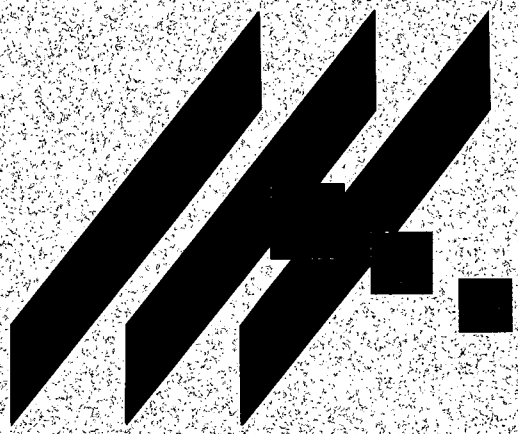
MKEC ENGINEERING CONSULTANTS, INC



# DRAINAGE REPORT

FOR

# WOODLAWN NORTH POINTE ADDITION

JULY 2004

411 N WEBB ROAD • WICHITA KS 67206 • 316 684 9600 • FAX 316 684 5100

# Drainage Report for Woodlawn North Pointe Addition
# Wichita, Sedgwick County, Kansas

## Location

The subject property is in Wichita, Sedgwick County, Kansas. The proposed development is on Woodlawn between 29th Street North and 21st Street North. It lies in the Southwest Quarter of the Northwest Quarter, of Section 6, Township 26 South, Range 2 East. The dimensions of the property are approximately 530 feet north to south and 1090 feet east to west at the widest point. The area of the plat is 15 acres. The site is shown on the Wichita East, Kansas Quadrangle, located in Appendix A.

## Soils

According to the NRCS (SCS) Sedgwick County Soil Survey (Appendix B) soils on the site consist of Farnum Loam, 1-3% slopes (Fb - HSG "B") and Rose Hill silty clay, 1-3% slopes (Rd – HSG "D"). The HSG used to select runoff coefficients is "C".

## Pre-Developed Conditions

*Current Development*
Currently the site is platted as Hinkle's Addition and zoned as limited industrial. The site is vacant and covered with grass.

*Current Landform and Slope*
Slopes across the site range from 0.5-3.0%. The entire site drains to the northeast corner. A pond in Hinkle's Addition south of the site discharges onto the site. Runoff from the site flows into reserves in Pepperwood Village and Waterford North Additions.

*Current Drainage Conditions*
The entire site is in Zone C – areas of minimal flooding. The nearest Zone A is approximately ½ mile north of the site. (FIRM Panel 15, Wichita, Sedgwick County, Kansas, May 15., 1986) (shown in Appendix C).

*Current Runoff Characteristics*
The entire site was analyzed as one drainage area since it all drains to the northeast corner. A curve number of 79 and time of concentration ($T_c$) was used to represent the vacant lot. Runoff from the site under pre-developed conditions was calculated using the SCS method in Hydraflow Hydrographs by Intelisolve. Computer output is found in Appendix D. Pre-Developed runoff from the site is shown in Table 1. Peak runoff from the site in the 100-year design event is 88.0 cfs under developed conditions.

**Table 1. Runoff.**

| | 2-Year | 5-Year | 10-Year | 100-Year |
|---|---|---|---|---|
| Pre-Developed | 25.2 | 40.1 | 50.1 | 88.0 |
| Developed | 41.5 | 57.5 | 68.0 | 105.7 |
| Developed with Detention | 32.6 | 46.3 | 55.3 | 87.5 |

## Developed Conditions

*Proposed Development*

The site will develop as 8 lots and be zoned as limited industrial. Lots will have access from Woodlawn by way of a private street. These lots will be used for medical facilities. Average lot size is 1.6 acres. Lots range in size from 1.1 acres to 2.5 acres.

*Current Landform and Slope*

Proposed slopes are expected to range from 0.5% to 3.0%. The private street will have minimum 0.5% slopes. The preliminary grading plan is Appendix E. Proposed Stormwater sewer will pick up runoff from the site and route it into a proposed detention facility near the northeast corner of the plat. The drainage and utility plan, Appendix F, shows the proposed utilities and detention.

*Current Runoff Characteristics*

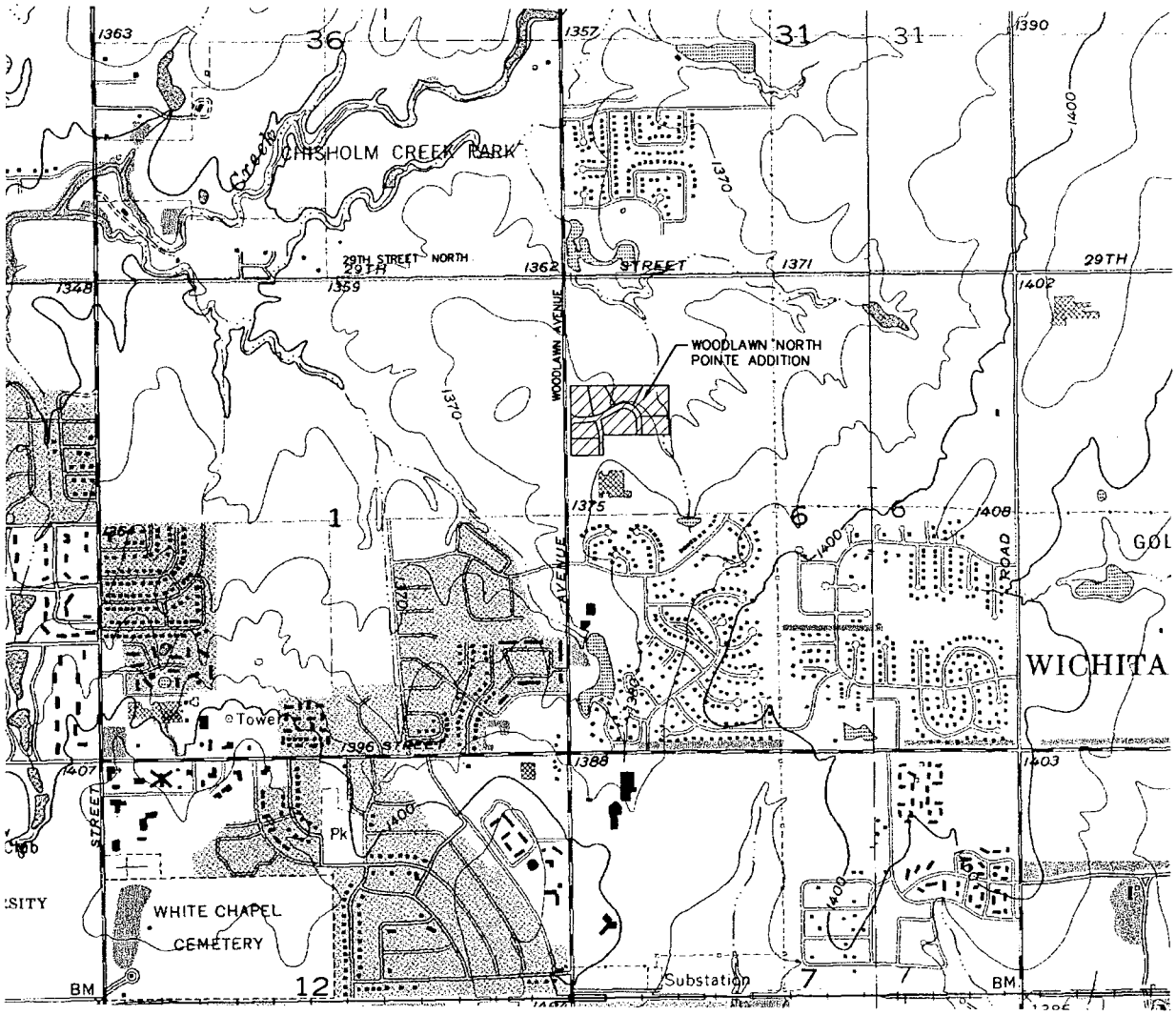
The entire site was again analyzed as one drainage area since it all drains to the northeast corner. A curve number of 91 was used to represent the industrial usage of the site. The time of concentration ($T_c$) for the site is 15 minutes under developed conditions. Runoff from the site under developed conditions was calculated using the SCS method in Hydraflow Hydrographs by Intelisolve. Computer output is Appendix D. Developed runoff from the site is shown in Table 1. Peak runoff from the site in the 100-year design event is 105.7 cfs under developed conditions. In order to reduce the peak outflow from the site a detention facility will need to be constructed near the northeast corner of the site. Preliminary calculations show that this facility will provide approximately 1.1 acre-feet of storage and reduce the peak outflow from the site to 87.5 cfs in the 100-year design event. The configuration and outlet structure for this pond has not yet been determined.

## Summary

The Woodlawn North Pointe Addition is currently platted as Hinkle's Addition. The site will develop as 8 lots that will be used for Medical facilities. Increased runoff from the site will be detained before discharging from the site. Peak flow from the site is 88.0 cfs during the 100-year event. After detention is provided, peak flow from the site will be 87.5 cfs during the 100-year event. A pond in Hinkle's Addition to the south discharges onto the property through an 18" RCP and through a drainage easement along the east side of the site.

# APPENDIX A

# QUADRANGLE MAP




SCALE 1:24 000

1 0 1/2 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

J:\CIVIL\DWG\PROP\DRNG\03316QUAD.DWG

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

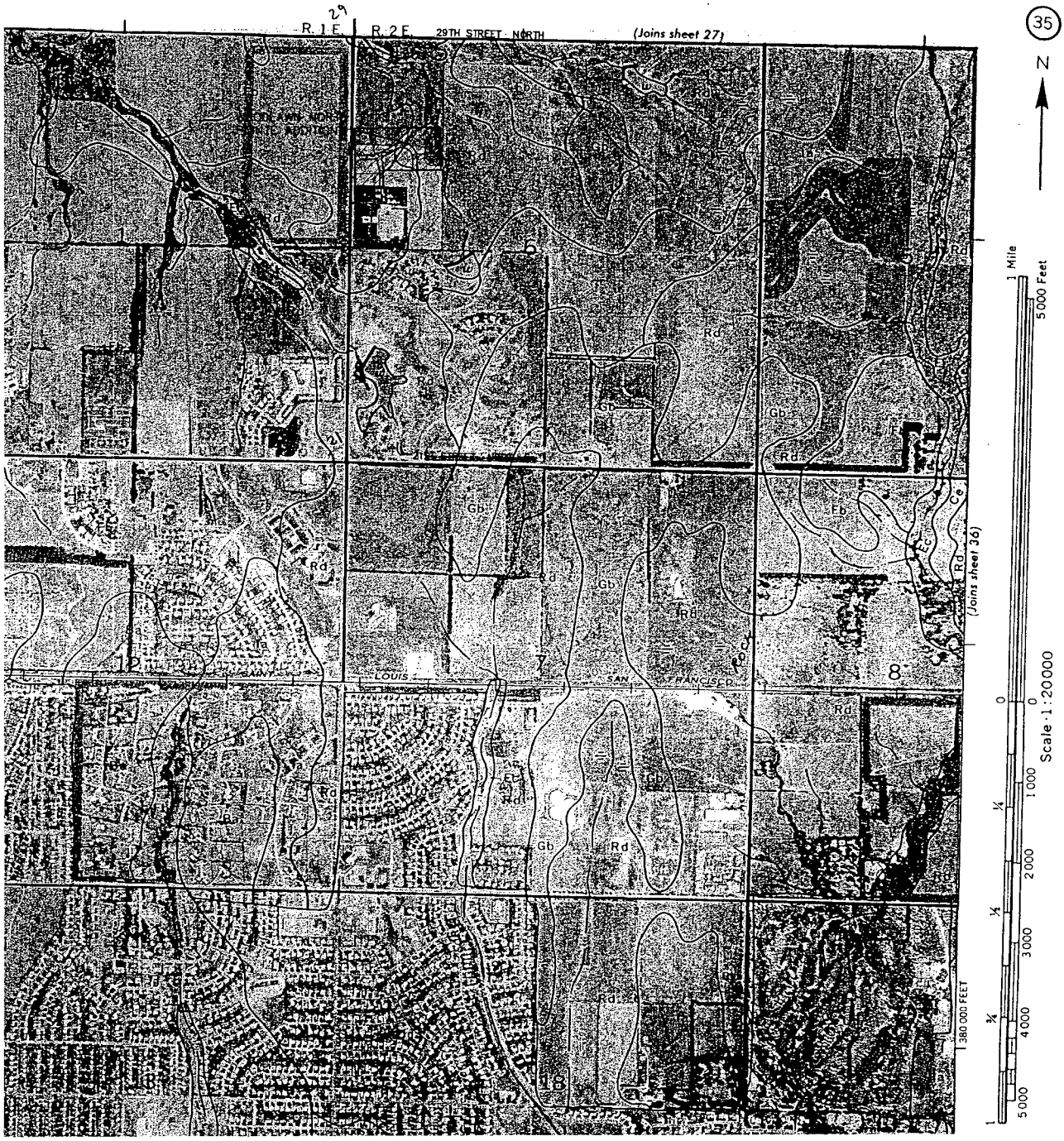
**WOODLAWN NORTH POINTE ADDITION**
PROJECT NAME

**WICHITA EAST QUADRANGLE**
**SEDGWICK COUNTY, KANSAS**
SHEET TITLE

| KLA | KLA | GJA |
|---|---|---|
| DESIGN BY: | DRAWN BY: | CHECKED BY: |
| JULY 2004 | 03316 | 1 / 1 |
| DATE | JOB NO. | SHEET/OF |

# APPENDIX B

# SOIL SURVEY




United States Department of Agriculture
Soil Conservation Service
in cooperation with
Kansas Agricultural Experiment Station

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

**WOODLAWIN NORTH POINTE ADDITION**
PROJECT NAME

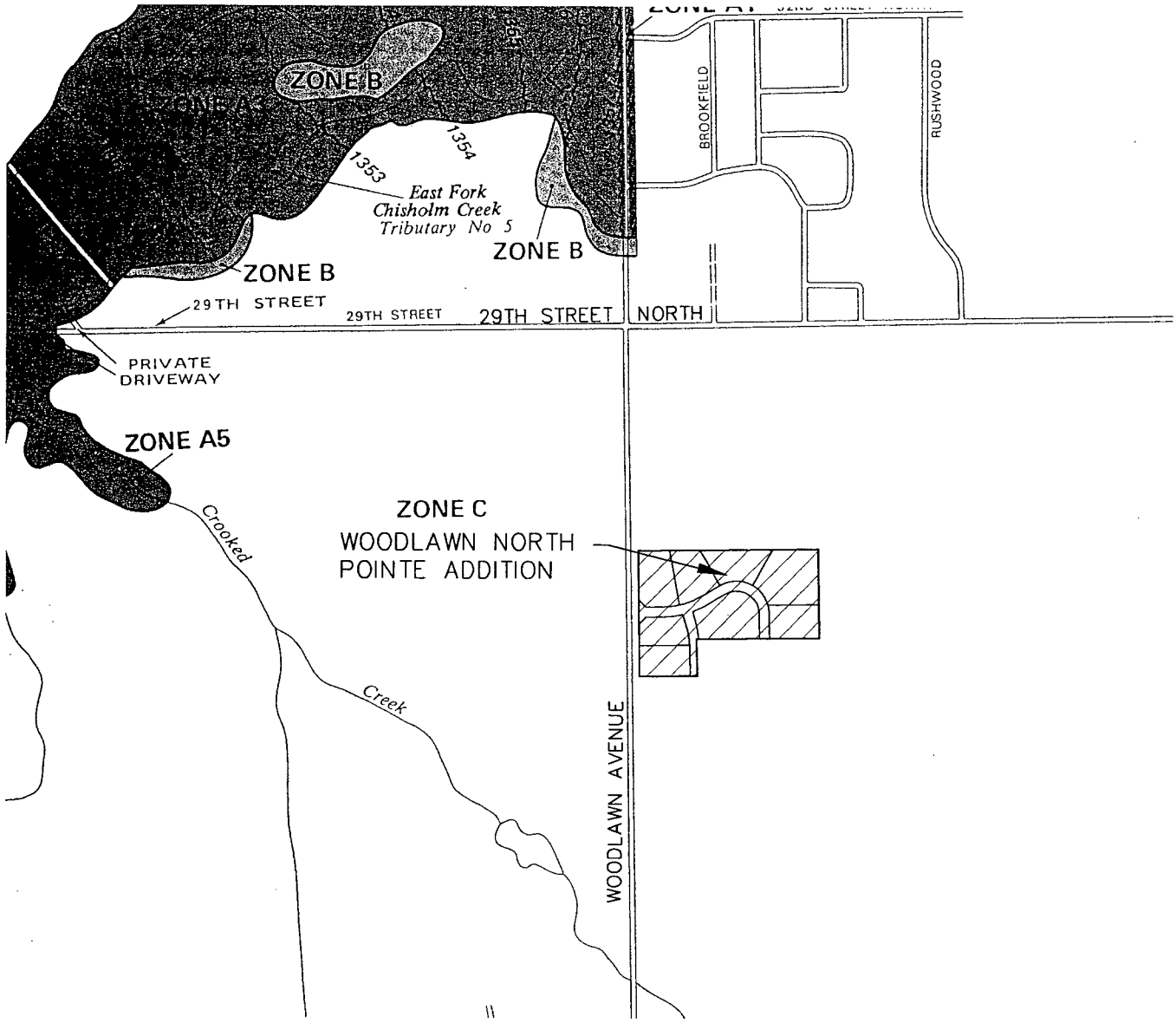
**SOIL SURVEY OF SEDGWICK COUNTY, KANSAS**
SHEET TITLE

| KLA | KLA | GJA |
|---|---|---|
| DESIGN BY: | DRAWN BY: | CHECKED BY: |
| JULY 2004 | 03316 | 1 / 1 |
| DATE | JOB NO. | SHEET/OF |

J:\CIVIL\03316\DWG\PROP\DRNG\03316SOIL.DWG

# APPENDIX C

# FIRM




NATIONAL FLOOD INSURANCE PROGRAM

# FIRM
## FLOOD INSURANCE RATE MAP

CITY OF
WICHITA,
KANSAS
SEDGWICK COUNTY

PANEL 15 OF 40
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
200328 0015 B

EFFECTIVE DATE:
MAY 15, 1986

Federal Emergency Management Agency

N

APPROXIMATE SCALE
1000 0 1000 FEET

J:\CIVIL\03316\DWG\PROP\03316FIRM.DWG

MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

**WOODLAWN NORTH POINTE ADDITION**
PROJECT NAME

**FIRM PANEL 15 OF 40**
**WICHITA, SEDGWICK COUNTY, KANSAS**
SHEET TITLE

| KLA | KLA | GJA |
|---|---|---|
| DESIGN BY: | DRAWN BY: | CHECKED BY: |
| JULY 2004 | 03316 | 1 / 1 |
| DATE | JOB NO. | SHEET/OF |

# APPENDIX D

# HYDRAFLOW HYDROGRAPHS OUTPUT

# Hydrograph Return Period Recap



| Hyd. No. | Hydrograph type (origin) | Inflow Hyd(s) | Peak Outflow (cfs) | | | | | | | | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-Yr | 2-Yr | 3-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr | |
| 1 | SCS Runoff | ------- | ------- | 25.24 | ------- | 40.05 | 50.14 | 65.61 | 77.55 | 88.04 | Undeveloped |
| 2 | SCS Runoff | ------- | ------- | 41.45 | ------- | 57.52 | 67.99 | 83.60 | 95.43 | 105.74 | Developed |
| 3 | Reservoir | 2 | ------- | 32.57 | ------- | 46.31 | 55.27 | 68.63 | 78.72 | 87.50 | Developed w/Detention |

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 25.24 | 6 | 720 | 1.817 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 41.45 | 6 | 720 | 2.956 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 32.57 | 6 | 726 | 2.956 | 2 | 1.82 | 0.480 | Developed w/Detention |

Proj. file: Woodlawn N. Pointe.gpw Return Period: 2 yr

Run date: 07-13-2004

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 40.05 | 6 | 720 | 2.834 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 57.52 | 6 | 720 | 4.156 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 46.31 | 6 | 726 | 4.156 | 2 | 2.29 | 0.630 | Developed w/Detention |

Proj. file: Woodlawn N. Pointe.gpw Return Period: 5 yr

Run date: 07-13-2004

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 50.14 | 6 | 720 | 3.537 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 67.99 | 6 | 720 | 4.951 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 55.27 | 6 | 726 | 4.951 | 2 | 2.58 | 0.724 | Developed w/Detention |

Proj. file: Woodlawn N. Pointe.gpw Return Period: 10 yr

Run date: 07-13-2004

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 65.61 | 6 | 720 | 4.627 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 83.60 | 6 | 720 | 6.154 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 68.63 | 6 | 726 | 6.154 | 2 | 2.98 | 0.861 | Developed w/Detention |

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 77.55 | 6 | 720 | 5.480 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 95.43 | 6 | 720 | 7.075 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 78.72 | 6 | 726 | 7.075 | 2 | 3.27 | 0.964 | Developed w/Detention |

# Hydrograph Summary Report



| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to peak (min) | Volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Maximum storage (acft) | Hydrograph description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SCS Runoff | 88.04 | 6 | 720 | 6.237 | ---- | ------ | ------ | Undeveloped |
| 2 | SCS Runoff | 105.74 | 6 | 720 | 7.883 | ---- | ------ | ------ | Developed |
| 3 | Reservoir | 87.50 | 6 | 726 | 7.883 | 2 | 3.51 | 1.053 | Developed w/Detention |

Proj. file: Woodlawn N. Pointe.gpw Return Period: 100 yr

Run date: 07-13-2004

# Hydrograph Report





## Hyd. No. 1

Undeveloped

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 88.04 cfs |
| Storm frequency | = 100 yrs | Time interval | = 6 min |
| Drainage area | = 15.00 ac | Curve number | = 79 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 15 min |
| Total precip. | = 7.80 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |

Hydrograph Volume = 6.237 acft

### Hydrograph Discharge Table

| Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) |
|---|---|---|---|---|---|---|---|
| 8.70 | 0.88 | 12.10 | 80.32 | 15.50 | 2.80 | 18.90 | 1.65 |
| 8.80 | 0.94 | 12.20 | 50.70 | 15.60 | 2.73 | 19.00 | 1.62 |
| 8.90 | 1.01 | 12.30 | 26.08 | 15.70 | 2.66 | 19.10 | 1.60 |
| 9.00 | 1.08 | 12.40 | 14.70 | 15.80 | 2.59 | 19.20 | 1.57 |
| 9.10 | 1.14 | 12.50 | 12.54 | 15.90 | 2.52 | 19.30 | 1.55 |
| 9.20 | 1.20 | 12.60 | 10.52 | 16.00 | 2.45 | 19.40 | 1.52 |
| 9.30 | 1.24 | 12.70 | 9.01 | 16.10 | 2.38 | 19.50 | 1.50 |
| 9.40 | 1.28 | 12.80 | 8.06 | 16.20 | 2.33 | 19.60 | 1.47 |
| 9.50 | 1.31 | 12.90 | 7.45 | 16.30 | 2.30 | 19.70 | 1.45 |
| 9.60 | 1.35 | 13.00 | 6.95 | 16.40 | 2.27 | 19.80 | 1.42 |
| 9.70 | 1.41 | 13.10 | 6.47 | 16.50 | 2.24 | 19.90 | 1.40 |
| 9.80 | 1.50 | 13.20 | 6.06 | 16.60 | 2.22 | 20.00 | 1.37 |
| 9.90 | 1.60 | 13.30 | 5.73 | 16.70 | 2.20 | 20.10 | 1.35 |
| 10.00 | 1.71 | 13.40 | 5.44 | 16.80 | 2.17 | 20.20 | 1.33 |
| 10.10 | 1.83 | 13.50 | 5.17 | 16.90 | 2.15 | 20.30 | 1.32 |
| 10.20 | 1.97 | 13.60 | 4.91 | 17.00 | 2.12 | 20.40 | 1.32 |
| 10.30 | 2.12 | 13.70 | 4.67 | 17.10 | 2.10 | 20.50 | 1.31 |
| 10.40 | 2.29 | 13.80 | 4.45 | 17.20 | 2.07 | 20.60 | 1.31 |
| 10.50 | 2.47 | 13.90 | 4.25 | 17.30 | 2.05 | 20.70 | 1.30 |
| 10.60 | 2.66 | 14.00 | 4.05 | 17.40 | 2.02 | 20.80 | 1.30 |
| 10.70 | 2.89 | 14.10 | 3.87 | 17.50 | 2.00 | 20.90 | 1.29 |
| 10.80 | 3.16 | 14.20 | 3.73 | 17.60 | 1.97 | 21.00 | 1.29 |
| 10.90 | 3.46 | 14.30 | 3.62 | 17.70 | 1.95 | 21.10 | 1.28 |
| 11.00 | 3.77 | 14.40 | 3.55 | 17.80 | 1.92 | 21.20 | 1.28 |
| 11.10 | 4.01 | 14.50 | 3.48 | 17.90 | 1.90 | 21.30 | 1.27 |
| 11.20 | 4.36 | 14.60 | 3.41 | 18.00 | 1.87 | 21.40 | 1.27 |
| 11.30 | 5.06 | 14.70 | 3.34 | 18.10 | 1.85 | 21.50 | 1.26 |
| 11.40 | 5.87 | 14.80 | 3.28 | 18.20 | 1.82 | 21.60 | 1.26 |
| 11.50 | 6.74 | 14.90 | 3.21 | 18.30 | 1.80 | 21.70 | 1.25 |
| 11.60 | 9.33 | 15.00 | 3.14 | 18.40 | 1.77 | 21.80 | 1.25 |
| 11.70 | 17.19 | 15.10 | 3.07 | 18.50 | 1.75 | 21.90 | 1.24 |
| 11.80 | 32.47 | 15.20 | 3.00 | 18.60 | 1.72 | 22.00 | 1.24 |
| 11.90 | 61.13 | 15.30 | 2.93 | 18.70 | 1.70 | 22.10 | 1.23 |
| 12.00 | 88.04 << | 15.40 | 2.86 | 18.80 | 1.67 | 22.20 | 1.23 |

*Continues on next page...*

## Hydrograph Discharge Table

| Time (hrs) | Outflow (cfs) |
|---|---|
| 22.30 | 1.22 |
| 22.40 | 1.22 |
| 22.50 | 1.21 |
| 22.60 | 1.21 |
| 22.70 | 1.20 |
| 22.80 | 1.20 |
| 22.90 | 1.19 |
| 23.00 | 1.19 |
| 23.10 | 1.18 |
| 23.20 | 1.18 |
| 23.30 | 1.17 |
| 23.40 | 1.17 |
| 23.50 | 1.16 |
| 23.60 | 1.16 |
| 23.70 | 1.15 |
| 23.80 | 1.15 |
| 23.90 | 1.14 |
| 24.00 | 1.14 |
| 24.10 | 0.91 |

*...End*

# Hydrograph Report



Hydraflow Hydrographs by Intelisolve

## Hyd. No. 2

Developed

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 105.74 cfs |
| Storm frequency | = 100 yrs | Time interval | = 6 min |
| Drainage area | = 15.00 ac | Curve number | = 91 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 15 min |
| Total precip. | = 7.80 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |

Hydrograph Volume = 7.883 acft

### Hydrograph Discharge Table

| Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) | Time (hrs) | Outflow (cfs) |
|---|---|---|---|---|---|---|---|
| 6.40 | 1.09 | 9.80 | 2.92 | 13.20 | 6.64 | 16.60 | 2.39 |
| 6.50 | 1.12 | 9.90 | 3.07 | 13.30 | 6.27 | 16.70 | 2.36 |
| 6.60 | 1.15 | 10.00 | 3.23 | 13.40 | 5.95 | 16.80 | 2.33 |
| 6.70 | 1.18 | 10.10 | 3.40 | 13.50 | 5.65 | 16.90 | 2.31 |
| 6.80 | 1.21 | 10.20 | 3.60 | 13.60 | 5.36 | 17.00 | 2.28 |
| 6.90 | 1.24 | 10.30 | 3.82 | 13.70 | 5.09 | 17.10 | 2.25 |
| 7.00 | 1.27 | 10.40 | 4.06 | 13.80 | 4.85 | 17.20 | 2.23 |
| 7.10 | 1.30 | 10.50 | 4.30 | 13.90 | 4.63 | 17.30 | 2.20 |
| 7.20 | 1.33 | 10.60 | 4.57 | 14.00 | 4.41 | 17.40 | 2.17 |
| 7.30 | 1.36 | 10.70 | 4.88 | 14.10 | 4.21 | 17.50 | 2.15 |
| 7.40 | 1.39 | 10.80 | 5.24 | 14.20 | 4.05 | 17.60 | 2.12 |
| 7.50 | 1.42 | 10.90 | 5.64 | 14.30 | 3.94 | 17.70 | 2.09 |
| 7.60 | 1.46 | 11.00 | 6.06 | 14.40 | 3.85 | 17.80 | 2.06 |
| 7.70 | 1.49 | 11.10 | 6.34 | 14.50 | 3.78 | 17.90 | 2.04 |
| 7.80 | 1.52 | 11.20 | 6.79 | 14.60 | 3.70 | 18.00 | 2.01 |
| 7.90 | 1.55 | 11.30 | 7.75 | 14.70 | 3.62 | 18.10 | 1.98 |
| 8.00 | 1.58 | 11.40 | 8.82 | 14.80 | 3.55 | 18.20 | 1.96 |
| 8.10 | 1.62 | 11.50 | 9.95 | 14.90 | 3.47 | 18.30 | 1.93 |
| 8.20 | 1.67 | 11.60 | 13.43 | 15.00 | 3.40 | 18.40 | 1.90 |
| 8.30 | 1.75 | 11.70 | 23.85 | 15.10 | 3.32 | 18.50 | 1.87 |
| 8.40 | 1.84 | 11.80 | 43.06 | 15.20 | 3.25 | 18.60 | 1.85 |
| 8.50 | 1.93 | 11.90 | 76.59 | 15.30 | 3.17 | 18.70 | 1.82 |
| 8.60 | 2.03 | 12.00 | 105.74 << | 15.40 | 3.10 | 18.80 | 1.79 |
| 8.70 | 2.12 | 12.10 | 93.99 | 15.50 | 3.02 | 18.90 | 1.77 |
| 8.80 | 2.22 | 12.20 | 58.25 | 15.60 | 2.94 | 19.00 | 1.74 |
| 8.90 | 2.32 | 12.30 | 29.33 | 15.70 | 2.87 | 19.10 | 1.71 |
| 9.00 | 2.43 | 12.40 | 16.34 | 15.80 | 2.79 | 19.20 | 1.68 |
| 9.10 | 2.52 | 12.50 | 13.90 | 15.90 | 2.72 | 19.30 | 1.66 |
| 9.20 | 2.59 | 12.60 | 11.64 | 16.00 | 2.64 | 19.40 | 1.63 |
| 9.30 | 2.64 | 12.70 | 9.94 | 16.10 | 2.57 | 19.50 | 1.60 |
| 9.40 | 2.67 | 12.80 | 8.88 | 16.20 | 2.51 | 19.60 | 1.58 |
| 9.50 | 2.69 | 12.90 | 8.19 | 16.30 | 2.47 | 19.70 | 1.55 |
| 9.60 | 2.72 | 13.00 | 7.63 | 16.40 | 2.44 | 19.80 | 1.52 |
| 9.70 | 2.80 | 13.10 | 7.10 | 16.50 | 2.42 | 19.90 | 1.49 |

*Continues on next page...*

## Hydrograph Discharge Table

| Time (hrs) | Outflow cfs) |
|---|---|
| 20.00 | 1.47 |
| 20.10 | 1.44 |
| 20.20 | 1.42 |
| 20.30 | 1.41 |
| 20.40 | 1.41 |
| 20.50 | 1.40 |
| 20.60 | 1.39 |
| 20.70 | 1.39 |
| 20.80 | 1.38 |
| 20.90 | 1.38 |
| 21.00 | 1.37 |
| 21.10 | 1.37 |
| 21.20 | 1.36 |
| 21.30 | 1.36 |
| 21.40 | 1.35 |
| 21.50 | 1.35 |
| 21.60 | 1.34 |
| 21.70 | 1.34 |
| 21.80 | 1.33 |
| 21.90 | 1.32 |
| 22.00 | 1.32 |
| 22.10 | 1.31 |
| 22.20 | 1.31 |
| 22.30 | 1.30 |
| 22.40 | 1.30 |
| 22.50 | 1.29 |
| 22.60 | 1.29 |
| 22.70 | 1.28 |
| 22.80 | 1.28 |
| 22.90 | 1.27 |
| 23.00 | 1.26 |
| 23.10 | 1.26 |
| 23.20 | 1.25 |
| 23.30 | 1.25 |
| 23.40 | 1.24 |
| 23.50 | 1.24 |
| 23.60 | 1.23 |
| 23.70 | 1.23 |
| 23.80 | 1.22 |
| 23.90 | 1.22 |
| 24.00 | 1.21 |

*...End*

# Hydrograph Report



Hydraflow Hydrographs by Intelisolve

## Hyd. No. 3

Developed w/Detention

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 87.50 cfs |
| Storm frequency | = 100 yrs | Time interval | = 6 min |
| Inflow hyd. No. | = 2 | Reservoir name | = Proposed Detentio |
| Max. Elevation | = 3.51 ft | Max. Storage | = 1.053 acft |

Storage Indication method used.

Outflow hydrograph volume = 7.883 acft

### Hydrograph Discharge Table

| Time (hrs) | Inflow cfs | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Outflow cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.10 | 0.99 | 0.16 | ----- | ----- | ----- | ----- | 0.88 | ----- | ----- | ----- | ----- | 0.88 |
| 6.20 | 1.02 | 0.17 | ----- | ----- | ----- | ----- | 0.91 | ----- | ----- | ----- | ----- | 0.91 |
| 6.30 | 1.05 | 0.17 | ----- | ----- | ----- | ----- | 0.95 | ----- | ----- | ----- | ----- | 0.95 |
| 6.40 | 1.09 | 0.18 | ----- | ----- | ----- | ----- | 0.98 | ----- | ----- | ----- | ----- | 0.98 |
| 6.50 | 1.12 | 0.18 | ----- | ----- | ----- | ----- | 1.01 | ----- | ----- | ----- | ----- | 1.01 |
| 6.60 | 1.15 | 0.18 | ----- | ----- | ----- | ----- | 1.04 | ----- | ----- | ----- | ----- | 1.04 |
| 6.70 | 1.18 | 0.19 | ----- | ----- | ----- | ----- | 1.07 | ----- | ----- | ----- | ----- | 1.07 |
| 6.80 | 1.21 | 0.19 | ----- | ----- | ----- | ----- | 1.11 | ----- | ----- | ----- | ----- | 1.11 |
| 6.90 | 1.24 | 0.19 | ----- | ----- | ----- | ----- | 1.14 | ----- | ----- | ----- | ----- | 1.14 |
| 7.00 | 1.27 | 0.20 | ----- | ----- | ----- | ----- | 1.17 | ----- | ----- | ----- | ----- | 1.17 |
| 7.10 | 1.30 | 0.20 | ----- | ----- | ----- | ----- | 1.20 | ----- | ----- | ----- | ----- | 1.20 |
| 7.20 | 1.33 | 0.20 | ----- | ----- | ----- | ----- | 1.23 | ----- | ----- | ----- | ----- | 1.23 |
| 7.30 | 1.36 | 0.21 | ----- | ----- | ----- | ----- | 1.26 | ----- | ----- | ----- | ----- | 1.26 |
| 7.40 | 1.39 | 0.21 | ----- | ----- | ----- | ----- | 1.29 | ----- | ----- | ----- | ----- | 1.29 |
| 7.50 | 1.42 | 0.21 | ----- | ----- | ----- | ----- | 1.33 | ----- | ----- | ----- | ----- | 1.33 |
| 7.60 | 1.46 | 0.22 | ----- | ----- | ----- | ----- | 1.36 | ----- | ----- | ----- | ----- | 1.36 |
| 7.70 | 1.49 | 0.22 | ----- | ----- | ----- | ----- | 1.39 | ----- | ----- | ----- | ----- | 1.39 |
| 7.80 | 1.52 | 0.22 | ----- | ----- | ----- | ----- | 1.42 | ----- | ----- | ----- | ----- | 1.42 |
| 7.90 | 1.55 | 0.23 | ----- | ----- | ----- | ----- | 1.45 | ----- | ----- | ----- | ----- | 1.45 |
| 8.00 | 1.58 | 0.23 | ----- | ----- | ----- | ----- | 1.48 | ----- | ----- | ----- | ----- | 1.48 |
| 8.10 | 1.62 | 0.23 | ----- | ----- | ----- | ----- | 1.52 | ----- | ----- | ----- | ----- | 1.52 |
| 8.20 | 1.67 | 0.24 | ----- | ----- | ----- | ----- | 1.55 | ----- | ----- | ----- | ----- | 1.55 |
| 8.30 | 1.75 | 0.24 | ----- | ----- | ----- | ----- | 1.60 | ----- | ----- | ----- | ----- | 1.60 |
| 8.40 | 1.84 | 0.25 | ----- | ----- | ----- | ----- | 1.65 | ----- | ----- | ----- | ----- | 1.65 |
| 8.50 | 1.93 | 0.26 | ----- | ----- | ----- | ----- | 1.72 | ----- | ----- | ----- | ----- | 1.72 |
| 8.60 | 2.03 | 0.26 | ----- | ----- | ----- | ----- | 1.80 | ----- | ----- | ----- | ----- | 1.80 |
| 8.70 | 2.12 | 0.27 | ----- | ----- | ----- | ----- | 1.88 | ----- | ----- | ----- | ----- | 1.88 |
| 8.80 | 2.22 | 0.28 | ----- | ----- | ----- | ----- | 1.97 | ----- | ----- | ----- | ----- | 1.97 |
| 8.90 | 2.32 | 0.29 | ----- | ----- | ----- | ----- | 2.06 | ----- | ----- | ----- | ----- | 2.06 |
| 9.00 | 2.43 | 0.30 | ----- | ----- | ----- | ----- | 2.16 | ----- | ----- | ----- | ----- | 2.16 |
| 9.10 | 2.52 | 0.31 | ----- | ----- | ----- | ----- | 2.26 | ----- | ----- | ----- | ----- | 2.26 |
| 9.20 | 2.59 | 0.32 | ----- | ----- | ----- | ----- | 2.36 | ----- | ----- | ----- | ----- | 2.36 |
| 9.30 | 2.64 | 0.32 | ----- | ----- | ----- | ----- | 2.44 | ----- | ----- | ----- | ----- | 2.44 |
| 9.40 | 2.67 | 0.33 | ----- | ----- | ----- | ----- | 2.51 | ----- | ----- | ----- | ----- | 2.51 |
| 9.50 | 2.69 | 0.33 | ----- | ----- | ----- | ----- | 2.57 | ----- | ----- | ----- | ----- | 2.57 |
| 9.60 | 2.72 | 0.34 | ----- | ----- | ----- | ----- | 2.61 | ----- | ----- | ----- | ----- | 2.61 |
| 9.70 | 2.80 | 0.34 | ----- | ----- | ----- | ----- | 2.66 | ----- | ----- | ----- | ----- | 2.66 |
| 9.80 | 2.92 | 0.35 | ----- | ----- | ----- | ----- | 2.73 | ----- | ----- | ----- | ----- | 2.73 |

*Continues on next page...*

## Hydrograph Discharge Table

| Time (hrs) | Inflow cfs | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Outflow cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.90 | 3.07 | 0.35 | ----- | ----- | ----- | ----- | 2.82 | ----- | ----- | ----- | ----- | 2.82 |
| 10.00 | 3.23 | 0.36 | ----- | ----- | ----- | ----- | 2.93 | ----- | ----- | ----- | ----- | 2.93 |
| 10.10 | 3.40 | 0.38 | ----- | ----- | ----- | ----- | 3.06 | ----- | ----- | ----- | ----- | 3.06 |
| 10.20 | 3.60 | 0.39 | ----- | ----- | ----- | ----- | 3.22 | ----- | ----- | ----- | ----- | 3.22 |
| 10.30 | 3.82 | 0.40 | ----- | ----- | ----- | ----- | 3.39 | ----- | ----- | ----- | ----- | 3.39 |
| 10.40 | 4.06 | 0.42 | ----- | ----- | ----- | ----- | 3.58 | ----- | ----- | ----- | ----- | 3.58 |
| 10.50 | 4.30 | 0.43 | ----- | ----- | ----- | ----- | 3.79 | ----- | ----- | ----- | ----- | 3.79 |
| 10.60 | 4.57 | 0.45 | ----- | ----- | ----- | ----- | 4.03 | ----- | ----- | ----- | ----- | 4.03 |
| 10.70 | 4.88 | 0.47 | ----- | ----- | ----- | ----- | 4.28 | ----- | ----- | ----- | ----- | 4.28 |
| 10.80 | 5.24 | 0.49 | ----- | ----- | ----- | ----- | 4.57 | ----- | ----- | ----- | ----- | 4.57 |
| 10.90 | 5.64 | 0.51 | ----- | ----- | ----- | ----- | 4.91 | ----- | ----- | ----- | ----- | 4.91 |
| 11.00 | 6.06 | 0.54 | ----- | ----- | ----- | ----- | 5.27 | ----- | ----- | ----- | ----- | 5.27 |
| 11.10 | 6.34 | 0.56 | ----- | ----- | ----- | ----- | 5.64 | ----- | ----- | ----- | ----- | 5.64 |
| 11.20 | 6.79 | 0.59 | ----- | ----- | ----- | ----- | 6.01 | ----- | ----- | ----- | ----- | 6.01 |
| 11.30 | 7.75 | 0.62 | ----- | ----- | ----- | ----- | 6.52 | ----- | ----- | ----- | ----- | 6.52 |
| 11.40 | 8.82 | 0.67 | ----- | ----- | ----- | ----- | 7.25 | ----- | ----- | ----- | ----- | 7.25 |
| 11.50 | 9.95 | 0.72 | ----- | ----- | ----- | ----- | 8.15 | ----- | ----- | ----- | ----- | 8.15 |
| 11.60 | 13.43 | 0.81 | ----- | ----- | ----- | ----- | 9.71 | ----- | ----- | ----- | ----- | 9.71 |
| 11.70 | 23.85 | 1.02 | ----- | ----- | ----- | ----- | 13.81 | ----- | ----- | ----- | ----- | 13.81 |
| 11.80 | 43.06 | 1.46 | ----- | ----- | ----- | ----- | 23.58 | ----- | ----- | ----- | ----- | 23.58 |
| 11.90 | 76.59 | 2.19 | ----- | ----- | ----- | ----- | 43.14 | ----- | ----- | ----- | ----- | 43.14 |
| 12.00 | 105.74 << | 3.04 | ----- | ----- | ----- | ----- | 70.44 | ----- | ----- | ----- | ----- | 70.44 |
| 12.10 | 93.99 | 3.51 << | ----- | ----- | ----- | ----- | 87.50 | ----- | ----- | ----- | ----- | 87.50 << |
| 12.20 | 58.25 | 3.33 | ----- | ----- | ----- | ----- | 80.89 | ----- | ----- | ----- | ----- | 80.89 |
| 12.30 | 29.33 | 2.71 | ----- | ----- | ----- | ----- | 59.49 | ----- | ----- | ----- | ----- | 59.49 |
| 12.40 | 16.34 | 2.04 | ----- | ----- | ----- | ----- | 38.89 | ----- | ----- | ----- | ----- | 38.89 |
| 12.50 | 13.90 | 1.57 | ----- | ----- | ----- | ----- | 26.09 | ----- | ----- | ----- | ----- | 26.09 |
| 12.60 | 11.64 | 1.28 | ----- | ----- | ----- | ----- | 19.24 | ----- | ----- | ----- | ----- | 19.24 |
| 12.70 | 9.94 | 1.09 | ----- | ----- | ----- | ----- | 15.08 | ----- | ----- | ----- | ----- | 15.08 |
| 12.80 | 8.88 | 0.95 | ----- | ----- | ----- | ----- | 12.40 | ----- | ----- | ----- | ----- | 12.40 |
| 12.90 | 8.19 | 0.86 | ----- | ----- | ----- | ----- | 10.62 | ----- | ----- | ----- | ----- | 10.62 |
| 13.00 | 7.63 | 0.79 | ----- | ----- | ----- | ----- | 9.42 | ----- | ----- | ----- | ----- | 9.42 |
| 13.10 | 7.10 | 0.74 | ----- | ----- | ----- | ----- | 8.51 | ----- | ----- | ----- | ----- | 8.51 |
| 13.20 | 6.64 | 0.70 | ----- | ----- | ----- | ----- | 7.81 | ----- | ----- | ----- | ----- | 7.81 |
| 13.30 | 6.27 | 0.67 | ----- | ----- | ----- | ----- | 7.24 | ----- | ----- | ----- | ----- | 7.24 |
| 13.40 | 5.95 | 0.64 | ----- | ----- | ----- | ----- | 6.77 | ----- | ----- | ----- | ----- | 6.77 |
| 13.50 | 5.65 | 0.61 | ----- | ----- | ----- | ----- | 6.38 | ----- | ----- | ----- | ----- | 6.38 |
| 13.60 | 5.36 | 0.59 | ----- | ----- | ----- | ----- | 6.02 | ----- | ----- | ----- | ----- | 6.02 |
| 13.70 | 5.09 | 0.57 | ----- | ----- | ----- | ----- | 5.70 | ----- | ----- | ----- | ----- | 5.70 |
| 13.80 | 4.85 | 0.55 | ----- | ----- | ----- | ----- | 5.41 | ----- | ----- | ----- | ----- | 5.41 |
| 13.90 | 4.63 | 0.53 | ----- | ----- | ----- | ----- | 5.15 | ----- | ----- | ----- | ----- | 5.15 |
| 14.00 | 4.41 | 0.51 | ----- | ----- | ----- | ----- | 4.90 | ----- | ----- | ----- | ----- | 4.90 |
| 14.10 | 4.21 | 0.50 | ----- | ----- | ----- | ----- | 4.68 | ----- | ----- | ----- | ----- | 4.68 |
| 14.20 | 4.05 | 0.48 | ----- | ----- | ----- | ----- | 4.47 | ----- | ----- | ----- | ----- | 4.47 |
| 14.30 | 3.94 | 0.47 | ----- | ----- | ----- | ----- | 4.29 | ----- | ----- | ----- | ----- | 4.29 |
| 14.40 | 3.85 | 0.46 | ----- | ----- | ----- | ----- | 4.14 | ----- | ----- | ----- | ----- | 4.14 |
| 14.50 | 3.78 | 0.45 | ----- | ----- | ----- | ----- | 4.02 | ----- | ----- | ----- | ----- | 4.02 |
| 14.60 | 3.70 | 0.44 | ----- | ----- | ----- | ----- | 3.92 | ----- | ----- | ----- | ----- | 3.92 |
| 14.70 | 3.62 | 0.44 | ----- | ----- | ----- | ----- | 3.83 | ----- | ----- | ----- | ----- | 3.83 |
| 14.80 | 3.55 | 0.43 | ----- | ----- | ----- | ----- | 3.74 | ----- | ----- | ----- | ----- | 3.74 |
| 14.90 | 3.47 | 0.42 | ----- | ----- | ----- | ----- | 3.66 | ----- | ----- | ----- | ----- | 3.66 |

*Continues on next page...*

## Hydrograph Discharge Table

| Time (hrs) | Inflow cfs | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Outflow cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.00 | 3.40 | 0.42 | ----- | ----- | ----- | ----- | 3.58 | ----- | ----- | ----- | ----- | 3.58 |
| 15.10 | 3.32 | 0.41 | ----- | ----- | ----- | ----- | 3.50 | ----- | ----- | ----- | ----- | 3.50 |
| 15.20 | 3.25 | 0.40 | ----- | ----- | ----- | ----- | 3.43 | ----- | ----- | ----- | ----- | 3.43 |
| 15.30 | 3.17 | 0.40 | ----- | ----- | ----- | ----- | 3.35 | ----- | ----- | ----- | ----- | 3.35 |
| 15.40 | 3.10 | 0.39 | ----- | ----- | ----- | ----- | 3.27 | ----- | ----- | ----- | ----- | 3.27 |
| 15.50 | 3.02 | 0.39 | ----- | ----- | ----- | ----- | 3.20 | ----- | ----- | ----- | ----- | 3.20 |
| 15.60 | 2.94 | 0.38 | ----- | ----- | ----- | ----- | 3.12 | ----- | ----- | ----- | ----- | 3.12 |
| 15.70 | 2.87 | 0.37 | ----- | ----- | ----- | ----- | 3.05 | ----- | ----- | ----- | ----- | 3.05 |
| 15.80 | 2.79 | 0.37 | ----- | ----- | ----- | ----- | 2.97 | ----- | ----- | ----- | ----- | 2.97 |
| 15.90 | 2.72 | 0.36 | ----- | ----- | ----- | ----- | 2.90 | ----- | ----- | ----- | ----- | 2.90 |
| 16.00 | 2.64 | 0.36 | ----- | ----- | ----- | ----- | 2.82 | ----- | ----- | ----- | ----- | 2.82 |
| 16.10 | 2.57 | 0.35 | ----- | ----- | ----- | ----- | 2.75 | ----- | ----- | ----- | ----- | 2.75 |
| 16.20 | 2.51 | 0.34 | ----- | ----- | ----- | ----- | 2.68 | ----- | ----- | ----- | ----- | 2.68 |
| 16.30 | 2.47 | 0.34 | ----- | ----- | ----- | ----- | 2.62 | ----- | ----- | ----- | ----- | 2.62 |
| 16.40 | 2.44 | 0.33 | ----- | ----- | ----- | ----- | 2.56 | ----- | ----- | ----- | ----- | 2.56 |
| 16.50 | 2.42 | 0.33 | ----- | ----- | ----- | ----- | 2.52 | ----- | ----- | ----- | ----- | 2.52 |
| 16.60 | 2.39 | 0.33 | ----- | ----- | ----- | ----- | 2.48 | ----- | ----- | ----- | ----- | 2.48 |
| 16.70 | 2.36 | 0.32 | ----- | ----- | ----- | ----- | 2.45 | ----- | ----- | ----- | ----- | 2.45 |
| 16.80 | 2.33 | 0.32 | ----- | ----- | ----- | ----- | 2.41 | ----- | ----- | ----- | ----- | 2.41 |
| 16.90 | 2.31 | 0.32 | ----- | ----- | ----- | ----- | 2.38 | ----- | ----- | ----- | ----- | 2.38 |
| 17.00 | 2.28 | 0.31 | ----- | ----- | ----- | ----- | 2.36 | ----- | ----- | ----- | ----- | 2.36 |
| 17.10 | 2.25 | 0.31 | ----- | ----- | ----- | ----- | 2.33 | ----- | ----- | ----- | ----- | 2.33 |
| 17.20 | 2.23 | 0.31 | ----- | ----- | ----- | ----- | 2.30 | ----- | ----- | ----- | ----- | 2.30 |
| 17.30 | 2.20 | 0.31 | ----- | ----- | ----- | ----- | 2.27 | ----- | ----- | ----- | ----- | 2.27 |
| 17.40 | 2.17 | 0.30 | ----- | ----- | ----- | ----- | 2.24 | ----- | ----- | ----- | ----- | 2.24 |
| 17.50 | 2.15 | 0.30 | ----- | ----- | ----- | ----- | 2.22 | ----- | ----- | ----- | ----- | 2.22 |
| 17.60 | 2.12 | 0.30 | ----- | ----- | ----- | ----- | 2.19 | ----- | ----- | ----- | ----- | 2.19 |
| 17.70 | 2.09 | 0.30 | ----- | ----- | ----- | ----- | 2.16 | ----- | ----- | ----- | ----- | 2.16 |
| 17.80 | 2.06 | 0.30 | ----- | ----- | ----- | ----- | 2.14 | ----- | ----- | ----- | ----- | 2.14 |
| 17.90 | 2.04 | 0.29 | ----- | ----- | ----- | ----- | 2.11 | ----- | ----- | ----- | ----- | 2.11 |
| 18.00 | 2.01 | 0.29 | ----- | ----- | ----- | ----- | 2.08 | ----- | ----- | ----- | ----- | 2.08 |
| 18.10 | 1.98 | 0.29 | ----- | ----- | ----- | ----- | 2.06 | ----- | ----- | ----- | ----- | 2.06 |
| 18.20 | 1.96 | 0.29 | ----- | ----- | ----- | ----- | 2.03 | ----- | ----- | ----- | ----- | 2.03 |
| 18.30 | 1.93 | 0.28 | ----- | ----- | ----- | ----- | 2.00 | ----- | ----- | ----- | ----- | 2.00 |
| 18.40 | 1.90 | 0.28 | ----- | ----- | ----- | ----- | 1.97 | ----- | ----- | ----- | ----- | 1.97 |
| 18.50 | 1.87 | 0.28 | ----- | ----- | ----- | ----- | 1.95 | ----- | ----- | ----- | ----- | 1.95 |
| 18.60 | 1.85 | 0.28 | ----- | ----- | ----- | ----- | 1.92 | ----- | ----- | ----- | ----- | 1.92 |
| 18.70 | 1.82 | 0.27 | ----- | ----- | ----- | ----- | 1.90 | ----- | ----- | ----- | ----- | 1.90 |
| 18.80 | 1.79 | 0.27 | ----- | ----- | ----- | ----- | 1.87 | ----- | ----- | ----- | ----- | 1.87 |
| 18.90 | 1.77 | 0.27 | ----- | ----- | ----- | ----- | 1.84 | ----- | ----- | ----- | ----- | 1.84 |
| 19.00 | 1.74 | 0.26 | ----- | ----- | ----- | ----- | 1.81 | ----- | ----- | ----- | ----- | 1.81 |
| 19.10 | 1.71 | 0.26 | ----- | ----- | ----- | ----- | 1.79 | ----- | ----- | ----- | ----- | 1.79 |
| 19.20 | 1.68 | 0.26 | ----- | ----- | ----- | ----- | 1.76 | ----- | ----- | ----- | ----- | 1.76 |
| 19.30 | 1.66 | 0.26 | ----- | ----- | ----- | ----- | 1.73 | ----- | ----- | ----- | ----- | 1.73 |
| 19.40 | 1.63 | 0.25 | ----- | ----- | ----- | ----- | 1.71 | ----- | ----- | ----- | ----- | 1.71 |
| 19.50 | 1.60 | 0.25 | ----- | ----- | ----- | ----- | 1.68 | ----- | ----- | ----- | ----- | 1.68 |
| 19.60 | 1.58 | 0.25 | ----- | ----- | ----- | ----- | 1.65 | ----- | ----- | ----- | ----- | 1.65 |
| 19.70 | 1.55 | 0.25 | ----- | ----- | ----- | ----- | 1.63 | ----- | ----- | ----- | ----- | 1.63 |
| 19.80 | 1.52 | 0.24 | ----- | ----- | ----- | ----- | 1.60 | ----- | ----- | ----- | ----- | 1.60 |
| 19.90 | 1.49 | 0.24 | ----- | ----- | ----- | ----- | 1.57 | ----- | ----- | ----- | ----- | 1.57 |
| 20.00 | 1.47 | 0.24 | ----- | ----- | ----- | ----- | 1.55 | ----- | ----- | ----- | ----- | 1.55 |

*Continues on next page...*

## Hydrograph Discharge Table

| Time (hrs) | Inflow cfs | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Outflow cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.10 | 1.44 | 0.24 | ----- | ----- | ----- | ----- | 1.52 | ----- | ----- | ----- | ----- | 1.52 |
| 20.20 | 1.42 | 0.23 | ----- | ----- | ----- | ----- | 1.50 | ----- | ----- | ----- | ----- | 1.50 |
| 20.30 | 1.41 | 0.23 | ----- | ----- | ----- | ----- | 1.47 | ----- | ----- | ----- | ----- | 1.47 |
| 20.40 | 1.41 | 0.23 | ----- | ----- | ----- | ----- | 1.46 | ----- | ----- | ----- | ----- | 1.46 |
| 20.50 | 1.40 | 0.23 | ----- | ----- | ----- | ----- | 1.44 | ----- | ----- | ----- | ----- | 1.44 |
| 20.60 | 1.39 | 0.23 | ----- | ----- | ----- | ----- | 1.43 | ----- | ----- | ----- | ----- | 1.43 |
| 20.70 | 1.39 | 0.22 | ----- | ----- | ----- | ----- | 1.42 | ----- | ----- | ----- | ----- | 1.42 |
| 20.80 | 1.38 | 0.22 | ----- | ----- | ----- | ----- | 1.41 | ----- | ----- | ----- | ----- | 1.41 |
| 20.90 | 1.38 | 0.22 | ----- | ----- | ----- | ----- | 1.40 | ----- | ----- | ----- | ----- | 1.40 |
| 21.00 | 1.37 | 0.22 | ----- | ----- | ----- | ----- | 1.39 | ----- | ----- | ----- | ----- | 1.39 |
| 21.10 | 1.37 | 0.22 | ----- | ----- | ----- | ----- | 1.39 | ----- | ----- | ----- | ----- | 1.39 |
| 21.20 | 1.36 | 0.22 | ----- | ----- | ----- | ----- | 1.38 | ----- | ----- | ----- | ----- | 1.38 |
| 21.30 | 1.36 | 0.22 | ----- | ----- | ----- | ----- | 1.37 | ----- | ----- | ----- | ----- | 1.37 |
| 21.40 | 1.35 | 0.22 | ----- | ----- | ----- | ----- | 1.37 | ----- | ----- | ----- | ----- | 1.37 |
| 21.50 | 1.35 | 0.22 | ----- | ----- | ----- | ----- | 1.36 | ----- | ----- | ----- | ----- | 1.36 |
| 21.60 | 1.34 | 0.22 | ----- | ----- | ----- | ----- | 1.36 | ----- | ----- | ----- | ----- | 1.36 |
| 21.70 | 1.34 | 0.22 | ----- | ----- | ----- | ----- | 1.35 | ----- | ----- | ----- | ----- | 1.35 |
| 21.80 | 1.33 | 0.22 | ----- | ----- | ----- | ----- | 1.35 | ----- | ----- | ----- | ----- | 1.35 |
| 21.90 | 1.32 | 0.22 | ----- | ----- | ----- | ----- | 1.34 | ----- | ----- | ----- | ----- | 1.34 |
| 22.00 | 1.32 | 0.22 | ----- | ----- | ----- | ----- | 1.34 | ----- | ----- | ----- | ----- | 1.34 |
| 22.10 | 1.31 | 0.22 | ----- | ----- | ----- | ----- | 1.33 | ----- | ----- | ----- | ----- | 1.33 |
| 22.20 | 1.31 | 0.21 | ----- | ----- | ----- | ----- | 1.33 | ----- | ----- | ----- | ----- | 1.33 |
| 22.30 | 1.30 | 0.21 | ----- | ----- | ----- | ----- | 1.32 | ----- | ----- | ----- | ----- | 1.32 |
| 22.40 | 1.30 | 0.21 | ----- | ----- | ----- | ----- | 1.31 | ----- | ----- | ----- | ----- | 1.31 |
| 22.50 | 1.29 | 0.21 | ----- | ----- | ----- | ----- | 1.31 | ----- | ----- | ----- | ----- | 1.31 |
| 22.60 | 1.29 | 0.21 | ----- | ----- | ----- | ----- | 1.30 | ----- | ----- | ----- | ----- | 1.30 |
| 22.70 | 1.28 | 0.21 | ----- | ----- | ----- | ----- | 1.30 | ----- | ----- | ----- | ----- | 1.30 |
| 22.80 | 1.28 | 0.21 | ----- | ----- | ----- | ----- | 1.29 | ----- | ----- | ----- | ----- | 1.29 |
| 22.90 | 1.27 | 0.21 | ----- | ----- | ----- | ----- | 1.29 | ----- | ----- | ----- | ----- | 1.29 |
| 23.00 | 1.26 | 0.21 | ----- | ----- | ----- | ----- | 1.28 | ----- | ----- | ----- | ----- | 1.28 |
| 23.10 | 1.26 | 0.21 | ----- | ----- | ----- | ----- | 1.28 | ----- | ----- | ----- | ----- | 1.28 |
| 23.20 | 1.25 | 0.21 | ----- | ----- | ----- | ----- | 1.27 | ----- | ----- | ----- | ----- | 1.27 |
| 23.30 | 1.25 | 0.21 | ----- | ----- | ----- | ----- | 1.27 | ----- | ----- | ----- | ----- | 1.27 |
| 23.40 | 1.24 | 0.21 | ----- | ----- | ----- | ----- | 1.26 | ----- | ----- | ----- | ----- | 1.26 |
| 23.50 | 1.24 | 0.21 | ----- | ----- | ----- | ----- | 1.25 | ----- | ----- | ----- | ----- | 1.25 |
| 23.60 | 1.23 | 0.21 | ----- | ----- | ----- | ----- | 1.25 | ----- | ----- | ----- | ----- | 1.25 |
| 23.70 | 1.23 | 0.21 | ----- | ----- | ----- | ----- | 1.24 | ----- | ----- | ----- | ----- | 1.24 |
| 23.80 | 1.22 | 0.21 | ----- | ----- | ----- | ----- | 1.24 | ----- | ----- | ----- | ----- | 1.24 |
| 23.90 | 1.22 | 0.20 | ----- | ----- | ----- | ----- | 1.23 | ----- | ----- | ----- | ----- | 1.23 |
| 24.00 | 1.21 | 0.20 | ----- | ----- | ----- | ----- | 1.23 | ----- | ----- | ----- | ----- | 1.23 |
| 24.10 | 0.97 | 0.20 | ----- | ----- | ----- | ----- | 1.19 | ----- | ----- | ----- | ----- | 1.19 |
| 24.20 | 0.48 | 0.19 | ----- | ----- | ----- | ----- | 1.07 | ----- | ----- | ----- | ----- | 1.07 |

*...End*

# Reservoir Report



## Reservoir No. 1 - Proposed Detention

Hydraflow Hydrographs by Intelisolve

### Pond Data

Bottom LxW = 100.0 x 100.0 ft Side slope = 4.0:1 Bottom elev. = 0.00 ft Depth = 4.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (acft) | Total storage (acft) |
|---|---|---|---|---|
| 0.00 | 0.00 | 10,000 | 0.000 | 0.000 |
| 0.20 | 0.20 | 10,323 | 0.047 | 0.047 |
| 0.40 | 0.40 | 10,650 | 0.048 | 0.095 |
| 0.60 | 0.60 | 10,983 | 0.050 | 0.144 |
| 0.80 | 0.80 | 11,321 | 0.051 | 0.196 |
| 1.00 | 1.00 | 11,664 | 0.053 | 0.248 |
| 1.20 | 1.20 | 12,012 | 0.054 | 0.303 |
| 1.40 | 1.40 | 12,365 | 0.056 | 0.359 |
| 1.60 | 1.60 | 12,724 | 0.058 | 0.416 |
| 1.80 | 1.80 | 13,087 | 0.059 | 0.476 |
| 2.00 | 2.00 | 13,456 | 0.061 | 0.537 |
| 2.20 | 2.20 | 13,830 | 0.063 | 0.599 |
| 2.40 | 2.40 | 14,209 | 0.064 | 0.664 |
| 2.60 | 2.60 | 14,593 | 0.066 | 0.730 |
| 2.80 | 2.80 | 14,982 | 0.068 | 0.798 |
| 3.00 | 3.00 | 15,376 | 0.070 | 0.867 |
| 3.20 | 3.20 | 15,775 | 0.072 | 0.939 |
| 3.40 | 3.40 | 16,180 | 0.073 | 1.012 |
| 3.60 | 3.60 | 16,589 | 0.075 | 1.087 |
| 3.80 | 3.80 | 17,004 | 0.077 | 1.164 |
| 4.00 | 4.00 | 17,424 | 0.079 | 1.243 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| Rise in | = 0.0 | 0.0 | 0.0 | 0.0 |
| Span in | = 0.0 | 0.0 | 0.0 | 0.0 |
| No. Barrels | = 0 | 0 | 0 | 0 |
| Invert El. ft | = 0.00 | 0.00 | 0.00 | 0.00 |
| Length ft | = 0.0 | 0.0 | 0.0 | 0.0 |
| Slope % | = 0.00 | 0.00 | 0.00 | 0.00 |
| N-Value | = .013 | .000 | .000 | .000 |
| Orif. Coeff. | = 0.60 | 0.00 | 0.00 | 0.00 |
| Multi-Stage | = n/a | No | No | No |

### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| Crest Len ft | = 4.00 | 0.00 | 0.00 | 0.00 |
| Crest El. ft | = 0.00 | 0.00 | 0.00 | 0.00 |
| Weir Coeff. | = 3.33 | 0.00 | 0.00 | 0.00 |
| Weir Type | = Rect | --- | --- | --- |
| Multi-Stage | = No | No | No | No |

**Exfiltration Rate** = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

### Stage / Storage / Discharge Table

Note: All outflows have been analyzed under inlet and outlet control.

| Stage ft | Storage acft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.000 | 0.00 | --- | --- | --- | --- | 0.00 | --- | --- | --- | --- | 0.00 |
| 0.02 | 0.005 | 0.02 | --- | --- | --- | --- | 0.04 | --- | --- | --- | --- | 0.04 |
| 0.04 | 0.009 | 0.04 | --- | --- | --- | --- | 0.11 | --- | --- | --- | --- | 0.11 |
| 0.06 | 0.014 | 0.06 | --- | --- | --- | --- | 0.20 | --- | --- | --- | --- | 0.20 |
| 0.08 | 0.019 | 0.08 | --- | --- | --- | --- | 0.30 | --- | --- | --- | --- | 0.30 |
| 0.10 | 0.023 | 0.10 | --- | --- | --- | --- | 0.42 | --- | --- | --- | --- | 0.42 |
| 0.12 | 0.028 | 0.12 | --- | --- | --- | --- | 0.55 | --- | --- | --- | --- | 0.55 |
| 0.14 | 0.033 | 0.14 | --- | --- | --- | --- | 0.70 | --- | --- | --- | --- | 0.70 |
| 0.16 | 0.037 | 0.16 | --- | --- | --- | --- | 0.85 | --- | --- | --- | --- | 0.85 |
| 0.18 | 0.042 | 0.18 | --- | --- | --- | --- | 1.02 | --- | --- | --- | --- | 1.02 |
| 0.20 | 0.047 | 0.20 | --- | --- | --- | --- | 1.19 | --- | --- | --- | --- | 1.19 |
| 0.22 | 0.051 | 0.22 | --- | --- | --- | --- | 1.37 | --- | --- | --- | --- | 1.37 |
| 0.24 | 0.056 | 0.24 | --- | --- | --- | --- | 1.57 | --- | --- | --- | --- | 1.57 |
| 0.26 | 0.061 | 0.26 | --- | --- | --- | --- | 1.77 | --- | --- | --- | --- | 1.77 |
| 0.28 | 0.066 | 0.28 | --- | --- | --- | --- | 1.97 | --- | --- | --- | --- | 1.97 |
| 0.30 | 0.071 | 0.30 | --- | --- | --- | --- | 2.19 | --- | --- | --- | --- | 2.19 |
| 0.32 | 0.076 | 0.32 | --- | --- | --- | --- | 2.41 | --- | --- | --- | --- | 2.41 |

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## Stage / Storage / Discharge Table

| Stage ft | Storage acft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.34 | 0.080 | 0.34 | --- | --- | --- | --- | 2.64 | --- | --- | --- | --- | 2.64 |
| 0.36 | 0.085 | 0.36 | --- | --- | --- | --- | 2.88 | --- | --- | --- | --- | 2.88 |
| 0.38 | 0.090 | 0.38 | --- | --- | --- | --- | 3.12 | --- | --- | --- | --- | 3.12 |
| 0.40 | 0.095 | 0.40 | --- | --- | --- | --- | 3.37 | --- | --- | --- | --- | 3.37 |
| 0.42 | 0.100 | 0.42 | --- | --- | --- | --- | 3.63 | --- | --- | --- | --- | 3.63 |
| 0.44 | 0.105 | 0.44 | --- | --- | --- | --- | 3.89 | --- | --- | --- | --- | 3.89 |
| 0.46 | 0.110 | 0.46 | --- | --- | --- | --- | 4.16 | --- | --- | --- | --- | 4.16 |
| 0.48 | 0.115 | 0.48 | --- | --- | --- | --- | 4.43 | --- | --- | --- | --- | 4.43 |
| 0.50 | 0.120 | 0.50 | --- | --- | --- | --- | 4.71 | --- | --- | --- | --- | 4.71 |
| 0.52 | 0.125 | 0.52 | --- | --- | --- | --- | 4.99 | --- | --- | --- | --- | 4.99 |
| 0.54 | 0.130 | 0.54 | --- | --- | --- | --- | 5.29 | --- | --- | --- | --- | 5.29 |
| 0.56 | 0.135 | 0.56 | --- | --- | --- | --- | 5.58 | --- | --- | --- | --- | 5.58 |
| 0.58 | 0.139 | 0.58 | --- | --- | --- | --- | 5.88 | --- | --- | --- | --- | 5.88 |
| 0.60 | 0.144 | 0.60 | --- | --- | --- | --- | 6.19 | --- | --- | --- | --- | 6.19 |
| 0.62 | 0.150 | 0.62 | --- | --- | --- | --- | 6.50 | --- | --- | --- | --- | 6.50 |
| 0.64 | 0.155 | 0.64 | --- | --- | --- | --- | 6.82 | --- | --- | --- | --- | 6.82 |
| 0.66 | 0.160 | 0.66 | --- | --- | --- | --- | 7.14 | --- | --- | --- | --- | 7.14 |
| 0.68 | 0.165 | 0.68 | --- | --- | --- | --- | 7.47 | --- | --- | --- | --- | 7.47 |
| 0.70 | 0.170 | 0.70 | --- | --- | --- | --- | 7.80 | --- | --- | --- | --- | 7.80 |
| 0.72 | 0.175 | 0.72 | --- | --- | --- | --- | 8.14 | --- | --- | --- | --- | 8.14 |
| 0.74 | 0.180 | 0.74 | --- | --- | --- | --- | 8.48 | --- | --- | --- | --- | 8.48 |
| 0.76 | 0.185 | 0.76 | --- | --- | --- | --- | 8.83 | --- | --- | --- | --- | 8.83 |
| 0.78 | 0.191 | 0.78 | --- | --- | --- | --- | 9.18 | --- | --- | --- | --- | 9.18 |
| 0.80 | 0.196 | 0.80 | --- | --- | --- | --- | 9.53 | --- | --- | --- | --- | 9.53 |
| 0.82 | 0.201 | 0.82 | --- | --- | --- | --- | 9.89 | --- | --- | --- | --- | 9.89 |
| 0.84 | 0.206 | 0.84 | --- | --- | --- | --- | 10.25 | --- | --- | --- | --- | 10.25 |
| 0.86 | 0.211 | 0.86 | --- | --- | --- | --- | 10.62 | --- | --- | --- | --- | 10.62 |
| 0.88 | 0.217 | 0.88 | --- | --- | --- | --- | 11.00 | --- | --- | --- | --- | 11.00 |
| 0.90 | 0.222 | 0.90 | --- | --- | --- | --- | 11.37 | --- | --- | --- | --- | 11.37 |
| 0.92 | 0.227 | 0.92 | --- | --- | --- | --- | 11.75 | --- | --- | --- | --- | 11.75 |
| 0.94 | 0.233 | 0.94 | --- | --- | --- | --- | 12.14 | --- | --- | --- | --- | 12.14 |
| 0.96 | 0.238 | 0.96 | --- | --- | --- | --- | 12.53 | --- | --- | --- | --- | 12.53 |
| 0.98 | 0.243 | 0.98 | --- | --- | --- | --- | 12.92 | --- | --- | --- | --- | 12.92 |
| 1.00 | 0.248 | 1.00 | --- | --- | --- | --- | 13.32 | --- | --- | --- | --- | 13.32 |
| 1.02 | 0.254 | 1.02 | --- | --- | --- | --- | 13.72 | --- | --- | --- | --- | 13.72 |
| 1.04 | 0.259 | 1.04 | --- | --- | --- | --- | 14.13 | --- | --- | --- | --- | 14.13 |
| 1.06 | 0.265 | 1.06 | --- | --- | --- | --- | 14.54 | --- | --- | --- | --- | 14.54 |
| 1.08 | 0.270 | 1.08 | --- | --- | --- | --- | 14.95 | --- | --- | --- | --- | 14.95 |
| 1.10 | 0.276 | 1.10 | --- | --- | --- | --- | 15.37 | --- | --- | --- | --- | 15.37 |
| 1.12 | 0.281 | 1.12 | --- | --- | --- | --- | 15.79 | --- | --- | --- | --- | 15.79 |
| 1.14 | 0.286 | 1.14 | --- | --- | --- | --- | 16.21 | --- | --- | --- | --- | 16.21 |
| 1.16 | 0.292 | 1.16 | --- | --- | --- | --- | 16.64 | --- | --- | --- | --- | 16.64 |
| 1.18 | 0.297 | 1.18 | --- | --- | --- | --- | 17.07 | --- | --- | --- | --- | 17.07 |
| 1.20 | 0.303 | 1.20 | --- | --- | --- | --- | 17.51 | --- | --- | --- | --- | 17.51 |
| 1.22 | 0.308 | 1.22 | --- | --- | --- | --- | 17.95 | --- | --- | --- | --- | 17.95 |
| 1.24 | 0.314 | 1.24 | --- | --- | --- | --- | 18.39 | --- | --- | --- | --- | 18.39 |
| 1.26 | 0.320 | 1.26 | --- | --- | --- | --- | 18.84 | --- | --- | --- | --- | 18.84 |
| 1.28 | 0.325 | 1.28 | --- | --- | --- | --- | 19.29 | --- | --- | --- | --- | 19.29 |
| 1.30 | 0.331 | 1.30 | --- | --- | --- | --- | 19.74 | --- | --- | --- | --- | 19.74 |
| 1.32 | 0.336 | 1.32 | --- | --- | --- | --- | 20.20 | --- | --- | --- | --- | 20.20 |
| 1.34 | 0.342 | 1.34 | --- | --- | --- | --- | 20.66 | --- | --- | --- | --- | 20.66 |
| 1.36 | 0.348 | 1.36 | --- | --- | --- | --- | 21.13 | --- | --- | --- | --- | 21.13 |
| 1.38 | 0.353 | 1.38 | --- | --- | --- | --- | 21.59 | --- | --- | --- | --- | 21.59 |
| 1.40 | 0.359 | 1.40 | --- | --- | --- | --- | 22.06 | --- | --- | --- | --- | 22.06 |
| 1.42 | 0.364 | 1.42 | --- | --- | --- | --- | 22.54 | --- | --- | --- | --- | 22.54 |
| 1.44 | 0.370 | 1.44 | --- | --- | --- | --- | 23.02 | --- | --- | --- | --- | 23.02 |
| 1.46 | 0.376 | 1.46 | --- | --- | --- | --- | 23.50 | --- | --- | --- | --- | 23.50 |
| 1.48 | 0.382 | 1.48 | --- | --- | --- | --- | 23.98 | --- | --- | --- | --- | 23.98 |
| 1.50 | 0.388 | 1.50 | --- | --- | --- | --- | 24.47 | --- | --- | --- | --- | 24.47 |
| 1.52 | 0.393 | 1.52 | --- | --- | --- | --- | 24.96 | --- | --- | --- | --- | 24.96 |
| 1.54 | 0.399 | 1.54 | --- | --- | --- | --- | 25.46 | --- | --- | --- | --- | 25.46 |
| 1.56 | 0.405 | 1.56 | --- | --- | --- | --- | 25.95 | --- | --- | --- | --- | 25.95 |
| 1.58 | 0.411 | 1.58 | --- | --- | --- | --- | 26.45 | --- | --- | --- | --- | 26.45 |
| 1.60 | 0.416 | 1.60 | --- | --- | --- | --- | 26.96 | --- | --- | --- | --- | 26.96 |
| 1.62 | 0.422 | 1.62 | --- | --- | --- | --- | 27.46 | --- | --- | --- | --- | 27.46 |
| 1.64 | 0.428 | 1.64 | --- | --- | --- | --- | 27.98 | --- | --- | --- | --- | 27.98 |
| 1.66 | 0.434 | 1.66 | --- | --- | --- | --- | 28.49 | --- | --- | --- | --- | 28.49 |
| 1.68 | 0.440 | 1.68 | --- | --- | --- | --- | 29.00 | --- | --- | --- | --- | 29.00 |
| 1.70 | 0.446 | 1.70 | --- | --- | --- | --- | 29.52 | --- | --- | --- | --- | 29.52 |
| 1.72 | 0.452 | 1.72 | --- | --- | --- | --- | 30.05 | --- | --- | --- | --- | 30.05 |

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## Stage / Storage / Discharge Table

| Stage ft | Storage acft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.74 | 0.458 | 1.74 | --- | --- | --- | --- | 30.57 | --- | --- | --- | --- | 30.57 |
| 1.76 | 0.464 | 1.76 | --- | --- | --- | --- | 31.10 | --- | --- | --- | --- | 31.10 |
| 1.78 | 0.470 | 1.78 | --- | --- | --- | --- | 31.63 | --- | --- | --- | --- | 31.63 |
| 1.80 | 0.476 | 1.80 | --- | --- | --- | --- | 32.17 | --- | --- | --- | --- | 32.17 |
| 1.82 | 0.482 | 1.82 | --- | --- | --- | --- | 32.70 | --- | --- | --- | --- | 32.70 |
| 1.84 | 0.488 | 1.84 | --- | --- | --- | --- | 33.25 | --- | --- | --- | --- | 33.25 |
| 1.86 | 0.494 | 1.86 | --- | --- | --- | --- | 33.79 | --- | --- | --- | --- | 33.79 |
| 1.88 | 0.500 | 1.88 | --- | --- | --- | --- | 34.34 | --- | --- | --- | --- | 34.34 |
| 1.90 | 0.506 | 1.90 | --- | --- | --- | --- | 34.88 | --- | --- | --- | --- | 34.88 |
| 1.92 | 0.512 | 1.92 | --- | --- | --- | --- | 35.44 | --- | --- | --- | --- | 35.44 |
| 1.94 | 0.518 | 1.94 | --- | --- | --- | --- | 35.99 | --- | --- | --- | --- | 35.99 |
| 1.96 | 0.524 | 1.96 | --- | --- | --- | --- | 36.55 | --- | --- | --- | --- | 36.55 |
| 1.98 | 0.530 | 1.98 | --- | --- | --- | --- | 37.11 | --- | --- | --- | --- | 37.11 |
| 2.00 | 0.537 | 2.00 | --- | --- | --- | --- | 37.67 | --- | --- | --- | --- | 37.67 |
| 2.02 | 0.543 | 2.02 | --- | --- | --- | --- | 38.24 | --- | --- | --- | --- | 38.24 |
| 2.04 | 0.549 | 2.04 | --- | --- | --- | --- | 38.81 | --- | --- | --- | --- | 38.81 |
| 2.06 | 0.555 | 2.06 | --- | --- | --- | --- | 39.38 | --- | --- | --- | --- | 39.38 |
| 2.08 | 0.562 | 2.08 | --- | --- | --- | --- | 39.96 | --- | --- | --- | --- | 39.96 |
| 2.10 | 0.568 | 2.10 | --- | --- | --- | --- | 40.54 | --- | --- | --- | --- | 40.54 |
| 2.12 | 0.574 | 2.12 | --- | --- | --- | --- | 41.12 | --- | --- | --- | --- | 41.12 |
| 2.14 | 0.580 | 2.14 | --- | --- | --- | --- | 41.70 | --- | --- | --- | --- | 41.70 |
| 2.16 | 0.587 | 2.16 | --- | --- | --- | --- | 42.28 | --- | --- | --- | --- | 42.28 |
| 2.18 | 0.593 | 2.18 | --- | --- | --- | --- | 42.87 | --- | --- | --- | --- | 42.87 |
| 2.20 | 0.599 | 2.20 | --- | --- | --- | --- | 43.46 | --- | --- | --- | --- | 43.46 |
| 2.22 | 0.606 | 2.22 | --- | --- | --- | --- | 44.06 | --- | --- | --- | --- | 44.06 |
| 2.24 | 0.612 | 2.24 | --- | --- | --- | --- | 44.66 | --- | --- | --- | --- | 44.66 |
| 2.26 | 0.618 | 2.26 | --- | --- | --- | --- | 45.26 | --- | --- | --- | --- | 45.26 |
| 2.28 | 0.625 | 2.28 | --- | --- | --- | --- | 45.86 | --- | --- | --- | --- | 45.86 |
| 2.30 | 0.631 | 2.30 | --- | --- | --- | --- | 46.46 | --- | --- | --- | --- | 46.46 |
| 2.32 | 0.638 | 2.32 | --- | --- | --- | --- | 47.07 | --- | --- | --- | --- | 47.07 |
| 2.34 | 0.644 | 2.34 | --- | --- | --- | --- | 47.68 | --- | --- | --- | --- | 47.68 |
| 2.36 | 0.651 | 2.36 | --- | --- | --- | --- | 48.29 | --- | --- | --- | --- | 48.29 |
| 2.38 | 0.657 | 2.38 | --- | --- | --- | --- | 48.91 | --- | --- | --- | --- | 48.91 |
| 2.40 | 0.664 | 2.40 | --- | --- | --- | --- | 49.52 | --- | --- | --- | --- | 49.52 |
| 2.42 | 0.670 | 2.42 | --- | --- | --- | --- | 50.14 | --- | --- | --- | --- | 50.14 |
| 2.44 | 0.677 | 2.44 | --- | --- | --- | --- | 50.77 | --- | --- | --- | --- | 50.77 |
| 2.46 | 0.683 | 2.46 | --- | --- | --- | --- | 51.39 | --- | --- | --- | --- | 51.39 |
| 2.48 | 0.690 | 2.48 | --- | --- | --- | --- | 52.02 | --- | --- | --- | --- | 52.02 |
| 2.50 | 0.697 | 2.50 | --- | --- | --- | --- | 52.65 | --- | --- | --- | --- | 52.65 |
| 2.52 | 0.703 | 2.52 | --- | --- | --- | --- | 53.29 | --- | --- | --- | --- | 53.29 |
| 2.54 | 0.710 | 2.54 | --- | --- | --- | --- | 53.92 | --- | --- | --- | --- | 53.92 |
| 2.56 | 0.716 | 2.56 | --- | --- | --- | --- | 54.56 | --- | --- | --- | --- | 54.56 |
| 2.58 | 0.723 | 2.58 | --- | --- | --- | --- | 55.20 | --- | --- | --- | --- | 55.20 |
| 2.60 | 0.730 | 2.60 | --- | --- | --- | --- | 55.84 | --- | --- | --- | --- | 55.84 |
| 2.62 | 0.736 | 2.62 | --- | --- | --- | --- | 56.49 | --- | --- | --- | --- | 56.49 |
| 2.64 | 0.743 | 2.64 | --- | --- | --- | --- | 57.14 | --- | --- | --- | --- | 57.14 |
| 2.66 | 0.750 | 2.66 | --- | --- | --- | --- | 57.79 | --- | --- | --- | --- | 57.79 |
| 2.68 | 0.757 | 2.68 | --- | --- | --- | --- | 58.44 | --- | --- | --- | --- | 58.44 |
| 2.70 | 0.764 | 2.70 | --- | --- | --- | --- | 59.09 | --- | --- | --- | --- | 59.09 |
| 2.72 | 0.770 | 2.72 | --- | --- | --- | --- | 59.75 | --- | --- | --- | --- | 59.75 |
| 2.74 | 0.777 | 2.74 | --- | --- | --- | --- | 60.41 | --- | --- | --- | --- | 60.41 |
| 2.76 | 0.784 | 2.76 | --- | --- | --- | --- | 61.08 | --- | --- | --- | --- | 61.08 |
| 2.78 | 0.791 | 2.78 | --- | --- | --- | --- | 61.74 | --- | --- | --- | --- | 61.74 |
| 2.80 | 0.798 | 2.80 | --- | --- | --- | --- | 62.41 | --- | --- | --- | --- | 62.41 |
| 2.82 | 0.804 | 2.82 | --- | --- | --- | --- | 63.08 | --- | --- | --- | --- | 63.08 |
| 2.84 | 0.811 | 2.84 | --- | --- | --- | --- | 63.75 | --- | --- | --- | --- | 63.75 |
| 2.86 | 0.818 | 2.86 | --- | --- | --- | --- | 64.42 | --- | --- | --- | --- | 64.42 |
| 2.88 | 0.825 | 2.88 | --- | --- | --- | --- | 65.10 | --- | --- | --- | --- | 65.10 |
| 2.90 | 0.832 | 2.90 | --- | --- | --- | --- | 65.78 | --- | --- | --- | --- | 65.78 |
| 2.92 | 0.839 | 2.92 | --- | --- | --- | --- | 66.46 | --- | --- | --- | --- | 66.46 |
| 2.94 | 0.846 | 2.94 | --- | --- | --- | --- | 67.15 | --- | --- | --- | --- | 67.15 |
| 2.96 | 0.853 | 2.96 | --- | --- | --- | --- | 67.83 | --- | --- | --- | --- | 67.83 |
| 2.98 | 0.860 | 2.98 | --- | --- | --- | --- | 68.52 | --- | --- | --- | --- | 68.52 |
| 3.00 | 0.867 | 3.00 | --- | --- | --- | --- | 69.21 | --- | --- | --- | --- | 69.21 |
| 3.02 | 0.874 | 3.02 | --- | --- | --- | --- | 69.91 | --- | --- | --- | --- | 69.91 |
| 3.04 | 0.882 | 3.04 | --- | --- | --- | --- | 70.60 | --- | --- | --- | --- | 70.60 |
| 3.06 | 0.889 | 3.06 | --- | --- | --- | --- | 71.30 | --- | --- | --- | --- | 71.30 |
| 3.08 | 0.896 | 3.08 | --- | --- | --- | --- | 72.00 | --- | --- | --- | --- | 72.00 |
| 3.10 | 0.903 | 3.10 | --- | --- | --- | --- | 72.70 | --- | --- | --- | --- | 72.70 |
| 3.12 | 0.910 | 3.12 | --- | --- | --- | --- | 73.41 | --- | --- | --- | --- | 73.41 |

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## Stage / Storage / Discharge Table

| Stage ft | Storage acft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | Clv D cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.14 | 0.917 | 3.14 | --- | --- | --- | --- | 74.11 | --- | --- | --- | --- | 74.11 |
| 3.16 | 0.924 | 3.16 | --- | --- | --- | --- | 74.82 | --- | --- | --- | --- | 74.82 |
| 3.18 | 0.932 | 3.18 | --- | --- | --- | --- | 75.53 | --- | --- | --- | --- | 75.53 |
| 3.20 | 0.939 | 3.20 | --- | --- | --- | --- | 76.25 | --- | --- | --- | --- | 76.25 |
| 3.22 | 0.946 | 3.22 | --- | --- | --- | --- | 76.96 | --- | --- | --- | --- | 76.96 |
| 3.24 | 0.953 | 3.24 | --- | --- | --- | --- | 77.68 | --- | --- | --- | --- | 77.68 |
| 3.26 | 0.961 | 3.26 | --- | --- | --- | --- | 78.40 | --- | --- | --- | --- | 78.40 |
| 3.28 | 0.968 | 3.28 | --- | --- | --- | --- | 79.13 | --- | --- | --- | --- | 79.13 |
| 3.30 | 0.975 | 3.30 | --- | --- | --- | --- | 79.85 | --- | --- | --- | --- | 79.85 |
| 3.32 | 0.983 | 3.32 | --- | --- | --- | --- | 80.58 | --- | --- | --- | --- | 80.58 |
| 3.34 | 0.990 | 3.34 | --- | --- | --- | --- | 81.31 | --- | --- | --- | --- | 81.31 |
| 3.36 | 0.997 | 3.36 | --- | --- | --- | --- | 82.04 | --- | --- | --- | --- | 82.04 |
| 3.38 | 1.005 | 3.38 | --- | --- | --- | --- | 82.77 | --- | --- | --- | --- | 82.77 |
| 3.40 | 1.012 | 3.40 | --- | --- | --- | --- | 83.51 | --- | --- | --- | --- | 83.51 |
| 3.42 | 1.020 | 3.42 | --- | --- | --- | --- | 84.24 | --- | --- | --- | --- | 84.24 |
| 3.44 | 1.027 | 3.44 | --- | --- | --- | --- | 84.98 | --- | --- | --- | --- | 84.98 |
| 3.46 | 1.035 | 3.46 | --- | --- | --- | --- | 85.73 | --- | --- | --- | --- | 85.73 |
| 3.48 | 1.042 | 3.48 | --- | --- | --- | --- | 86.47 | --- | --- | --- | --- | 86.47 |
| 3.50 | 1.050 | 3.50 | --- | --- | --- | --- | 87.22 | --- | --- | --- | --- | 87.22 |
| 3.52 | 1.057 | 3.52 | --- | --- | --- | --- | 87.97 | --- | --- | --- | --- | 87.97 |
| 3.54 | 1.065 | 3.54 | --- | --- | --- | --- | 88.72 | --- | --- | --- | --- | 88.72 |
| 3.56 | 1.072 | 3.56 | --- | --- | --- | --- | 89.47 | --- | --- | --- | --- | 89.47 |
| 3.58 | 1.080 | 3.58 | --- | --- | --- | --- | 90.23 | --- | --- | --- | --- | 90.23 |
| 3.60 | 1.087 | 3.60 | --- | --- | --- | --- | 90.98 | --- | --- | --- | --- | 90.98 |
| 3.62 | 1.095 | 3.62 | --- | --- | --- | --- | 91.74 | --- | --- | --- | --- | 91.74 |
| 3.64 | 1.103 | 3.64 | --- | --- | --- | --- | 92.50 | --- | --- | --- | --- | 92.50 |
| 3.66 | 1.110 | 3.66 | --- | --- | --- | --- | 93.27 | --- | --- | --- | --- | 93.27 |
| 3.68 | 1.118 | 3.68 | --- | --- | --- | --- | 94.03 | --- | --- | --- | --- | 94.03 |
| 3.70 | 1.126 | 3.70 | --- | --- | --- | --- | 94.80 | --- | --- | --- | --- | 94.80 |
| 3.72 | 1.134 | 3.72 | --- | --- | --- | --- | 95.57 | --- | --- | --- | --- | 95.57 |
| 3.74 | 1.141 | 3.74 | --- | --- | --- | --- | 96.34 | --- | --- | --- | --- | 96.34 |
| 3.76 | 1.149 | 3.76 | --- | --- | --- | --- | 97.11 | --- | --- | --- | --- | 97.11 |
| 3.78 | 1.157 | 3.78 | --- | --- | --- | --- | 97.89 | --- | --- | --- | --- | 97.89 |
| 3.80 | 1.164 | 3.80 | --- | --- | --- | --- | 98.67 | --- | --- | --- | --- | 98.67 |
| 3.82 | 1.172 | 3.82 | --- | --- | --- | --- | 99.45 | --- | --- | --- | --- | 99.45 |
| 3.84 | 1.180 | 3.84 | --- | --- | --- | --- | 100.23 | --- | --- | --- | --- | 100.23 |
| 3.86 | 1.188 | 3.86 | --- | --- | --- | --- | 101.01 | --- | --- | --- | --- | 101.01 |
| 3.88 | 1.196 | 3.88 | --- | --- | --- | --- | 101.80 | --- | --- | --- | --- | 101.80 |
| 3.90 | 1.204 | 3.90 | --- | --- | --- | --- | 102.59 | --- | --- | --- | --- | 102.59 |
| 3.92 | 1.212 | 3.92 | --- | --- | --- | --- | 103.38 | --- | --- | --- | --- | 103.38 |
| 3.94 | 1.220 | 3.94 | --- | --- | --- | --- | 104.17 | --- | --- | --- | --- | 104.17 |
| 3.96 | 1.228 | 3.96 | --- | --- | --- | --- | 104.97 | --- | --- | --- | --- | 104.97 |
| 3.98 | 1.236 | 3.98 | --- | --- | --- | --- | 105.76 | --- | --- | --- | --- | 105.76 |
| 4.00 | 1.243 | 4.00 | --- | --- | --- | --- | 106.56 | --- | --- | --- | --- | 106.56 |

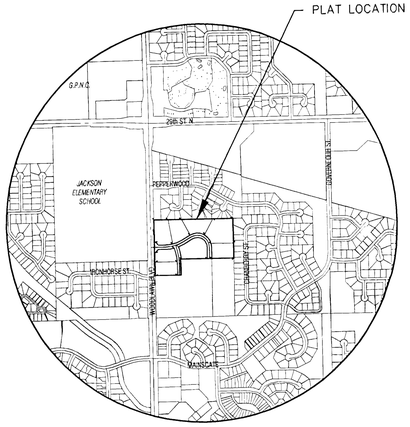
...End

# APPENDIX E

# LOT GRADING PLAN

# APPENDIX F

# DRAINAGE & UTILITY PLAN




## VICINITY MAP

## NOTES

1. ZONING: Existing Limited Industrial "GC"
   Proposed Limited Industrial "GC"
2. Plat Area = 15 ac.
3. Lot total = 8
4. RESERVE USES:
   Private Streets, Landscaping, Irrigation, Drainage, Utilities, Street Lights, Monuments, Signs, Berming, and Parking

## ACCESS CONTROL NOTE

Woodlawn - One access points for Lot 1, Block 1 and One access point for Lot 1 or 2, Block 3 AND shall be placed accordingly: The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.

## LEGAL DESCRIPTION

A tract of land lying in a portion of Lot 1, Block 1, Hinkle's Addition, an addition to Wichita, Sedgwick County, Kansas, being more particularly described as follows

BEGINNING at the Northwest corner of said Lot 1, thence along the North line of said Lot 1, N89°19'18"E, 1089.91 feet to the Northeast corner of said Lot 1; thence along the East line of said Lot 1, S00°54'44"E, 528.23 feet to the Northeast corner of a tract of land described on Film 2851, Page 2997; thence along the North line of said tract described on said Film 2851, Page 2997 and along the North line of a tract of land described on Film 2550, Page 53, S89°20'44"W, 737.57 feet to a point lying 20.17 feet East of a point of intersection on said North line of said tract described on Film 2550, Page 53; thence along a non-tangent curve to the right 66.13 feet, said curve having a central angle of 06°09'05", a radius of 616.00 feet, and a long chord distance of 66.10 feet, bearing S03°48'21"E; thence S00°43'49"E, 150.83 feet; thence S89°19'35"W, 23.72 feet to a point of intersection on said North line of said tract described on Film 2550, Page 53; thence along the North line of said tract on Film 2550, Page 53, S89°19'35"W, 333.96 feet to the East line of said Lot 1; thence parallel with and 50 feet east of the West line of the Northeast Quarter, Section 6, Township 26 South, Range 2 East, of the Sixth principal meridian, and along said East line on a Kansas South Zone Grid Bearing of N00°43'18"W, 744.72 feet to the POINT OF BEGINNING.

## LEGEND

- CONIFEROUS TREE & DIAMETER
- DECIDUOUS TREE & DIAMETER
- SIGN
- BUSH
- EDGE OF TREES
- FENCE
- SANITARY SEWER MANHOLE
- GAS METER
- POLE
- HIGH LINE POLE
- GATE
- WALL
- LIGHT POLE
- TELEPHONE RISER
- INLET
- STORM SEWER PIPE
- WATER LINE
- SANITARY SEWER LINE
- GAS LINE
- TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD TELEPHONE
- OVERHEAD ELECTRIC
- SECTION CORNER
- PROPERTY CORNER FOUND
- BENCHMARK
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- POWER POLE

NORTHEAST ELEMENTARY SCHOOL ADDITION

IRONHORSE AT OXFORD ADDITION

NW. Cor., NE. ¼, Sec. 6, T26S, R2E, 6th P.M. Fnd. ¾" Pipe in Thimble

SW. Cor., NE. ¼, Sec. 6, T26S, R2E, 6th P.M. Fnd. ¾" Pipe in Thimble

PEPPERWOOD VILLAGE ADDITION

RESERVE "A" · RESERVE "D" · RESERVE "A"

ZONED "SF-5" & CUP DP-73

ZONED "GO"

ZONED "GO" & BZA 01-21

HINKLE'S ADDITION

NORTH WATERFORD ADDITION

ZONED "SF-5" & CUP DP-73

N. WOODLAWN BLVD. — ACCESS CONTROL (SEE NOTE) — EXISTING PAVEMENT — FUTURE PAVEMENT — 4' SIDEWALK — 10' STREET SCAPING EASEMENT

N. 28th CIR. PRIVATE STREET

IRONHORSE ST. — ASPHALT DRIVE

ABANDONED TELECO LINE

ABANDONED ARKANSAS VALLEY TELECO LINE

BUILDING UNDER CONSTRUCTION

ASPHALT PARKING LOT

GALICHIA HEART HOSPITAL

POND

DRNG. SWALE

CRANBERRY ST.

1 — 71,037 sq.ft. 1.63 acres

2 — 63,73. sq.ft. 1.46 acres

3 — 62,907. sq.ft. 1.44 acres

4 — 111,008. sq.ft. 2.54 acres

5 — 60,551. sq.ft. 1.39 acres

1 — 90,951. sq.ft. 2.08 acres

1 — 47,967. sq.ft. 1.10 acres

2 — 54,894. sq.ft. 1.26 acres

# PRELIMINARY LOT GRADING PLAN

# WOODLAWN NORTH POINTE ADDITION

**DATE: July 2004**

Owner/Developer: InSite Medical Partners, L.L.C., 8100 E. 22nd St., Bldg. 2100-4, Wichita, KS 67226 316-942-8855
Owner: The Galichia Medical Group, P.A., 2600 N. Woodlawn Blvd., Wichita, KS 67220 316-618-1100

0 60 120

MKEC ENGINEERING CONSULTANTS
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