.004	951	.00	.00	2.20
546.60	.00	.006	1370	.00	.00	3.80
546.70	.00	.010	1865	.00	.00	6.04
546.80	.00	.015	2435	.00	.00	9.02
546.90	.00	.021	3082	.00	.00	12.84
547.00	.00	.029	3805	.00	.00	17.62
547.10	.00	.038	4147	.00	.00	23.13
547.20	.00	.048	4503	.00	.00	29.14
547.30	.00	.059	4875	.00	.00	35.65
547.40	.00	.071	5261	.00	.00	42.69
547.50	.00	.083	5661	.00	.00	50.27
547.60	.00	.097	6076	.00	.00	58.42
547.70	.00	.111	6507	.00	.00	67.16
547.80	.00	.126	6951	.00	.00	76.50
547.90	.00	.143	7411	.00	.00	86.48
548.00	.00	.160	7885	.00	.00	97.09
548.10	.00	.179	7893	.00	.00	108.05
548.20	.00	.197	7902	.00	.00	119.02

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

  HYG Dir          = R:\0675I\
  Inflow  HYG file = NONE STORED - BASIN 01      IN  2
  Outflow HYG file = NONE STORED - BASIN 01      OUT 2

  Pond Node   Data = BASIN 01
  Pond Volume Data = Basin 01
  Pond Outlet Data = BLOCKED

  No Infiltration

  INITIAL CONDITIONS
  ----------------------------------
  Starting WS Elev   =    546.00 ft
  Starting Volume    =      .000 ac-ft
  Starting Outflow   =      .00 cfs
  Starting Infiltr.  =      .00 cfs
  Starting Total Qout=      .00 cfs
  Time Increment     =    .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
548.30	.00	.215	7910	.00	.00	130.00
548.40	.00	.233	7919	.00	.00	141.00
548.50	.00	.251	7927	.00	.00	152.00
548.60	.00	.269	7936	.00	.00	163.01
548.70	.00	.288	7944	.00	.00	174.04
548.80	.00	.306	7953	.00	.00	185.08
548.90	.00	.324	7961	.00	.00	196.14
549.00	.00	.342	7970	.00	.00	207.20
549.10	.00	.361	7978	.00	.00	218.27
549.20	.00	.379	7987	.00	.00	229.36
549.30	.00	.397	7995	.00	.00	240.46
549.40	.00	.416	8004	.00	.00	251.57
549.50	.00	.434	8012	.00	.00	262.69
549.60	.00	.453	8021	.00	.00	273.82
549.70	.08	.471	8029	.00	.08	285.05
549.80	.22	.489	8038	.00	.22	296.35
549.90	.41	.508	8046	.00	.41	307.71
550.00	.63	.526	8055	.00	.63	319.11
550.10	.88	.545	8064	.00	.88	330.56
550.20	1.16	.563	8073	.00	1.16	342.04
550.30	1.46	.582	8082	.00	1.46	353.56
550.40	1.79	.601	8091	.00	1.79	365.12
550.50	2.13	.619	8100	.00	2.13	376.71

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

 HYG Dir          = R:\0675I\
 Inflow  HYG file = NONE STORED - BASIN 01      IN  2
 Outflow HYG file = NONE STORED - BASIN 01      OUT 2

 Pond Node   Data = BASIN 01
 Pond Volume Data = Basin 01
 Pond Outlet Data = BLOCKED

 No Infiltration

 INITIAL CONDITIONS
 ----------------------------------
 Starting WS Elev   =    546.00 ft
 Starting Volume    =      .000 ac-ft
 Starting Outflow   =      .00 cfs
 Starting Infiltr.  =      .00 cfs
 Starting Total Qout=      .00 cfs
 Time Increment     =    .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
550.60	2.50	.638	8109	.00	2.50	388.33
550.70	2.88	.656	8118	.00	2.88	399.98
550.80	3.28	.675	8127	.00	3.28	411.66
550.90	3.70	.694	8136	.00	3.70	423.38
551.00	4.14	.712	8145	.00	4.14	435.12
551.10	4.59	.731	8153	.00	4.59	446.89
551.20	5.05	.750	8162	.00	5.05	458.69
551.30	5.54	.769	8170	.00	5.54	470.51
551.40	6.03	.787	8179	.00	6.03	482.36
551.50	6.54	.806	8187	.00	6.54	494.23
551.60	7.06	.825	8196	.00	7.06	506.13
551.70	7.60	.844	8204	.00	7.60	518.06
551.80	8.15	.863	8213	.00	8.15	530.01
551.90	8.71	.881	8221	.00	8.71	541.99
552.00	9.29	.900	8230	.00	9.29	553.98
552.10	9.87	.919	8238	.00	9.87	566.00
552.20	10.47	.938	8247	.00	10.47	578.05
552.30	11.08	.957	8255	.00	11.08	590.12
552.40	11.70	.976	8264	.00	11.70	602.22
552.50	12.33	.995	8272	.00	12.33	614.33
552.60	12.98	1.014	8281	.00	12.98	626.47
552.65	13.30	1.024	8285	.00	13.30	632.55
552.70	14.07	1.033	8289	.00	14.07	639.07

```
Type.... Pond E-V-Q Table
Name.... BASIN 01
File.... R:\0675I\0675I.PPW

                    LEVEL POOL ROUTING DATA

HYG Dir            = R:\0675I\
Inflow  HYG file = NONE STORED - BASIN 01     IN  2
Outflow HYG file = NONE STORED - BASIN 01     OUT 2

Pond Node   Data = BASIN 01
Pond Volume Data = Basin 01
Pond Outlet Data = BLOCKED

No Infiltration

INITIAL CONDITIONS
-----------------------------------
Starting WS Elev   =    546.00 ft
Starting Volume    =      .000 ac-ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0400 hrs
```

Elevation ft	Outflow cfs	Storage ac-ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
552.80	16.58	1.052	8298	.00	16.58	653.10
552.90	19.89	1.071	8306	.00	19.89	667.94
553.00	23.81	1.090	8315	.00	23.81	683.40
553.10	28.23	1.109	8324	.00	28.23	699.38
553.20	33.11	1.128	8333	.00	33.11	715.83
553.30	38.40	1.148	8342	.00	38.40	732.69
553.40	44.07	1.167	8351	.00	44.07	749.96
553.50	50.08	1.186	8360	.00	50.08	767.57
553.60	56.42	1.205	8369	.00	56.42	785.53
553.70	63.08	1.224	8378	.00	63.08	803.82
553.80	70.04	1.244	8387	.00	70.04	822.41
553.90	77.28	1.263	8396	.00	77.28	841.32
554.00	84.79	1.282	8405	.00	84.79	860.49
554.10	92.56	1.301	8413	.00	92.56	879.94
554.20	99.96	1.321	8422	.00	99.96	899.04
554.30	103.16	1.340	8430	.00	103.16	913.94
554.40	106.30	1.359	8439	.00	106.30	928.79
554.50	109.38	1.379	8447	.00	109.38	943.60
554.60	112.41	1.398	8456	.00	112.41	958.36
554.70	115.39	1.418	8464	.00	115.39	973.10
554.80	118.32	1.437	8473	.00	118.32	987.79
554.90	121.22	1.457	8481	.00	121.22	1002.47
555.00	124.08	1.476	8490	.00	124.08	1017.11

```
Type.... Pond Routing Summary
Name.... BASIN 01     OUT   Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100

                    LEVEL POOL ROUTING SUMMARY

 HYG Dir          = R:\0675I\
 Inflow  HYG file = NONE STORED - BASIN 01      IN  100
 Outflow HYG file = NONE STORED - BASIN 01      OUT 100

 Pond Node   Data = BASIN 01
 Pond Volume Data = Basin 01
 Pond Outlet Data = BLOCKED

 No Infiltration

 INITIAL CONDITIONS
 ----------------------------------
 Starting WS Elev   =    546.00 ft
 Starting Volume    =      .000 ac-ft
 Starting Outflow   =      .00 cfs
 Starting Infiltr.  =      .00 cfs
 Starting Total Qout=      .00 cfs
 Time Increment     =    .0400 hrs


 INFLOW/OUTFLOW HYDROGRAPH SUMMARY
 =================================================================
 Peak Inflow      =      57.19 cfs    at    11.9200 hrs
 Peak Outflow     =      49.79 cfs    at    11.9600 hrs
 -----------------------------------------------------------------
 Peak Elevation   =    553.50 ft
 Peak Storage =        1.185 ac-ft
 =================================================================


 MASS BALANCE (ac-ft)
 -------------------------
 + Initial Vol  =        .000
 + HYG Vol IN   =       3.373
 - Infiltration =        .000
 - HYG Vol OUT  =       2.920
 - Retained Vol =        .453
                     ----------
 Unrouted Vol =       -.000 ac-ft  (.000% of Inflow Volume)
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 100                          Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100


            POND ROUTED TOTAL OUTFLOW HYG...
            HYG file =
            HYG ID   = BASIN 01      OUT
            HYG Tag  = 100
            ------------------------------------
            Peak Discharge =       49.79 cfs
            Time to Peak   =     11.9600 hrs
            HYG Volume     =       2.920 ac-ft
            ------------------------------------


                    HYDROGRAPH ORDINATES (cfs)
   Time   |         Output Time increment = .0400 hrs
   hrs    |    Time on left represents time for first value in each row.
----------|---------------------------------------------------------------
  10.2800 |        .00        .00        .00        .00        .00
  10.4800 |        .02        .05        .08        .13        .19
  10.6800 |        .24        .31        .38        .46        .54
  10.8800 |        .62        .71        .80        .89        .99
  11.0800 |       1.09       1.19       1.30       1.41       1.53
  11.2800 |       1.66       1.79       1.93       2.07       2.22
  11.4800 |       2.37       2.53       2.79       3.17       3.72
  11.6800 |       4.57       5.72       7.26       9.29      11.91
  11.8800 |      21.54      41.20      49.79      48.44      42.68
  12.0800 |      32.45      22.53      16.67      13.81      12.87
  12.2800 |      12.25      11.66      11.10      10.56      10.05
  12.4800 |       9.55       9.07       8.61       8.18       7.78
  12.6800 |       7.40       7.06       6.75       6.45       6.18
  12.8800 |       5.93       5.70       5.48       5.27       5.07
  13.0800 |       4.89       4.72       4.55       4.40       4.26
  13.2800 |       4.12       4.00       3.88       3.77       3.66
  13.4800 |       3.56       3.46       3.37       3.28       3.19
  13.6800 |       3.11       3.03       2.96       2.89       2.82
  13.8800 |       2.76       2.69       2.63       2.57       2.52
  14.0800 |       2.46       2.41       2.36       2.32       2.27
  14.2800 |       2.23       2.19       2.15       2.12       2.08
  14.4800 |       2.05       2.02       1.99       1.96       1.93
  14.6800 |       1.90       1.88       1.85       1.83       1.80
  14.8800 |       1.78       1.76       1.74       1.72       1.70
  15.0800 |       1.68       1.66       1.64       1.62       1.60
  15.2800 |       1.59       1.57       1.55       1.53       1.52
  15.4800 |       1.50       1.48       1.47       1.45       1.44
  15.6800 |       1.42       1.41       1.39       1.38       1.37
  15.8800 |       1.35       1.34       1.32       1.31       1.30
  16.0800 |       1.28       1.27       1.26       1.24       1.23
  16.2800 |       1.22       1.21       1.20       1.19       1.18
  16.4800 |       1.17       1.16       1.15       1.14       1.13
  16.6800 |       1.13       1.12       1.11       1.10       1.09
  16.8800 |       1.09       1.08       1.07       1.07       1.06
  17.0800 |       1.05       1.05       1.04       1.03       1.03
  17.2800 |       1.02       1.01       1.01       1.00       1.00
  17.4800 |        .99        .99        .98        .97        .97
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01    OUT   Tag: 100                          Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100
```

```
                      HYDROGRAPH ORDINATES (cfs)
   Time  |            Output Time increment = .0400 hrs
   hrs   |   Time on left represents time for first value in each row.
---------|--------------------------------------------------------------
 17.6800 |      .96        .96        .95        .95        .94
 17.8800 |      .94        .93        .93        .92        .92
 18.0800 |      .91        .91        .90        .90        .89
 18.2800 |      .89        .88        .88        .87        .87
 18.4800 |      .86        .86        .85        .85        .84
 18.6800 |      .84        .84        .83        .83        .82
 18.8800 |      .82        .81        .81        .80        .80
 19.0800 |      .80        .79        .79        .78        .78
 19.2800 |      .77        .77        .76        .76        .75
 19.4800 |      .75        .75        .74        .74        .73
 19.6800 |      .73        .72        .72        .71        .71
 19.8800 |      .71        .70        .70        .69        .69
 20.0800 |      .68        .68        .67        .67        .67
 20.2800 |      .66        .66        .66        .65        .65
 20.4800 |      .65        .64        .64        .64        .63
 20.6800 |      .63        .63        .63        .62        .62
 20.8800 |      .62        .62        .62        .61        .61
 21.0800 |      .61        .61        .61        .60        .60
 21.2800 |      .60        .60        .60        .60        .59
 21.4800 |      .59        .59        .59        .59        .59
 21.6800 |      .58        .58        .58        .58        .58
 21.8800 |      .58        .58        .58        .57        .57
 22.0800 |      .57        .57        .57        .57        .57
 22.2800 |      .57        .56        .56        .56        .56
 22.4800 |      .56        .56        .56        .56        .55
 22.6800 |      .55        .55        .55        .55        .55
 22.8800 |      .55        .55        .55        .55        .54
 23.0800 |      .54        .54        .54        .54        .54
 23.2800 |      .54        .54        .54        .54        .53
 23.4800 |      .53        .53        .53        .53        .53
 23.6800 |      .53        .53        .53        .53        .52
 23.8800 |      .52        .52        .52        .52        .52
 24.0800 |      .51        .49        .47        .45        .44
 24.2800 |      .42        .40        .39        .38        .37
 24.4800 |      .35        .34        .33        .32        .31
 24.6800 |      .30        .29        .28        .27        .26
 24.8800 |      .25        .24        .24        .23        .22
 25.0800 |      .22        .21        .21        .20        .19
 25.2800 |      .19        .19        .18        .18        .17
 25.4800 |      .17        .16        .16        .15        .15
 25.6800 |      .15        .14        .14        .14        .13
 25.8800 |      .13        .13        .12        .12        .12
 26.0800 |      .11        .11        .11        .10        .10
 26.2800 |      .10        .10        .09        .09        .09
 26.4800 |      .09        .09        .08        .08        .08
 26.6800 |      .08        .08        .08        .07        .07
 26.8800 |      .07        .07        .07        .07        .07
```

```
Type.... Pond Routed HYG (total out)
Name.... BASIN 01     OUT   Tag: 100                    Event: 100 yr
File.... R:\0675I\0675I.PPW
Storm... TypeII  24hr   Tag: 100
```

```
                       HYDROGRAPH ORDINATES (cfs)
     Time  |           Output Time increment = .0400 hrs
     hrs   |   Time on left represents time for first value in each row.
 ----------|-----------------------------------------------------------
   27.0800 |      .07        .07        .07        .06        .06
   27.2800 |      .06        .06        .06        .06        .06
   27.4800 |      .06        .06        .06        .06        .06
   27.6800 |      .05        .05        .05        .05        .05
   27.8800 |      .05        .05        .05        .05        .05
   28.0800 |      .05        .05        .05        .05        .04
   28.2800 |      .04        .04        .04        .04        .04
   28.4800 |      .04        .04        .04        .04        .04
   28.6800 |      .04        .04        .04        .04        .04
   28.8800 |      .04        .04        .03        .03        .03
   29.0800 |      .03        .03        .03        .03        .03
   29.2800 |      .03        .03        .03        .03        .03
   29.4800 |      .03        .03        .03        .03        .03
   29.6800 |      .03        .03        .03        .03        .03
   29.8800 |      .03        .02        .02        .02        .02
   30.0800 |      .02        .02        .02        .02        .02
   30.2800 |      .02        .02        .02        .02        .02
   30.4800 |      .02        .02        .02        .02        .02
   30.6800 |      .02        .02        .02        .02        .02
   30.8800 |      .02        .02        .02        .02        .02
   31.0800 |      .02        .02        .02        .02        .02
   31.2800 |      .02        .02        .01        .01        .01
   31.4800 |      .01        .01        .01        .01        .01
   31.6800 |      .01        .01        .01        .01        .01
   31.8800 |      .01        .01        .01        .01        .01
   32.0800 |      .01        .01        .01        .01        .01
   32.2800 |      .01        .01        .01        .01        .01
   32.4800 |      .01        .01        .01        .01        .01
   32.6800 |      .01        .01        .01        .01        .01
   32.8800 |      .01        .01        .01        .01        .01
   33.0800 |      .01        .01        .01        .01        .01
   33.2800 |      .01        .01        .01        .01        .01
   33.4800 |      .01        .01        .01        .01        .01
   33.6800 |      .01        .01        .01        .01        .01
   33.8800 |      .01        .01        .01        .01        .01
   34.0800 |      .01        .01        .01        .01        .01
   34.2800 |      .01        .01        .01        .01        .00
   34.4800 |      .00        .00        .00        .00        .00
```

Hydrograph
BASIN 01   OUT   100

BASIN 01   IN   100
BASIN 01   OUT   100

Flow (cfs)

Time (hrs)
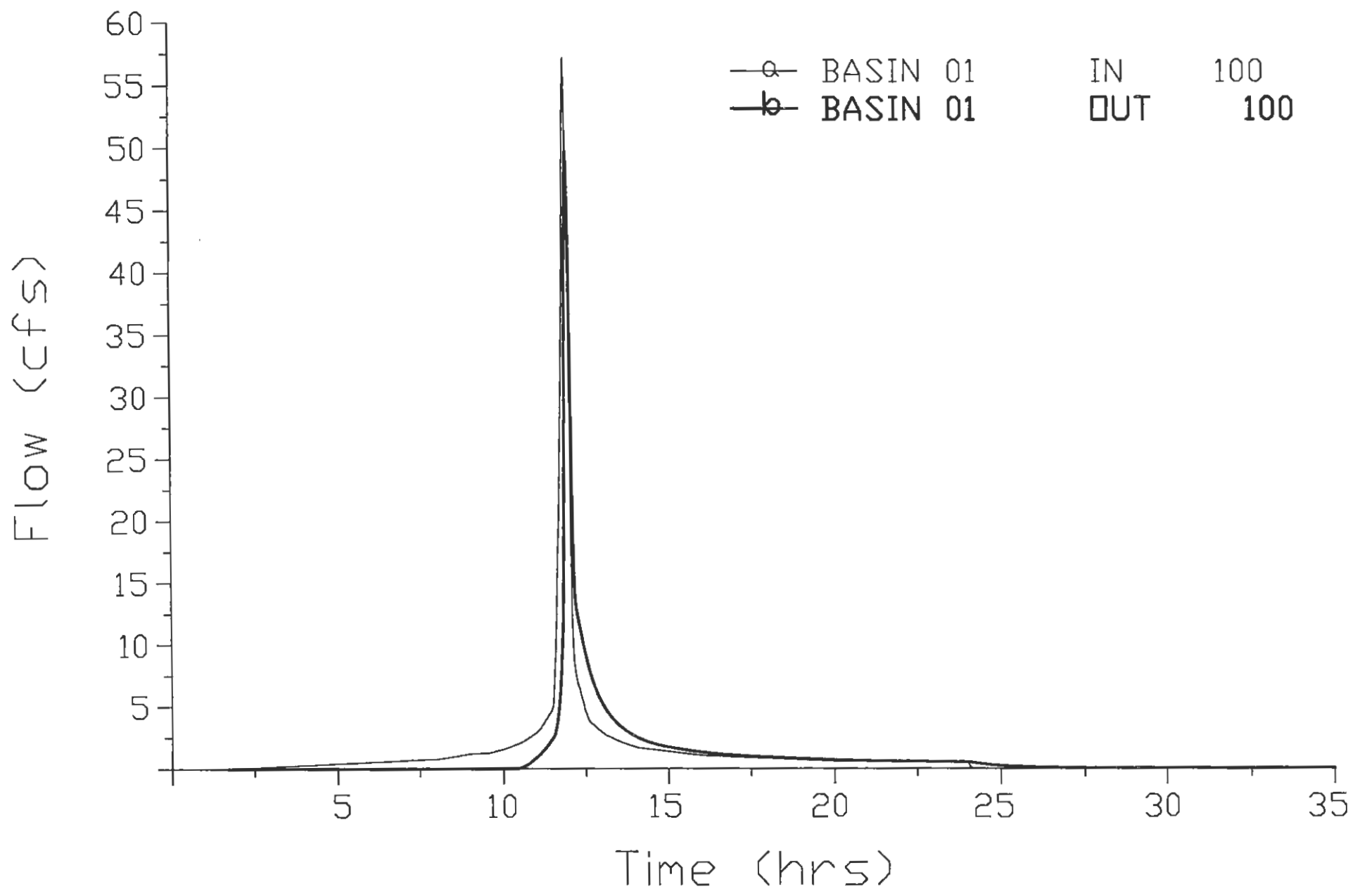
APPENDIX

SOILS MAP AND INDEX

DRAINAGE AREA MAP

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness		Uncoated steel	Concrete
					Ft			In				
31C------------ Hatton	C	None--------	---	---	1.5-3.0	Perched	Oct-Apr	>60	---	High-----	High-----	Moderate.
34E------------ Lindley	C	None--------	---	---	>6.0	---	---	>60	---	Moderate	Moderate	Moderate.
35B------------ Mexico	D	None--------	---	---	1.0-2.0	Perched	Nov-Apr	>60	---	Moderate	High-----	Moderate.
37------------ Marion	D	None--------	---	---	1.0-2.0	Perched	Nov-May	>60	---	Moderate	High-----	High.
40------------ Westerville	C	Rare--------	---	---	1.0-3.0	Apparent	Nov-Apr	>60	---	High-----	---	---
41------------ Freeburg	C	Rare--------	---	---	1.5-3.0	Perched	Nov-May	>60	---	High-----	Moderate	High.
43------------ Cedargap	B	Occasional	Very brief	Nov-Mar	>6.0	---	---	>60	---	Moderate	Low------	Low.
44------------ Sensabaugh	B	Occasional	Very brief	Jan-Apr	4.0-6.0	Apparent	Jan-Apr	>60	---	---	Low------	Low.
48A, 48B, 48C---- Weller	C	None--------	---	---	2.0-4.0	Apparent	Nov-Jul	>60	---	High-----	High-----	High.
54C*, 54D*: Harvester--------	B	None--------	---	---	>6.0	---	---	>60	---	High-----	Low------	Low.
Urban land.												
62------------ Edinburg	C	None--------	---	---	+.5-2.0	Apparent	Mar-Jun	>60	---	High-----	High-----	Moderate.
63B------------ Herrick	B	None--------	---	---	1.0-3.0	Apparent	Mar-Jun	>60	---	High-----	High-----	High.
67E------------ Menfro	B	None--------	---	---	>6.0	---	---	>60	---	High-----	Low------	Moderate.
70------------ Booker	D	Frequent----	Brief to long.	Apr-Jul	+.5-1.0	Perched	Nov-May	>60	---	Moderate	High-----	Moderate.
71------------ Waldron	D	Rare--------	Brief-----	Mar-Jun	1.0-3.0	Perched	Nov-May	>60	---	High-----	High-----	Low.
72------------ Blake	B	Rare--------	Very brief	Feb-Nov	2.0-4.0	Apparent	Nov-Jul	>60	---	High-----	High-----	Low.
73------------ Haynie	B	Rare--------	Very brief	Feb-Nov	>6.0	---	---	>60	---	High-----	Low------	Low.

See footnote at end of table.

Table 2-2a.—Runoff curve numbers for urban areas[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D

Fully developed urban areas (vegetation established)

Open space (lawns, parks, golf courses, cemeteries, etc.)[3]:

Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)...........		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way).		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way).................................		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders).		96	96	96	96
Urban districts:					
Commercial and business..........................	85	89	92	94	95
Industrial.......................................	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses).....................	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82

Developing urban areas

Newly graded areas (pervious areas only, no vegetation)[5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1]Average runoff condition, and $I_a = 0.2S$.

[2]The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98; and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3]CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4]Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5]Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

2 YEAR SEDIMENT
STORAGE REQUIRED

EXAMPLE:
TRIBUTARY AREA = 20 ACRES
RATIONAL METHOD RUNOFF COEFFICIENT "c" = 0.6
SEDIMENT STORAGE = 120 CU. FT. PER ACRE PER YEAR
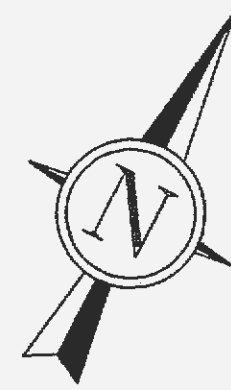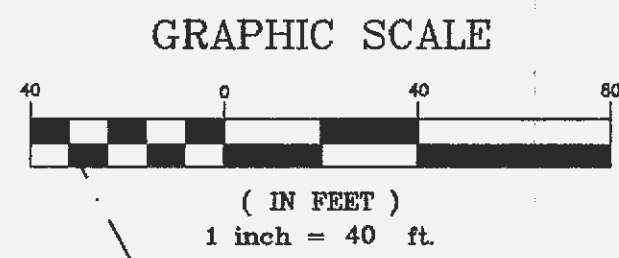TOTAL SEDIMENT STORAGE = 120 X 20 = 2400 CU. FT. PER YEAR.

6.24 AC.

ANNUAL SEDIMENT STORAGE VOLUME CU. FT. PER ACRE TRIBUTARY AREA
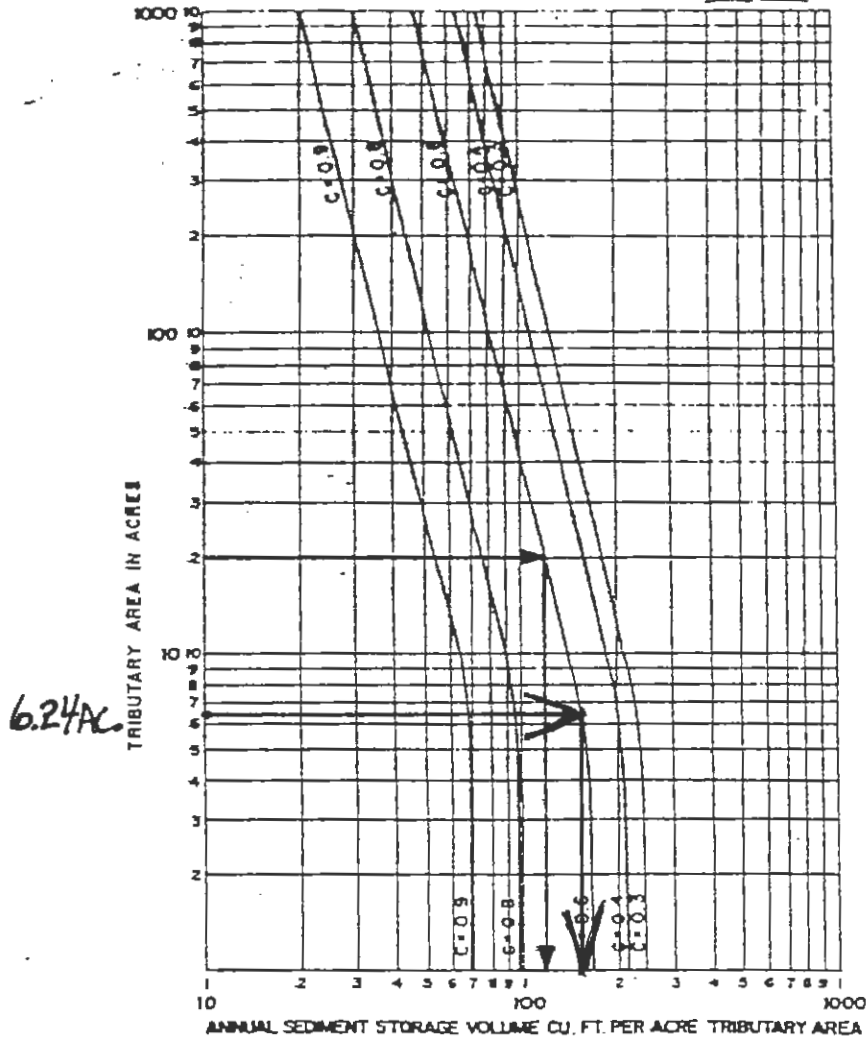
ANNUAL SEDIMENT STORAGE

FIG. 6

$$STORAGE = 160 \, C.F./ACRE/YR$$

$$TOTAL(1\text{-}YEAR) = 160 \cdot 6.24 = 998.4 \, C.F./YEAR$$

$$TOTAL(2\text{-}YEAR) = 1997 \, C.F.$$

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

N

48B
WELLER
SOIL GROUP 'C'

N/F
KELLER-BECK PROPERTIES, LLC
DB. 2476, PG. 1717
ZONED NTCO
VACANT

TECHNOLOGY DRIVE (WIDTH VARIES)

TECHNOLOGY DRIVE (WIDTH VARIES)

25' BUILDING SETBACK

25' BUILDING SETBACK

DRAINAGE AREA LIMITS

LOT 5
N/F
WILLIAM H. ERKER
DB. 645, PG. 633
ZONED C2
VACANT
1.28 ACRES

N/F
ALL PURPOSE STORAGE
DB. 2476, PG. 1717

SEGMENT '1A'

SEGMENT '1B'

P.O.I.#1

N/F
ALL PURPOSE STORAGE
DB. 2264, PG. 734 & 737
ZONED NTCO
VACANT

Tc PATH

48C
WELLER
SOIL GROUP 'C'

10' BUILDING SETBACK

STATE HIGHWAY K (WIDTH VARIES)

LOT 1
N/F
PERSIMMON POINTE
MARKET, L.L.C.
DB. 2476, PG. 1717
3.84 AC.±

DRAINAGE AREA LIMITS

N/F
MOUNTAIN FARM LLC
ZONED NTCO
VACANT

LOT 2
N/F
ALL PURPOSE STORAGE
DB. 2264, PG. 734 & 737
0.65 AC.±

FL=541.40

P.O.I.#1
UNDEVELOPED
DRAINAGE DATA

A= 6.20 Ac.
CN= 79
i_2= 3.50 in/hr
i_{15}= 5.20 in/hr
i_{25}= 5.70 in/hr
i_{100}= 7.20 in/hr
Tc= 0.56 HR
Q_2= 7.45 cfs
Q_{15}= 14.47 cfs
Q_{25}= 16.62 cfs
Q_{100}= 23.19 cfs

NOT FOR CONSTRUCTION
FOR DRAINAGE PURPOSES ONLY

PREPARED FOR:
PERSIMMON POINTE
MARKET, L.L.C.
165 N. MERAMEC AVE., STE. 500
ST. LOUIS, MO 63105
PH: (314) 721-3444
FAX: (314) 721-3071

STATE OF MISSOURI
LEONARD
J. MEERS
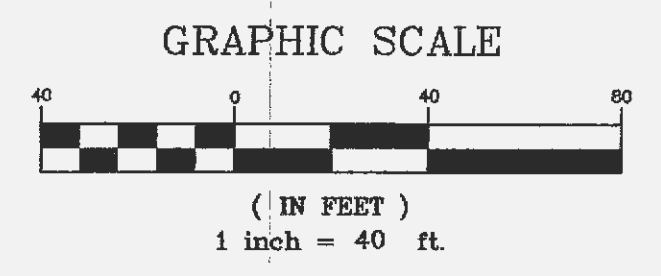NUMBER
E-26286
REGISTERED PROFESSIONAL ENGINEER

PERSIMMON POINTE MARKET

EXISTING DRAINAGE AREA MAP

J. R. GRIMES
CONSULTING ENGINEERS, INC.

12300 OLD TESSON ROAD
SUITE 300-D
ST. LOUIS, MO. 63128
PH. (314) 849-8100
FAX (314) 849-8010
E-MAIL jrgeng@islink.com

DRAWN BY:	DATE:	CHECKED BY:	DATE:	JOB NUMBER:	SHEET:
KAN	09/12/03	LJM	09/12/03	6751	1 of 2

J:\6751\CIVIL\WELLER-DJM.dwg Thu Sep 18 16:31:03 2003 KENT_N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

N

48B
WELLER
SOIL GROUP 'C'

N/F
KELLEN-BECK PROPERTIES, LLC
DB. 2476, PG. 1717
ZONED NTCD
VACANT

TECHNOLOGY DRIVE (WIDTH VARIES)

TECHNOLOGY DRIVE (WIDTH VARIES)

TECHNOLOGY DRIVE (WIDTH VARIES)

EXISTING CONCRETE

EXISTING CONCRETE

SEGMENT '1A'

25' BUILDING SETBACK

SEGMENT '1B'

DRAINAGE AREA LIMITS

LOT 5
N/F
WILLIAM H. ERKER
DB. 645, PG. 633
ZONED C/
VACANT
1.28 ACRES

25' BUILDING SETBACK

Tc PATH

SEGMENT '1C'

TW 555.50
BW 547.35

TW 555.50
BW 547.30

N/F
ALL PURPOSE STORAGE
DB. 2476, PG. 1717

N/F
ALL PURPOSE STORAGE
DB. 2284, PG. 734 & 737
ZONED NTCD
VACANT

TW 547.20
BW 547.60

WELLER
SOIL GROUP 'C'

P.O.I.#1

LOT 1
PERSIMMON POINTE
MARKET, L.L.C.
DB. 2476, PG. 1717
3.84 AC.±

STATE HIGHWAY K (WIDTH VARIES)

EXISTING ASPHALT

DRAINAGE AREA LIMITS

10' BUILDING SETBACK

N/F
MOUNTAIN FARM LLC
ZONED NTCD
VACANT

LOT 2
N/F
ALL PURPOSE STORAGE
DB. 2284, PG. 734 & 737
0.85 AC.±

EXISTING CONCRETE

FL-541.40

P.O.I.#1 DEVELOPED DRAINAGE DATA	
A=	6.24 Ac.
CN=	94
i_2=	3.50 in/hr
i_{15}=	5.20 in/hr
i_{25}=	5.70 in/hr
i_{100}=	7.20 in/hr
Tc=	0.08 HR
Q_2=	26.24 cfs
Q_{15}=	40.55 cfs
Q_{25}=	44.73 cfs
Q_{100}=	57.19 cfs

NOT FOR CONSTRUCTION
FOR DRAINAGE PURPOSES ONLY

J. R. GRIMES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED
ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY
OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN
AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S
SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE
THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR.
J. R. GRIMES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY
TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS
SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE
OWNER OR CONTRACTOR.

STATE OF MISSOURI
LEONARD
J. MEERS
NUMBER
E-26288

10/21/03
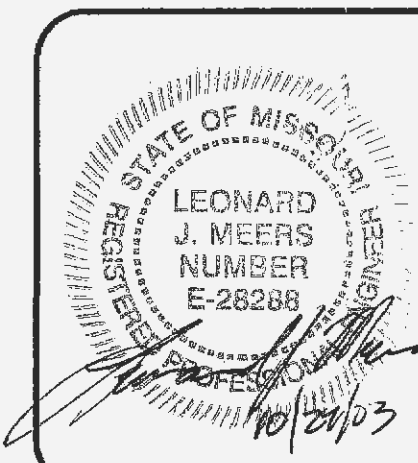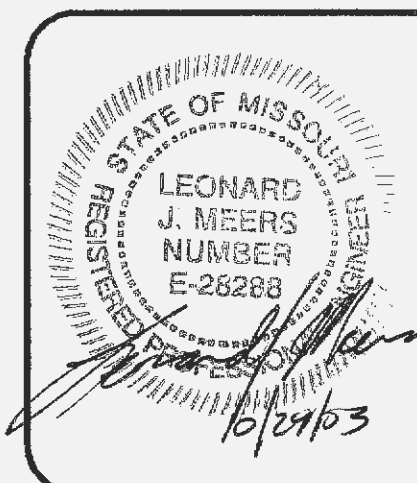
PERSIMMON POINTE MARKET

PROPOSED DRAINAGE AREA MAP

J. R. GRIMES
CONSULTING ENGINEERS, INC.

12300 OLD TESSON ROAD
SUITE 300-D
ST. LOUIS, MO. 63128
PH. (314) 849-6100
FAX (314) 849-6010
E-MAIL jrgeng@inlink.com

DRAWN BY:	DATE:	CHECKED BY:	DATE:	JOB NUMBER:	SHEET:
KAN	09/12/03	LJM	09/12/03	6751	2 of 2