

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

March 22, 2019

Yolanda Padilla Moyer, PE
Bohannon Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

**RE: Valle Prado Subdivision, Units 4 and 5
Tr 6, The Trails Unit 3A
Drainage Report Stamp Date: 3/8/19
Grading Plan Stamp Date: 3/7/19
Hydrology File: C09D011**

Dear Ms. Padilla Moyer,

PO Box 1293

Based on the submittal received on 3/11/19 the above-referenced Drainage Report and Grading Plan are approved for Preliminary Plat, Grading Permit, and Work Order.

Albuquerque

1. For Information. The interim pond on OS-2 must be named on the infrastructure list for Unit 5, along with drainage covenants and drainage easements. The pond should be called out as Interim Pond A-5, with the interim volume required and future volume required, per the Trails DMP (4.61ac-ft, per Thompson, 2015). It needs to be clear on the Work Order plans and the infrastructure list that the pond will need to be upsized again to accommodate future phases (or build the future configuration now).

NM 87103

www.cabq.gov

Prior to Release of Financial Guarantee (For Information):

2. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Subdivision* is required.
3. Additional details are required for the cobble swale and will need to be provided on the Work Order plans: A channel detail will be needed, showing rock size & thickness, subgrade compaction, etc... Dimensional data needs to be provided, showing that the swale can convey the Q_{100} (2.7cfs).
4. Prior to Unit 4 ROFG, a temporary drainage easement on the temporary ponds will be needed, unless the upstream road portions have been built.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

Sincerely,

A handwritten signature in dark ink, appearing to read 'D. Peterson', is written over a light gray circular background.

Dana M. Peterson
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Valle Prado Units 4-5 **Building Permit #:** _____ **Hydrology File #:** C09D011
DRB#: _____ **EPC#:** _____ **Work Order#:** _____
Legal Description: Tract 6, The Trails Unit 3A
City Address: _____

Applicant: Bohannon Huston Inc. **Contact:** Yolanda Moyer
Address: 7500 Jefferson St NE CY2 Albuquerque, NM, 87109
Phone#: 505-798-7945 **Fax#:** _____ **E-mail:** ypadilla@bhinc.com
Owner: PV Trails Albuquerque LCC **Contact:** Scott Steffen
Address: 4350 La Jolla Village Dr, Suite 110 San Diego CA 92122
Phone#: 505 243-3949 **Fax#:** _____ **E-mail:** ssteffen@pricedg.com

TYPE OF SUBMITTAL: ☒ PLAT (⁹³ # OF LOTS) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL?: ☒ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION ☒ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION
☐ PAD CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☒ DRAINAGE REPORT
☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
☐ ELEVATION CERTIFICATE
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ OTHER (SPECIFY) _____
☐ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☒ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☒ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ FLOODPLAIN DEVELOPMENT PERMIT
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: 3-08-19 **By:** Yolanda Padilla Moyer, P.E.

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

March 7, 2019

Mr. Dana Peterson, P.E.
Senior Engineer
City of Albuquerque
Planning Department
600 2nd Street NW
Albuquerque, NM 87103

RE: **Valle Prado Subdivision, Units 4 and 5**
Tr 6, The Trails Unit 3A
Drainage Report Stamp Date: 2/15/19
Grading Plan Stamp Date: 2/15/19
Hydrology File: C09D011

Dear Mr. Peterson,

Enclosed are responses to the comments provided on February 27th, 2019. Responses are listed in red below.

1. The Basin B and Basin C delineations are not supported by the grading plan in the vicinity of Sandmark Rd/Two Rock Rd intersection; remove the valley gutter and add supplemental spot elevations and quarter points to show the flows in the Two Rock half street will turn south and go down Sandmark instead of continuing on Two Rock. **Valley gutter has been removed and supplemental spots have been provided.**
2. Provide written and signed permission from the owner of Tract OS-2 for the grading on their property (along the north side of Valle Prado Unit 5). If the retaining wall behind lots 10-16, Unit 5 will encroach, you should get this permission as well. **Written permission will be provided to allow grading and retaining wall to encroach in Tract OS-2**
3. The interim ponds on OS-2 should be named on the infrastructure list for Unit 4, along with drainage covenants and drainage easements. Delineate the areas draining to them and size for the 100-yr., 10-day storm volume. Basin delineations are missing, and the areas don't appear to reflect the entire area draining to the ponds; another interim pond seems necessary just north of the South Sky/Two Rock intersection. **Basin Delineation were previously provided but have been updated. The pond size has been updated to accommodate 2x100-yr. Per our conversation, in lieu of another interim pond at Two Rocks, a swale has been added to carry the appropriate flow to the existing pond to the North.**

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

4. Along all external boundaries, provide sections showing any proposed retaining walls, the property line, and existing and proposed grades. In accordance with DPM Ch.22, section 5-part B, grading and wall construction near the property line may not endanger adjacent property or constrain its use. Ensure that the retaining walls (including footers) do not encroach on neighboring property or public ROW. If a revocable permit is pursued it should be discussed prior to Preliminary Plat, so it can be included as an infrastructure list item. **Cross-section B-B, which was previously provided shows that retaining wall footings will not encroach into right-of-way.**
5. This project requires an ESC Plan, submitted to the Stormwater Quality Engineer (Curtis Cherne PE, ccherne@cabq.gov or 924-3420). We have old ESC Plans for Units 1-3, but nothing for Units 4-5. **ESC Plan will be submitted.**
6. Show the storm drain on the new subbasin exhibit (layer may be turned off or missing). **Layer has been turned on to show storm drains.**
7. For Information. Prior to Unit 4 ROFG, a temporary drainage easement on the temporary ponds will be needed, unless the upstream road portions have been built. **Noted.**

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Revised Grading Plans are enclosed. Please feel free to contact me at 823-1000 with questions or comments.

Sincerely,



Yolanda Padilla Moyer, P.E.
Senior Project Manager
Community Development and Planning

YPM/cc
Enclosures

cc: Scott J. Steffen, PLDG

The Trails Community Association, Inc

3077 E. Warm Springs Road
Las Vegas, Nevada 89120

February 28, 2019

City of Albuquerque
Planning Department
P.O. Box 1293
Albuquerque, NM 87102

Re: Letter of Authorization for Construction within Tract OS-2, The Trails Unit 3A

To Whom It May Concern:

The Trails Community Association, Inc. ("The Trails"), owner of Tracts OS-1 and OS-2, The Trails Unit 3A, hereby grants permission to PV Trails Albuquerque, LLC ("PV Trails") to grade and install utilities and drainage infrastructure within Tracts OS-1 and OS-2 as necessary for the development of Tracts 1-6, The Trails Unit 3A. Grading may include, but not be limited to, tie slopes from Tracts 4-6 into Tract OS-2, tie slopes from Tract 2 into Tract OS-1, interim drainage ponds in both Tracts and permanent drainage ponds in both Tracts as shown in Plate 1 of the Drainage Master Plan for the Trails Units 1-3.

In addition, The Trails grants permission to PV Trails to install walls and/or fences along the common boundaries of Tracts OS-1 and OS-2 and Tracts 2 and 4-6, The Trails Unit 3A, such that wall footings and/or fence posts may encroach into Tracts OS-1 and OS-2.

Sincerely,



Kelly Calhoun
Manager

The Trails Community Association, Inc.

AMENDMENT No. 1

DRAINAGE MANAGEMENT PLAN

FOR

VALLE PRADO @

THE TRAILS 3A

MARCH 2019

Prepared for:

PV Trails Albuquerque, LLC

4350 La Jolla Drive, Suite 110

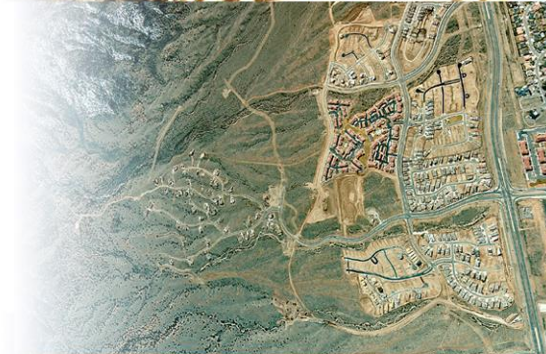
San Diego, CA 92122

Bohannon  **Huston**

Engineering

Spatial Data

Advanced Technologies



**AMENDMENT NO. 1
DRAINAGE MANAGEMENT PLAN
FOR
VALLE PRADO @ THE TRAILS 3A**

MARCH 7, 2019

Prepared for:
PV Trails Albuquerque, LLC
4350 La Jolla Drive, Suite 110
San Diego CA 92122

Prepared by:
BOHANNAN HUSTON, INC.
COURTYARD I
7500 JEFFERSON STREET NE
ALBUQUERQUE, NM 87109

Prepared by:


Yolanda Padilla Moyer, P.E.
Senior Project Manager

Date



TABLE OF CONTENTS

I. PURPOSE.....2

APPENDICES

APPENDIX A: ORIGINAL AHYMO INPUT AND OUT FILES
APPENDIX B: NEW AHYMO INPUT AND OUT FILES
APPENDIX C: ROADWAY HYDAULICS
APPENDIX D: ORIGINAL DMP APPROVAL LETTER
APPENDIX E: FIRST FLUSH
APPENDIX F: BASIN LAND TREATMENTS
APPENDIX G: TEMPORARY POND CALCULATIONS

EXHIBITS

EXHIBIT A: ORIGINAL FULLY DEVELOPED BASIN MAP
EXHIBIT B: PROPOSED BASIN MAP
EXHIBIT C: PHASE 4 GRADING PLAN
EXHIBIT D: PHASE 5 GRADING PLAN
EXHIBT E: BULK LAND PLAT

I. PURPOSE

This report will serve as Amendment No. 1 to the Drainage Management Plan for Valle Prado @ the Trails Unit 3A, June 2014, which was originally prepared for Woodmont Paseo, LLC. The owners of the property have changed at is now owned by PV Trail Albuquerque LLC and this amendment is submitted on their behalf. The original DMP stated above provides drainage analysis to support proposed site-specific drainage infrastructure for Valle Prado Unit 1 and 2 and The Trail Unit 3A. In this report the future phases 4 and 5 were anticipated and included as future basins, Future Basins 1, 2 and 3. See enclosed Exhibit A for this original Basin Map from the original DMP. With the proposed development of Phases 4 and 5, the lotting plan has changed slightly with a decrease of lots in some basins and an increase in others. This amendment provides some additional calculation to show that the subdivision is below the allowable 100-yr 6yr storm event approved in the Master DMP. Included are the original AHYMO calculations (Appendix A) to show the original %D and runoff to be 58% and 19.93cfs, 54% and 13.54cfs and 55% and 10.79cfs. A new proposed Basin Map is provided for Phases 4 and 5 with the Basins renamed as a Basins A, B, and C (formerly named Future Basins 1, 2, and 3 respectively). The AHYMO files are also included for with the updated land treatment types due to the lot changes with the %D and runoff being 55.8% and 19.47cfs, 58.7% and 11.6cfs and 54.8% and 15.70cfs respectively. The total increase in flow is 0.19cfs from 44.26cfs to 46.8 cfs which is negligible. Also included in Appendix C are the street hydraulic calculations.

One temporary retention pond will need to be placed Northwest of Basins A, B, and C in order to mitigate offsite flows until Future Pond A5 is built. Interim Basin 1 is an offsite basin that will reach the Temporary pond, which has a flowrate 5.3cfs requiring a retention volume of 6916.26 CF. Interim Basin 2 is another offsite basin that will reach the Temporary pond, which has a flowrate of 3.1cfs requiring a retention volume of 4096.54 CF. The land treatments for these basins can be found in Appendix F. The Temporary pond will have enough capacity to retain two times the offsite flow that is conveyed to them. The Temporary pond is designed to retain 22326.7 CF, as illustrated in Appendix G.

In regard to first flush requirements, Pond E, shown in Exhibit A, was designed to accommodate 0.9ac-ft of first flush discharge. The first flush pond was designed to accommodate all phases including the future phases. Per, the original DMP on page 3, excerpt provided in Appendix E, the first flush was calculation using 0.44' which could have

been 0.34' as required at the time. The report indicates that the required volumes was 1.3 acft at the 0.44' but if the 0.34', which was the requirement at the time, was used the required volume would have been 1.0 ac ft. For reference, I have also included the certification for Pond E in Appendix E. Grading Plans for Phase 4 and 5 are included as Exhibits C & D.

In conclusion, as stated above there is little to no impact on the downstream improvements as the runoff is consistent with the original DMP and approval (the approval letter is provided in Appendix D.

APPENDICES

APPENDIX A: ORIGINAL AHYMO INPUT AND OUT FILES

APPENDIX B: NEW AHYMO INPUT AND OUT FILES

APPENDIX C: ROADWAY HYDAULICS

APPENDIX D: ORIGINAL DMP APPROVAL LETTER

APPENDIX E: FIRST FLUSH

APPENDIX F: BASIN LAND TREATMENTS

APPENDIX G: TEMPORARY POND CALCULATIONS

APPENDIX A
ORIGINAL AHYMO INPUT AND OUT FILES

DEV_COND.OUT

AHYMO PROGRAM (AHYMO_97) - - Version: 1997.02c
 RUN DATE (MON/DAY/YR) = 06/23/2014
 START TIME (HR:MIN:SEC) = 14:30:46 USER NO.= AHYMO-S-9702c1BohanHu-AH
 INPUT FILE = DEV_Cond.HYM

*S TIERRA VISTA UNIT 3A SUBDIVISION DRAINAGE BASIN (D) PROPOSED
 *S 100 YEAR - 24 HOUR STORM
 *S
 *S CREATED JUNE 20, 2014
 *

*CONVERT TO NMHYMO

START TIME=0.0 HR PUNCH CODE=0

LOCATION NM
 Soil infiltration values (LAND FACTORS) for this location are not available.
 The following default values were used.
 Land Treatment Initial Abstr.(in) Unif. Infilt.(in/hour)
 A 0.65 1.67
 B 0.50 1.25
 C 0.35 0.83
 D 0.10 0.04

*

*100 YEAR - 24 HOUR

RAINFALL TYPE=2 RAIN QUARTER=0
 RAIN ONE=1.84 IN RAIN SIX=2.20 IN
 RAIN DAY=2.66 IN DT=0.10 HRS

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT =	.100000 HOURS				END TIME =	24.000000 HOURS			
.0000	.0060	.0124	.0193	.0266	.0347	.0435			
.0532	.0640	.0764	.0908	.1071	.1906	.4476			
.9796	1.3314	1.5028	1.6393	1.7527	1.8488	1.9308			
1.9485	1.9639	1.9776	1.9899	2.0013	2.0117	2.0215			
2.0306	2.0393	2.0475	2.0553	2.0627	2.0698	2.0766			
2.0832	2.0895	2.0956	2.1015	2.1072	2.1128	2.1182			
2.1234	2.1285	2.1335	2.1383	2.1431	2.1477	2.1522			
2.1566	2.1610	2.1652	2.1694	2.1734	2.1774	2.1814			
2.1852	2.1890	2.1927	2.1964	2.2000	2.2039	2.2078			
2.2117	2.2155	2.2193	2.2231	2.2268	2.2305	2.2342			
2.2379	2.2416	2.2452	2.2488	2.2524	2.2559	2.2595			
2.2630	2.2665	2.2700	2.2734	2.2768	2.2802	2.2836			
2.2870	2.2903	2.2937	2.2970	2.3002	2.3035	2.3068			
2.3100	2.3132	2.3164	2.3196	2.3227	2.3259	2.3290			
2.3321	2.3352	2.3383	2.3413	2.3444	2.3474	2.3504			
2.3534	2.3563	2.3593	2.3622	2.3652	2.3681	2.3710			
2.3739	2.3767	2.3796	2.3824	2.3853	2.3881	2.3909			
2.3937	2.3965	2.3992	2.4020	2.4047	2.4074	2.4101			
2.4128	2.4155	2.4182	2.4208	2.4235	2.4261	2.4287			
2.4314	2.4340	2.4365	2.4391	2.4417	2.4442	2.4468			
2.4493	2.4518	2.4543	2.4568	2.4593	2.4618	2.4643			
2.4667	2.4692	2.4716	2.4740	2.4765	2.4789	2.4813			
2.4837	2.4860	2.4884	2.4908	2.4931	2.4955	2.4978			
2.5001	2.5024	2.5047	2.5070	2.5093	2.5116	2.5139			
2.5161	2.5184	2.5206	2.5229	2.5251	2.5273	2.5295			
2.5317	2.5339	2.5361	2.5383	2.5404	2.5426	2.5448			
2.5469	2.5490	2.5512	2.5533	2.5554	2.5575	2.5596			
2.5617	2.5638	2.5659	2.5680	2.5700	2.5721	2.5741			
2.5762	2.5782	2.5803	2.5823	2.5843	2.5863	2.5883			
2.5903	2.5923	2.5943	2.5963	2.5982	2.6002	2.6022			
2.6041	2.6061	2.6080	2.6099	2.6119	2.6138	2.6157			
2.6176	2.6195	2.6214	2.6233	2.6252	2.6271	2.6290			
2.6308	2.6327	2.6346	2.6364	2.6383	2.6401	2.6419			
2.6438	2.6456	2.6474	2.6492	2.6510	2.6528	2.6546			
2.6564	2.6582	2.6600							

*S

*S

*S

*S

*S

*S

*S

*S COMPUTE BASIN 1 *****

COMPUTE NM HYD ID=1 HYD=1 AREA=0.005 PER A=0 PER B=24
 PER C=24 PER D=52 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 7.9785 CFS UNIT VOLUME = 1.005 B = 526.28 P60 = 1.8400
 AREA = .002600 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 4.9601 CFS UNIT VOLUME = 1.002 B = 354.44 P60 = 1.8400
 AREA = .002400 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 1.00

RUNOFF VOLUME = 1.64591 INCHES = .4389 ACRE-FEET
 PEAK DISCHARGE RATE = 8.92 CFS AT 1.500 HOURS BASIN AREA = .0050 SQ. MI.

*

*S COMPUTE BASIN 2 *****

COMPUTE NM HYD ID=2 HYD=2 AREA=0.004513 PER A=0 PER B=26
 PER C=26 PER D=48 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 6.6475 CFS UNIT VOLUME = 1.004 B = 526.28 P60 = 1.8400

```

                                DEV_COND.OUT
AREA = .002166 SQ MI    IA = .10000 INCHES    INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR    TP = .171500HR    K/TP RATIO = .889153    SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 4.8501 CFS    UNIT VOLUME = 1.002    B = 354.44    P60 = 1.8400
AREA = .002347 SQ MI    IA = .42500 INCHES    INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD                                ID=2    CODE=1

                                OUTFLOW HYDROGRAPH REACH    2.00

RUNOFF VOLUME = 1.58072 INCHES    = .3805 ACRE-FEET
PEAK DISCHARGE RATE = 7.86 CFS    AT 1.500 HOURS    BASIN AREA = .0045 SQ. MI.

*
*S COMPUTE BASIN 3 *****
COMPUTE NM HYD    ID=3 HYD=3    AREA=0.006875    PER A=0 PER B=31
                                PER C=31 PER D=38    TP=-0.1715    RAINFALL=-1

K = .093468HR    TP = .171500HR    K/TP RATIO = .545000    SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 8.0169 CFS    UNIT VOLUME = 1.005    B = 526.28    P60 = 1.8400
AREA = .002613 SQ MI    IA = .10000 INCHES    INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR    TP = .171500HR    K/TP RATIO = .889153    SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 8.8093 CFS    UNIT VOLUME = 1.003    B = 354.44    P60 = 1.8400
AREA = .004263 SQ MI    IA = .42500 INCHES    INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD                                ID=3    CODE=1

                                OUTFLOW HYDROGRAPH REACH    3.00

RUNOFF VOLUME = 1.41777 INCHES    = .5198 ACRE-FEET
PEAK DISCHARGE RATE = 11.22 CFS    AT 1.500 HOURS    BASIN AREA = .0069 SQ. MI.

*
*S COMPUTE BASIN 4 *****
COMPUTE NM HYD    ID=4 HYD=4    AREA=0.003594    PER A=0 PER B=26
                                PER C=26 PER D=48    TP=-0.1715    RAINFALL=-1

K = .093468HR    TP = .171500HR    K/TP RATIO = .545000    SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.2938 CFS    UNIT VOLUME = 1.004    B = 526.28    P60 = 1.8400
AREA = .001725 SQ MI    IA = .10000 INCHES    INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR    TP = .171500HR    K/TP RATIO = .889153    SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 3.8624 CFS    UNIT VOLUME = 1.001    B = 354.44    P60 = 1.8400
AREA = .001869 SQ MI    IA = .42500 INCHES    INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD                                ID=4    CODE=1

                                OUTFLOW HYDROGRAPH REACH    4.00

RUNOFF VOLUME = 1.58072 INCHES    = .3030 ACRE-FEET
PEAK DISCHARGE RATE = 6.26 CFS    AT 1.500 HOURS    BASIN AREA = .0036 SQ. MI.

*
*S COMPUTE BASIN 5 *****
COMPUTE NM HYD    ID=5 HYD=5    AREA=0.001875    PER A=0 PER B=31.5
                                PER C=31.5 PER D=37    TP=-0.1715    RAINFALL=-1

K = .093468HR    TP = .171500HR    K/TP RATIO = .545000    SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 2.1289 CFS    UNIT VOLUME = 1.001    B = 526.28    P60 = 1.8400
AREA = .000694 SQ MI    IA = .10000 INCHES    INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR    TP = .171500HR    K/TP RATIO = .889153    SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 2.4413 CFS    UNIT VOLUME = .9998    B = 354.44    P60 = 1.8400
AREA = .001181 SQ MI    IA = .42500 INCHES    INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD                                ID=5    CODE=1

                                OUTFLOW HYDROGRAPH REACH    5.00

RUNOFF VOLUME = 1.40148 INCHES    = .1401 ACRE-FEET
PEAK DISCHARGE RATE = 3.05 CFS    AT 1.500 HOURS    BASIN AREA = .0019 SQ. MI.

*
*S COMPUTE FUTURE BASIN 1 *****
COMPUTE NM HYD    ID=6 HYD=6    AREA=0.010781    PER A=0 PER B=21
                                PER C=21 PER D=58    TP=-0.1715    RAINFALL=-1

K = .093468HR    TP = .171500HR    K/TP RATIO = .545000    SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 19.188 CFS    UNIT VOLUME = 1.005    B = 526.28    P60 = 1.8400
AREA = .006253 SQ MI    IA = .10000 INCHES    INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR    TP = .171500HR    K/TP RATIO = .889153    SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 9.3581 CFS    UNIT VOLUME = 1.003    B = 354.44    P60 = 1.8400
AREA = .004528 SQ MI    IA = .42500 INCHES    INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

```

DEV_COND.OUT

PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA FB.1

RUNOFF VOLUME = 1.74368 INCHES = 1.0026 ACRE-FEET
 PEAK DISCHARGE RATE = 19.93 CFS AT 1.500 HOURS BASIN AREA = .0108 SQ. MI.

*
 *S COMPUTE FUTURE BASIN 2 *****
 COMPUTE NM HYD ID=7 HYD=FB.2 AREA=0.0075 PER A=0 PER B=23
 PER C=23 PER D=54 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 12.428 CFS UNIT VOLUME = 1.005 B = 526.28 P60 = 1.8400
 AREA = .004050 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 7.1301 CFS UNIT VOLUME = 1.002 B = 354.44 P60 = 1.8400
 AREA = .003450 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=7 CODE=1

HYDROGRAPH FROM AREA FB.2

RUNOFF VOLUME = 1.67850 INCHES = .6714 ACRE-FEET
 PEAK DISCHARGE RATE = 13.54 CFS AT 1.500 HOURS BASIN AREA = .0075 SQ. MI.

*
 *S COMPUTE FUTURE BASIN 3 *****
 COMPUTE NM HYD ID=8 HYD=FB.3 AREA=0.005938 PER A=0 PER B=22.5
 PER C=22.5 PER D=55 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 10.022 CFS UNIT VOLUME = 1.005 B = 526.28 P60 = 1.8400
 AREA = .003266 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 5.5224 CFS UNIT VOLUME = 1.002 B = 354.44 P60 = 1.8400
 AREA = .002672 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA FB.3

RUNOFF VOLUME = 1.69479 INCHES = .5367 ACRE-FEET
 PEAK DISCHARGE RATE = 10.79 CFS AT 1.500 HOURS BASIN AREA = .0059 SQ. MI.

*
 *S COMPUTE FUTURE BASIN 4 *****
 COMPUTE NM HYD ID=9 HYD=FB.4 AREA=0.004844 PER A=0 PER B=29.5
 PER C=29.5 PER D=41 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 6.0945 CFS UNIT VOLUME = 1.004 B = 526.28 P60 = 1.8400
 AREA = .001986 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 5.9066 CFS UNIT VOLUME = 1.002 B = 354.44 P60 = 1.8400
 AREA = .002858 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA FB.4

RUNOFF VOLUME = 1.46666 INCHES = .3789 ACRE-FEET
 PEAK DISCHARGE RATE = 8.07 CFS AT 1.500 HOURS BASIN AREA = .0048 SQ. MI.

*
 *S COMPUTE OFFSITE BASIN 2 *****
 COMPUTE NM HYD ID=10 HYD=OFF.2 AREA=0.000938 PER A=80 PER B=20
 PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1

K = .203093HR TP = .171500HR K/TP RATIO = 1.184216 SHAPE CONSTANT, N = 2.997519
 UNIT PEAK = 1.5403 CFS UNIT VOLUME = .9852 B = 281.62 P60 = 1.8400
 AREA = .000938 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA OFF.2

RUNOFF VOLUME = .45840 INCHES = .0229 ACRE-FEET
 PEAK DISCHARGE RATE = .62 CFS AT 1.500 HOURS BASIN AREA = .0009 SQ. MI.

DEV_COND.OUT

*S COMPUTE OFFSITE BASIN 3 *****
 COMPUTE NM HYD ID=11 HYD=OFF.3 AREA=0.001094 PER A=76 PER B=24
 PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1

K = .201399HR TP = .171500HR K/TP RATIO = 1.174338 SHAPE CONSTANT, N = 3.020870
 UNIT PEAK = 1.8086 CFS UNIT VOLUME = .9871 B = 283.52 P60 = 1.8400
 AREA = .001094 SQ MI IA = .61400 INCHES INF = 1.56920 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA OFF.3

RUNOFF VOLUME = .46712 INCHES = .0273 ACRE-FEET
 PEAK DISCHARGE RATE = .74 CFS AT 1.500 HOURS BASIN AREA = .0011 SQ. MI.

*

*S COMPUTE OFFSITE BASIN 4 *****
 COMPUTE NM HYD ID=12 HYD=OFF.4 AREA=0.001406 PER A=80 PER B=20
 PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1

K = .203093HR TP = .171500HR K/TP RATIO = 1.184216 SHAPE CONSTANT, N = 2.997519
 UNIT PEAK = 2.3088 CFS UNIT VOLUME = .9875 B = 281.62 P60 = 1.8400
 AREA = .001406 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA OFF.4

RUNOFF VOLUME = .45840 INCHES = .0344 ACRE-FEET
 PEAK DISCHARGE RATE = .93 CFS AT 1.500 HOURS BASIN AREA = .0014 SQ. MI.

*

*S COMPUTE OFFSITE BASIN 5 *****
 COMPUTE NM HYD ID=13 HYD=OFF.5 AREA=0.003281 PER A=95 PER B=5
 PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1

K = .209446HR TP = .171500HR K/TP RATIO = 1.221261 SHAPE CONSTANT, N = 2.914129
 UNIT PEAK = 5.2562 CFS UNIT VOLUME = .9902 B = 274.74 P60 = 1.8400
 AREA = .003281 SQ MI IA = .64250 INCHES INF = 1.64900 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=13 CODE=1

HYDROGRAPH FROM AREA OFF.5

RUNOFF VOLUME = .42601 INCHES = .0745 ACRE-FEET
 PEAK DISCHARGE RATE = 1.99 CFS AT 1.500 HOURS BASIN AREA = .0033 SQ. MI.

*

*S COMPUTE OFFSITE BASIN WELL *****
 COMPUTE NM HYD ID=14 HYD=OFF.WELL AREA=0.001563 PER A=0 PER B=40
 PER C=40 PER D=20 TP=-0.1715 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .95926 CFS UNIT VOLUME = .9965 B = 526.28 P60 = 1.8400
 AREA = .000313 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 2.5842 CFS UNIT VOLUME = .9998 B = 354.44 P60 = 1.8400
 AREA = .001250 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=14 CODE=1

HYDROGRAPH FROM AREA OFF.WELL

RUNOFF VOLUME = 1.12446 INCHES = .0937 ACRE-FEET
 PEAK DISCHARGE RATE = 2.26 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

*

*S

*S ADD BASINS 1 AND 2 TO CREATE TEMP A *****
 ADD HYD ID=15 HYD=TEMP.A ID I=1 II=2
 PRINT HYD ID=15 CODE=0

HYDROGRAPH FROM AREA TEMP.A

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.100	.0	5.100	.1	10.100	.1	15.100	.1	20.100	.1
.200	.0	5.200	.1	10.200	.1	15.200	.1	20.200	.1
.300	.0	5.300	.1	10.300	.1	15.300	.1	20.300	.1
.400	.0	5.400	.1	10.400	.1	15.400	.1	20.400	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
.600	.0	5.600	.1	10.600	.1	15.600	.1	20.600	.1
.700	.0	5.700	.1	10.700	.1	15.700	.1	20.700	.1
.800	.0	5.800	.1	10.800	.1	15.800	.1	20.800	.1
.900	.0	5.900	.1	10.900	.1	15.900	.1	20.900	.1
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.100	.0	6.100	.1	11.100	.1	16.100	.1	21.100	.1
1.200	.6	6.200	.1	11.200	.1	16.200	.1	21.200	.1

DEV_COND.OUT									
1.300	2.9	6.300	.1	11.300	.1	16.300	.1	21.300	.1
1.400	10.5	6.400	.1	11.400	.1	16.400	.1	21.400	.1
1.500	16.8	6.500	.1	11.500	.1	16.500	.1	21.500	.1
1.600	14.4	6.600	.1	11.600	.1	16.600	.1	21.600	.1
1.700	9.8	6.700	.1	11.700	.1	16.700	.1	21.700	.1
1.800	6.9	6.800	.1	11.800	.1	16.800	.1	21.800	.1
1.900	5.2	6.900	.1	11.900	.1	16.900	.1	21.900	.1
2.000	4.2	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.100	3.1	7.100	.1	12.100	.1	17.100	.1	22.100	.1
2.200	1.9	7.200	.1	12.200	.1	17.200	.1	22.200	.1
2.300	1.3	7.300	.1	12.300	.1	17.300	.1	22.300	.1
2.400	1.0	7.400	.1	12.400	.1	17.400	.1	22.400	.1
2.500	.8	7.500	.1	12.500	.1	17.500	.1	22.500	.1
2.600	.6	7.600	.1	12.600	.1	17.600	.1	22.600	.1
2.700	.5	7.700	.1	12.700	.1	17.700	.1	22.700	.1
2.800	.4	7.800	.1	12.800	.1	17.800	.1	22.800	.1
2.900	.3	7.900	.1	12.900	.1	17.900	.1	22.900	.1
3.000	.3	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.100	.2	8.100	.1	13.100	.1	18.100	.1	23.100	.1
3.200	.2	8.200	.1	13.200	.1	18.200	.1	23.200	.1
3.300	.2	8.300	.1	13.300	.1	18.300	.1	23.300	.1
3.400	.2	8.400	.1	13.400	.1	18.400	.1	23.400	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
3.600	.1	8.600	.1	13.600	.1	18.600	.1	23.600	.1
3.700	.1	8.700	.1	13.700	.1	18.700	.1	23.700	.1
3.800	.1	8.800	.1	13.800	.1	18.800	.1	23.800	.1
3.900	.1	8.900	.1	13.900	.1	18.900	.1	23.900	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.100	.1	9.100	.1	14.100	.1	19.100	.1	24.100	.0
4.200	.1	9.200	.1	14.200	.1	19.200	.1	24.200	.0
4.300	.1	9.300	.1	14.300	.1	19.300	.1	24.300	.0
4.400	.1	9.400	.1	14.400	.1	19.400	.1	24.400	.0
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0
4.600	.1	9.600	.1	14.600	.1	19.600	.1	24.600	.0
4.700	.1	9.700	.1	14.700	.1	19.700	.1	24.700	.0
4.800	.1	9.800	.1	14.800	.1	19.800	.1		
4.900	.1	9.900	.1	14.900	.1	19.900	.1		

RUNOFF VOLUME = 1.61490 INCHES = .8193 ACRE-FEET
 PEAK DISCHARGE RATE = 16.78 CFS AT 1.500 HOURS BASIN AREA = .0095 SQ. MI.

*
 *S ADD BASINS TEMP A AND 3 TO CREATE TEMP 1.B*****
 ADD HYD ID=16 HYD=TEMP.B ID I=15 II=3
 PRINT HYD ID=16 CODE=0

HYDROGRAPH FROM AREA TEMP.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.100	.0	5.100	.1	10.100	.1	15.100	.1	20.100	.1
.200	.0	5.200	.2	10.200	.1	15.200	.1	20.200	.1
.300	.0	5.300	.2	10.300	.1	15.300	.1	20.300	.1
.400	.0	5.400	.2	10.400	.1	15.400	.1	20.400	.1
.500	.0	5.500	.2	10.500	.1	15.500	.1	20.500	.1
.600	.0	5.600	.2	10.600	.1	15.600	.1	20.600	.1
.700	.0	5.700	.2	10.700	.1	15.700	.1	20.700	.1
.800	.0	5.800	.2	10.800	.1	15.800	.1	20.800	.1
.900	.0	5.900	.2	10.900	.1	15.900	.1	20.900	.1
1.000	.0	6.000	.2	11.000	.1	16.000	.1	21.000	.1
1.100	.1	6.100	.2	11.100	.1	16.100	.1	21.100	.1
1.200	1.0	6.200	.2	11.200	.1	16.200	.1	21.200	.1
1.300	4.6	6.300	.2	11.300	.1	16.300	.1	21.300	.1
1.400	17.3	6.400	.2	11.400	.1	16.400	.1	21.400	.1
1.500	28.0	6.500	.2	11.500	.1	16.500	.1	21.500	.1
1.600	24.1	6.600	.2	11.600	.1	16.600	.1	21.600	.1
1.700	16.3	6.700	.2	11.700	.1	16.700	.1	21.700	.1
1.800	11.5	6.800	.2	11.800	.1	16.800	.1	21.800	.1
1.900	8.5	6.900	.2	11.900	.1	16.900	.1	21.900	.1
2.000	6.7	7.000	.2	12.000	.1	17.000	.1	22.000	.1
2.100	4.9	7.100	.2	12.100	.1	17.100	.1	22.100	.1
2.200	3.0	7.200	.2	12.200	.1	17.200	.1	22.200	.1
2.300	2.1	7.300	.2	12.300	.1	17.300	.1	22.300	.1
2.400	1.6	7.400	.2	12.400	.1	17.400	.1	22.400	.1
2.500	1.3	7.500	.2	12.500	.1	17.500	.1	22.500	.1
2.600	1.0	7.600	.2	12.600	.1	17.600	.1	22.600	.1
2.700	.8	7.700	.2	12.700	.1	17.700	.1	22.700	.1
2.800	.7	7.800	.2	12.800	.1	17.800	.1	22.800	.1
2.900	.5	7.900	.2	12.900	.1	17.900	.1	22.900	.1
3.000	.5	8.000	.2	13.000	.1	18.000	.1	23.000	.1
3.100	.4	8.100	.2	13.100	.1	18.100	.1	23.100	.1
3.200	.3	8.200	.2	13.200	.1	18.200	.1	23.200	.1
3.300	.3	8.300	.2	13.300	.1	18.300	.1	23.300	.1
3.400	.2	8.400	.2	13.400	.1	18.400	.1	23.400	.1
3.500	.2	8.500	.2	13.500	.1	18.500	.1	23.500	.1
3.600	.2	8.600	.2	13.600	.1	18.600	.1	23.600	.1
3.700	.2	8.700	.2	13.700	.1	18.700	.1	23.700	.1
3.800	.2	8.800	.2	13.800	.1	18.800	.1	23.800	.1
3.900	.2	8.900	.2	13.900	.1	18.900	.1	23.900	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1
4.100	.1	9.100	.2	14.100	.1	19.100	.1	24.100	.1
4.200	.1	9.200	.2	14.200	.1	19.200	.1	24.200	.0
4.300	.1	9.300	.2	14.300	.1	19.300	.1	24.300	.0
4.400	.1	9.400	.2	14.400	.1	19.400	.1	24.400	.0
4.500	.1	9.500	.2	14.500	.1	19.500	.1	24.500	.0
4.600	.1	9.600	.2	14.600	.1	19.600	.1	24.600	.0
4.700	.1	9.700	.2	14.700	.1	19.700	.1	24.700	.0
4.800	.1	9.800	.1	14.800	.1	19.800	.1		
4.900	.1	9.900	.1	14.900	.1	19.900	.1		

RUNOFF VOLUME = 1.53218 INCHES = 1.3392 ACRE-FEET
 PEAK DISCHARGE RATE = 28.00 CFS AT 1.500 HOURS BASIN AREA = .0164 SQ. MI.

*
 *S ADD BASINS TEMP B AND 5 TO CREATE TEMP C*****
 ADD HYD ID=17 HYD=TEMP.C ID I=16 II=5
 PRINT HYD ID=17 CODE=0

DEV_COND.OUT

HYDROGRAPH FROM AREA TEMP.C

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
.100	.0	5.100	.2	10.100	.2	15.100	.1	20.100	.1
.200	.0	5.200	.2	10.200	.2	15.200	.1	20.200	.1
.300	.0	5.300	.2	10.300	.2	15.300	.1	20.300	.1
.400	.0	5.400	.2	10.400	.2	15.400	.1	20.400	.1
.500	.0	5.500	.2	10.500	.2	15.500	.1	20.500	.1
.600	.0	5.600	.2	10.600	.2	15.600	.1	20.600	.1
.700	.0	5.700	.2	10.700	.2	15.700	.1	20.700	.1
.800	.0	5.800	.2	10.800	.2	15.800	.1	20.800	.1
.900	.0	5.900	.2	10.900	.2	15.900	.1	20.900	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.1	21.000	.1
1.100	.1	6.100	.2	11.100	.2	16.100	.1	21.100	.1
1.200	1.1	6.200	.2	11.200	.2	16.200	.1	21.200	.1
1.300	5.0	6.300	.2	11.300	.2	16.300	.1	21.300	.1
1.400	19.2	6.400	.2	11.400	.1	16.400	.1	21.400	.1
1.500	31.1	6.500	.2	11.500	.1	16.500	.1	21.500	.1
1.600	26.7	6.600	.2	11.600	.1	16.600	.1	21.600	.1
1.700	18.1	6.700	.2	11.700	.1	16.700	.1	21.700	.1
1.800	12.7	6.800	.2	11.800	.1	16.800	.1	21.800	.1
1.900	9.4	6.900	.2	11.900	.1	16.900	.1	21.900	.1
2.000	7.4	7.000	.2	12.000	.1	17.000	.1	22.000	.1
2.100	5.5	7.100	.2	12.100	.1	17.100	.1	22.100	.1
2.200	3.3	7.200	.2	12.200	.1	17.200	.1	22.200	.1
2.300	2.3	7.300	.2	12.300	.1	17.300	.1	22.300	.1
2.400	1.8	7.400	.2	12.400	.1	17.400	.1	22.400	.1
2.500	1.4	7.500	.2	12.500	.1	17.500	.1	22.500	.1
2.600	1.1	7.600	.2	12.600	.1	17.600	.1	22.600	.1
2.700	.9	7.700	.2	12.700	.1	17.700	.1	22.700	.1
2.800	.7	7.800	.2	12.800	.1	17.800	.1	22.800	.1
2.900	.6	7.900	.2	12.900	.1	17.900	.1	22.900	.1
3.000	.5	8.000	.2	13.000	.1	18.000	.1	23.000	.1
3.100	.4	8.100	.2	13.100	.1	18.100	.1	23.100	.1
3.200	.4	8.200	.2	13.200	.1	18.200	.1	23.200	.1
3.300	.3	8.300	.2	13.300	.1	18.300	.1	23.300	.1
3.400	.3	8.400	.2	13.400	.1	18.400	.1	23.400	.1
3.500	.2	8.500	.2	13.500	.1	18.500	.1	23.500	.1
3.600	.2	8.600	.2	13.600	.1	18.600	.1	23.600	.1
3.700	.2	8.700	.2	13.700	.1	18.700	.1	23.700	.1
3.800	.2	8.800	.2	13.800	.1	18.800	.1	23.800	.1
3.900	.2	8.900	.2	13.900	.1	18.900	.1	23.900	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1
4.100	.2	9.100	.2	14.100	.1	19.100	.1	24.100	.1
4.200	.2	9.200	.2	14.200	.1	19.200	.1	24.200	.0
4.300	.2	9.300	.2	14.300	.1	19.300	.1	24.300	.0
4.400	.2	9.400	.2	14.400	.1	19.400	.1	24.400	.0
4.500	.2	9.500	.2	14.500	.1	19.500	.1	24.500	.0
4.600	.2	9.600	.2	14.600	.1	19.600	.1	24.600	.0
4.700	.2	9.700	.2	14.700	.1	19.700	.1	24.700	.0
4.800	.2	9.800	.2	14.800	.1	19.800	.1		
4.900	.2	9.900	.2	14.900	.1	19.900	.1		

RUNOFF VOLUME = 1.51874 INCHES = 1.4793 ACRE-Feet
 PEAK DISCHARGE RATE = 31.05 CFS AT 1.500 HOURS BASIN AREA = .0183 SQ. MI.

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*S ADD BASINS TEMP C AND FUTURE BASIN 1 TO CREATE TEMP D*****
 ADD HYD ID=18 HYD=TEMP.D ID I=17 II=6
 PRINT HYD ID=18 CODE=0

HYDROGRAPH FROM AREA TEMP.D

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.3	10.000	.3	15.000	.2	20.000	.2
.100	.0	5.100	.3	10.100	.3	15.100	.2	20.100	.2
.200	.0	5.200	.3	10.200	.3	15.200	.2	20.200	.2
.300	.0	5.300	.3	10.300	.3	15.300	.2	20.300	.2
.400	.0	5.400	.3	10.400	.3	15.400	.2	20.400	.2
.500	.0	5.500	.3	10.500	.3	15.500	.2	20.500	.2
.600	.0	5.600	.3	10.600	.3	15.600	.2	20.600	.2
.700	.0	5.700	.3	10.700	.3	15.700	.2	20.700	.2
.800	.0	5.800	.3	10.800	.3	15.800	.2	20.800	.2
.900	.0	5.900	.3	10.900	.3	15.900	.2	20.900	.2
1.000	.0	6.000	.3	11.000	.3	16.000	.2	21.000	.2
1.100	.1	6.100	.3	11.100	.3	16.100	.2	21.100	.2
1.200	1.9	6.200	.4	11.200	.3	16.200	.2	21.200	.2
1.300	8.8	6.300	.4	11.300	.3	16.300	.2	21.300	.2
1.400	31.9	6.400	.4	11.400	.3	16.400	.2	21.400	.2
1.500	51.0	6.500	.4	11.500	.3	16.500	.2	21.500	.2
1.600	43.7	6.600	.4	11.600	.3	16.600	.2	21.600	.2
1.700	29.7	6.700	.3	11.700	.3	16.700	.2	21.700	.2
1.800	21.0	6.800	.3	11.800	.3	16.800	.2	21.800	.2
1.900	15.8	6.900	.3	11.900	.3	16.900	.2	21.900	.2
2.000	12.6	7.000	.3	12.000	.3	17.000	.2	22.000	.2
2.100	9.3	7.100	.3	12.100	.3	17.100	.2	22.100	.2
2.200	5.6	7.200	.3	12.200	.3	17.200	.2	22.200	.2
2.300	3.9	7.300	.3	12.300	.3	17.300	.2	22.300	.2
2.400	3.0	7.400	.3	12.400	.3	17.400	.2	22.400	.2
2.500	2.3	7.500	.3	12.500	.3	17.500	.2	22.500	.2
2.600	1.9	7.600	.3	12.600	.3	17.600	.2	22.600	.2
2.700	1.5	7.700	.3	12.700	.3	17.700	.2	22.700	.2
2.800	1.2	7.800	.3	12.800	.2	17.800	.2	22.800	.2
2.900	1.0	7.900	.3	12.900	.2	17.900	.2	22.900	.2
3.000	.8	8.000	.3	13.000	.2	18.000	.2	23.000	.2
3.100	.7	8.100	.3	13.100	.2	18.100	.2	23.100	.2
3.200	.6	8.200	.3	13.200	.2	18.200	.2	23.200	.2
3.300	.5	8.300	.3	13.300	.2	18.300	.2	23.300	.2
3.400	.5	8.400	.3	13.400	.2	18.400	.2	23.400	.2
3.500	.4	8.500	.3	13.500	.2	18.500	.2	23.500	.2
3.600	.4	8.600	.3	13.600	.2	18.600	.2	23.600	.2
3.700	.4	8.700	.3	13.700	.2	18.700	.2	23.700	.2
3.800	.3	8.800	.3	13.800	.2	18.800	.2	23.800	.2
3.900	.3	8.900	.3	13.900	.2	18.900	.2	23.900	.2
4.000	.3	9.000	.3	14.000	.2	19.000	.2	24.000	.2

				DEV_COND.OUT					
4.100	.3	9.100	.3	14.100	.2	19.100	.2	24.100	.1
4.200	.3	9.200	.3	14.200	.2	19.200	.2	24.200	.1
4.300	.3	9.300	.3	14.300	.2	19.300	.2	24.300	.0
4.400	.3	9.400	.3	14.400	.2	19.400	.2	24.400	.0
4.500	.3	9.500	.3	14.500	.2	19.500	.2	24.500	.0
4.600	.3	9.600	.3	14.600	.2	19.600	.2	24.600	.0
4.700	.3	9.700	.3	14.700	.2	19.700	.2	24.700	.0
4.800	.3	9.800	.3	14.800	.2	19.800	.2	24.800	.0
4.900	.3	9.900	.3	14.900	.2	19.900	.2	24.900	.0

RUNOFF VOLUME = 1.60222 INCHES = 2.4818 ACRE-FEET
 PEAK DISCHARGE RATE = 50.98 CFS AT 1.500 HOURS BASIN AREA = .0290 SQ. MI.

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*S ADD BASINS TEMP D AND FUTURE BASIN 2 TO CREATE TEMP E*****
 ADD HYD ID=19 HYD=TEMP.E ID I=18 II=7
 PRINT HYD ID=19 CODE=0

HYDROGRAPH FROM AREA TEMP.E

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.2
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.2
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.2
.300	.0	5.300	.4	10.300	.4	15.300	.3	20.300	.2
.400	.0	5.400	.4	10.400	.4	15.400	.3	20.400	.2
.500	.0	5.500	.4	10.500	.4	15.500	.3	20.500	.2
.600	.0	5.600	.4	10.600	.4	15.600	.3	20.600	.2
.700	.0	5.700	.4	10.700	.4	15.700	.3	20.700	.2
.800	.0	5.800	.4	10.800	.4	15.800	.3	20.800	.2
.900	.0	5.900	.4	10.900	.4	15.900	.3	20.900	.2
1.000	.0	6.000	.4	11.000	.4	16.000	.3	21.000	.2
1.100	.1	6.100	.4	11.100	.3	16.100	.3	21.100	.2
1.200	2.4	6.200	.4	11.200	.3	16.200	.3	21.200	.2
1.300	11.3	6.300	.5	11.300	.3	16.300	.3	21.300	.2
1.400	40.4	6.400	.5	11.400	.3	16.400	.3	21.400	.2
1.500	64.5	6.500	.5	11.500	.3	16.500	.3	21.500	.2
1.600	55.2	6.600	.5	11.600	.3	16.600	.3	21.600	.2
1.700	37.5	6.700	.4	11.700	.3	16.700	.3	21.700	.2
1.800	26.6	6.800	.4	11.800	.3	16.800	.3	21.800	.2
1.900	20.1	6.900	.4	11.900	.3	16.900	.3	21.900	.2
2.000	16.0	7.000	.4	12.000	.3	17.000	.3	22.000	.2
2.100	11.8	7.100	.4	12.100	.3	17.100	.3	22.100	.2
2.200	7.2	7.200	.4	12.200	.3	17.200	.3	22.200	.2
2.300	4.9	7.300	.4	12.300	.3	17.300	.3	22.300	.2
2.400	3.8	7.400	.4	12.400	.3	17.400	.3	22.400	.2
2.500	3.0	7.500	.4	12.500	.3	17.500	.3	22.500	.2
2.600	2.4	7.600	.4	12.600	.3	17.600	.3	22.600	.2
2.700	1.9	7.700	.4	12.700	.3	17.700	.3	22.700	.2
2.800	1.6	7.800	.4	12.800	.3	17.800	.3	22.800	.2
2.900	1.3	7.900	.4	12.900	.3	17.900	.3	22.900	.2
3.000	1.1	8.000	.4	13.000	.3	18.000	.3	23.000	.2
3.100	.9	8.100	.4	13.100	.3	18.100	.3	23.100	.2
3.200	.8	8.200	.4	13.200	.3	18.200	.3	23.200	.2
3.300	.7	8.300	.4	13.300	.3	18.300	.3	23.300	.2
3.400	.6	8.400	.4	13.400	.3	18.400	.3	23.400	.2
3.500	.5	8.500	.4	13.500	.3	18.500	.3	23.500	.2
3.600	.5	8.600	.4	13.600	.3	18.600	.3	23.600	.2
3.700	.5	8.700	.4	13.700	.3	18.700	.3	23.700	.2
3.800	.4	8.800	.4	13.800	.3	18.800	.2	23.800	.2
3.900	.4	8.900	.4	13.900	.3	18.900	.2	23.900	.2
4.000	.4	9.000	.4	14.000	.3	19.000	.2	24.000	.2
4.100	.4	9.100	.4	14.100	.3	19.100	.2	24.100	.2
4.200	.4	9.200	.4	14.200	.3	19.200	.2	24.200	.1
4.300	.4	9.300	.4	14.300	.3	19.300	.2	24.300	.0
4.400	.4	9.400	.4	14.400	.3	19.400	.2	24.400	.0
4.500	.4	9.500	.4	14.500	.3	19.500	.2	24.500	.0
4.600	.4	9.600	.4	14.600	.3	19.600	.2	24.600	.0
4.700	.4	9.700	.4	14.700	.3	19.700	.2	24.700	.0
4.800	.4	9.800	.4	14.800	.3	19.800	.2	24.800	.0
4.900	.4	9.900	.4	14.900	.3	19.900	.2	24.900	.0

RUNOFF VOLUME = 1.61787 INCHES = 3.1532 ACRE-FEET
 PEAK DISCHARGE RATE = 64.52 CFS AT 1.500 HOURS BASIN AREA = .0365 SQ. MI.

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*S ADD BASINS TEMP E AND FUTURE BASIN 3 TO CREATE TEMP F*****
 ADD HYD ID=20 HYD=TEMP.F ID I=19 II=8
 PRINT HYD ID=20 CODE=0

HYDROGRAPH FROM AREA TEMP.F

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.3
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.3
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.3
.300	.0	5.300	.4	10.300	.4	15.300	.3	20.300	.3
.400	.0	5.400	.5	10.400	.4	15.400	.3	20.400	.3
.500	.0	5.500	.5	10.500	.4	15.500	.3	20.500	.3
.600	.0	5.600	.5	10.600	.4	15.600	.3	20.600	.3
.700	.0	5.700	.5	10.700	.4	15.700	.3	20.700	.3
.800	.0	5.800	.5	10.800	.4	15.800	.3	20.800	.3
.900	.0	5.900	.5	10.900	.4	15.900	.3	20.900	.3
1.000	.0	6.000	.5	11.000	.4	16.000	.3	21.000	.3
1.100	.2	6.100	.5	11.100	.4	16.100	.3	21.100	.3
1.200	2.8	6.200	.5	11.200	.4	16.200	.3	21.200	.3
1.300	13.3	6.300	.5	11.300	.4	16.300	.3	21.300	.3
1.400	47.2	6.400	.5	11.400	.4	16.400	.3	21.400	.3
1.500	75.3	6.500	.5	11.500	.4	16.500	.3	21.500	.3
1.600	64.4	6.600	.5	11.600	.4	16.600	.3	21.600	.3
1.700	43.8	6.700	.5	11.700	.4	16.700	.3	21.700	.3
1.800	31.1	6.800	.5	11.800	.4	16.800	.3	21.800	.3
1.900	23.5	6.900	.5	11.900	.4	16.900	.3	21.900	.3
2.000	18.7	7.000	.5	12.000	.4	17.000	.3	22.000	.3

DEV_COND.OUT									
2.100	13.9	7.100	.5	12.100	.4	17.100	.3	22.100	.3
2.200	8.4	7.200	.5	12.200	.4	17.200	.3	22.200	.3
2.300	5.8	7.300	.5	12.300	.4	17.300	.3	22.300	.3
2.400	4.4	7.400	.5	12.400	.4	17.400	.3	22.400	.3
2.500	3.5	7.500	.5	12.500	.4	17.500	.3	22.500	.3
2.600	2.8	7.600	.5	12.600	.4	17.600	.3	22.600	.3
2.700	2.2	7.700	.5	12.700	.4	17.700	.3	22.700	.3
2.800	1.8	7.800	.5	12.800	.4	17.800	.3	22.800	.3
2.900	1.5	7.900	.5	12.900	.4	17.900	.3	22.900	.3
3.000	1.2	8.000	.5	13.000	.4	18.000	.3	23.000	.3
3.100	1.1	8.100	.5	13.100	.4	18.100	.3	23.100	.3
3.200	.9	8.200	.5	13.200	.4	18.200	.3	23.200	.3
3.300	.8	8.300	.5	13.300	.4	18.300	.3	23.300	.3
3.400	.7	8.400	.5	13.400	.4	18.400	.3	23.400	.3
3.500	.6	8.500	.5	13.500	.4	18.500	.3	23.500	.3
3.600	.6	8.600	.5	13.600	.4	18.600	.3	23.600	.3
3.700	.5	8.700	.5	13.700	.4	18.700	.3	23.700	.3
3.800	.5	8.800	.5	13.800	.4	18.800	.3	23.800	.3
3.900	.5	8.900	.5	13.900	.4	18.900	.3	23.900	.3
4.000	.5	9.000	.5	14.000	.4	19.000	.3	24.000	.3
4.100	.4	9.100	.5	14.100	.4	19.100	.3	24.100	.2
4.200	.4	9.200	.5	14.200	.4	19.200	.3	24.200	.1
4.300	.4	9.300	.4	14.300	.4	19.300	.3	24.300	.0
4.400	.4	9.400	.4	14.400	.3	19.400	.3	24.400	.0
4.500	.4	9.500	.4	14.500	.3	19.500	.3	24.500	.0
4.600	.4	9.600	.4	14.600	.3	19.600	.3	24.600	.0
4.700	.4	9.700	.4	14.700	.3	19.700	.3	24.700	.0
4.800	.4	9.800	.4	14.800	.3	19.800	.3	24.800	.0
4.900	.4	9.900	.4	14.900	.3	19.900	.3	24.900	.0

RUNOFF VOLUME = 1.62861 INCHES = 3.6899 ACRE-FEET
 PEAK DISCHARGE RATE = 75.31 CFS AT 1.500 HOURS BASIN AREA = .0425 SQ. MI.

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*S ADD BASINS TEMP F AND OFFSITE BASIN 3 TO CREATE TEMP G*****
 ADD HYD ID=21 HYD=TEMP.G ID I=20 II=11
 PRINT HYD ID=21 CODE=0

HYDROGRAPH FROM AREA TEMP.G

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.3
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.3
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.3
.300	.0	5.300	.4	10.300	.4	15.300	.3	20.300	.3
.400	.0	5.400	.5	10.400	.4	15.400	.3	20.400	.3
.500	.0	5.500	.5	10.500	.4	15.500	.3	20.500	.3
.600	.0	5.600	.5	10.600	.4	15.600	.3	20.600	.3
.700	.0	5.700	.5	10.700	.4	15.700	.3	20.700	.3
.800	.0	5.800	.5	10.800	.4	15.800	.3	20.800	.3
.900	.0	5.900	.5	10.900	.4	15.900	.3	20.900	.3
1.000	.0	6.000	.5	11.000	.4	16.000	.3	21.000	.3
1.100	.2	6.100	.5	11.100	.4	16.100	.3	21.100	.3
1.200	2.8	6.200	.5	11.200	.4	16.200	.3	21.200	.3
1.300	13.3	6.300	.5	11.300	.4	16.300	.3	21.300	.3
1.400	47.6	6.400	.5	11.400	.4	16.400	.3	21.400	.3
1.500	76.1	6.500	.5	11.500	.4	16.500	.3	21.500	.3
1.600	65.1	6.600	.5	11.600	.4	16.600	.3	21.600	.3
1.700	44.2	6.700	.5	11.700	.4	16.700	.3	21.700	.3
1.800	31.4	6.800	.5	11.800	.4	16.800	.3	21.800	.3
1.900	23.7	6.900	.5	11.900	.4	16.900	.3	21.900	.3
2.000	18.9	7.000	.5	12.000	.4	17.000	.3	22.000	.3
2.100	13.9	7.100	.5	12.100	.4	17.100	.3	22.100	.3
2.200	8.4	7.200	.5	12.200	.4	17.200	.3	22.200	.3
2.300	5.8	7.300	.5	12.300	.4	17.300	.3	22.300	.3
2.400	4.5	7.400	.5	12.400	.4	17.400	.3	22.400	.3
2.500	3.5	7.500	.5	12.500	.4	17.500	.3	22.500	.3
2.600	2.8	7.600	.5	12.600	.4	17.600	.3	22.600	.3
2.700	2.3	7.700	.5	12.700	.4	17.700	.3	22.700	.3
2.800	1.8	7.800	.5	12.800	.4	17.800	.3	22.800	.3
2.900	1.5	7.900	.5	12.900	.4	17.900	.3	22.900	.3
3.000	1.3	8.000	.5	13.000	.4	18.000	.3	23.000	.3
3.100	1.1	8.100	.5	13.100	.4	18.100	.3	23.100	.3
3.200	.9	8.200	.5	13.200	.4	18.200	.3	23.200	.3
3.300	.8	8.300	.5	13.300	.4	18.300	.3	23.300	.3
3.400	.7	8.400	.5	13.400	.4	18.400	.3	23.400	.3
3.500	.6	8.500	.5	13.500	.4	18.500	.3	23.500	.3
3.600	.6	8.600	.5	13.600	.4	18.600	.3	23.600	.3
3.700	.5	8.700	.5	13.700	.4	18.700	.3	23.700	.3
3.800	.5	8.800	.5	13.800	.4	18.800	.3	23.800	.3
3.900	.5	8.900	.5	13.900	.4	18.900	.3	23.900	.3
4.000	.5	9.000	.5	14.000	.4	19.000	.3	24.000	.3
4.100	.4	9.100	.5	14.100	.4	19.100	.3	24.100	.2
4.200	.4	9.200	.5	14.200	.4	19.200	.3	24.200	.1
4.300	.4	9.300	.4	14.300	.4	19.300	.3	24.300	.0
4.400	.4	9.400	.4	14.400	.3	19.400	.3	24.400	.0
4.500	.4	9.500	.4	14.500	.3	19.500	.3	24.500	.0
4.600	.4	9.600	.4	14.600	.3	19.600	.3	24.600	.0
4.700	.4	9.700	.4	14.700	.3	19.700	.3	24.700	.0
4.800	.4	9.800	.4	14.800	.3	19.800	.3	24.800	.0
4.900	.4	9.900	.4	14.900	.3	19.900	.3	24.900	.0

RUNOFF VOLUME = 1.59945 INCHES = 3.7172 ACRE-FEET
 PEAK DISCHARGE RATE = 76.05 CFS AT 1.500 HOURS BASIN AREA = .0436 SQ. MI.

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*S ADD BASINS TEMP G AND OFFSITE BASIN 4 TO CREATE TEMP H*****
 ADD HYD ID=22 HYD=TEMP.H ID I=21 II=12
 PRINT HYD ID=22 CODE=0

HYDROGRAPH FROM AREA TEMP.H

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.3

DEV_COND.OUT									
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.3
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.3
.300	.0	5.300	.4	10.300	.4	15.300	.3	20.300	.3
.400	.0	5.400	.5	10.400	.4	15.400	.3	20.400	.3
.500	.0	5.500	.5	10.500	.4	15.500	.3	20.500	.3
.600	.0	5.600	.5	10.600	.4	15.600	.3	20.600	.3
.700	.0	5.700	.5	10.700	.4	15.700	.3	20.700	.3
.800	.0	5.800	.5	10.800	.4	15.800	.3	20.800	.3
.900	.0	5.900	.5	10.900	.4	15.900	.3	20.900	.3
1.000	.0	6.000	.5	11.000	.4	16.000	.3	21.000	.3
1.100	.2	6.100	.5	11.100	.4	16.100	.3	21.100	.3
1.200	2.8	6.200	.5	11.200	.4	16.200	.3	21.200	.3
1.300	13.3	6.300	.5	11.300	.4	16.300	.3	21.300	.3
1.400	48.1	6.400	.5	11.400	.4	16.400	.3	21.400	.3
1.500	77.0	6.500	.5	11.500	.4	16.500	.3	21.500	.3
1.600	66.0	6.600	.5	11.600	.4	16.600	.3	21.600	.3
1.700	44.8	6.700	.5	11.700	.4	16.700	.3	21.700	.3
1.800	31.8	6.800	.5	11.800	.4	16.800	.3	21.800	.3
1.900	23.9	6.900	.5	11.900	.4	16.900	.3	21.900	.3
2.000	19.0	7.000	.5	12.000	.4	17.000	.3	22.000	.3
2.100	14.0	7.100	.5	12.100	.4	17.100	.3	22.100	.3
2.200	8.5	7.200	.5	12.200	.4	17.200	.3	22.200	.3
2.300	5.9	7.300	.5	12.300	.4	17.300	.3	22.300	.3
2.400	4.5	7.400	.5	12.400	.4	17.400	.3	22.400	.3
2.500	3.6	7.500	.5	12.500	.4	17.500	.3	22.500	.3
2.600	2.9	7.600	.5	12.600	.4	17.600	.3	22.600	.3
2.700	2.3	7.700	.5	12.700	.4	17.700	.3	22.700	.3
2.800	1.9	7.800	.5	12.800	.4	17.800	.3	22.800	.3
2.900	1.5	7.900	.5	12.900	.4	17.900	.3	22.900	.3
3.000	1.3	8.000	.5	13.000	.4	18.000	.3	23.000	.3
3.100	1.1	8.100	.5	13.100	.4	18.100	.3	23.100	.3
3.200	.9	8.200	.5	13.200	.4	18.200	.3	23.200	.3
3.300	.8	8.300	.5	13.300	.4	18.300	.3	23.300	.3
3.400	.7	8.400	.5	13.400	.4	18.400	.3	23.400	.3
3.500	.7	8.500	.5	13.500	.4	18.500	.3	23.500	.3
3.600	.6	8.600	.5	13.600	.4	18.600	.3	23.600	.3
3.700	.6	8.700	.5	13.700	.4	18.700	.3	23.700	.3
3.800	.5	8.800	.5	13.800	.4	18.800	.3	23.800	.3
3.900	.5	8.900	.5	13.900	.4	18.900	.3	23.900	.3
4.000	.5	9.000	.5	14.000	.4	19.000	.3	24.000	.3
4.100	.4	9.100	.5	14.100	.4	19.100	.3	24.100	.2
4.200	.4	9.200	.5	14.200	.4	19.200	.3	24.200	.1
4.300	.4	9.300	.4	14.300	.4	19.300	.3	24.300	.0
4.400	.4	9.400	.4	14.400	.3	19.400	.3	24.400	.0
4.500	.4	9.500	.4	14.500	.3	19.500	.3	24.500	.0
4.600	.4	9.600	.4	14.600	.3	19.600	.3	24.600	.0
4.700	.4	9.700	.4	14.700	.3	19.700	.3	24.700	.0
4.800	.4	9.800	.4	14.800	.3	19.800	.3	24.800	.0
4.900	.4	9.900	.4	14.900	.3	19.900	.3	24.900	.0

RUNOFF VOLUME = 1.56378 INCHES = 3.7516 ACRE-FEET
PEAK DISCHARGE RATE = 76.98 CFS AT 1.500 HOURS BASIN AREA = .0450 SQ. MI.

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*S ADD BASINS TEMP H AND OFFSITE BASIN WELL TO CREATE TEMP I*****
ADD HYD ID=23 HYD=TEMP.1 ID I=22 II=14
PRINT HYD ID=23 CODE=0

HYDROGRAPH FROM AREA TEMP.1

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.3
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.3
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.3
.300	.0	5.300	.5	10.300	.4	15.300	.3	20.300	.3
.400	.0	5.400	.5	10.400	.4	15.400	.3	20.400	.3
.500	.0	5.500	.5	10.500	.4	15.500	.3	20.500	.3
.600	.0	5.600	.5	10.600	.4	15.600	.3	20.600	.3
.700	.0	5.700	.5	10.700	.4	15.700	.3	20.700	.3
.800	.0	5.800	.5	10.800	.4	15.800	.3	20.800	.3
.900	.0	5.900	.5	10.900	.4	15.900	.3	20.900	.3
1.000	.0	6.000	.5	11.000	.4	16.000	.3	21.000	.3
1.100	.2	6.100	.5	11.100	.4	16.100	.3	21.100	.3
1.200	2.9	6.200	.5	11.200	.4	16.200	.3	21.200	.3
1.300	13.5	6.300	.5	11.300	.4	16.300	.3	21.300	.3
1.400	49.4	6.400	.5	11.400	.4	16.400	.3	21.400	.3
1.500	79.2	6.500	.5	11.500	.4	16.500	.3	21.500	.3
1.600	68.0	6.600	.5	11.600	.4	16.600	.3	21.600	.3
1.700	46.2	6.700	.5	11.700	.4	16.700	.3	21.700	.3
1.800	32.7	6.800	.5	11.800	.4	16.800	.3	21.800	.3
1.900	24.5	6.900	.5	11.900	.4	16.900	.3	21.900	.3
2.000	19.4	7.000	.5	12.000	.4	17.000	.3	22.000	.3
2.100	14.3	7.100	.5	12.100	.4	17.100	.3	22.100	.3
2.200	8.7	7.200	.5	12.200	.4	17.200	.3	22.200	.3
2.300	6.1	7.300	.5	12.300	.4	17.300	.3	22.300	.3
2.400	4.6	7.400	.5	12.400	.4	17.400	.3	22.400	.3
2.500	3.7	7.500	.5	12.500	.4	17.500	.3	22.500	.3
2.600	2.9	7.600	.5	12.600	.4	17.600	.3	22.600	.3
2.700	2.4	7.700	.5	12.700	.4	17.700	.3	22.700	.3
2.800	1.9	7.800	.5	12.800	.4	17.800	.3	22.800	.3
2.900	1.6	7.900	.5	12.900	.4	17.900	.3	22.900	.3
3.000	1.3	8.000	.5	13.000	.4	18.000	.3	23.000	.3
3.100	1.1	8.100	.5	13.100	.4	18.100	.3	23.100	.3
3.200	.9	8.200	.5	13.200	.4	18.200	.3	23.200	.3
3.300	.8	8.300	.5	13.300	.4	18.300	.3	23.300	.3
3.400	.7	8.400	.5	13.400	.4	18.400	.3	23.400	.3
3.500	.7	8.500	.5	13.500	.4	18.500	.3	23.500	.3
3.600	.6	8.600	.5	13.600	.4	18.600	.3	23.600	.3
3.700	.6	8.700	.5	13.700	.4	18.700	.3	23.700	.3
3.800	.5	8.800	.5	13.800	.4	18.800	.3	23.800	.3
3.900	.5	8.900	.5	13.900	.4	18.900	.3	23.900	.3
4.000	.5	9.000	.5	14.000	.4	19.000	.3	24.000	.3
4.100	.4	9.100	.5	14.100	.4	19.100	.3	24.100	.2
4.200	.4	9.200	.5	14.200	.4	19.200	.3	24.200	.1
4.300	.4	9.300	.5	14.300	.4	19.300	.3	24.300	.0
4.400	.4	9.400	.5	14.400	.4	19.400	.3	24.400	.0
4.500	.4	9.500	.5	14.500	.4	19.500	.3	24.500	.0
4.600	.4	9.600	.4	14.600	.4	19.600	.3	24.600	.0

				DEV_COND.OUT				
4.700	.4	9.700	.4	14.700	.4	19.700	.3	24.700
4.800	.4	9.800	.4	14.800	.3	19.800	.3	24.800
4.900	.4	9.900	.4	14.900	.3	19.900	.3	24.900

RUNOFF VOLUME = 1.54902 INCHES = 3.8453 ACRE-FEET
 PEAK DISCHARGE RATE = 79.24 CFS AT 1.500 HOURS BASIN AREA = .0465 SQ. MI.

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*S ADD BASINS TEMP I AND OFFSITE BASIN 5 TO CREATE TEMP J*****
 ADD HYD ID=24 HYD=TEMP.J ID I=23 II=13
 PRINT HYD ID=24 CODE=0

HYDROGRAPH FROM AREA TEMP.J

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.4	10.000	.4	15.000	.3	20.000	.3
.100	.0	5.100	.4	10.100	.4	15.100	.3	20.100	.3
.200	.0	5.200	.4	10.200	.4	15.200	.3	20.200	.3
.300	.0	5.300	.5	10.300	.4	15.300	.3	20.300	.3
.400	.0	5.400	.5	10.400	.4	15.400	.3	20.400	.3
.500	.0	5.500	.5	10.500	.4	15.500	.3	20.500	.3
.600	.0	5.600	.5	10.600	.4	15.600	.3	20.600	.3
.700	.0	5.700	.5	10.700	.4	15.700	.3	20.700	.3
.800	.0	5.800	.5	10.800	.4	15.800	.3	20.800	.3
.900	.0	5.900	.5	10.900	.4	15.900	.3	20.900	.3
1.000	.0	6.000	.5	11.000	.4	16.000	.3	21.000	.3
1.100	.2	6.100	.5	11.100	.4	16.100	.3	21.100	.3
1.200	2.9	6.200	.5	11.200	.4	16.200	.3	21.200	.3
1.300	13.5	6.300	.5	11.300	.4	16.300	.3	21.300	.3
1.400	50.4	6.400	.5	11.400	.4	16.400	.3	21.400	.3
1.500	81.2	6.500	.5	11.500	.4	16.500	.3	21.500	.3
1.600	69.8	6.600	.5	11.600	.4	16.600	.3	21.600	.3
1.700	47.4	6.700	.5	11.700	.4	16.700	.3	21.700	.3
1.800	33.4	6.800	.5	11.800	.4	16.800	.3	21.800	.3
1.900	25.0	6.900	.5	11.900	.4	16.900	.3	21.900	.3
2.000	19.7	7.000	.5	12.000	.4	17.000	.3	22.000	.3
2.100	14.6	7.100	.5	12.100	.4	17.100	.3	22.100	.3
2.200	8.9	7.200	.5	12.200	.4	17.200	.3	22.200	.3
2.300	6.2	7.300	.5	12.300	.4	17.300	.3	22.300	.3
2.400	4.8	7.400	.5	12.400	.4	17.400	.3	22.400	.3
2.500	3.8	7.500	.5	12.500	.4	17.500	.3	22.500	.3
2.600	3.0	7.600	.5	12.600	.4	17.600	.3	22.600	.3
2.700	2.4	7.700	.5	12.700	.4	17.700	.3	22.700	.3
2.800	2.0	7.800	.5	12.800	.4	17.800	.3	22.800	.3
2.900	1.6	7.900	.5	12.900	.4	17.900	.3	22.900	.3
3.000	1.4	8.000	.5	13.000	.4	18.000	.3	23.000	.3
3.100	1.1	8.100	.5	13.100	.4	18.100	.3	23.100	.3
3.200	1.0	8.200	.5	13.200	.4	18.200	.3	23.200	.3
3.300	.9	8.300	.5	13.300	.4	18.300	.3	23.300	.3
3.400	.8	8.400	.5	13.400	.4	18.400	.3	23.400	.3
3.500	.7	8.500	.5	13.500	.4	18.500	.3	23.500	.3
3.600	.6	8.600	.5	13.600	.4	18.600	.3	23.600	.3
3.700	.6	8.700	.5	13.700	.4	18.700	.3	23.700	.3
3.800	.5	8.800	.5	13.800	.4	18.800	.3	23.800	.3
3.900	.5	8.900	.5	13.900	.4	18.900	.3	23.900	.3
4.000	.5	9.000	.5	14.000	.4	19.000	.3	24.000	.3
4.100	.5	9.100	.5	14.100	.4	19.100	.3	24.100	.2
4.200	.4	9.200	.5	14.200	.4	19.200	.3	24.200	.1
4.300	.4	9.300	.5	14.300	.4	19.300	.3	24.300	.0
4.400	.4	9.400	.5	14.400	.4	19.400	.3	24.400	.0
4.500	.4	9.500	.5	14.500	.4	19.500	.3	24.500	.0
4.600	.4	9.600	.4	14.600	.4	19.600	.3	24.600	.0
4.700	.4	9.700	.4	14.700	.4	19.700	.3	24.700	.0
4.800	.4	9.800	.4	14.800	.3	19.800	.3	24.800	.0
4.900	.4	9.900	.4	14.900	.3	19.900	.3	24.900	.0

RUNOFF VOLUME = 1.47507 INCHES = 3.9198 ACRE-FEET
 PEAK DISCHARGE RATE = 81.23 CFS AT 1.500 HOURS BASIN AREA = .0498 SQ. MI.

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*S TEMP BASIN J REPLACES BASIN E3 AND E5 FROM THE DMP AHYMO FILE*****

COMPUTE NM HYD ID=25 HYD NO=OFFSITE2 DA=.0805 SQ MI
 %A=100 %B=0.0 %C=0.0 %D=0.0
 TP=-.66 HR RAIN=-1

K = .803590HR TP = .660000HR K/TP RATIO = 1.217560 SHAPE CONSTANT, N = 2.922175
 UNIT PEAK = 33.592 CFS UNIT VOLUME = .9995 B = 275.41 P60 = 1.8400
 AREA = .080500 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=25 CODE=10

HYDROGRAPH FROM AREA OFFSITE2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	4.000	1.5	8.000	.3	12.000	.1	16.000	.0
1.000	.0	5.000	.9	9.000	.2	13.000	.0	17.000	.0
2.000	13.9	6.000	.6	10.000	.1	14.000	.0	18.000	.0
3.000	5.2	7.000	.4	11.000	.1	15.000	.0		

RUNOFF VOLUME = .41534 INCHES = 1.7832 ACRE-FEET
 PEAK DISCHARGE RATE = 13.87 CFS AT 2.000 HOURS BASIN AREA = .0805 SQ. MI.

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ROUTE RESERVOIR ID=26 HYD=OFFPOND2 INFLOW ID=25 CODE=5
 OUTFLOW 0 STORAGE DEPTH 0
 Page 10

DEV_COND.OUT

2.16	0.047	1
3.06	0.222	2
3.75	0.466	3
4.33	0.751	4
4.84	1.081	5

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	.00	.000	.00
.50	.00	.00	.000	.00
1.00	.00	.00	.000	.00
1.50	3.77	.41	.019	.88
2.00	13.87	2.49	.342	3.40
2.50	9.71	3.78	.689	4.20
3.00	5.22	4.18	.809	4.42
3.50	2.80	4.11	.787	4.39
4.00	1.50	3.80	.695	4.22
4.50	1.13	3.39	.579	3.98
5.00	.92	2.98	.461	3.74
5.50	.75	2.52	.348	3.42
6.00	.61	2.08	.241	3.11
6.50	.49	1.55	.144	2.66
7.00	.40	1.08	.061	2.23
7.50	.33	.34	.016	.73
8.00	.26	.16	.008	.35
8.50	.22	.12	.005	.25
9.00	.17	.09	.004	.20
9.50	.14	.07	.003	.16
10.00	.12	.06	.003	.13
10.50	.09	.05	.002	.11
11.00	.08	.04	.002	.09
11.50	.06	.03	.002	.07
12.00	.05	.03	.001	.06
12.50	.04	.02	.001	.05
13.00	.03	.02	.001	.04
13.50	.03	.01	.001	.03
14.00	.02	.01	.001	.02
14.50	.02	.01	.000	.02
15.00	.01	.01	.000	.02
15.50	.01	.01	.000	.01
16.00	.01	.00	.000	.01
16.50	.01	.00	.000	.01
17.00	.01	.00	.000	.01
17.50	.01	.00	.000	.01
18.00	.00	.00	.000	.00

PEAK DISCHARGE = 4.426 CFS - PEAK OCCURS AT HOUR 3.10
 MAXIMUM WATER SURFACE ELEVATION = 4.188
 MAXIMUM STORAGE = .8131 AC-FT INCREMENTAL TIME= .100000HRS

*
 *
 * PRINT HYD ID=26 CODE=10
 *
 *
 * COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.011
 DIA=2.0 N=0.013

RATING CURVE PIPE SECTION 1.0				MAX
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS		WIDTH FT
.00	.00	.00		.00
.10	.06	.12		.89
.21	.17	.54		1.22
.31	.31	1.26		1.45
.42	.47	2.26		1.62
.52	.65	3.53		1.76
.63	.84	5.03		1.85
.73	1.04	6.74		1.93
.83	1.24	8.62		1.97
.94	1.45	10.63		2.00
1.04	1.66	12.72		2.00
1.15	1.86	14.85		2.00
1.25	2.07	16.96		2.00
1.35	2.27	19.01		2.00
1.46	2.46	20.93		2.00
1.56	2.63	22.65		2.00
1.67	2.80	24.08		2.00
1.77	2.94	25.10		2.00
1.88	3.06	25.52		2.00
2.00	3.14	25.52		2.00

ROUTE MCUNGE ID=27 HYD=RTE.OFFPOND2 INFLOW ID=26
 DT=0.0 L=900 NS=0 SLOPE=0.011
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 185 TABLE PTS= 19
 DT= .100000 QMED= 2.21 CKMED= 6.2379
 WIDTH MED= 1.62 NREACH= 1 DX= 900.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.170	.0	2.50	.94	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.10	.1	.1	.125	.9	3.28	1.99	1.312	.004	.996	.136	-.133	.0	.999	.021	-.021
.21	.2	.5	.080	1.2	4.53	3.11	1.810	.010	.993	.291	-.284	.3	.994	.203	-.197
.31	.3	1.3	.062	1.5	5.73	4.00	2.292	.015	.991	.395	-.386	.9	.992	.347	-.339
.42	.5	2.3	.053	1.6	6.75	4.76	2.698	.021	.989	.462	-.451	1.7	.990	.431	-.421
.52	.7	3.5	.046	1.8	7.61	5.42	3.044	.027	.987	.509	-.496	2.9	.988	.488	-.475
.63	.8	5.0	.042	1.9	8.34	6.00	3.338	.033	.985	.542	-.527	4.3	.986	.527	-.513
.73	1.0	6.7	.038	1.9	8.96	6.50	3.585	.039	.983	.567	-.550	5.9	.984	.556	-.540
.83	1.2	8.6	.036	2.0	9.47	6.95	3.788	.047	.981	.586	-.567	7.7	.982	.578	-.560
.94	1.4	10.6	.034	2.0	9.87	7.34	3.947	.055	.978	.600	-.578	9.6	.980	.594	-.574
1.04	1.7	12.7	.033	2.0	10.14	7.68	4.057	.063	.975	.609	-.585	11.7	.977	.606	-.583
1.15	1.9	14.8	.031	2.0	10.21	7.97	4.083	.073	.972	.612	-.584	13.8	.974	.612	-.586
1.25	2.1	17.0	.030	2.0	10.02	8.21	4.007	.086	.966	.607	-.574	15.9	.969	.611	-.580
1.35	2.3	19.0	.030	2.0	9.54	8.39	3.817	.101	.959	.593	-.552	18.0	.963	.602	-.565
1.46	2.5	20.9	.029	2.0	8.75	8.52	3.499	.121	.948	.567	-.515	20.0	.954	.583	-.537
1.56	2.6	22.7	.029	2.0	7.57	8.60	3.027	.151	.928	.521	-.449	21.8	.940	.549	-.488
1.67	2.8	24.1	.029	2.0	5.89	8.60	2.357	.206	.884	.439	-.323	23.4	.912	.489	-.401
1.77	2.9	25.1	.029	2.0	3.45	8.53	1.381	.367	.733	.272	-.005	24.6	.842	.378	-.220

DEV_COND.OUT
 1.88 3.1 25.5 .030 2.0 1.97 8.34 .787 .655 .463 .181 .356 25.3 .480 .181 .339
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.1024
 Equations solved using the Ponce correction to C2
 *
 PRINT HYD ID=27 CODE=0

HYDROGRAPH FROM AREA RTE.OFFPOND2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.800	4.3	7.600	.7	11.400	.1	15.200	.0
.100	.0	3.900	4.3	7.700	.6	11.500	.1	15.300	.0
.200	.0	4.000	4.2	7.800	.5	11.600	.1	15.400	.0
.300	.0	4.100	4.2	7.900	.4	11.700	.1	15.500	.0
.400	.0	4.200	4.1	8.000	.4	11.800	.1	15.600	.0
.500	.0	4.300	4.1	8.100	.3	11.900	.1	15.700	.0
.600	.0	4.400	4.0	8.200	.3	12.000	.1	15.800	.0
.700	.0	4.500	4.0	8.300	.3	12.100	.1	15.900	.0
.800	.0	4.600	3.9	8.400	.3	12.200	.1	16.000	.0
.900	.0	4.700	3.9	8.500	.3	12.300	.1	16.100	.0
1.000	.0	4.800	3.9	8.600	.2	12.400	.0	16.200	.0
1.100	.0	4.900	3.8	8.700	.2	12.500	.0	16.300	.0
1.200	.0	5.000	3.8	8.800	.2	12.600	.0	16.400	.0
1.300	.0	5.100	3.7	8.900	.2	12.700	.0	16.500	.0
1.400	.0	5.200	3.6	9.000	.2	12.800	.0	16.600	.0
1.500	.4	5.300	3.6	9.100	.2	12.900	.0	16.700	.0
1.600	1.6	5.400	3.5	9.200	.2	13.000	.0	16.800	.0
1.700	2.6	5.500	3.4	9.300	.2	13.100	.0	16.900	.0
1.800	2.6	5.600	3.4	9.400	.2	13.200	.0	17.000	.0
1.900	3.1	5.700	3.3	9.500	.2	13.300	.0	17.100	.0
2.000	3.3	5.800	3.3	9.600	.2	13.400	.0	17.200	.0
2.100	3.6	5.900	3.2	9.700	.2	13.500	.0	17.300	.0
2.200	3.8	6.000	3.1	9.800	.1	13.600	.0	17.400	.0
2.300	3.9	6.100	3.1	9.900	.1	13.700	.0	17.500	.0
2.400	4.1	6.200	3.0	10.000	.1	13.800	.0	17.600	.0
2.500	4.2	6.300	2.9	10.100	.1	13.900	.0	17.700	.0
2.600	4.3	6.400	2.8	10.200	.1	14.000	.0	17.800	.0
2.700	4.3	6.500	2.7	10.300	.1	14.100	.0	17.900	.0
2.800	4.4	6.600	2.6	10.400	.1	14.200	.0	18.000	.0
2.900	4.4	6.700	2.5	10.500	.1	14.300	.0	18.100	.0
3.000	4.4	6.800	2.4	10.600	.1	14.400	.0	18.200	.0
3.100	4.4	6.900	2.3	10.700	.1	14.500	.0	18.300	.0
3.200	4.4	7.000	2.3	10.800	.1	14.600	.0	18.400	.0
3.300	4.4	7.100	2.2	10.900	.1	14.700	.0	18.500	.0
3.400	4.4	7.200	1.9	11.000	.1	14.800	.0	18.600	.0
3.500	4.4	7.300	1.3	11.100	.1	14.900	.0	18.700	.0
3.600	4.4	7.400	1.0	11.200	.1	15.000	.0	18.800	.0
3.700	4.3	7.500	.8	11.300	.1	15.100	.0		

RUNOFF VOLUME = .41538 INCHES = 1.7834 ACRE-FEET
 PEAK DISCHARGE RATE = 4.43 CFS AT 3.200 HOURS BASIN AREA = .0805 SQ. MI.

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 *
 COMPUTE NM HYD ID=28 HYD NO=BASIN.B DA=.01998 SQ MI
 %A=0 %B=34.0 %C=34.0 %D=32.0
 TP=-.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 25.299 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
 AREA = .006394 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
 UNIT PEAK = 36.207 CFS UNIT VOLUME = 1.007 B = 354.44 P60 = 1.8400
 AREA = .013586 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=28 CODE=10

HYDROGRAPH FROM AREA BASIN.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.1
2.000	5.8	7.000	.2	12.000	.1	17.000	.1	22.000	.1
3.000	.3	8.000	.1	13.000	.1	18.000	.1	23.000	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1

RUNOFF VOLUME = 1.32000 INCHES = 1.4066 ACRE-FEET
 PEAK DISCHARGE RATE = 34.80 CFS AT 1.500 HOURS BASIN AREA = .0200 SQ. MI.

*
 *
 ROUTE RESERVOIR ID=29 HYD=POND.B INFLOW ID=28 CODE=5
 OUTFLOW STORAGE DEPTH
 0 0 5515
 1.71 0.06 5516
 2.42 0.24 5517
 2.96 0.55 5518
 3.42 0.99 5519
 3.82 1.67 5520

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5515.00	.000	.00
.50	.00	5515.00	.000	.00
1.00	.00	5515.00	.000	.00
1.50	34.80	5517.54	.407	2.71
2.00	5.83	5518.84	.918	3.34
2.50	.93	5518.75	.880	3.31
3.00	.31	5518.50	.769	3.19
3.50	.17	5518.23	.649	3.06

DEV_COND.OUT

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4.00      .13  5517.94      .531      2.93
4.50      .12  5517.58      .419      2.73
5.00      .13  5517.24      .315      2.55
5.50      .14  5516.88      .219      2.34
6.00      .15  5516.42      .136      2.01
6.50      .16  5516.03      .065      1.73
7.00      .15  5515.40      .024      .68
7.50      .15  5515.18      .011      .31
8.00      .14  5515.11      .007      .20
8.50      .14  5515.09      .006      .16
9.00      .14  5515.08      .005      .14
9.50      .13  5515.08      .005      .14
10.00     .13  5515.08      .005      .13
10.50     .12  5515.07      .004      .13
11.00     .12  5515.07      .004      .12
11.50     .12  5515.07      .004      .12
12.00     .12  5515.07      .004      .12
12.50     .11  5515.07      .004      .11
13.00     .11  5515.07      .004      .11
13.50     .11  5515.06      .004      .11
14.00     .10  5515.06      .004      .11
14.50     .10  5515.06      .004      .10
15.00     .10  5515.06      .004      .10
15.50     .10  5515.06      .004      .10
16.00     .10  5515.06      .003      .10
16.50     .09  5515.06      .003      .10
17.00     .09  5515.06      .003      .09
17.50     .09  5515.05      .003      .09
18.00     .09  5515.05      .003      .09
18.50     .09  5515.05      .003      .09
19.00     .09  5515.05      .003      .09
19.50     .08  5515.05      .003      .09
20.00     .08  5515.05      .003      .08
20.50     .08  5515.05      .003      .08
21.00     .08  5515.05      .003      .08
21.50     .08  5515.05      .003      .08
22.00     .08  5515.05      .003      .08
22.50     .08  5515.05      .003      .08
23.00     .07  5515.04      .003      .08
23.50     .07  5515.04      .003      .08
24.00     .07  5515.04      .003      .07
24.50     .00  5515.02      .001      .03
25.00     .00  5515.01      .000      .01
25.50     .00  5515.00      .000      .00
PEAK DISCHARGE = 3.357 CFS - PEAK OCCURS AT HOUR 2.10
MAXIMUM WATER SURFACE ELEVATION = 5518.863
MAXIMUM STORAGE = .9296 AC-FT INCREMENTAL TIME= .100000HRS

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PRINT HYD

ID=29 CODE=10

HYDROGRAPH FROM AREA POND.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	2.0	12.000	.1	18.000	.1	24.000	.1
1.000	.0	7.000	.7	13.000	.1	19.000	.1	25.000	.0
2.000	3.3	8.000	.2	14.000	.1	20.000	.1	26.000	.0
3.000	3.2	9.000	.1	15.000	.1	21.000	.1		
4.000	2.9	10.000	.1	16.000	.1	22.000	.1		
5.000	2.6	11.000	.1	17.000	.1	23.000	.1		

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RUNOFF VOLUME = 1.31999 INCHES = 1.4066 ACRE-FEET
PEAK DISCHARGE RATE = 3.36 CFS AT 2.100 HOURS BASIN AREA = .0200 SQ. MI.

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COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.03
DIA=2.0 N=0.013

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RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.10	.06	.21	.89
.21	.17	.89	1.22
.31	.31	2.07	1.45
.42	.47	3.73	1.62
.52	.65	5.82	1.76
.63	.84	8.31	1.85
.73	1.04	11.13	1.93
.83	1.24	14.24	1.97
.94	1.45	17.55	2.00
1.04	1.66	21.00	2.00
1.15	1.86	24.52	2.00
1.25	2.07	28.02	2.00
1.35	2.27	31.40	2.00
1.46	2.46	34.57	2.00
1.56	2.63	37.41	2.00
1.67	2.80	39.77	2.00
1.77	2.94	41.46	2.00
1.88	3.06	42.15	2.00
2.00	3.14	42.15	2.00

```

ROUTE MCUNGE ID=30 HYD=RTE.PONDB INFLOW ID=29
DT=0.0 L=1180 NS=0 SLOPE=0.03
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

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INFLOW END= 261
DT= .100000
WIDTH MED= 1.38
TABLE PTS= 19
QMED= 1.68
CKMED= 8.4416
NREACH= 1
DX= 1180.00

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DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.135	.0	3.28	1.55	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.10	.1	.2	.100	.9	5.42	3.29	1.652	.001	.999	.246	-.245	.0	.999	.065	-.065
.21	.2	.9	.064	1.2	7.47	5.14	2.280	.003	.998	.391	-.389	.5	.999	.309	-.307
.31	.3	2.1	.050	1.5	9.46	6.61	2.887	.004	.998	.486	-.484	1.4	.998	.442	-.440
.42	.5	3.7	.042	1.6	11.14	7.86	3.398	.006	.997	.546	-.543	2.9	.998	.519	-.516

DEV_COND.OUT															
.52	.7	5.8	.037	1.8	12.57	8.95	3.834	.007	.997	.587	-.584	4.7	.997	.568	-.565
.63	.8	8.3	.033	1.9	13.78	9.90	4.204	.009	.996	.616	-.613	7.0	.997	.603	-.600
.73	1.0	11.1	.031	1.9	14.80	10.74	4.515	.011	.996	.638	-.634	9.7	.996	.629	-.625
.83	1.2	14.2	.029	2.0	15.64	11.48	4.771	.013	.995	.654	-.650	12.7	.996	.647	-.643
.94	1.4	17.5	.027	2.0	16.29	12.13	4.971	.015	.995	.666	-.661	15.9	.995	.661	-.656
1.04	1.7	21.0	.026	2.0	16.75	12.69	5.110	.018	.994	.674	-.668	19.3	.995	.671	-.665
1.15	1.9	24.5	.025	2.0	16.86	13.16	5.143	.021	.993	.676	-.669	22.7	.994	.676	-.670
1.25	2.1	28.0	.024	2.0	16.54	13.56	5.047	.024	.992	.671	-.663	26.3	.993	.674	-.667
1.35	2.3	31.4	.024	2.0	15.76	13.86	4.808	.028	.990	.657	-.648	29.7	.991	.666	-.657
1.46	2.5	34.6	.023	2.0	14.44	14.08	4.407	.034	.988	.632	-.620	33.0	.989	.647	-.636
1.56	2.6	37.4	.023	2.0	12.50	14.20	3.813	.042	.983	.588	-.571	36.0	.986	.615	-.600
1.67	2.8	39.8	.023	2.0	9.73	14.21	2.969	.058	.971	.503	-.475	38.6	.979	.556	-.534
1.77	2.9	41.5	.023	2.0	5.70	14.09	1.739	.103	.928	.296	-.224	40.6	.960	.435	-.395
1.88	3.1	42.1	.024	2.0	3.25	13.77	.991	.183	.831	.080	.088	41.8	.838	.088	.074

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.1036
 Equations solved using the Ponce correction to C2

PRINT HYD ID=30 CODE=0

HYDROGRAPH FROM AREA RTE.PONDB

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.300	2.5	10.600	.1	15.900	.1	21.200	.1
.100	.0	5.400	2.4	10.700	.1	16.000	.1	21.300	.1
.200	.0	5.500	2.4	10.800	.1	16.100	.1	21.400	.1
.300	.0	5.600	2.3	10.900	.1	16.200	.1	21.500	.1
.400	.0	5.700	2.2	11.000	.1	16.300	.1	21.600	.1
.500	.0	5.800	2.2	11.100	.1	16.400	.1	21.700	.1
.600	.0	5.900	2.1	11.200	.1	16.500	.1	21.800	.1
.700	.0	6.000	2.0	11.300	.1	16.600	.1	21.900	.1
.800	.0	6.100	2.0	11.400	.1	16.700	.1	22.000	.1
.900	.0	6.200	1.9	11.500	.1	16.800	.1	22.100	.1
1.000	.0	6.300	1.9	11.600	.1	16.900	.1	22.200	.1
1.100	.0	6.400	1.8	11.700	.1	17.000	.1	22.300	.1
1.200	.0	6.500	1.7	11.800	.1	17.100	.1	22.400	.1
1.300	.5	6.600	1.6	11.900	.1	17.200	.1	22.500	.1
1.400	1.7	6.700	1.3	12.000	.1	17.300	.1	22.600	.1
1.500	2.6	6.800	1.1	12.100	.1	17.400	.1	22.700	.1
1.600	2.9	6.900	.9	12.200	.1	17.500	.1	22.800	.1
1.700	3.2	7.000	.7	12.300	.1	17.600	.1	22.900	.1
1.800	3.2	7.100	.6	12.400	.1	17.700	.1	23.000	.1
1.900	3.3	7.200	.5	12.500	.1	17.800	.1	23.100	.1
2.000	3.3	7.300	.4	12.600	.1	17.900	.1	23.200	.1
2.100	3.4	7.400	.4	12.700	.1	18.000	.1	23.300	.1
2.200	3.4	7.500	.3	12.800	.1	18.100	.1	23.400	.1
2.300	3.3	7.600	.3	12.900	.1	18.200	.1	23.500	.1
2.400	3.3	7.700	.3	13.000	.1	18.300	.1	23.600	.1
2.500	3.3	7.800	.2	13.100	.1	18.400	.1	23.700	.1
2.600	3.3	7.900	.2	13.200	.1	18.500	.1	23.800	.1
2.700	3.3	8.000	.2	13.300	.1	18.600	.1	23.900	.1
2.800	3.2	8.100	.2	13.400	.1	18.700	.1	24.000	.1
2.900	3.2	8.200	.2	13.500	.1	18.800	.1	24.100	.1
3.000	3.2	8.300	.2	13.600	.1	18.900	.1	24.200	.1
3.100	3.2	8.400	.2	13.700	.1	19.000	.1	24.300	.1
3.200	3.1	8.500	.2	13.800	.1	19.100	.1	24.400	.0
3.300	3.1	8.600	.2	13.900	.1	19.200	.1	24.500	.0
3.400	3.1	8.700	.2	14.000	.1	19.300	.1	24.600	.0
3.500	3.1	8.800	.1	14.100	.1	19.400	.1	24.700	.0
3.600	3.0	8.900	.1	14.200	.1	19.500	.1	24.800	.0
3.700	3.0	9.000	.1	14.300	.1	19.600	.1	24.900	.0
3.800	3.0	9.100	.1	14.400	.1	19.700	.1	25.000	.0
3.900	3.0	9.200	.1	14.500	.1	19.800	.1	25.100	.0
4.000	2.9	9.300	.1	14.600	.1	19.900	.1	25.200	.0
4.100	2.9	9.400	.1	14.700	.1	20.000	.1	25.300	.0
4.200	2.9	9.500	.1	14.800	.1	20.100	.1	25.400	.0
4.300	2.8	9.600	.1	14.900	.1	20.200	.1	25.500	.0
4.400	2.8	9.700	.1	15.000	.1	20.300	.1	25.600	.0
4.500	2.7	9.800	.1	15.100	.1	20.400	.1	25.700	.0
4.600	2.7	9.900	.1	15.200	.1	20.500	.1	25.800	.0
4.700	2.7	10.000	.1	15.300	.1	20.600	.1	25.900	.0
4.800	2.6	10.100	.1	15.400	.1	20.700	.1	26.000	.0
4.900	2.6	10.200	.1	15.500	.1	20.800	.1	26.100	.0
5.000	2.6	10.300	.1	15.600	.1	20.900	.1		
5.100	2.5	10.400	.1	15.700	.1	21.000	.1		
5.200	2.5	10.500	.1	15.800	.1	21.100	.1		

RUNOFF VOLUME = 1.32010 INCHES = 1.4067 ACRE-FEET
 PEAK DISCHARGE RATE = 3.36 CFS AT 2.100 HOURS BASIN AREA = .0200 SQ. MI.

*
 *
 ADD HYD ID=31 HYD=OFF.B ID I=30 II=27
 PRINT HYD ID=31 CODE=10

HYDROGRAPH FROM AREA OFF.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	5.2	12.000	.2	18.000	.1	24.000	.1
1.000	.0	7.000	3.0	13.000	.2	19.000	.1	25.000	.0
2.000	6.6	8.000	.6	14.000	.1	20.000	.1	26.000	.0
3.000	7.6	9.000	.3	15.000	.1	21.000	.1		
4.000	7.2	10.000	.3	16.000	.1	22.000	.1		
5.000	6.3	11.000	.2	17.000	.1	23.000	.1		

RUNOFF VOLUME = .59525 INCHES = 3.1899 ACRE-FEET
 PEAK DISCHARGE RATE = 7.62 CFS AT 2.900 HOURS BASIN AREA = .1005 SQ. MI.

*
 *
 COMPUTE NM HYD ID=32 HYD N0=BASINE1.1 DA=.02753 SQ MI
 %A=0.0 %B=33.0 %C=33.0 %D=34.0
 TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 37.038 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
 AREA = .009360 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

DEV_COND.OUT
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 48.422 CFS UNIT VOLUME = 1.007 B = 354.44 P60 = 1.8400
AREA = .018170 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=32 CODE=10

HYDROGRAPH FROM AREA BASINE1.1

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.1	21.000	.1
2.000	8.3	7.000	.2	12.000	.2	17.000	.1	22.000	.1
3.000	.4	8.000	.2	13.000	.2	18.000	.1	23.000	.1
4.000	.2	9.000	.2	14.000	.2	19.000	.1	24.000	.1

RUNOFF VOLUME = 1.35259 INCHES = 1.9860 ACRE-FEET
PEAK DISCHARGE RATE = 48.45 CFS AT 1.500 HOURS BASIN AREA = .0275 SQ. MI.

*
*
ADD HYD ID=33 HYD=OFF.E11 ID I=32 II=31
PRINT HYD ID=33 CODE=10

HYDROGRAPH FROM AREA OFF.E11

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	5.4	12.000	.3	18.000	.2	24.000	.2
1.000	.0	7.000	3.2	13.000	.3	19.000	.2	25.000	.0
2.000	14.9	8.000	.8	14.000	.3	20.000	.2	26.000	.0
3.000	8.1	9.000	.5	15.000	.3	21.000	.2		
4.000	7.4	10.000	.5	16.000	.3	22.000	.2		
5.000	6.5	11.000	.4	17.000	.2	23.000	.2		

RUNOFF VOLUME = .75812 INCHES = 5.1758 ACRE-FEET
PEAK DISCHARGE RATE = 51.42 CFS AT 1.500 HOURS BASIN AREA = .1280 SQ. MI.

*
*
COMPUTE NM HYD ID=34 HYD NO=BASINE1.2 DA=.00588 SQ MI
%A=0.0 %B=33.0 %C=33.0 %D=34.0
TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 7.9108 CFS UNIT VOLUME = 1.029 B = 526.28 P60 = 1.8400
AREA = .001999 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 10.342 CFS UNIT VOLUME = 1.006 B = 354.44 P60 = 1.8400
AREA = .003881 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=34 CODE=10

HYDROGRAPH FROM AREA BASINE1.2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
2.000	1.8	7.000	.0	12.000	.0	17.000	.0	22.000	.0
3.000	.1	8.000	.0	13.000	.0	18.000	.0	23.000	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0

RUNOFF VOLUME = 1.35259 INCHES = .4242 ACRE-FEET
PEAK DISCHARGE RATE = 10.36 CFS AT 1.500 HOURS BASIN AREA = .0059 SQ. MI.

*
*
COMPUTE NM HYD ID=35 HYD NO=BASIN.E2 DA=.01348 SQ MI
%A=0.0 %B=18.0 %C=18.0 %D=64.0
TP=-.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 34.137 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
AREA = .008627 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 12.933 CFS UNIT VOLUME = 1.006 B = 354.44 P60 = 1.8400
AREA = .004853 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=35 CODE=10

HYDROGRAPH FROM AREA BASIN.E2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.1	21.000	.1
2.000	6.1	7.000	.2	12.000	.2	17.000	.1	22.000	.1
3.000	.3	8.000	.2	13.000	.1	18.000	.1	23.000	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1

RUNOFF VOLUME = 1.84145 INCHES = 1.3239 ACRE-FEET
PEAK DISCHARGE RATE = 27.42 CFS AT 1.500 HOURS BASIN AREA = .0135 SQ. MI.

DEV_COND.OUT

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ADD HYD
PRINT HYD

ID=36 HYD=E2.E12 ID I=34 II=35
ID=36 CODE=10

HYDROGRAPH FROM AREA E2.E12

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.2	20.000	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.2	21.000	.1
2.000	7.9	7.000	.3	12.000	.2	17.000	.2	22.000	.1
3.000	.4	8.000	.2	13.000	.2	18.000	.1	23.000	.1
4.000	.2	9.000	.2	14.000	.2	19.000	.1	24.000	.1

RUNOFF VOLUME = 1.69294 INCHES = 1.7480 ACRE-Feet
PEAK DISCHARGE RATE = 37.77 CFS AT 1.500 HOURS BASIN AREA = .0194 SQ. MI.

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COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.002
DIA=3.0 N=0.013

RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.16	.14	.16	1.33
.31	.39	.68	1.83
.47	.71	1.58	2.18
.63	1.07	2.84	2.44
.78	1.46	4.43	2.63
.94	1.89	6.33	2.78
1.09	2.33	8.48	2.89
1.25	2.79	10.84	2.96
1.41	3.26	13.36	2.99
1.56	3.72	15.99	3.00
1.72	4.19	18.67	3.00
1.88	4.65	21.33	3.00
2.03	5.10	23.90	3.00
2.19	5.53	26.32	3.00
2.35	5.93	28.48	3.00
2.50	6.30	30.27	3.00
2.66	6.62	31.56	3.00
2.81	6.89	32.09	3.00
3.00	7.07	32.09	3.00

ROUTE MCUNGE ID=37 HYD=RTE.E12 INFLOW ID=36
DT=0.0 L=800 NS=0 SLOPE=0.01
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 249
DT= .100000
WIDTH MED= 3.00

TABLE PTS= 19
QMED= 18.89
NREACH= 1

CKMED= 5.7936
DX= 800.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.271	.0	2.22	.53	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.16	.1	.2	.200	1.3	2.21	1.11	.993	.007	.993	.000	.007	.0	.999	.000	.001
.31	.4	.7	.128	1.8	2.53	1.74	1.138	.018	.983	.072	-.055	.4	.989	.030	-.019
.47	.7	1.6	.099	2.2	3.20	2.24	1.441	.028	.977	.190	-.167	1.1	.979	.135	-.115
.63	1.1	2.8	.084	2.4	3.77	2.66	1.696	.039	.972	.269	-.240	2.2	.974	.232	-.206
.78	1.5	4.4	.073	2.6	4.25	3.03	1.913	.049	.967	.325	-.292	3.6	.969	.299	-.268
.94	1.9	6.3	.066	2.8	4.66	3.35	2.098	.061	.961	.367	-.328	5.4	.964	.348	-.312
1.09	2.3	8.5	.061	2.9	5.01	3.63	2.253	.073	.956	.399	-.355	7.4	.959	.385	-.343
1.25	2.8	10.8	.057	3.0	5.29	3.88	2.381	.087	.950	.423	-.373	9.6	.953	.413	-.366
1.41	3.3	13.4	.054	3.0	5.51	4.10	2.481	.101	.944	.442	-.385	12.1	.947	.434	-.381
1.56	3.7	16.0	.052	3.0	5.67	4.29	2.550	.118	.936	.455	-.391	14.7	.940	.450	-.390
1.72	4.2	18.7	.050	3.0	5.70	4.45	2.567	.136	.926	.460	-.386	17.3	.932	.459	-.390
1.88	4.7	21.3	.048	3.0	5.60	4.59	2.519	.159	.914	.456	-.370	20.0	.921	.460	-.380
2.03	5.1	23.9	.047	3.0	5.33	4.69	2.399	.187	.896	.442	-.338	22.6	.906	.451	-.357
2.19	5.5	26.3	.047	3.0	4.89	4.76	2.199	.224	.869	.416	-.285	25.1	.884	.432	-.316
2.35	5.9	28.5	.046	3.0	4.23	4.80	1.903	.281	.824	.372	-.195	27.4	.851	.398	-.248
2.50	6.3	30.3	.046	3.0	3.29	4.81	1.482	.383	.733	.302	-.034	29.4	.790	.343	-.133
2.66	6.6	31.6	.047	3.0	1.93	4.77	.868	.682	.465	.216	.319	30.9	.652	.260	.088
2.81	6.9	32.1	.048	3.0	1.10	4.66	.495	1.216	.103	.262	.635	31.8	.123	.255	.623

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 11 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.0628
Equations solved using the Ponce correction to C2

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PRINT HYD ID=37 CODE=0

HYDROGRAPH FROM AREA RTE.E12

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.2	20.000	.1
.100	.0	5.100	.2	10.100	.2	15.100	.2	20.100	.1
.200	.0	5.200	.2	10.200	.2	15.200	.2	20.200	.1
.300	.0	5.300	.2	10.300	.2	15.300	.2	20.300	.1
.400	.0	5.400	.2	10.400	.2	15.400	.2	20.400	.1
.500	.0	5.500	.2	10.500	.2	15.500	.2	20.500	.1
.600	.0	5.600	.2	10.600	.2	15.600	.2	20.600	.1
.700	.0	5.700	.2	10.700	.2	15.700	.2	20.700	.1
.800	.0	5.800	.2	10.800	.2	15.800	.2	20.800	.1
.900	.0	5.900	.2	10.900	.2	15.900	.2	20.900	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.2	21.000	.1
1.100	.0	6.100	.2	11.100	.2	16.100	.2	21.100	.1
1.200	.4	6.200	.3	11.200	.2	16.200	.2	21.200	.1
1.300	6.0	6.300	.3	11.300	.2	16.300	.2	21.300	.1
1.400	22.3	6.400	.3	11.400	.2	16.400	.2	21.400	.1
1.500	31.2	6.500	.3	11.500	.2	16.500	.2	21.500	.1
1.600	31.3	6.600	.3	11.600	.2	16.600	.2	21.600	.1
1.700	20.5	6.700	.3	11.700	.2	16.700	.2	21.700	.1
1.800	13.8	6.800	.3	11.800	.2	16.800	.2	21.800	.1
1.900	10.9	6.900	.3	11.900	.2	16.900	.2	21.900	.1
2.000	8.6	7.000	.3	12.000	.2	17.000	.2	22.000	.1
2.100	6.5	7.100	.3	12.100	.2	17.100	.2	22.100	.1
2.200	3.7	7.200	.3	12.200	.2	17.200	.2	22.200	.1

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DEV_COND.OUT
2.300      2.4      7.300      .3      12.300      .2      17.300      .2      22.300      .1
2.400      1.8      7.400      .2      12.400      .2      17.400      .2      22.400      .1
2.500      1.4      7.500      .2      12.500      .2      17.500      .2      22.500      .1
2.600      1.1      7.600      .2      12.600      .2      17.600      .2      22.600      .1
2.700      .9      7.700      .2      12.700      .2      17.700      .2      22.700      .1
2.800      .7      7.800      .2      12.800      .2      17.800      .2      22.800      .1
2.900      .6      7.900      .2      12.900      .2      17.900      .2      22.900      .1
3.000      .5      8.000      .2      13.000      .2      18.000      .1      23.000      .1
3.100      .4      8.100      .2      13.100      .2      18.100      .1      23.100      .1
3.200      .4      8.200      .2      13.200      .2      18.200      .2      23.200      .1
3.300      .3      8.300      .2      13.300      .2      18.300      .1      23.300      .1
3.400      .3      8.400      .2      13.400      .2      18.400      .1      23.400      .1
3.500      .3      8.500      .2      13.500      .2      18.500      .1      23.500      .1
3.600      .3      8.600      .2      13.600      .2      18.600      .1      23.600      .1
3.700      .2      8.700      .2      13.700      .2      18.700      .1      23.700      .1
3.800      .2      8.800      .2      13.800      .2      18.800      .1      23.800      .1
3.900      .2      8.900      .2      13.900      .2      18.900      .1      23.900      .1
4.000      .2      9.000      .2      14.000      .2      19.000      .1      24.000      .1
4.100      .2      9.100      .2      14.100      .2      19.100      .1      24.100      .1
4.200      .2      9.200      .2      14.200      .2      19.200      .1      24.200      .1
4.300      .2      9.300      .2      14.300      .2      19.300      .1      24.300      .0
4.400      .2      9.400      .2      14.400      .2      19.400      .1      24.400      .0
4.500      .2      9.500      .2      14.500      .2      19.500      .1      24.500      .0
4.600      .2      9.600      .2      14.600      .2      19.600      .1      24.600      .0
4.700      .2      9.700      .2      14.700      .2      19.700      .1      24.700      .0
4.800      .2      9.800      .2      14.800      .2      19.800      .1      24.800      .0
4.900      .2      9.900      .2      14.900      .2      19.900      .1      24.900      .0

RUNOFF VOLUME = 1.63074 INCHES = 1.6838 ACRE-FEET
PEAK DISCHARGE RATE = 31.30 CFS AT 1.600 HOURS BASIN AREA = .0194 SQ. MI.

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COMPUTE NM HYD ID=38 HYD NO=BASIN.E4 DA=.00577 SQ MI
%A=0.0 %B=5.0 %C=5.0 %D=90.0
TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 20.548 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
AREA = .005193 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 1.5377 CFS UNIT VOLUME = .9989 B = 354.44 P60 = 1.8400
AREA = .000577 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=38 CODE=10

HYDROGRAPH FROM AREA BASIN.E4

TIME FLOW TIME FLOW TIME FLOW TIME FLOW TIME FLOW
HRS CFS HRS CFS HRS CFS HRS CFS HRS CFS
.000 .0 5.000 .1 10.000 .1 15.000 .1 20.000 .1
1.000 .0 6.000 .1 11.000 .1 16.000 .1 21.000 .1
2.000 3.4 7.000 .1 12.000 .1 17.000 .1 22.000 .1
3.000 .2 8.000 .1 13.000 .1 18.000 .1 23.000 .1
4.000 .1 9.000 .1 14.000 .1 19.000 .1 24.000 .1

RUNOFF VOLUME = 2.26513 INCHES = .6971 ACRE-FEET
PEAK DISCHARGE RATE = 13.11 CFS AT 1.500 HOURS BASIN AREA = .0058 SQ. MI.

*
*
ADD HYD ID=39 HYD=AP1 ID I=38 II=33
PRINT HYD ID=39 CODE=10

HYDROGRAPH FROM AREA AP1

TIME FLOW TIME FLOW TIME FLOW TIME FLOW TIME FLOW
HRS CFS HRS CFS HRS CFS HRS CFS HRS CFS
.000 .0 6.000 5.5 12.000 .4 18.000 .3 24.000 .2
1.000 .0 7.000 3.4 13.000 .4 19.000 .3 25.000 .0
2.000 18.3 8.000 .9 14.000 .4 20.000 .3 26.000 .0
3.000 8.2 9.000 .7 15.000 .3 21.000 .3
4.000 7.5 10.000 .6 16.000 .3 22.000 .3
5.000 6.6 11.000 .5 17.000 .3 23.000 .2

RUNOFF VOLUME = .82312 INCHES = 5.8729 ACRE-FEET
PEAK DISCHARGE RATE = 64.53 CFS AT 1.500 HOURS BASIN AREA = .1338 SQ. MI.

*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.026
DIA=4.0 N=0.013

RATING CURVE PIPE SECTION 1.0
WATER FLOW FLOW MAX
SURFACE AREA RATE
ELEV SQ FT CFS FT
.00 .00 .00 .00
.21 .25 1.21 1.78
.42 .69 5.27 2.44
.63 1.25 12.26 2.91
.83 1.90 22.05 3.25
1.04 2.60 34.43 3.51
1.25 3.36 49.13 3.71
1.46 4.15 65.82 3.85
1.67 4.96 84.15 3.94
1.88 5.79 103.74 3.99
2.08 6.62 124.15 4.00
2.29 7.45 144.94 4.00
2.50 8.27 165.61 4.00
2.71 9.06 185.62 4.00
2.92 9.82 204.35 4.00

```

DEV_COND.OUT
 3.13 10.54 221.12 4.00
 3.34 11.20 235.07 4.00
 3.54 11.77 245.05 4.00
 3.75 12.24 249.15 4.00
 4.00 12.57 249.15 4.00
 ROUTE MCUNGE ID=40 HYD=RTE.E1E4 INFLOW ID=39
 DT=0.0 L=400 NS=0 SLOPE=0.026
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
 ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED
 *
 PRINT HYD ID=40 CODE=0

HYDROGRAPH FROM AREA RTE.E1E4									
TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.300	6.3	10.600	.5	15.900	.3	21.200	.3
.100	.0	5.400	6.2	10.700	.5	16.000	.3	21.300	.3
.200	.0	5.500	6.1	10.800	.5	16.100	.3	21.400	.3
.300	.0	5.600	6.0	10.900	.5	16.200	.3	21.500	.3
.400	.0	5.700	5.9	11.000	.5	16.300	.3	21.600	.3
.500	.0	5.800	5.7	11.100	.5	16.400	.3	21.700	.3
.600	.0	5.900	5.6	11.200	.5	16.500	.3	21.800	.3
.700	.0	6.000	5.5	11.300	.5	16.600	.3	21.900	.3
.800	.0	6.100	5.4	11.400	.5	16.700	.3	22.000	.3
.900	.0	6.200	5.3	11.500	.5	16.800	.3	22.100	.3
1.000	.0	6.300	5.1	11.600	.5	16.900	.3	22.200	.3
1.100	.2	6.400	4.9	11.700	.5	17.000	.3	22.300	.3
1.200	3.7	6.500	4.8	11.800	.4	17.100	.3	22.400	.3
1.300	14.9	6.600	4.6	11.900	.4	17.200	.3	22.500	.3
1.400	53.4	6.700	4.2	12.000	.4	17.300	.3	22.600	.3
1.500	64.5	6.800	3.9	12.100	.4	17.400	.3	22.700	.3
1.600	47.4	6.900	3.6	12.200	.4	17.500	.3	22.800	.3
1.700	33.3	7.000	3.4	12.300	.4	17.600	.3	22.900	.3
1.800	25.3	7.100	3.1	12.400	.4	17.700	.3	23.000	.2
1.900	21.2	7.200	2.7	12.500	.4	17.800	.3	23.100	.3
2.000	18.3	7.300	2.1	12.600	.4	17.900	.3	23.200	.2
2.100	14.1	7.400	1.8	12.700	.4	18.000	.3	23.300	.2
2.200	11.4	7.500	1.5	12.800	.4	18.100	.3	23.400	.2
2.300	10.3	7.600	1.3	12.900	.4	18.200	.3	23.500	.2
2.400	9.7	7.700	1.2	13.000	.4	18.300	.3	23.600	.2
2.500	9.3	7.800	1.0	13.100	.4	18.400	.3	23.700	.2
2.600	8.9	7.900	1.0	13.200	.4	18.500	.3	23.800	.2
2.700	8.7	8.000	.9	13.300	.4	18.600	.3	23.900	.2
2.800	8.5	8.100	.9	13.400	.4	18.700	.3	24.000	.2
2.900	8.4	8.200	.8	13.500	.4	18.800	.3	24.100	.2
3.000	8.2	8.300	.8	13.600	.4	18.900	.3	24.200	.1
3.100	8.1	8.400	.8	13.700	.4	19.000	.3	24.300	.1
3.200	8.0	8.500	.7	13.800	.4	19.100	.3	24.400	.1
3.300	8.0	8.600	.7	13.900	.4	19.200	.3	24.500	.0
3.400	7.9	8.700	.7	14.000	.4	19.300	.3	24.600	.0
3.500	7.8	8.800	.7	14.100	.4	19.400	.3	24.700	.0
3.600	7.8	8.900	.7	14.200	.4	19.500	.3	24.800	.0
3.700	7.7	9.000	.7	14.300	.4	19.600	.3	24.900	.0
3.800	7.6	9.100	.6	14.400	.4	19.700	.3	25.000	.0
3.900	7.5	9.200	.6	14.500	.4	19.800	.3	25.100	.0
4.000	7.5	9.300	.6	14.600	.4	19.900	.3	25.200	.0
4.100	7.4	9.400	.6	14.700	.4	20.000	.3	25.300	.0
4.200	7.3	9.500	.6	14.800	.4	20.100	.3	25.400	.0
4.300	7.2	9.600	.6	14.900	.4	20.200	.3	25.500	.0
4.400	7.1	9.700	.6	15.000	.3	20.300	.3	25.600	.0
4.500	7.0	9.800	.6	15.100	.3	20.400	.3	25.700	.0
4.600	6.9	9.900	.6	15.200	.3	20.500	.3	25.800	.0
4.700	6.9	10.000	.6	15.300	.3	20.600	.3	25.900	.0
4.800	6.8	10.100	.5	15.400	.3	20.700	.3	26.000	.0
4.900	6.7	10.200	.5	15.500	.3	20.800	.3	26.100	.0
5.000	6.6	10.300	.5	15.600	.3	20.900	.3		
5.100	6.5	10.400	.5	15.700	.3	21.000	.3		
5.200	6.4	10.500	.5	15.800	.3	21.100	.3		

RUNOFF VOLUME = .82312 INCHES = 5.8729 ACRE-FEET
 PEAK DISCHARGE RATE = 64.53 CFS AT 1.500 HOURS BASIN AREA = .1338 SQ. MI.

*
 *
 ADD HYD ID=41 HYD=AP2 ID I=37 II=40
 PRINT HYD ID=41 CODE=10

HYDROGRAPH FROM AREA AP2									
TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	5.7	12.000	.6	18.000	.4	24.000	.4
1.000	.0	7.000	3.6	13.000	.6	19.000	.4	25.000	.0
2.000	27.0	8.000	1.1	14.000	.5	20.000	.4	26.000	.0
3.000	8.7	9.000	.9	15.000	.5	21.000	.4		
4.000	7.7	10.000	.8	16.000	.5	22.000	.4		
5.000	6.8	11.000	.7	17.000	.5	23.000	.4		

RUNOFF VOLUME = .92521 INCHES = 7.5566 ACRE-FEET
 PEAK DISCHARGE RATE = 95.72 CFS AT 1.500 HOURS BASIN AREA = .1531 SQ. MI.

*
 *
 COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.026
 DIA=4.0 N=0.013

RATING CURVE PIPE SECTION 1.0				
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT	
.00	.00	.00	.00	
.21	.25	1.21	1.78	
.42	.69	5.27	2.44	
.63	1.25	12.26	2.91	
.83	1.90	22.05	3.25	
1.04	2.60	34.43	3.51	
1.25	3.36	49.13	3.71	



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*
COMPUTE NM HYD      ID=44  HYD NO=BASIN.OFF6  DA=.0014 SQ MI
                     %A=0.0  %B=0  %C=100.0  %D=0
                     TP=-0.133 HR  RAIN=-1

K = .105291HR      TP = .133000HR      K/TP RATIO = .791661      SHAPE CONSTANT, N = 4.531123
UNIT PEAK = 4.0963 CFS      UNIT VOLUME = 1.011      B = 389.14      P60 = 1.8400
AREA = .001400 SQ MI      IA = .35000 INCHES      INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD          ID=44  CODE=10

```

DEV_COND.OUT

HYDROGRAPH FROM AREA BASIN.OFF6

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.000	.0	2.000	.3	3.000	.0		

RUNOFF VOLUME = .96928 INCHES = .0724 ACRE-FEET
 PEAK DISCHARGE RATE = 2.33 CFS AT 1.500 HOURS BASIN AREA = .0014 SQ. MI.

*

ADD HYD
PRINT HYDID=45 HYD=POND ID I=43 II=44
ID=45 CODE=10

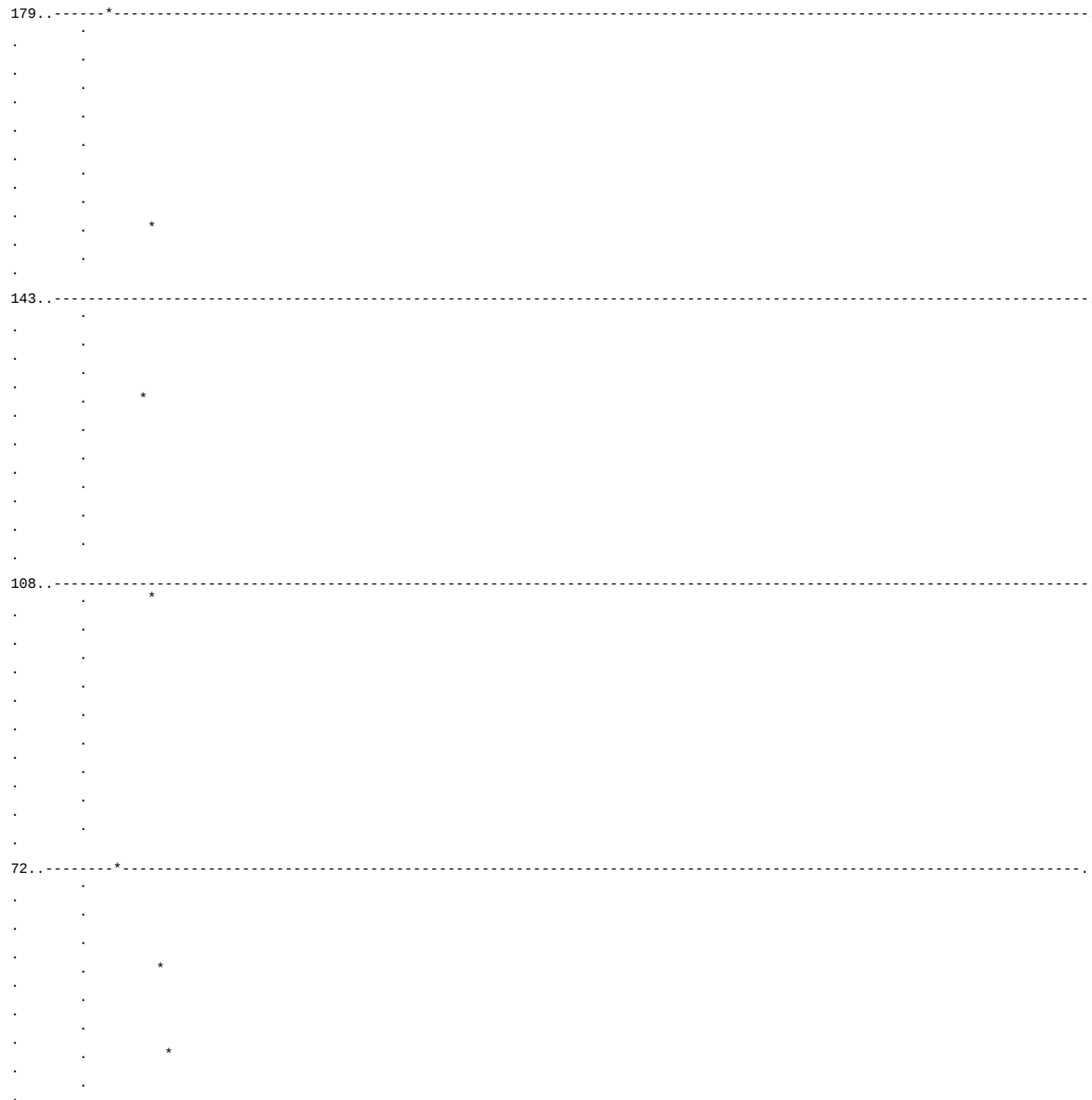
HYDROGRAPH FROM AREA POND

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	6.3	12.000	1.0	18.000	.8	24.000	.6
1.000	.0	7.000	4.1	13.000	1.0	19.000	.7	25.000	.0
2.000	46.9	8.000	1.6	14.000	.9	20.000	.7	26.000	.0
3.000	10.1	9.000	1.3	15.000	.9	21.000	.7		
4.000	8.2	10.000	1.2	16.000	.8	22.000	.7		
5.000	7.3	11.000	1.1	17.000	.8	23.000	.6		

RUNOFF VOLUME = 1.05957 INCHES = 11.5488 ACRE-FEET
 PEAK DISCHARGE RATE = 179.27 CFS AT 1.500 HOURS BASIN AREA = .2044 SQ. MI.

PLOT HYD
FLOW RATE (CFS)

ID=45



DEV_COND.OUT

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
27.50	.00	5446.45	1.170	.45
28.00	.00	5446.42	1.152	.42
28.50	.00	5446.39	1.135	.40
29.00	.00	5446.36	1.119	.37
29.50	.00	5446.34	1.105	.35
30.00	.00	5446.31	1.091	.33
30.50	.00	5446.29	1.078	.31
31.00	.00	5446.27	1.065	.29
31.50	.00	5446.25	1.054	.27
32.00	.00	5446.23	1.043	.25
32.50	.00	5446.21	1.033	.24
33.00	.00	5446.20	1.024	.22
33.50	.00	5446.18	1.015	.21
34.00	.00	5446.17	1.007	.19
34.50	.00	5446.15	.999	.18
35.00	.00	5446.14	.992	.17
35.50	.00	5446.13	.985	.16
36.00	.00	5446.12	.979	.15
36.50	.00	5446.11	.973	.14
37.00	.00	5446.10	.967	.13
37.50	.00	5446.09	.962	.12
38.00	.00	5446.08	.957	.11
38.50	.00	5446.07	.952	.11
39.00	.00	5446.07	.948	.10
39.50	.00	5446.06	.944	.09
40.00	.00	5446.05	.940	.09
40.50	.00	5446.05	.937	.08
41.00	.00	5446.04	.933	.08
41.50	.00	5446.04	.930	.07
42.00	.00	5446.03	.927	.07
42.50	.00	5446.03	.925	.06
43.00	.00	5446.02	.922	.06
43.50	.00	5446.02	.920	.06
44.00	.00	5446.01	.918	.05
44.50	.00	5446.01	.916	.05
45.00	.00	5446.01	.914	.05
45.50	.00	5446.00	.912	.04
46.00	.00	5446.00	.910	.04
46.50	.00	5446.00	.908	.04
47.00	.00	5445.99	.907	.04
47.50	.00	5445.99	.905	.04
48.00	.00	5445.99	.903	.04
48.50	.00	5445.98	.902	.04
49.00	.00	5445.98	.900	.04
49.50	.00	5445.98	.899	.04
50.00	.00	5445.97	.897	.04
50.50	.00	5445.97	.895	.04
51.00	.00	5445.97	.894	.04
51.50	.00	5445.96	.892	.04
52.00	.00	5445.96	.890	.04
52.50	.00	5445.96	.889	.04
53.00	.00	5445.95	.887	.04
53.50	.00	5445.95	.886	.04
54.00	.00	5445.95	.884	.04
54.50	.00	5445.94	.882	.04
55.00	.00	5445.94	.881	.04
55.50	.00	5445.94	.879	.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
56.00	.00	5445.94	.878	.04
56.50	.00	5445.93	.876	.04
57.00	.00	5445.93	.874	.04
57.50	.00	5445.93	.873	.04
58.00	.00	5445.92	.871	.04
58.50	.00	5445.92	.870	.04
59.00	.00	5445.92	.868	.04
59.50	.00	5445.91	.866	.04

PEAK DISCHARGE = 21.160 CFS - PEAK OCCURS AT HOUR 2.30
 MAXIMUM WATER SURFACE ELEVATION = 5451.582
 MAXIMUM STORAGE = 5.9219 AC-FT INCREMENTAL TIME= .100000HRS

*
 PRINT HYD ID=46 CODE=10

HYDROGRAPH FROM AREA POND.E

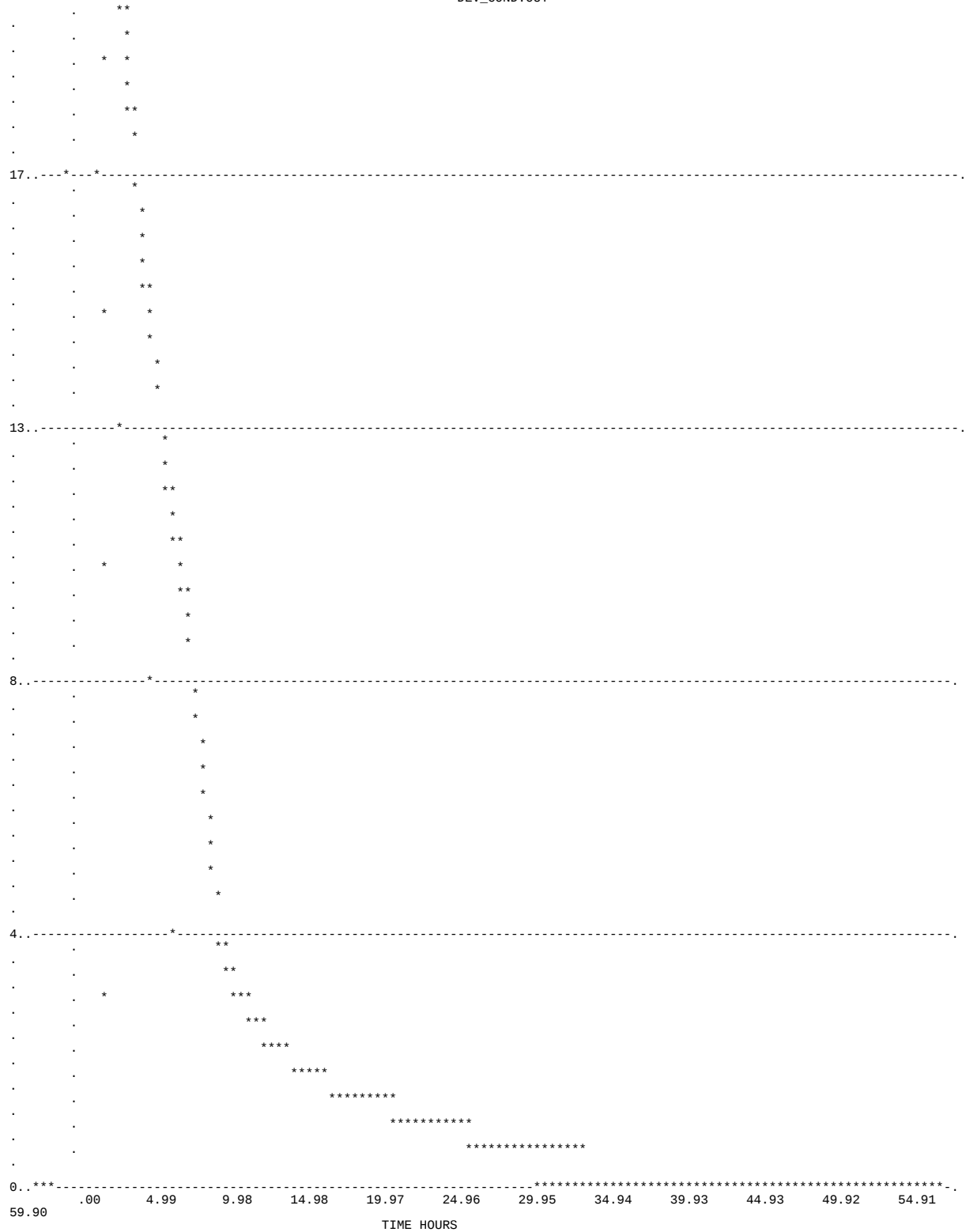
TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	12.000	2.4	24.000	.8	36.000	.1	48.000	.0
1.000	.0	13.000	2.1	25.000	.7	37.000	.1	49.000	.0
2.000	20.0	14.000	1.9	26.000	.6	38.000	.1	50.000	.0
3.000	19.3	15.000	1.7	27.000	.5	39.000	.1	51.000	.0
4.000	16.1	16.000	1.5	28.000	.4	40.000	.1	52.000	.0
5.000	13.5	17.000	1.4	29.000	.4	41.000	.1	53.000	.0
6.000	11.4	18.000	1.3	30.000	.3	42.000	.1	54.000	.0
7.000	9.5	19.000	1.2	31.000	.3	43.000	.1	55.000	.0
8.000	7.3	20.000	1.1	32.000	.3	44.000	.1	56.000	.0
9.000	4.8	21.000	1.0	33.000	.2	45.000	.0	57.000	.0
10.000	3.2	22.000	1.0	34.000	.2	46.000	.0	58.000	.0
11.000	2.8	23.000	.9	35.000	.2	47.000	.0	59.000	.0

RUNOFF VOLUME = .98388 INCHES = 10.7238 ACRE-FEET
 PEAK DISCHARGE RATE = 21.16 CFS AT 2.300 HOURS BASIN AREA = .2044 SQ. MI.

PLOT HYD ID=46
 FLOW RATE (CFS)

21. *
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 *
 **

DEV_COND.OUT



*
 COMPUTE NM HYD ID=47 HYD NO=BASIN.E6 DA=.00488 SQ MI
 %A=0.0 %B=5.0 %C=5.0 %D=90.0
 TP=-0.133 HR RAIN=-1
 K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 17.379 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
 AREA = .004392 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
 Page 24

DEV_COND.OUT
 UNIT PEAK = 1.3005 CFS UNIT VOLUME = .9989 B = 354.44 P60 = 1.8400
 AREA = .000488 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD ID=47 CODE=10

HYDROGRAPH FROM AREA BASIN.E6

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.1
2.000	2.9	7.000	.1	12.000	.1	17.000	.1	22.000	.1
3.000	.1	8.000	.1	13.000	.1	18.000	.1	23.000	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1

RUNOFF VOLUME = 2.26512 INCHES = .5895 ACRE-FEET
 PEAK DISCHARGE RATE = 11.09 CFS AT 1.500 HOURS BASIN AREA = .0049 SQ. MI.

*
 ADD HYD ID=48 HYD=TOTALE ID I=46 II=47
 PRINT HYD ID=46 CODE=10

HYDROGRAPH FROM AREA POND.E

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	12.000	2.4	24.000	.8	36.000	.1	48.000	.0
1.000	.0	13.000	2.1	25.000	.7	37.000	.1	49.000	.0
2.000	20.0	14.000	1.9	26.000	.6	38.000	.1	50.000	.0
3.000	19.3	15.000	1.7	27.000	.5	39.000	.1	51.000	.0
4.000	16.1	16.000	1.5	28.000	.4	40.000	.1	52.000	.0
5.000	13.5	17.000	1.4	29.000	.4	41.000	.1	53.000	.0
6.000	11.4	18.000	1.3	30.000	.3	42.000	.1	54.000	.0
7.000	9.5	19.000	1.2	31.000	.3	43.000	.1	55.000	.0
8.000	7.3	20.000	1.1	32.000	.3	44.000	.1	56.000	.0
9.000	4.8	21.000	1.0	33.000	.2	45.000	.0	57.000	.0
10.000	3.2	22.000	1.0	34.000	.2	46.000	.0	58.000	.0
11.000	2.8	23.000	.9	35.000	.2	47.000	.0	59.000	.0

RUNOFF VOLUME = .98388 INCHES = 10.7238 ACRE-FEET
 PEAK DISCHARGE RATE = 21.16 CFS AT 2.300 HOURS BASIN AREA = .2044 SQ. MI.

*
 *
 FINISH
 NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:30:47

```

ADD HYD          ID=18 HYD=TEMP.D ID I=17 II=6
PRINT HYD        ID=18 CODE=0
*
*S ADD BASINS TEMP D AND FUTURE BASIN 2 TO CREATE TEMP E*****
ADD HYD          ID=19 HYD=TEMP.E ID I=18 II=7
PRINT HYD        ID=19 CODE=0
*
*S ADD BASINS TEMP E AND FUTURE BASIN 3 TO CREATE TEMP F*****
ADD HYD          ID=20 HYD=TEMP.F ID I=19 II=8
PRINT HYD        ID=20 CODE=0
*
*S ADD BASINS TEMP F AND OFFSITE BASIN 3 TO CREATE TEMP G*****
ADD HYD          ID=21 HYD=TEMP.G ID I=20 II=11
PRINT HYD        ID=21 CODE=0
*
*S ADD BASINS TEMP G AND OFFSITE BASIN 4 TO CREATE TEMP H*****
ADD HYD          ID=22 HYD=TEMP.H ID I=21 II=12
PRINT HYD        ID=22 CODE=0
*
*S ADD BASINS TEMP H AND OFFSITE BASIN WELL TO CREATE TEMP I*****
ADD HYD          ID=23 HYD=TEMP.1 ID I=22 II=14
PRINT HYD        ID=23 CODE=0
*
*S ADD BASINS TEMP I AND OFFSITE BASIN 5 TO CREATE TEMP J*****
ADD HYD          ID=24 HYD=TEMP.J ID I=23 II=13
PRINT HYD        ID=24 CODE=0
*
*S TEMP BASIN J REPLACES BASIN E3 AND E5 FROM THE DMP AHYMO FILE*****

```

```

COMPUTE NM HYD   ID=25 HYD NO=OFFSITE2 DA=.0805 SQ MI
                  %A=100 %B=0.0 %C=0.0 %D=0.0
                  TP=-.66 HR RAIN=-1
PRINT HYD        ID=25 CODE=10
*

```

```

ROUTE RESERVOIR ID=26 HYD=OFFPOND2 INFLOW ID=25 CODE=5
                  OUTFLOW STORAGE DEPTH
                  0 0 0
                  2.16 0.047 1
                  3.06 0.222 2
                  3.75 0.466 3
                  4.33 0.751 4
                  4.84 1.081 5
*

```

```

PRINT HYD        ID=26 CODE=10
*

```

```

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.011
                  DIA=2.0 N=0.013
ROUTE MCUNGE     ID=27 HYD=RTE.OFFPOND2 INFLOW ID=26
                  DT=0.0 L=900 NS=0 SLOPE=0.011
                  MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*

```

```

PRINT HYD        ID=27 CODE=0
*

```

```

COMPUTE NM HYD   ID=28 HYD NO=BASIN.B DA=.01998 SQ MI
                  %A=0 %B=34.0 %C=34.0 %D=32.0
                  TP=-.133 HR RAIN=-1
PRINT HYD        ID=28 CODE=10
*

```

```

ROUTE RESERVOIR ID=29 HYD=POND.B INFLOW ID=28 CODE=5
                  OUTFLOW STORAGE DEPTH
                  0 0 5515
                  1.71 0.06 5516
                  2.42 0.24 5517
                  2.96 0.55 5518
                  3.42 0.99 5519
                  3.82 1.67 5520
*

```

```

PRINT HYD        ID=29 CODE=10
*

```

```

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.03
                  DIA=2.0 N=0.013
ROUTE MCUNGE     ID=30 HYD=RTE.PONDB INFLOW ID=29
                  DT=0.0 L=1180 NS=0 SLOPE=0.03
                  MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*

```

```

PRINT HYD        ID=30 CODE=0
*

```

```

ADD HYD          ID=31 HYD=OFF.B ID I=30 II=27
PRINT HYD        ID=31 CODE=10
*

```

```

COMPUTE NM HYD   ID=32 HYD NO=BASIN1.1 DA=.02753 SQ MI
                  %A=0.0 %B=33.0 %C=33.0 %D=34.0
                  TP=-0.133 HR RAIN=-1
PRINT HYD        ID=32 CODE=10
*

```

```

ADD HYD          ID=33 HYD=OFF.E11 ID I=32 II=31
PRINT HYD        ID=33 CODE=10
*

```

```

COMPUTE NM HYD   ID=34 HYD NO=BASIN1.2 DA=.00588 SQ MI
                  %A=0.0 %B=33.0 %C=33.0 %D=34.0
                  TP=-0.133 HR RAIN=-1
PRINT HYD        ID=34 CODE=10
*

```

```

COMPUTE NM HYD   ID=35 HYD NO=BASIN.E2 DA=.01348 SQ MI
                  %A=0.0 %B=18.0 %C=18.0 %D=64.0
                  TP=-.133 HR RAIN=-1
PRINT HYD        ID=35 CODE=10

```

```

*
*
ADD HYD          ID=36 HYD=E2.E12 ID I=34 II=35
PRINT HYD        ID=36 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS N0=1 CODE=-1 SLP=0.002
                    DIA=3.0 N=0.013
ROUTE MCUNGE      ID=37 HYD=RTE.E12 INFLOW ID=36
                    DT=0.0 L=800 NS=0 SLOPE=0.01
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD        ID=37 CODE=0
*
*
COMPUTE NM HYD    ID=38 HYD N0=BASIN.E4 DA=.00577 SQ MI
                    %A=0.0 %B=5.0 %C=5.0 %D=90.0
                    TP=-0.133 HR RAIN=-1
PRINT HYD        ID=38 CODE=10
*
*
ADD HYD          ID=39 HYD=AP1 ID I=38 II=33
PRINT HYD        ID=39 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS N0=1 CODE=-1 SLP=0.026
                    DIA=4.0 N=0.013
ROUTE MCUNGE      ID=40 HYD=RTE.E1E4 INFLOW ID=39
                    DT=0.0 L=400 NS=0 SLOPE=0.026
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD        ID=40 CODE=0
*
*
ADD HYD          ID=41 HYD=AP2 ID I=37 II=40
PRINT HYD        ID=41 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS N0=1 CODE=-1 SLP=0.026
                    DIA=4.0 N=0.013
ROUTE MCUNGE      ID=42 HYD=RTE.E1E4 INFLOW ID=41
                    DT=0.0 L=600 NS=0 SLOPE=0.026
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD        ID=42 CODE=0
*
*
ADD HYD          ID=43 HYD=AP3 ID I=42 II=24
PRINT HYD        ID=43 CODE=10
PLOT HYD         ID=43
*
COMPUTE NM HYD    ID=44 HYD N0=BASIN.OFF6 DA=.0014 SQ MI
                    %A=0.0 %B=0 %C=100.0 %D=0
                    TP=-0.133 HR RAIN=-1
PRINT HYD        ID=44 CODE=10
*
*
ADD HYD          ID=45 HYD=POND ID I=43 II=44
PRINT HYD        ID=45 CODE=10
PLOT HYD         ID=45
*
*
ROUTE RESERVOIR   ID=46 HYD=POND.E INFLOW ID=45 CODE=5
                    OUTFLOW STORAGE DEPTH
                    0 0.04 5444
                    0.01 0.23 5444.5
                    0.02 0.43 5445
                    0.03 0.66 5445.5
                    0.04 0.91 5446
                    0.5 1.20 5446.5
                    1.3 1.52 5447
                    2.2 1.88 5447.5
                    3.3 2.26 5448
                    6.7 2.68 5448.5
                    8.7 3.12 5449
                    10.8 3.60 5449.5
                    13.1 4.10 5450
                    15.5 4.65 5450.5
                    18.0 5.22 5451
                    20.7 5.82 5451.5
                    23.5 6.44 5452
*
PRINT HYD        ID=46 CODE=10
PLOT HYD         ID=46
*
COMPUTE NM HYD    ID=47 HYD N0=BASIN.E6 DA=.00488 SQ MI
                    %A=0.0 %B=5.0 %C=5.0 %D=90.0
                    TP=-0.133 HR RAIN=-1
PRINT HYD        ID=47 CODE=10
*
*
ADD HYD          ID=48 HYD=TOTALE ID I=46 II=47
PRINT HYD        ID=46 CODE=10
*
*
FINISH

```

♀

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1	NOTATION
*S	TIERRA VISTA UNIT 3A SUBDIVISION DRAINAGE BASIN (D) PROPOSED										
*S	100 YEAR - 6 HOUR STORM										
*S	START										TIME= .00
*S	LOCATION										
*S	RAINFALL TYPE= 1										RAIN= 2.200
*S											
*S											
*S											
*S											
*S											
*S	COMPUTE BASIN 1										
*S	COMPUTE NM HYD	1.00	- 1	.00500	8.92	.375	1.40680	1.500	2.788	PER IMP=	52.00
*S	COMPUTE BASIN 2										
*S	COMPUTE NM HYD	2.00	- 2	.00451	7.86	.327	1.36001	1.500	2.721	PER IMP=	48.00
*S	COMPUTE BASIN 3										
*S	COMPUTE NM HYD	3.00	- 3	.00688	11.22	.456	1.24304	1.500	2.550	PER IMP=	38.00
*S	COMPUTE BASIN 4										
*S	COMPUTE NM HYD	4.00	- 4	.00359	6.26	.261	1.36001	1.500	2.722	PER IMP=	48.00
*S	COMPUTE BASIN 5										
*S	COMPUTE NM HYD	5.00	- 5	.00188	3.05	.123	1.23134	1.500	2.541	PER IMP=	37.00
*S	COMPUTE FUTURE BASIN 1										
*S	COMPUTE NM HYD	FB.1	- 6	.01078	19.93	.849	1.47698	1.500	2.888	PER IMP=	58.00
*S	COMPUTE FUTURE BASIN 2										
*S	COMPUTE NM HYD	FB.2	- 7	.00750	13.54	.572	1.43019	1.500	2.821	PER IMP=	54.00
*S	COMPUTE FUTURE BASIN 3										
*S	COMPUTE NM HYD	FB.3	- 8	.00594	10.79	.457	1.44189	1.500	2.839	PER IMP=	55.00
*S	COMPUTE FUTURE BASIN 4										
*S	COMPUTE NM HYD	FB.4	- 9	.00484	8.07	.330	1.27813	1.500	2.602	PER IMP=	41.00
*S	COMPUTE OFFSITE BASIN 2										
*S	COMPUTE NM HYD	OFF.2	- 10	.00094	.62	.023	.45840	1.500	1.035	PER IMP=	.00
*S	COMPUTE OFFSITE BASIN 3										
*S	COMPUTE NM HYD	OFF.3	- 11	.00109	.74	.027	.46712	1.500	1.056	PER IMP=	.00
*S	COMPUTE OFFSITE BASIN 4										
*S	COMPUTE NM HYD	OFF.4	- 12	.00141	.93	.034	.45840	1.500	1.033	PER IMP=	.00
*S	COMPUTE OFFSITE BASIN 5										
*S	COMPUTE NM HYD	OFF.5	- 13	.00328	1.99	.075	.42601	1.500	.948	PER IMP=	.00
*S	COMPUTE OFFSITE BASIN WELL										
*S	COMPUTE NM HYD	OFF.WELL	- 14	.00156	2.26	.086	1.03249	1.500	2.256	PER IMP=	20.00
*S											
*S	ADD BASINS 1 AND 2 TO CREATE TEMP A										
*S	ADD HYD	TEMP.A 1& 2	15	.00951	16.78	.702	1.38453	1.500	2.757		
*S	ADD BASINS TEMP A AND 3 TO CREATE TEMP 1.B										
*S	ADD HYD	TEMP.B 15& 3	16	.01639	28.00	1.158	1.32516	1.500	2.670		
*S	ADD BASINS TEMP B AND 5 TO CREATE TEMP C										
*S	ADD HYD	TEMP.C 16& 5	17	.01826	31.05	1.281	1.31551	1.500	2.657		
*S	ADD BASINS TEMP C AND FUTURE BASIN 1 TO CREATE TEMP D										
ADD HYD	TEMP.D 17& 6	18		.02904	50.98	2.131	1.37543	1.500	2.743		
*S	ADD BASINS TEMP D AND FUTURE BASIN 2 TO CREATE TEMP E										
ADD HYD	TEMP.E 18& 7	19		.03654	64.52	2.703	1.38666	1.500	2.759		
*S	ADD BASINS TEMP E AND FUTURE BASIN 3 TO CREATE TEMP F										
ADD HYD	TEMP.F 19& 8	20		.04248	75.31	3.159	1.39437	1.500	2.770		
*S	ADD BASINS TEMP F AND OFFSITE BASIN 3 TO CREATE TEMP G										
ADD HYD	TEMP.G 20&11	21		.04358	76.05	3.186	1.37109	1.500	2.727		
*S	ADD BASINS TEMP G AND OFFSITE BASIN 4 TO CREATE TEMP H										
ADD HYD	TEMP.H 21&12	22		.04498	76.98	3.221	1.34256	1.500	2.674		
*S	ADD BASINS TEMP H AND OFFSITE BASIN WELL TO CREATE TEMP I										
ADD HYD	TEMP.I 22&14	23		.04655	79.24	3.307	1.33215	1.500	2.660		
*S	ADD BASINS TEMP I AND OFFSITE BASIN 5 TO CREATE TEMP J										
ADD HYD	TEMP.J 23&13	24		.04983	81.23	3.381	1.27248	1.500	2.547		
*S	TEMP BASIN J REPLACES BASIN E3 AND E5 FROM THE DMP AHYMO FILE										
COMPUTE NM HYD	OFFSITE2	- 25		.08050	13.87	1.783	.41534	2.000	.269	PER IMP=	.00
ROUTE RESERVOIR	OFFPOND2	25	26	.08050	4.43	1.783	.41534	3.100	.086	AC-FT=	.813
ROUTE MCUNGE	RTE.OFFPOND2	26	27	.08050	4.43	1.783	.41538	3.200	.086	CCODE =	.2
COMPUTE NM HYD	BASIN.B	- 28		.01998	34.80	1.250	1.17286	1.500	2.721	PER IMP=	32.00
ROUTE RESERVOIR	POND.B	28	29	.01998	3.36	1.250	1.17284	2.100	.263	AC-FT=	.930
ROUTE MCUNGE	RTE.POND.B	29	30	.01998	3.36	1.250	1.17295	2.100	.263	CCODE =	.2
ADD HYD	OFF.B 30&27	31		.10048	7.62	3.033	.56599	2.900	.118		
COMPUTE NM HYD	BASIN.E1.1	- 32		.02753	48.45	1.756	1.19625	1.500	2.750	PER IMP=	34.00
ADD HYD	OFF.E11 32&31	33		.12801	51.42	4.790	.70153	1.500	.628		
COMPUTE NM HYD	BASIN.E1.2	- 34		.00588	10.36	.375	1.19625	1.500	2.752	PER IMP=	34.00
COMPUTE NM HYD	BASIN.E2	- 35		.01348	27.42	1.112	1.54716	1.500	3.178	PER IMP=	64.00
ADD HYD	E2.E12 34&35	36		.01936	37.77	1.487	1.44056	1.500	3.049		
ROUTE MCUNGE	RTE.E12	36	37	.01936	31.30	1.423	1.37837	1.600	2.526	CCODE =	.2
COMPUTE NM HYD	BASIN.E4	- 38		.00577	13.11	.570	1.85129	1.500	3.550	PER IMP=	90.00
ADD HYD	AP1 38&33	39		.13378	64.53	5.359	.75112	1.500	.754		
ROUTE MCUNGE	RTE.E1E4	39	40	.13378	64.53	5.359	.75112	1.500	.754	CCODE =	.0
ADD HYD	AP2 37&40	41		.15314	95.72	6.782	.83041	1.500	.977		
ROUTE MCUNGE	RTE.E1E4	41	42	.15314	95.72	6.782	.83041	1.500	.977	CCODE =	.0
ADD HYD	AP3 42&24	43		.20297	176.95	10.164	.93893	1.500	1.362		
COMPUTE NM HYD	BASIN.OFF6	- 44		.00140	2.33	.072	.96928	1.500	2.597	PER IMP=	.00
ADD HYD	POND 43&44	45		.20437	179.27	10.236	.93914	1.500	1.371		
ROUTE RESERVOIR	POND.E	45	46	.20437	21.16	9.438	.86588	2.300	.162	AC-FT=	5.922
COMPUTE NM HYD	BASIN.E6	- 47		.00488	11.09	.482	1.85129	1.500	3.550	PER IMP=	90.00
ADD HYD	TOTALE 46&47	48		.20925	22.92	9.919	.88886	2.000	.171		
FINISH											

APPENDIX B

NEW AHYMO INPUT AND OUT FILES

```

*S  TIERRA VISTA UNIT 3A SUBDIVISION DRAINAGE BASIN (D) PROPOSED
*S  100 YEAR - 6 HOUR STORM
*S
*   CREATED JUNE 20, 2014
*
*
*CONVERT TO NMHYMO
START                                TIME=0.0 HR   PUNCH CODE=0
*****
LOCATION      NM
*
*****
*
*****
*100 YEAR - 6 HOUR
RAINFALL                                TYPE=1   RAIN QUARTER=0
                                         RAIN ONE=1.84 IN   RAIN SIX=2.20 IN
                                         RAIN DAY=2.66 IN   DT=0.10 HRS

*S
*S                                     *****
*S                                     *COMPUTE ONSITE BASINS*
*S                                     *****
*S
*S
*S
*S
*S COMPUTE BASIN 1 *****
*
COMPUTE NM HYD          ID=1 HYD=1   AREA=0.005   PER A=0 PER B=24
                        PER C=24 PER D=52   TP=-0.1715   RAINFALL=-1
PRINT HYD              ID=1   CODE=1
*
*S COMPUTE BASIN 2 *****
COMPUTE NM HYD          ID=2 HYD=2   AREA=0.004513   PER A=0 PER B=26
                        PER C=26 PER D=48   TP=-0.1715   RAINFALL=-1
PRINT HYD              ID=2   CODE=1
*
*S COMPUTE BASIN 3 *****
COMPUTE NM HYD          ID=3 HYD=3   AREA=0.006875   PER A=0 PER B=31
                        PER C=31 PER D=38   TP=-0.1715   RAINFALL=-1
PRINT HYD              ID=3   CODE=1
*
*S COMPUTE BASIN 4 *****
COMPUTE NM HYD          ID=4 HYD=4   AREA=0.003594   PER A=0 PER B=26
                        PER C=26 PER D=48   TP=-0.1715   RAINFALL=-1
PRINT HYD              ID=4   CODE=1
*
*S COMPUTE BASIN 5 *****
COMPUTE NM HYD          ID=5 HYD=5   AREA=0.001875   PER A=0 PER B=31.5
                        PER C=31.5 PER D=37   TP=-0.1715   RAINFALL=-1
PRINT HYD              ID=5   CODE=1
*
*S COMPUTE BASIN A *****
COMPUTE NM HYD          ID=6 HYD=FB.1   AREA=0.01067   PER A=0 PER B=22.1

```

```

PER C=22.1 PER D=55.8 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=6 CODE=1
*
*S COMPUTE BASIN B *****
COMPUTE NM HYD ID=7 HYD=FB.2 AREA=0.00625 PER A=0 PER B=20.65
PER C=20.65 PER D=58.7 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=7 CODE=1
*
*S COMPUTE BASIN C *****
COMPUTE NM HYD ID=8 HYD=FB.3 AREA=0.0086563 PER A=0 PER B=22.61
PER C=22.61 PER D=54.78 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=8 CODE=1
*
*S COMPUTE FUTURE BASIN 4
*****
COMPUTE NM HYD ID=9 HYD=FB.4 AREA=0.004844 PER A=0 PER B=29.5
PER C=29.5 PER D=41 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=9 CODE=1
*
*S COMPUTE OFFSITE BASIN 2
*****
COMPUTE NM HYD ID=10 HYD=OFF.2 AREA=0.000938 PER A=80 PER B=20
PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=10 CODE=1
*
*S COMPUTE OFFSITE BASIN 3
*****
COMPUTE NM HYD ID=11 HYD=OFF.3 AREA=0.001094 PER A=76 PER B=24
PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=11 CODE=1
*
*S COMPUTE OFFSITE BASIN 4
*****
COMPUTE NM HYD ID=12 HYD=OFF.4 AREA=0.001406 PER A=80 PER B=20
PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=12 CODE=1
*
*S COMPUTE OFFSITE BASIN 5
*****
COMPUTE NM HYD ID=13 HYD=OFF.5 AREA=0.003281 PER A=95 PER B=5
PER C=0 PER D=0 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=13 CODE=1
*
*S COMPUTE OFFSITE BASIN WELL
*****
COMPUTE NM HYD ID=14 HYD=OFF.WELL AREA=0.001563 PER A=0 PER B=40
PER C=40 PER D=20 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=14 CODE=1
*
*S COMPUTE OFFSITE BASIN E6
*****
COMPUTE NM HYD ID=60 HYD=OFF.WELL AREA=0.0054205 PER A=0 PER B=0
PER C=10 PER D=90 TP=-0.1715 RAINFALL=-1
PRINT HYD ID=60 CODE=1

```

```

*
*S
*
*S ADD BASINS 1 AND 2 TO CREATE TEMP A *****
ADD HYD          ID=15 HYD=TEMP.A ID I=1 II=2
PRINT HYD        ID=15 CODE=0
*
*S ADD BASINS TEMP A AND 3 TO CREATE TEMP
1.B*****
ADD HYD          ID=16 HYD=TEMP.B ID I=15 II=3
PRINT HYD        ID=16 CODE=0
*
*S ADD BASINS TEMP B AND 5 TO CREATE TEMP
C*****
ADD HYD          ID=17 HYD=TEMP.C ID I=16 II=5
PRINT HYD        ID=17 CODE=0
*
*S ADD BASINS TEMP C AND BASIN A TO CREATE TEMP
D*****
ADD HYD          ID=18 HYD=TEMP.D ID I=17 II=6
PRINT HYD        ID=18 CODE=0
*
*S ADD BASINS TEMP D AND BASIN B TO CREATE TEMP
E*****
ADD HYD          ID=19 HYD=TEMP.E ID I=18 II=7
PRINT HYD        ID=19 CODE=0
*
*S ADD BASINS TEMP E AND BASIN C TO CREATE TEMP
F*****
ADD HYD          ID=20 HYD=TEMP.F ID I=19 II=8
PRINT HYD        ID=20 CODE=0
*
*S ADD BASINS TEMP F AND OFFSITE BASIN 3 TO CREATE TEMP
G*****
ADD HYD          ID=21 HYD=TEMP.G ID I=20 II=11
PRINT HYD        ID=21 CODE=0
*
*S ADD BASINS TEMP G AND OFFSITE BASIN 4 TO CREATE TEMP
H*****
ADD HYD          ID=22 HYD=TEMP.H ID I=21 II=12
PRINT HYD        ID=22 CODE=0
*
*S ADD BASINS TEMP H AND OFFSITE BASIN WELL TO CREATE TEMP
I*****
ADD HYD          ID=23 HYD=TEMP.1 ID I=22 II=14
PRINT HYD        ID=23 CODE=0
*
*S ADD BASINS TEMP I AND OFFSITE BASIN 5 TO CREATE TEMP
J*****
ADD HYD          ID=24 HYD=TEMP.J ID I=23 II=13
PRINT HYD        ID=24 CODE=0
*
*S TEMP BASIN J REPLACES BASIN E3 AND E5 FROM THE DMP AHYMO
FILE*****

```

```

COMPUTE NM HYD      ID=25  HYD NO=OFFSITE2  DA=.0805 SQ MI
                     %A=100  %B=0.0  %C=0.0  %D=0.0
                     TP=-.66 HR  RAIN=-1
PRINT HYD           ID=25 CODE=10
*
*
ROUTE RESERVOIR     ID=26  HYD=OFFPOND2  INFLOW ID=25 CODE=5
                     OUTFLOW  STORAGE    DEPTH
                     0    0          0
                     2.16    0.047      1
                     3.06    0.222      2
                     3.75    0.466      3
                     4.33    0.751      4
                     4.84    1.081      5
*
*
PRINT HYD           ID=26 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.011
                     DIA=2.0  N=0.013
ROUTE MCUNGE        ID=27  HYD=RTE.OFFPOND2  INFLOW ID=26
                     DT=0.0  L=900 NS=0  SLOPE=0.011
                     MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
*
PRINT HYD           ID=27 CODE=0
*
*
COMPUTE NM HYD      ID=28  HYD NO=BASIN.B  DA=.01998 SQ MI
                     %A=0  %B=34.0  %C=34.0  %D=32.0
                     TP=-.133 HR  RAIN=-1
PRINT HYD           ID=28 CODE=10
*
*
ROUTE RESERVOIR     ID=29  HYD=POND.B  INFLOW ID=28 CODE=5
                     OUTFLOW  STORAGE    DEPTH
                     0    0          5515
                     1.71    0.06      5516
                     2.42    0.24      5517
                     2.96    0.55      5518
                     3.42    0.99      5519
                     3.82    1.67      5520
*
*
PRINT HYD           ID=29 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.03
                     DIA=2.0  N=0.013
ROUTE MCUNGE        ID=30  HYD=RTE.PONDB  INFLOW ID=29

```

```

DT=0.0  L=1180 NS=0  SLOPE=0.03
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

*
PRINT HYD          ID=30 CODE=0
*
*
ADD HYD            ID=31 HYD=OFF.B ID I=30 II=27
PRINT HYD          ID=31 CODE=10
*
*
COMPUTE NM HYD      ID=32  HYD NO=BASINE1.1  DA=.02753 SQ MI
                   %A=0.0  %B=33.0  %C=33.0 %D=34.0
                   TP=-0.133 HR  RAIN=-1
PRINT HYD          ID=32 CODE=10
*
*
ADD HYD            ID=33 HYD=OFF.E11 ID I=32 II=31
PRINT HYD          ID=33 CODE=10
*
*
COMPUTE NM HYD      ID=34  HYD NO=BASINE1.2  DA=.00588 SQ MI
                   %A=0.0  %B=33.0  %C=33.0 %D=34.0
                   TP=-0.133 HR  RAIN=-1
PRINT HYD          ID=34 CODE=10
*
*
COMPUTE NM HYD      ID=35  HYD NO=BASIN.E2  DA=.01348 SQ MI
                   %A=0.0  %B=18.0  %C=18.0 %D=64.0
                   TP=-.133 HR  RAIN=-1
PRINT HYD          ID=35 CODE=10
*
*
ADD HYD            ID=36 HYD=E2.E12 ID I=34 II=35
PRINT HYD          ID=36 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.002
                   DIA=3.0  N=0.013
ROUTE MCUNGE       ID=37 HYD=RTE.E12 INFLOW ID=36
                   DT=0.0  L=800 NS=0  SLOPE=0.01
                   MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

*
PRINT HYD          ID=37 CODE=0
*
*
COMPUTE NM HYD      ID=38  HYD NO=BASIN.E4  DA=.00577 SQ MI
                   %A=0.0  %B=5.0  %C=5.0 %D=90.0
                   TP=-0.133 HR  RAIN=-1
PRINT HYD          ID=38 CODE=10
*
*
ADD HYD            ID=39 HYD=AP1 ID I=38 II=33
PRINT HYD          ID=39 CODE=10
*

```

```

*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.026
      DIA=4.0  N=0.013
ROUTE MCUNGE      ID=40 HYD=RTE.E1E4 INFLOW ID=39
      DT=0.0  L=400 NS=0  SLOPE=0.026
      MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

*
PRINT HYD      ID=40 CODE=0
*
*
ADD HYD      ID=41 HYD=AP2 ID I=37 II=40
PRINT HYD      ID=41 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.026
      DIA=4.0  N=0.013
ROUTE MCUNGE      ID=42 HYD=RTE.E1E4 INFLOW ID=41
      DT=0.0  L=600 NS=0  SLOPE=0.026
      MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

*
PRINT HYD      ID=42 CODE=0
*
ADD HYD      ID=43 HYD=AP3 ID I=42 II=24
PRINT HYD      ID=43 CODE=10
PLOT HYD      ID=43

*
COMPUTE NM HYD      ID=44 HYD NO=BASIN.OFF6  DA=.0014 SQ MI
      %A=0.0  %B=0  %C=100.0 %D=0
      TP=-0.133 HR  RAIN=-1
PRINT HYD      ID=44 CODE=10
*
ADD HYD      ID=45 HYD=POND ID I=43 II=44
PRINT HYD      ID=45 CODE=10
PLOT HYD      ID=45

*
*
ROUTE RESERVOIR      ID=46 HYD=POND.E  INFLOW ID=45 CODE=5
      OUTFLOW  STORAGE  DEPTH
      0  0.04  5444
      0.01  0.23  5444.5
      0.02  0.43  5445
      0.03  0.66  5445.5
      0.04  0.91  5446
      0.5 1.20  5446.5
      1.3 1.52  5447
      2.2 1.88  5447.5
      3.3 2.26  5448
      6.7 2.68  5448.5
      8.7 3.12  5449
      10.8 3.60  5449.5
      13.1 4.10  5450
      15.5 4.65  5450.5
      18.0 5.22  5451
      20.7 5.82  5451.5

```

	23.5	6.44	5452
*			
PRINT HYD	ID=46	CODE=10	
PLOT HYD	ID=46		
*			
COMPUTE NM HYD	ID=47	HYD NO=BASIN.E6	DA=.00488 SQ MI
	%A=0.0	%B=5.0	%C=5.0 %D=90.0
	TP=-0.133	HR	RAIN=-1
PRINT HYD	ID=47	CODE=10	
*			
ADD HYD	ID=48	HYD=TOTALE	ID I=46 II=47
PRINT HYD	ID=46	CODE=10	
*			
*			
FINISH			

AHYMO PROGRAM (AHYMO_97) - - Version:
 1997.02c
 RUN DATE (MON/DAY/YR) = 03/08/2019
 START TIME (HR:MIN:SEC) = 13:24:44 USER NO.= AHYMO-S-
 9702c1BohanHu-AH
 INPUT FILE = DEV_COND.HYM

*S TIERRA VISTA UNIT 3A SUBDIVISION DRAINAGE BASIN (D) PROPOSED
 *S 100 YEAR - 6 HOUR STORM
 *S
 * CREATED JUNE 20, 2014
 *
 *

*CONVERT TO NMHYMO

START TIME=0.0 HR PUNCH CODE=0

LOCATION NM

Soil infiltration values (LAND FACTORS) for this location are
 not available.

The following default values were used.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

*

 *

*100 YEAR - 6 HOUR

RAINFALL TYPE=1 RAIN QUARTER=0
 RAIN ONE=1.84 IN RAIN SIX=2.20 IN
 RAIN DAY=2.66 IN DT=0.10 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
 ATLAS 2 - PEAK AT 1.40 HR.

HOURS	DT = .100000 HOURS	END TIME = 6.000000
.0000	.0060	.0124
.0435	.0193	.0266
.0870	.0347	.0532
.1305	.0764	.0908
.1740	.1071	.1906
.2175	.13314	.15028
.2610	1.6393	1.7527
.3045	1.8488	1.9485
.3480	1.9639	1.9776
.3915	1.9899	2.0013
.4350	2.0117	2.0306
.4785	2.0393	2.0475
.5220	2.0553	2.0627
.5655	2.0698	2.0832
.6090	2.0895	2.0956
.6525	2.1015	2.1072
.6960	2.1128	

	2.1234	2.1285	2.1335	2.1383	2.1431	2.1477
2.1522						
	2.1566	2.1610	2.1652	2.1694	2.1734	2.1774
2.1814						
	2.1852	2.1890	2.1927	2.1964	2.2000	

```

*S
*S
*S          *****
*S          *COMPUTE ONSITE BASINS*
*S          *****
*S
*S
*S
*S COMPUTE BASIN 1
*****
*
  COMPUTE NM HYD          ID=1 HYD=1  AREA=0.005  PER A=0 PER B=24
                           PER C=24 PER D=52  TP=-0.1715
RAINFALL=-1

      K =   .093468HR      TP =   .171500HR      K/TP RATIO =   .545000
SHAPE CONSTANT, N =   7.106420
      UNIT PEAK =   7.9785      CFS      UNIT VOLUME =   1.005      B =
526.28      P60 = 1.8400
      AREA =   .002600 SQ MI      IA =   .10000 INCHES      INF =
.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =   .100000

      K =   .152490HR      TP =   .171500HR      K/TP RATIO =   .889153
SHAPE CONSTANT, N =   3.989068
      UNIT PEAK =   4.9601      CFS      UNIT VOLUME =   1.002      B =
354.44      P60 = 1.8400
      AREA =   .002400 SQ MI      IA =   .42500 INCHES      INF =
1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =   .100000

      PRINT HYD          ID=1      CODE=1

                                OUTFLOW HYDROGRAPH REACH
1.00

      RUNOFF VOLUME =   1.40680 INCHES      =   .3751 ACRE-FEET
      PEAK DISCHARGE RATE =   8.92 CFS      AT   1.500 HOURS      BASIN
AREA =   .0050 SQ. MI.

```

```

*
*S COMPUTE BASIN 2
*****

```

COMPUTE NM HYD ID=2 HYD=2 AREA=0.004513 PER A=0 PER B=26
 PER C=26 PER D=48 TP=-0.1715
 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 6.6475 CFS UNIT VOLUME = 1.004 B =
 526.28 P60 = 1.8400
 AREA = .002166 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 4.8501 CFS UNIT VOLUME = 1.002 B =
 354.44 P60 = 1.8400
 AREA = .002347 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH

2.00

RUNOFF VOLUME = 1.36001 INCHES = .3273 ACRE-FEET
 PEAK DISCHARGE RATE = 7.86 CFS AT 1.500 HOURS BASIN
 AREA = .0045 SQ. MI.

*

*S COMPUTE BASIN 3

COMPUTE NM HYD ID=3 HYD=3 AREA=0.006875 PER A=0 PER B=31
 PER C=31 PER D=38 TP=-0.1715
 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 8.0169 CFS UNIT VOLUME = 1.005 B =
 526.28 P60 = 1.8400
 AREA = .002613 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989068

UNIT PEAK = 8.8093 CFS UNIT VOLUME = 1.003 B =
354.44 P60 = 1.8400
AREA = .004263 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH

3.00

RUNOFF VOLUME = 1.24304 INCHES = .4558 ACRE-FEET
PEAK DISCHARGE RATE = 11.22 CFS AT 1.500 HOURS BASIN
AREA = .0069 SQ. MI.

*

*S COMPUTE BASIN 4

COMPUTE NM HYD ID=4 HYD=4 AREA=0.003594 PER A=0 PER B=26
PER C=26 PER D=48 TP=-0.1715

RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.2938 CFS UNIT VOLUME = 1.004 B =
526.28 P60 = 1.8400
AREA = .001725 SQ MI IA = .10000 INCHES INF =
.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 3.8624 CFS UNIT VOLUME = 1.001 B =
354.44 P60 = 1.8400
AREA = .001869 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD ID=4 CODE=1

OUTFLOW HYDROGRAPH REACH

4.00

RUNOFF VOLUME = 1.36001 INCHES = .2607 ACRE-FEET
PEAK DISCHARGE RATE = 6.26 CFS AT 1.500 HOURS BASIN
AREA = .0036 SQ. MI.

```

*
*S COMPUTE BASIN 5
*****
COMPUTE NM HYD          ID=5 HYD=5  AREA=0.001875  PER A=0 PER B=31.5
                        PER C=31.5 PER D=37  TP=-0.1715
RAINFALL=-1

      K = .093468HR      TP = .171500HR      K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
      UNIT PEAK = 2.1289 CFS      UNIT VOLUME = 1.001      B =
526.28      P60 = 1.8400
      AREA = .000694 SQ MI      IA = .10000 INCHES      INF =
.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

      K = .152490HR      TP = .171500HR      K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989068
      UNIT PEAK = 2.4413 CFS      UNIT VOLUME = .9998      B =
354.44      P60 = 1.8400
      AREA = .001181 SQ MI      IA = .42500 INCHES      INF =
1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

      PRINT HYD          ID=5      CODE=1

                                OUTFLOW HYDROGRAPH REACH
5.00

      RUNOFF VOLUME = 1.23134 INCHES      = .1231 ACRE-FEET
      PEAK DISCHARGE RATE = 3.05 CFS      AT 1.500 HOURS      BASIN
AREA = .0019 SQ. MI.

```

```

*
*S COMPUTE BASIN A
*****
COMPUTE NM HYD          ID=6 HYD=FB.1  AREA=0.01067  PER A=0 PER B=22.1
                        PER C=22.1 PER D=55.8  TP=-0.1715
RAINFALL=-1

      K = .093468HR      TP = .171500HR      K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
      UNIT PEAK = 18.270 CFS      UNIT VOLUME = 1.005      B =
526.28      P60 = 1.8400
      AREA = .005954 SQ MI      IA = .10000 INCHES      INF =
.04000 INCHES PER HOUR

```

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 9.7469 CFS UNIT VOLUME = 1.003 B =
354.44 P60 = 1.8400
AREA = .004716 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA FB.1

RUNOFF VOLUME = 1.45125 INCHES = .8259 ACRE-FEET
PEAK DISCHARGE RATE = 19.47 CFS AT 1.500 HOURS BASIN
AREA = .0107 SQ. MI.

*
*S COMPUTE BASIN B

COMPUTE NM HYD ID=7 HYD=FB.2 AREA=0.00625 PER A=0 PER
B=20.65
PER C=20.65 PER D=58.7 TP=-0.1715
RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 11.258 CFS UNIT VOLUME = 1.005 B =
526.28 P60 = 1.8400
AREA = .003669 SQ MI IA = .10000 INCHES INF =
.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 5.3347 CFS UNIT VOLUME = 1.002 B =
354.44 P60 = 1.8400
AREA = .002581 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD ID=7 CODE=1

HYDROGRAPH FROM AREA FB.2

RUNOFF VOLUME = 1.48517 INCHES = .4951 ACRE-FEET
PEAK DISCHARGE RATE = 11.60 CFS AT 1.500 HOURS BASIN
AREA = .0063 SQ. MI.

*

*S COMPUTE BASIN C

COMPUTE NM HYD ID=8 HYD=FB.3 AREA=0.0086563 PER A=0 PER
B=22.61

PER C=22.61 PER D=54.78 TP=-0.1715

RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 14.551 CFS UNIT VOLUME = 1.005 B =
526.28 P60 = 1.8400
AREA = .004742 SQ MI IA = .10000 INCHES INF =
.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989068
UNIT PEAK = 8.0899 CFS UNIT VOLUME = 1.003 B =
354.44 P60 = 1.8400
AREA = .003914 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA FB.3

RUNOFF VOLUME = 1.43932 INCHES = .6645 ACRE-FEET
PEAK DISCHARGE RATE = 15.70 CFS AT 1.500 HOURS BASIN
AREA = .0087 SQ. MI.

*

*S COMPUTE FUTURE BASIN 4

COMPUTE NM HYD ID=9 HYD=FB.4 AREA=0.004844 PER A=0 PER
B=29.5

PER C=29.5 PER D=41 TP=-0.1715

RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 6.0945 CFS UNIT VOLUME = 1.004 B =
 526.28 P60 = 1.8400
 AREA = .001986 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 5.9066 CFS UNIT VOLUME = 1.002 B =
 354.44 P60 = 1.8400
 AREA = .002858 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA FB.4

RUNOFF VOLUME = 1.27813 INCHES = .3302 ACRE-FEET
 PEAK DISCHARGE RATE = 8.07 CFS AT 1.500 HOURS BASIN
 AREA = .0048 SQ. MI.

*

```

      *S COMPUTE OFFSITE BASIN 2
*****
      COMPUTE NM HYD          ID=10 HYD=OFF.2  AREA=0.000938  PER A=80 PER
B=20
                                PER C=0 PER D=0  TP=-0.1715  RAINFALL=-
1
      K =   .203093HR      TP =   .171500HR      K/TP RATIO =  1.184216
SHAPE CONSTANT, N =  2.997519
      UNIT PEAK =   1.5403      CFS      UNIT VOLUME =   .9852      B =
281.62      P60 = 1.8400
      AREA =   .000938 SQ MI      IA =   .62000 INCHES      INF =
1.58600 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =   .100000

      PRINT HYD          ID=10      CODE=1

                                HYDROGRAPH FROM AREA OFF.2

      RUNOFF VOLUME =   .45840 INCHES      =   .0229 ACRE-FEET
      PEAK DISCHARGE RATE =   .62 CFS      AT  1.500 HOURS      BASIN
AREA =   .0009 SQ. MI.

```

*

```

      *S COMPUTE OFFSITE BASIN 3
*****
      COMPUTE NM HYD          ID=11 HYD=OFF.3  AREA=0.001094  PER A=76 PER
B=24
                                PER C=0 PER D=0  TP=-0.1715  RAINFALL=-
1
      K =   .201399HR      TP =   .171500HR      K/TP RATIO =  1.174338
SHAPE CONSTANT, N =  3.020870
      UNIT PEAK =   1.8086      CFS      UNIT VOLUME =   .9871      B =
283.52      P60 = 1.8400
      AREA =   .001094 SQ MI      IA =   .61400 INCHES      INF =
1.56920 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =   .100000

      PRINT HYD          ID=11      CODE=1

                                HYDROGRAPH FROM AREA OFF.3

      RUNOFF VOLUME =   .46712 INCHES      =   .0273 ACRE-FEET
      PEAK DISCHARGE RATE =   .74 CFS      AT  1.500 HOURS      BASIN
AREA =   .0011 SQ. MI.

```

*

```

      *S COMPUTE OFFSITE BASIN 4
*****
      COMPUTE NM HYD          ID=12 HYD=OFF.4  AREA=0.001406 PER A=80 PER
B=20
                                PER C=0 PER D=0  TP=-0.1715  RAINFALL=-
1
      K =   .203093HR      TP =   .171500HR      K/TP RATIO =   1.184216
SHAPE CONSTANT, N =   2.997519
      UNIT PEAK =   2.3088      CFS      UNIT VOLUME =   .9875      B =
281.62      P60 = 1.8400
      AREA =   .001406 SQ MI      IA =   .62000 INCHES      INF =
1.58600 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =   .100000

      PRINT HYD          ID=12      CODE=1

                                HYDROGRAPH FROM AREA OFF.4

      RUNOFF VOLUME =   .45840 INCHES      =   .0344 ACRE-FEET
      PEAK DISCHARGE RATE =   .93 CFS      AT   1.500 HOURS      BASIN
AREA =   .0014 SQ. MI.

```

*

```

      *S COMPUTE OFFSITE BASIN 5
*****
      COMPUTE NM HYD          ID=13 HYD=OFF.5  AREA=0.003281  PER A=95 PER
B=5
                                PER C=0 PER D=0  TP=-0.1715  RAINFALL=-
1
      K = .209446HR      TP = .171500HR      K/TP RATIO = 1.221261
SHAPE CONSTANT, N = 2.914129
      UNIT PEAK = 5.2562  CFS      UNIT VOLUME = .9902      B =
274.74      P60 = 1.8400
      AREA = .003281 SQ MI      IA = .64250 INCHES      INF =
1.64900 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

      PRINT HYD          ID=13  CODE=1

                                HYDROGRAPH FROM AREA OFF.5

      RUNOFF VOLUME = .42601 INCHES      = .0745 ACRE-FEET
      PEAK DISCHARGE RATE = 1.99 CFS  AT 1.500 HOURS  BASIN
AREA = .0033 SQ. MI.

```

*

*S COMPUTE OFFSITE BASIN WELL

 COMPUTE NM HYD ID=14 HYD=OFF.WELL AREA=0.001563 PER A=0 PER
 B=40
 PER C=40 PER D=20 TP=-0.1715
 RAINFALL=-1

K = .093468HR TP = .171500HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .95926 CFS UNIT VOLUME = .9965 B =
 526.28 P60 = 1.8400
 AREA = .000313 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .152490HR TP = .171500HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989068
 UNIT PEAK = 2.5842 CFS UNIT VOLUME = .9998 B =
 354.44 P60 = 1.8400
 AREA = .001250 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=14 CODE=1
 HYDROGRAPH FROM AREA
 OFF.WELL

RUNOFF VOLUME = 1.03249 INCHES = .0861 ACRE-FEET
 PEAK DISCHARGE RATE = 2.26 CFS AT 1.500 HOURS BASIN
 AREA = .0016 SQ. MI.

*

```

      *S COMPUTE OFFSITE BASIN E6
*****
      COMPUTE NM HYD          ID=60 HYD=OFF.WELL  AREA=0.0054205  PER A=0 PER
B=0
                                PER C=10 PER D=90  TP=-0.1715
RAINFALL=-1

```

```

      K = .093468HR    TP = .171500HR    K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
      UNIT PEAK = 14.970    CFS    UNIT VOLUME = 1.005    B =
526.28    P60 = 1.8400
      AREA = .004878 SQ MI    IA = .10000 INCHES    INF =
.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

```

```

      K = .135770HR    TP = .171500HR    K/TP RATIO = .791661
SHAPE CONSTANT, N = 4.531111
      UNIT PEAK = 1.2299    CFS    UNIT VOLUME = .9987    B =
389.14    P60 = 1.8400
      AREA = .000542 SQ MI    IA = .35000 INCHES    INF =
.83000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

```

```

      PRINT HYD          ID=60    CODE=1

                                HYDROGRAPH FROM AREA
OFF.WELL

```

```

      RUNOFF VOLUME = 1.86836 INCHES    = .5401 ACRE-FEET
      PEAK DISCHARGE RATE = 12.02 CFS    AT 1.500 HOURS    BASIN
AREA = .0054 SQ. MI.

```

```

*
*S
*
*S ADD BASINS 1 AND 2 TO CREATE TEMP A
*****
      ADD HYD          ID=15 HYD=TEMP.A ID I=1 II=2
      PRINT HYD          ID=15 CODE=0

                                HYDROGRAPH FROM AREA TEMP.A

      TIME      FLOW      TIME      FLOW      TIME
FLOW      TIME      FLOW      TIME      FLOW      FLOW      TIME
      HRS      CFS      HRS      CFS      HRS      CFS      HRS
CFS      HRS      CFS      HRS      CFS      CFS

```

	.000	.0	1.400	10.5	2.800
.4	4.200	.1	5.600	.1	
	.100	.0	1.500	16.8	2.900
.3	4.300	.1	5.700	.1	
	.200	.0	1.600	14.4	3.000
.3	4.400	.1	5.800	.1	
	.300	.0	1.700	9.8	3.100
.2	4.500	.1	5.900	.1	
	.400	.0	1.800	6.9	3.200
.2	4.600	.1	6.000	.1	
	.500	.0	1.900	5.2	3.300
.2	4.700	.1	6.100	.1	
	.600	.0	2.000	4.2	3.400
.2	4.800	.1	6.200	.0	
	.700	.0	2.100	3.1	3.500
.1	4.900	.1	6.300	.0	
	.800	.0	2.200	1.9	3.600
.1	5.000	.1	6.400	.0	
	.900	.0	2.300	1.3	3.700
.1	5.100	.1	6.500	.0	
	1.000	.0	2.400	1.0	3.800
.1	5.200	.1	6.600	.0	
	1.100	.0	2.500	.8	3.900
.1	5.300	.1	6.700	.0	
	1.200	.6	2.600	.6	4.000
.1	5.400	.1	6.800	.0	
	1.300	2.9	2.700	.5	4.100
.1	5.500	.1	6.900	.0	

RUNOFF VOLUME = 1.38453 INCHES = .7025 ACRE-FEET
 PEAK DISCHARGE RATE = 16.78 CFS AT 1.500 HOURS BASIN
 AREA = .0095 SQ. MI.

*
 *S ADD BASINS TEMP A AND 3 TO CREATE TEMP
 1.B*****
 ADD HYD ID=16 HYD=TEMP.B ID I=15 II=3
 PRINT HYD ID=16 CODE=0

HYDROGRAPH FROM AREA TEMP.B

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.400	17.3	2.800
.7	4.200	.1	5.600	.2	
	.100	.0	1.500	28.0	2.900
.5	4.300	.1	5.700	.2	
	.200	.0	1.600	24.1	3.000
.5	4.400	.1	5.800	.2	

	.300	.0	1.700	16.3	3.100
.4	4.500	.1	5.900	.2	
	.400	.0	1.800	11.5	3.200
.3	4.600	.1	6.000	.2	
	.500	.0	1.900	8.5	3.300
.3	4.700	.1	6.100	.1	
	.600	.0	2.000	6.7	3.400
.2	4.800	.1	6.200	.1	
	.700	.0	2.100	4.9	3.500
.2	4.900	.1	6.300	.0	
	.800	.0	2.200	3.0	3.600
.2	5.000	.1	6.400	.0	
	.900	.0	2.300	2.1	3.700
.2	5.100	.1	6.500	.0	
	1.000	.0	2.400	1.6	3.800
.2	5.200	.2	6.600	.0	
	1.100	.1	2.500	1.3	3.900
.2	5.300	.2	6.700	.0	
	1.200	1.0	2.600	1.0	4.000
.2	5.400	.2	6.800	.0	
	1.300	4.6	2.700	.8	4.100
.1	5.500	.2	6.900	.0	

RUNOFF VOLUME = 1.32516 INCHES = 1.1582 ACRE-FEET
 PEAK DISCHARGE RATE = 28.00 CFS AT 1.500 HOURS BASIN
 AREA = .0164 SQ. MI.

*
 *S ADD BASINS TEMP B AND 5 TO CREATE TEMP
 C*****
 ADD HYD ID=17 HYD=TEMP.C ID I=16 II=5
 PRINT HYD ID=17 CODE=0

HYDROGRAPH FROM AREA TEMP.C

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.400	19.2	2.800
.7	4.200	.2	5.600	.2	
	.100	.0	1.500	31.1	2.900
.6	4.300	.2	5.700	.2	
	.200	.0	1.600	26.7	3.000
.5	4.400	.2	5.800	.2	
	.300	.0	1.700	18.1	3.100
.4	4.500	.2	5.900	.2	
	.400	.0	1.800	12.7	3.200
.4	4.600	.2	6.000	.2	
	.500	.0	1.900	9.4	3.300
.3	4.700	.2	6.100	.1	

	.600	.0	2.000	7.4	3.400
.3	4.800	.2	6.200	.1	
	.700	.0	2.100	5.5	3.500
.2	4.900	.2	6.300	.0	
	.800	.0	2.200	3.3	3.600
.2	5.000	.2	6.400	.0	
	.900	.0	2.300	2.3	3.700
.2	5.100	.2	6.500	.0	
	1.000	.0	2.400	1.8	3.800
.2	5.200	.2	6.600	.0	
	1.100	.1	2.500	1.4	3.900
.2	5.300	.2	6.700	.0	
	1.200	1.1	2.600	1.1	4.000
.2	5.400	.2	6.800	.0	
	1.300	5.0	2.700	.9	4.100
.2	5.500	.2	6.900	.0	

RUNOFF VOLUME = 1.31551 INCHES = 1.2813 ACRE-FEET
 PEAK DISCHARGE RATE = 31.05 CFS AT 1.500 HOURS BASIN
 AREA = .0183 SQ. MI.

★

*S ADD BASINS TEMP C AND BASIN A TO CREATE TEMP
D*****
ADD HYD ID=18 HYD=TEMP.D ID I=17 II=6
PRINT HYD ID=18 CODE=0

HYDROGRAPH FROM AREA TEMP.D

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.8	.000	.0	1.500	50.5	3.000
.7	4.500	.3	6.000	.3	3.100
.6	.100	.0	1.600	43.3	3.200
.5	4.600	.3	6.100	.3	3.300
.4	.200	.0	1.700	29.4	3.400
.3	4.700	.3	6.200	.1	3.500
.2	.300	.0	1.800	20.8	3.600
.1	4.800	.3	6.300	.1	3.700
.0	.400	.0	1.900	15.6	3.800
	4.900	.3	6.400	.0	3.900
	.500	.0	2.000	12.4	4.000
	5.000	.3	6.500	.0	4.100
	.600	.0	2.100	9.1	4.200
	5.100	.3	6.600	.0	4.300
	.700	.0	2.200	5.6	4.400
	5.200	.3	6.700	.0	
	.800	.0	2.300	3.8	
	5.300	.3	6.800	.0	
	.900	.0	2.400	3.0	
	5.400	.3	6.900	.0	
	1.000	.0	2.500	2.3	
	5.500	.3	7.000	.0	
	1.100	.1	2.600	1.9	
	5.600	.3	7.100	.0	
	1.200	1.8	2.700	1.5	
	5.700	.3	2.800	1.2	
	1.300	8.7	2.900	1.0	
	5.800	.3			
	1.400	31.5			
	5.900	.3			

RUNOFF VOLUME = 1.36555 INCHES = 2.1072 ACRE-FEET
PEAK DISCHARGE RATE = 50.52 CFS AT 1.500 HOURS BASIN
AREA = .0289 SQ. MI.

*

```

      *S ADD BASINS TEMP D AND BASIN B TO CREATE TEMP
E*****
      ADD HYD          ID=19 HYD=TEMP.E ID I=18 II=7
      PRINT HYD        ID=19 CODE=0

```

HYDROGRAPH FROM AREA TEMP.E

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	62.1	3.000
1.0	4.500	.3	6.000	.4	
	.100	.0	1.600	53.2	3.100
.9	4.600	.3	6.100	.3	
	.200	.0	1.700	36.1	3.200
.7	4.700	.3	6.200	.1	
	.300	.0	1.800	25.7	3.300
.6	4.800	.3	6.300	.1	
	.400	.0	1.900	19.3	3.400
.6	4.900	.3	6.400	.0	
	.500	.0	2.000	15.4	3.500
.5	5.000	.4	6.500	.0	
	.600	.0	2.100	11.4	3.600
.5	5.100	.4	6.600	.0	
	.700	.0	2.200	6.9	3.700
.4	5.200	.4	6.700	.0	
	.800	.0	2.300	4.8	3.800
.4	5.300	.4	6.800	.0	
	.900	.0	2.400	3.6	3.900
.4	5.400	.4	6.900	.0	
	1.000	.0	2.500	2.9	4.000
.4	5.500	.4	7.000	.0	
	1.100	.1	2.600	2.3	4.100
.4	5.600	.4	7.100	.0	
	1.200	2.3	2.700	1.8	4.200
.3	5.700	.4			
	1.300	10.9	2.800	1.5	4.300
.3	5.800	.4			
	1.400	38.9	2.900	1.2	4.400
.3	5.900	.4			

```

      RUNOFF VOLUME =      1.38679 INCHES      =      2.6022 ACRE-FEET
      PEAK DISCHARGE RATE =      62.13 CFS    AT      1.500 HOURS    BASIN
AREA =      .0352 SQ. MI.

```

*

```

      *S ADD BASINS TEMP E AND BASIN C TO CREATE TEMP
F*****
      ADD HYD          ID=20 HYD=TEMP.F ID I=19 II=8
      PRINT HYD        ID=20 CODE=0

```

HYDROGRAPH FROM AREA TEMP.F

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	77.8	3.000
1.3	4.500	.4	6.000	.5	
	.100	.0	1.600	66.6	3.100
1.1	4.600	.4	6.100	.4	
	.200	.0	1.700	45.2	3.200
.9	4.700	.4	6.200	.2	
	.300	.0	1.800	32.2	3.300
.8	4.800	.4	6.300	.1	
	.400	.0	1.900	24.3	3.400
.7	4.900	.4	6.400	.1	
	.500	.0	2.000	19.4	3.500
.7	5.000	.4	6.500	.0	
	.600	.0	2.100	14.3	3.600
.6	5.100	.5	6.600	.0	
	.700	.0	2.200	8.7	3.700
.6	5.200	.5	6.700	.0	
	.800	.0	2.300	6.0	3.800
.5	5.300	.5	6.800	.0	
	.900	.0	2.400	4.6	3.900
.5	5.400	.5	6.900	.0	
	1.000	.0	2.500	3.6	4.000
.5	5.500	.5	7.000	.0	
	1.100	.2	2.600	2.9	4.100
.5	5.600	.5	7.100	.0	
	1.200	2.9	2.700	2.3	4.200
.4	5.700	.5			
	1.300	13.8	2.800	1.9	4.300
.4	5.800	.5			
	1.400	48.9	2.900	1.5	4.400
.4	5.900	.5			

```

      RUNOFF VOLUME =      1.39716 INCHES      =      3.2667 ACRE-FEET
      PEAK DISCHARGE RATE =      77.83 CFS    AT      1.500 HOURS    BASIN
AREA =      .0438 SQ. MI.

```

*

*S ADD BASINS TEMP F AND OFFSITE BASIN 3 TO CREATE TEMP
 G*****

ADD HYD ID=21 HYD=TEMP.G ID I=20 II=11
 PRINT HYD ID=21 CODE=0

HYDROGRAPH FROM AREA TEMP.G

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	78.6	3.000
1.3	4.500	.4	6.000	.5	
	.100	.0	1.600	67.3	3.100
1.1	4.600	.4	6.100	.4	
	.200	.0	1.700	45.7	3.200
.9	4.700	.4	6.200	.2	
	.300	.0	1.800	32.5	3.300
.8	4.800	.4	6.300	.1	
	.400	.0	1.900	24.5	3.400
.7	4.900	.4	6.400	.1	
	.500	.0	2.000	19.5	3.500
.7	5.000	.4	6.500	.0	
	.600	.0	2.100	14.4	3.600
.6	5.100	.5	6.600	.0	
	.700	.0	2.200	8.7	3.700
.6	5.200	.5	6.700	.0	
	.800	.0	2.300	6.0	3.800
.5	5.300	.5	6.800	.0	
	.900	.0	2.400	4.6	3.900
.5	5.400	.5	6.900	.0	
	1.000	.0	2.500	3.6	4.000
.5	5.500	.5	7.000	.0	
	1.100	.2	2.600	2.9	4.100
.5	5.600	.5	7.100	.0	
	1.200	2.9	2.700	2.3	4.200
.4	5.700	.5			
	1.300	13.8	2.800	1.9	4.300
.4	5.800	.5			
	1.400	49.2	2.900	1.6	4.400
.4	5.900	.5			

RUNOFF VOLUME = 1.37451 INCHES = 3.2939 ACRE-FEET
 PEAK DISCHARGE RATE = 78.57 CFS AT 1.500 HOURS BASIN
 AREA = .0449 SQ. MI.

*

*S ADD BASINS TEMP G AND OFFSITE BASIN 4 TO CREATE TEMP
H*****

ADD HYD ID=22 HYD=TEMP.H ID I=21 II=12
PRINT HYD ID=22 CODE=0

HYDROGRAPH FROM AREA TEMP.H

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	79.5	3.000
1.3	4.500	.4	6.000	.5	
	.100	.0	1.600	68.1	3.100
1.1	4.600	.4	6.100	.4	
	.200	.0	1.700	46.3	3.200
1.0	4.700	.4	6.200	.2	
	.300	.0	1.800	32.8	3.300
.8	4.800	.4	6.300	.1	
	.400	.0	1.900	24.7	3.400
.7	4.900	.4	6.400	.1	
	.500	.0	2.000	19.6	3.500
.7	5.000	.4	6.500	.0	
	.600	.0	2.100	14.5	3.600
.6	5.100	.5	6.600	.0	
	.700	.0	2.200	8.8	3.700
.6	5.200	.5	6.700	.0	
	.800	.0	2.300	6.1	3.800
.5	5.300	.5	6.800	.0	
	.900	.0	2.400	4.7	3.900
.5	5.400	.5	6.900	.0	
	1.000	.0	2.500	3.7	4.000
.5	5.500	.5	7.000	.0	
	1.100	.2	2.600	2.9	4.100
.5	5.600	.5	7.100	.0	
	1.200	2.9	2.700	2.4	4.200
.4	5.700	.5			
	1.300	13.8	2.800	1.9	4.300
.4	5.800	.5			
	1.400	49.7	2.900	1.6	4.400
.4	5.900	.5			

RUNOFF VOLUME = 1.34672 INCHES = 3.3283 ACRE-FEET
PEAK DISCHARGE RATE = 79.49 CFS AT 1.500 HOURS BASIN
AREA = .0463 SQ. MI.

*

*S ADD BASINS TEMP H AND OFFSITE BASIN WELL TO CREATE TEMP
 I*****

ADD HYD ID=23 HYD=TEMP.1 ID I=22 II=14
 PRINT HYD ID=23 CODE=0

HYDROGRAPH FROM AREA TEMP.1

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	81.8	3.000
1.4	4.500	.4	6.000	.5	
	.100	.0	1.600	70.1	3.100
1.1	4.600	.4	6.100	.4	
	.200	.0	1.700	47.6	3.200
1.0	4.700	.4	6.200	.2	
	.300	.0	1.800	33.7	3.300
.9	4.800	.4	6.300	.1	
	.400	.0	1.900	25.3	3.400
.8	4.900	.4	6.400	.1	
	.500	.0	2.000	20.1	3.500
.7	5.000	.5	6.500	.0	
	.600	.0	2.100	14.8	3.600
.6	5.100	.5	6.600	.0	
	.700	.0	2.200	9.0	3.700
.6	5.200	.5	6.700	.0	
	.800	.0	2.300	6.3	3.800
.5	5.300	.5	6.800	.0	
	.900	.0	2.400	4.8	3.900
.5	5.400	.5	6.900	.0	
	1.000	.0	2.500	3.8	4.000
.5	5.500	.5	7.000	.0	
	1.100	.2	2.600	3.0	4.100
.5	5.600	.5	7.100	.0	
	1.200	3.0	2.700	2.4	4.200
.4	5.700	.5			
	1.300	14.0	2.800	2.0	4.300
.4	5.800	.5			
	1.400	51.0	2.900	1.6	4.400
.4	5.900	.5			

RUNOFF VOLUME = 1.33646 INCHES = 3.4143 ACRE-FEET
 PEAK DISCHARGE RATE = 81.75 CFS AT 1.500 HOURS BASIN
 AREA = .0479 SQ. MI.

*

*S ADD BASINS TEMP I AND OFFSITE BASIN 5 TO CREATE TEMP
 J*****

ADD HYD ID=24 HYD=TEMP.J ID I=23 II=13
 PRINT HYD ID=24 CODE=0

HYDROGRAPH FROM AREA TEMP.J

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	83.7	3.000
1.4	4.500	.4	6.000	.5	
	.100	.0	1.600	72.0	3.100
1.2	4.600	.4	6.100	.4	
	.200	.0	1.700	48.9	3.200
1.0	4.700	.4	6.200	.2	
	.300	.0	1.800	34.5	3.300
.9	4.800	.4	6.300	.1	
	.400	.0	1.900	25.8	3.400
.8	4.900	.4	6.400	.1	
	.500	.0	2.000	20.4	3.500
.7	5.000	.5	6.500	.0	
	.600	.0	2.100	15.0	3.600
.6	5.100	.5	6.600	.0	
	.700	.0	2.200	9.2	3.700
.6	5.200	.5	6.700	.0	
	.800	.0	2.300	6.4	3.800
.6	5.300	.5	6.800	.0	
	.900	.0	2.400	4.9	3.900
.5	5.400	.5	6.900	.0	
	1.000	.0	2.500	3.9	4.000
.5	5.500	.5	7.000	.0	
	1.100	.2	2.600	3.1	4.100
.5	5.600	.5	7.100	.0	
	1.200	3.0	2.700	2.5	4.200
.5	5.700	.5			
	1.300	14.0	2.800	2.0	4.300
.4	5.800	.5			
	1.400	52.0	2.900	1.7	4.400
.4	5.900	.5			

RUNOFF VOLUME = 1.27809 INCHES = 3.4889 ACRE-FEET
 PEAK DISCHARGE RATE = 83.74 CFS AT 1.500 HOURS BASIN
 AREA = .0512 SQ. MI.

*

*S TEMP BASIN J REPLACES BASIN E3 AND E5 FROM THE DMP AHYMO
 FILE*****

COMPUTE NM HYD ID=25 HYD NO=OFFSITE2 DA=.0805 SQ MI
 %A=100 %B=0.0 %C=0.0 %D=0.0
 TP=-.66 HR RAIN=-1

K = .803590HR TP = .660000HR K/TP RATIO = 1.217560
 SHAPE CONSTANT, N = 2.922175
 UNIT PEAK = 33.592 CFS UNIT VOLUME = .9995 B =
 275.41 P60 = 1.8400
 AREA = .080500 SQ MI IA = .65000 INCHES INF =
 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=25 CODE=10

HYDROGRAPH FROM AREA

OFFSITE2

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.3	12.000	.1	16.000	.0	8.000
.2	13.000	.0	17.000	.0	9.000
.1	14.000	.0	18.000	.0	10.000
.1	15.000	.0	7.000	.4	11.000

RUNOFF VOLUME = .41534 INCHES = 1.7832 ACRE-FEET
 PEAK DISCHARGE RATE = 13.87 CFS AT 2.000 HOURS BASIN
 AREA = .0805 SQ. MI.

*
 *

ROUTE RESERVOIR ID=26 HYD=OFFPOND2 INFLOW ID=25 CODE=5

OUTFLOW	STORAGE	DEPTH
0 0	0	
2.16	0.047	1
3.06	0.222	2
3.75	0.466	3
4.33	0.751	4
4.84	1.081	5

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	.00	.000	.00
.50	.00	.00	.000	.00
1.00	.00	.00	.000	.00
1.50	3.77	.41	.019	.88
2.00	13.87	2.49	.342	3.40
2.50	9.71	3.78	.689	4.20
3.00	5.22	4.18	.809	4.42
3.50	2.80	4.11	.787	4.39
4.00	1.50	3.80	.695	4.22
4.50	1.13	3.39	.579	3.98
5.00	.92	2.98	.461	3.74
5.50	.75	2.52	.348	3.42
6.00	.61	2.08	.241	3.11
6.50	.49	1.55	.144	2.66
7.00	.40	1.08	.061	2.23
7.50	.33	.34	.016	.73
8.00	.26	.16	.008	.35
8.50	.22	.12	.005	.25
9.00	.17	.09	.004	.20
9.50	.14	.07	.003	.16
10.00	.12	.06	.003	.13
10.50	.09	.05	.002	.11
11.00	.08	.04	.002	.09
11.50	.06	.03	.002	.07
12.00	.05	.03	.001	.06
12.50	.04	.02	.001	.05
13.00	.03	.02	.001	.04
13.50	.03	.01	.001	.03
14.00	.02	.01	.001	.02
14.50	.02	.01	.000	.02
15.00	.01	.01	.000	.02
15.50	.01	.01	.000	.01
16.00	.01	.00	.000	.01
16.50	.01	.00	.000	.01
17.00	.01	.00	.000	.01
17.50	.01	.00	.000	.01
18.00	.00	.00	.000	.00

PEAK DISCHARGE = 4.426 CFS - PEAK OCCURS AT HOUR 3.10
 MAXIMUM WATER SURFACE ELEVATION = 4.188
 MAXIMUM STORAGE = .8131 AC-FT INCREMENTAL TIME=
 .100000HRS

*

*

PRINT HYD ID=26 CODE=10

*

*

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.011

DIA=2.0 N=0.013

		RATING CURVE	PIPE SECTION	1.0
		WATER	FLOW	FLOW
MAX		SURFACE	AREA	RATE
WIDTH		ELEV	SQ FT	CFS
FT				
.00	.00	.00	.00	
.12	.89	.10	.06	
.54	1.22	.21	.17	
1.26	1.45	.31	.31	
2.26	1.62	.42	.47	
3.53	1.76	.52	.65	
5.03	1.85	.63	.84	
6.74	1.93	.73	1.04	
8.62	1.97	.83	1.24	
10.63	2.00	.94	1.45	
12.72	2.00	1.04	1.66	
14.85	2.00	1.15	1.86	
16.96	2.00	1.25	2.07	
19.01	2.00	1.35	2.27	
20.93	2.00	1.46	2.46	
22.65	2.00	1.56	2.63	
24.08	2.00	1.67	2.80	
25.10	2.00	1.77	2.94	
25.52	2.00	1.88	3.06	
25.52	2.00	2.00	3.14	

ROUTE MCUNGE

ID=27 HYD=RTE.OFFPOND2 INFLOW ID=26
 DT=0.0 L=900 NS=0 SLOPE=0.011
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 185

TABLE PTS= 19

DT= .100000 QMED= 2.21 CKMED=
 6.2379 WIDTH MED= 1.62 NREACH= 1 DX= 900.00

D	DEPTH C1 (FT)	AREA C2 (SQ FT)	Q C3 (CFS)	TRAVEL Q-M TIME (HR)	WIDTH C1-M (FT)	ck C2-M (FPS)	VEL C3-M (FPS)	C
	.00	.0	.0	.170	.0	2.50	.94	1.000
.000	1.000	.000	.000	.0	1.000	.000	.000	
	.10	.1	.1	.125	.9	3.28	1.99	1.312
.004	.996	.136	-.133	.0	.999	.021	-.021	
	.21	.2	.5	.080	1.2	4.53	3.11	1.810
.010	.993	.291	-.284	.3	.994	.203	-.197	
	.31	.3	1.3	.062	1.5	5.73	4.00	2.292
.015	.991	.395	-.386	.9	.992	.347	-.339	
	.42	.5	2.3	.053	1.6	6.75	4.76	2.698
.021	.989	.462	-.451	1.7	.990	.431	-.421	
	.52	.7	3.5	.046	1.8	7.61	5.42	3.044
.027	.987	.509	-.496	2.9	.988	.488	-.475	
	.63	.8	5.0	.042	1.9	8.34	6.00	3.338
.033	.985	.542	-.527	4.3	.986	.527	-.513	
	.73	1.0	6.7	.038	1.9	8.96	6.50	3.585
.039	.983	.567	-.550	5.9	.984	.556	-.540	
	.83	1.2	8.6	.036	2.0	9.47	6.95	3.788
.047	.981	.586	-.567	7.7	.982	.578	-.560	
	.94	1.4	10.6	.034	2.0	9.87	7.34	3.947
.055	.978	.600	-.578	9.6	.980	.594	-.574	
	1.04	1.7	12.7	.033	2.0	10.14	7.68	4.057
.063	.975	.609	-.585	11.7	.977	.606	-.583	
	1.15	1.9	14.8	.031	2.0	10.21	7.97	4.083
.073	.972	.612	-.584	13.8	.974	.612	-.586	
	1.25	2.1	17.0	.030	2.0	10.02	8.21	4.007
.086	.966	.607	-.574	15.9	.969	.611	-.580	
	1.35	2.3	19.0	.030	2.0	9.54	8.39	3.817
.101	.959	.593	-.552	18.0	.963	.602	-.565	
	1.46	2.5	20.9	.029	2.0	8.75	8.52	3.499
.121	.948	.567	-.515	20.0	.954	.583	-.537	
	1.56	2.6	22.7	.029	2.0	7.57	8.60	3.027
.151	.928	.521	-.449	21.8	.940	.549	-.488	
	1.67	2.8	24.1	.029	2.0	5.89	8.60	2.357
.206	.884	.439	-.323	23.4	.912	.489	-.401	
	1.77	2.9	25.1	.029	2.0	3.45	8.53	1.381
.367	.733	.272	-.005	24.6	.842	.378	-.220	
	1.88	3.1	25.5	.030	2.0	1.97	8.34	.787
.655	.463	.181	.356	25.3	.480	.181	.339	

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 1
 TIMES. AVERAGE NUMBER ITERATIONS = 1.1024
 Equations solved using the Ponce correction to C2
 *
 PRINT HYD ID=27 CODE=0

HYDROGRAPH FROM AREA

RTE.OFFPOND2

FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS	CFS	HRS
CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0		3.800	4.3		7.600
.7	11.400	.1		15.200	.0		
	.100	.0		3.900	4.3		7.700
.6	11.500	.1		15.300	.0		
	.200	.0		4.000	4.2		7.800
.5	11.600	.1		15.400	.0		
	.300	.0		4.100	4.2		7.900
.4	11.700	.1		15.500	.0		
	.400	.0		4.200	4.1		8.000
.4	11.800	.1		15.600	.0		
	.500	.0		4.300	4.1		8.100
.3	11.900	.1		15.700	.0		
	.600	.0		4.400	4.0		8.200
.3	12.000	.1		15.800	.0		
	.700	.0		4.500	4.0		8.300
.3	12.100	.1		15.900	.0		
	.800	.0		4.600	3.9		8.400
.3	12.200	.1		16.000	.0		
	.900	.0		4.700	3.9		8.500
.3	12.300	.1		16.100	.0		
	1.000	.0		4.800	3.9		8.600
.2	12.400	.0		16.200	.0		
	1.100	.0		4.900	3.8		8.700
.2	12.500	.0		16.300	.0		
	1.200	.0		5.000	3.8		8.800
.2	12.600	.0		16.400	.0		
	1.300	.0		5.100	3.7		8.900
.2	12.700	.0		16.500	.0		
	1.400	.0		5.200	3.6		9.000
.2	12.800	.0		16.600	.0		
	1.500	.4		5.300	3.6		9.100
.2	12.900	.0		16.700	.0		
	1.600	1.6		5.400	3.5		9.200
.2	13.000	.0		16.800	.0		
	1.700	2.6		5.500	3.4		9.300
.2	13.100	.0		16.900	.0		
	1.800	2.6		5.600	3.4		9.400
.2	13.200	.0		17.000	.0		
	1.900	3.1		5.700	3.3		9.500
.2	13.300	.0		17.100	.0		
	2.000	3.3		5.800	3.3		9.600
.2	13.400	.0		17.200	.0		
	2.100	3.6		5.900	3.2		9.700
.2	13.500	.0		17.300	.0		
	2.200	3.8		6.000	3.1		9.800
.1	13.600	.0		17.400	.0		
	2.300	3.9		6.100	3.1		9.900
.1	13.700	.0		17.500	.0		

	2.400	4.1	6.200	3.0	10.000
.1	13.800	.0	17.600	.0	
	2.500	4.2	6.300	2.9	10.100
.1	13.900	.0	17.700	.0	
	2.600	4.3	6.400	2.8	10.200
.1	14.000	.0	17.800	.0	
	2.700	4.3	6.500	2.7	10.300
.1	14.100	.0	17.900	.0	
	2.800	4.4	6.600	2.6	10.400
.1	14.200	.0	18.000	.0	
	2.900	4.4	6.700	2.5	10.500
.1	14.300	.0	18.100	.0	
	3.000	4.4	6.800	2.4	10.600
.1	14.400	.0	18.200	.0	
	3.100	4.4	6.900	2.3	10.700
.1	14.500	.0	18.300	.0	
	3.200	4.4	7.000	2.3	10.800
.1	14.600	.0	18.400	.0	
	3.300	4.4	7.100	2.2	10.900
.1	14.700	.0	18.500	.0	
	3.400	4.4	7.200	1.9	11.000
.1	14.800	.0	18.600	.0	
	3.500	4.4	7.300	1.3	11.100
.1	14.900	.0	18.700	.0	
	3.600	4.4	7.400	1.0	11.200
.1	15.000	.0	18.800	.0	
	3.700	4.3	7.500	.8	11.300
.1	15.100	.0			

RUNOFF VOLUME = .41538 INCHES = 1.7834 ACRE-FEET
 PEAK DISCHARGE RATE = 4.43 CFS AT 3.200 HOURS BASIN
 AREA = .0805 SQ. MI.

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COMPUTE NM HYD ID=28 HYD NO=BASIN.B DA=.01998 SQ MI
 %A=0 %B=34.0 %C=34.0 %D=32.0
 TP=-.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 25.299 CFS UNIT VOLUME = 1.030 B =
 526.28 P60 = 1.8400
 AREA = .006394 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989065

UNIT PEAK = 36.207 CFS UNIT VOLUME = 1.007 B =
 354.44 P60 = 1.8400
 AREA = .013586 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=28 CODE=10

HYDROGRAPH FROM AREA

BASIN.B

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.1	.000	.0	2.000	5.8	4.000
.1	6.000	.1	3.000	.3	5.000
.1	1.000	.0			

RUNOFF VOLUME = 1.17286 INCHES = 1.2498 ACRE-FEET
 PEAK DISCHARGE RATE = 34.80 CFS AT 1.500 HOURS BASIN
 AREA = .0200 SQ. MI.

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ROUTE	RESERVOIR	ID=29	HYD=POND.B	INFLOW	ID=28	CODE=5
		OUTFLOW		STORAGE		DEPTH
		0	0		5515	
		1.71		0.06		5516
		2.42		0.24		5517
		2.96		0.55		5518
		3.42		0.99		5519
		3.82		1.67		5520

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5515.00	.000	.00
.50	.00	5515.00	.000	.00
1.00	.00	5515.00	.000	.00
1.50	34.80	5517.54	.407	2.71
2.00	5.83	5518.84	.918	3.34
2.50	.93	5518.75	.880	3.31
3.00	.31	5518.50	.769	3.19
3.50	.17	5518.23	.649	3.06
4.00	.13	5517.94	.531	2.93
4.50	.12	5517.58	.419	2.73
5.00	.13	5517.24	.315	2.55

5.50	.14	5516.88	.219	2.34
6.00	.15	5516.42	.136	2.01
6.50	.01	5516.00	.061	1.71
7.00	.00	5515.31	.019	.53
7.50	.00	5515.09	.006	.16
8.00	.00	5515.03	.002	.05
8.50	.00	5515.01	.001	.02
9.00	.00	5515.00	.000	.00

PEAK DISCHARGE = 3.357 CFS - PEAK OCCURS AT HOUR 2.10
 MAXIMUM WATER SURFACE ELEVATION = 5518.863
 MAXIMUM STORAGE = .9296 AC-FT INCREMENTAL TIME=
 .100000HRS

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*

PRINT HYD ID=29 CODE=10

HYDROGRAPH FROM AREA POND.B

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
2.9	6.000	2.0	8.000	.0	4.000
2.6	7.000	.5	9.000	.0	5.000

RUNOFF VOLUME = 1.17284 INCHES = 1.2498 ACRE-FEET
 PEAK DISCHARGE RATE = 3.36 CFS AT 2.100 HOURS BASIN
 AREA = .0200 SQ. MI.

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*

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.03
 DIA=2.0 N=0.013

MAX	WIDTH	FT	RATING CURVE	PIPE SECTION	1.0
			WATER	FLOW	FLOW
			SURFACE	AREA	RATE
			ELEV	SQ FT	CFS
.00	.00		.00	.00	
.21	.89		.10	.06	
.89	1.22		.21	.17	
2.07	1.45		.31	.31	

3.73	1.62	.42	.47
5.82	1.76	.52	.65
8.31	1.85	.63	.84
11.13	1.93	.73	1.04
14.24	1.97	.83	1.24
17.55	2.00	.94	1.45
21.00	2.00	1.04	1.66
24.52	2.00	1.15	1.86
28.02	2.00	1.25	2.07
31.40	2.00	1.35	2.27
34.57	2.00	1.46	2.46
37.41	2.00	1.56	2.63
39.77	2.00	1.67	2.80
41.46	2.00	1.77	2.94
42.15	2.00	1.88	3.06
42.15	2.00	2.00	3.14

ROUTE MCUNGE

ID=30 HYD=RTE.PONDB INFLOW ID=29
 DT=0.0 L=1180 NS=0 SLOPE=0.03
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 97 TABLE PTS= 19
 DT= .100000 QMED= 1.68 CKMED=
 8.4416 WIDTH MED= 1.38 NREACH= 1 DX= 1180.00

D	DEPTH C1 (FT)	AREA C2 (SQ FT)	Q C3 (CFS)	TRAVEL Q-M TIME (HR)	WIDTH C1-M (FT)	ck C2-M (FPS)	VEL C3-M (FPS)	C
(CFS)								
	.00	.0	.0	.135	.0	3.28	1.55	1.000
.000	1.000	.000	.000	.0	1.000	.000	.000	
	.10	.1	.2	.100	.9	5.42	3.29	1.652
.001	.999	.246	-.245	.0	.999	.065	-.065	
	.21	.2	.9	.064	1.2	7.47	5.14	2.280
.003	.998	.391	-.389	.5	.999	.309	-.307	
	.31	.3	2.1	.050	1.5	9.46	6.61	2.887
.004	.998	.486	-.484	1.4	.998	.442	-.440	

	.42	.5	3.7	.042	1.6	11.14	7.86	3.398
.006	.997	.546	-.543	2.9	.998	.519	-.516	
	.52	.7	5.8	.037	1.8	12.57	8.95	3.834
.007	.997	.587	-.584	4.7	.997	.568	-.565	
	.63	.8	8.3	.033	1.9	13.78	9.90	4.204
.009	.996	.616	-.613	7.0	.997	.603	-.600	
	.73	1.0	11.1	.031	1.9	14.80	10.74	4.515
.011	.996	.638	-.634	9.7	.996	.629	-.625	
	.83	1.2	14.2	.029	2.0	15.64	11.48	4.771
.013	.995	.654	-.650	12.7	.996	.647	-.643	
	.94	1.4	17.5	.027	2.0	16.29	12.13	4.971
.015	.995	.666	-.661	15.9	.995	.661	-.656	
	1.04	1.7	21.0	.026	2.0	16.75	12.69	5.110
.018	.994	.674	-.668	19.3	.995	.671	-.665	
	1.15	1.9	24.5	.025	2.0	16.86	13.16	5.143
.021	.993	.676	-.669	22.7	.994	.676	-.670	
	1.25	2.1	28.0	.024	2.0	16.54	13.56	5.047
.024	.992	.671	-.663	26.3	.993	.674	-.667	
	1.35	2.3	31.4	.024	2.0	15.76	13.86	4.808
.028	.990	.657	-.648	29.7	.991	.666	-.657	
	1.46	2.5	34.6	.023	2.0	14.44	14.08	4.407
.034	.988	.632	-.620	33.0	.989	.647	-.636	
	1.56	2.6	37.4	.023	2.0	12.50	14.20	3.813
.042	.983	.588	-.571	36.0	.986	.615	-.600	
	1.67	2.8	39.8	.023	2.0	9.73	14.21	2.969
.058	.971	.503	-.475	38.6	.979	.556	-.534	
	1.77	2.9	41.5	.023	2.0	5.70	14.09	1.739
.103	.928	.296	-.224	40.6	.960	.435	-.395	
	1.88	3.1	42.1	.024	2.0	3.25	13.77	.991
.183	.831	.080	.088	41.8	.838	.088	.074	

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 1
TIMES. AVERAGE NUMBER ITERATIONS = 1.1036

Equations solved using the Ponce correction to C2

*

PRINT HYD ID=30 CODE=0

HYDROGRAPH FROM AREA

RTE.PONDB

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS		HRS	CFS
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	2.000	3.3	4.000
2.9	6.000	2.0	8.000	.1	
	.100	.0	2.100	3.4	4.100
2.9	6.100	2.0	8.100	.0	
	.200	.0	2.200	3.4	4.200
2.9	6.200	1.9	8.200	.0	
	.300	.0	2.300	3.3	4.300
2.8	6.300	1.8	8.300	.0	
	.400	.0	2.400	3.3	4.400
2.8	6.400	1.8	8.400	.0	

	.500	.0	2.500	3.3	4.500
2.7	6.500	1.7	8.500	.0	
	.600	.0	2.600	3.3	4.600
2.7	6.600	1.5	8.600	.0	
	.700	.0	2.700	3.3	4.700
2.7	6.700	1.2	8.700	.0	
	.800	.0	2.800	3.2	4.800
2.6	6.800	1.0	8.800	.0	
	.900	.0	2.900	3.2	4.900
2.6	6.900	.7	8.900	.0	
	1.000	.0	3.000	3.2	5.000
2.6	7.000	.6	9.000	.0	
	1.100	.0	3.100	3.2	5.100
2.5	7.100	.5	9.100	.0	
	1.200	.0	3.200	3.1	5.200
2.5	7.200	.4	9.200	.0	
	1.300	.5	3.300	3.1	5.300
2.5	7.300	.3	9.300	.0	
	1.400	1.7	3.400	3.1	5.400
2.4	7.400	.2	9.400	.0	
	1.500	2.6	3.500	3.1	5.500
2.4	7.500	.2	9.500	.0	
	1.600	2.9	3.600	3.0	5.600
2.3	7.600	.1	9.600	.0	
	1.700	3.2	3.700	3.0	5.700
2.2	7.700	.1	9.700	.0	
	1.800	3.2	3.800	3.0	5.800
2.2	7.800	.1	9.800	.0	
	1.900	3.3	3.900	3.0	5.900
2.1	7.900	.1			

RUNOFF VOLUME = 1.17295 INCHES = 1.2499 ACRE-FEET
 PEAK DISCHARGE RATE = 3.36 CFS AT 2.100 HOURS BASIN
 AREA = .0200 SQ. MI.

*
*

ADD HYD ID=31 HYD=OFF.B ID I=30 II=27
 PRINT HYD ID=31 CODE=10

HYDROGRAPH FROM AREA OFF.B

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	4.000	7.2	8.000
.4	12.000	.1	16.000	.0	
	1.000	.0	5.000	6.3	9.000
.2	13.000	.0	17.000	.0	
	2.000	6.6	6.000	5.2	10.000
.1	14.000	.0	18.000	.0	

	3.000	7.6	7.000	2.9	11.000
.1	15.000	.0			

RUNOFF VOLUME = .56599 INCHES = 3.0331 ACRE-FEET
 PEAK DISCHARGE RATE = 7.62 CFS AT 2.900 HOURS BASIN
 AREA = .1005 SQ. MI.

*
*

COMPUTE NM HYD ID=32 HYD NO=BASINE1.1 DA=.02753 SQ MI
 %A=0.0 %B=33.0 %C=33.0 %D=34.0
 TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 37.038 CFS UNIT VOLUME = 1.030 B =
 526.28 P60 = 1.8400
 AREA = .009360 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989065
 UNIT PEAK = 48.422 CFS UNIT VOLUME = 1.007 B =
 354.44 P60 = 1.8400
 AREA = .018170 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=32 CODE=10

HYDROGRAPH FROM AREA

BASINE1.1

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	2.000	8.3	4.000
.2	6.000	.2			
	1.000	.0	3.000	.4	5.000
.2					

RUNOFF VOLUME = 1.19625 INCHES = 1.7564 ACRE-FEET
 PEAK DISCHARGE RATE = 48.45 CFS AT 1.500 HOURS BASIN
 AREA = .0275 SQ. MI.

*
*

ADD HYD
PRINT HYD

ID=33 HYD=OFF.E11 ID I=32 II=31
ID=33 CODE=10

HYDROGRAPH FROM AREA

OFF.E11

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.0	.000	.0	.000	7.4	8.000
.4	12.000	.1	16.000	.0	
	1.000	.0	5.000	6.5	9.000
.2	13.000	.0	17.000	.0	
	2.000	14.9	6.000	5.4	10.000
.1	14.000	.0	18.000	.0	
	3.000	8.1	7.000	2.9	11.000
.1	15.000	.0			

RUNOFF VOLUME = .70153 INCHES = 4.7895 ACRE-FEET
PEAK DISCHARGE RATE = 51.42 CFS AT 1.500 HOURS BASIN
AREA = .1280 SQ. MI.

*
*

COMPUTE NM HYD ID=34 HYD NO=BASINE1.2 DA=.00588 SQ MI
%A=0.0 %B=33.0 %C=33.0 %D=34.0
TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 7.9108 CFS UNIT VOLUME = 1.029 B =
526.28 P60 = 1.8400
AREA = .001999 SQ MI IA = .10000 INCHES INF =
.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 10.342 CFS UNIT VOLUME = 1.006 B =
354.44 P60 = 1.8400
AREA = .003881 SQ MI IA = .42500 INCHES INF =
1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

PRINT HYD

ID=34 CODE=10

HYDROGRAPH FROM AREA

BASINE1.2

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.0	.000	.0	2.000	1.8	4.000
.0	6.000	.0	3.000	.1	5.000
.0	1.000	.0			

RUNOFF VOLUME = 1.19625 INCHES = .3751 ACRE-FEET
 PEAK DISCHARGE RATE = 10.36 CFS AT 1.500 HOURS BASIN
 AREA = .0059 SQ. MI.

*
 *

COMPUTE NM HYD ID=35 HYD NO=BASIN.E2 DA=.01348 SQ MI
 %A=0.0 %B=18.0 %C=18.0 %D=64.0
 TP=-.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 34.137 CFS UNIT VOLUME = 1.030 B =
 526.28 P60 = 1.8400
 AREA = .008627 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989065
 UNIT PEAK = 12.933 CFS UNIT VOLUME = 1.006 B =
 354.44 P60 = 1.8400
 AREA = .004853 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=35 CODE=10

HYDROGRAPH FROM AREA

BASIN.E2

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
.2	.000	.0	2.000	6.1	4.000
.2	6.000	.2			

1.000 .0 3.000 .3 5.000
 .2

RUNOFF VOLUME = 1.54716 INCHES = 1.1123 ACRE-FEET
 PEAK DISCHARGE RATE = 27.42 CFS AT 1.500 HOURS BASIN
 AREA = .0135 SQ. MI.

*
 *

ADD HYD ID=36 HYD=E2.E12 ID I=34 II=35
 PRINT HYD ID=36 CODE=10

HYDROGRAPH FROM AREA E2.E12

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME
TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME
HRS	CFS	HRS	CFS	HRS	CFS	HRS
CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	2.000	7.9	4.000		
.2	6.000	.2				
1.000	.0	3.000	.4	5.000		
.2						

RUNOFF VOLUME = 1.44056 INCHES = 1.4874 ACRE-FEET
 PEAK DISCHARGE RATE = 37.77 CFS AT 1.500 HOURS BASIN
 AREA = .0194 SQ. MI.

*
 *

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.002
 DIA=3.0 N=0.013

MAX	RATING CURVE	PIPE SECTION	1.0
WIDTH	WATER	FLOW	FLOW
FT	SURFACE	AREA	RATE
	ELEV	SQ FT	CFS
.00	.00	.00	
.16	1.33	.14	
.68	1.83	.31	
1.58	2.18	.47	
2.84	2.44	.63	1.07

		.78	1.46
4.43	2.63		
		.94	1.89
6.33	2.78		
		1.09	2.33
8.48	2.89		
		1.25	2.79
10.84	2.96		
		1.41	3.26
13.36	2.99		
		1.56	3.72
15.99	3.00		
		1.72	4.19
18.67	3.00		
		1.88	4.65
21.33	3.00		
		2.03	5.10
23.90	3.00		
		2.19	5.53
26.32	3.00		
		2.35	5.93
28.48	3.00		
		2.50	6.30
30.27	3.00		
		2.66	6.62
31.56	3.00		
		2.81	6.89
32.09	3.00		
		3.00	7.07
32.09	3.00		

ROUTE MCUNGE

ID=37 HYD=RTE.E12 INFLOW ID=36
DT=0.0 L=800 NS=0 SLOPE=0.01
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

	INFLOW END= 70	TABLE PTS= 19	
	DT= .100000	QMED= 18.89	CKMED=
5.7936			
	WIDTH MED= 3.00	NREACH= 1	DX= 800.00

D	DEPTH C1 (FT)	AREA C2 (SQ FT)	Q C3 (CFS)	TRAVEL Q-M TIME (HR)	WIDTH C1-M (FT)	ck C2-M (FPS)	VEL C3-M (FPS)	C
(CFS)	.00	.0	.0	.271	.0	2.22	.53	1.000
.000	1.000	.000	.000	.0	1.000	.000	.000	
	.16	.1	.2	.200	1.3	2.21	1.11	.993
.007	.993	.000	.007	.0	.999	.000	.001	
	.31	.4	.7	.128	1.8	2.53	1.74	1.138
.018	.983	.072	-.055	.4	.989	.030	-.019	
	.47	.7	1.6	.099	2.2	3.20	2.24	1.441
.028	.977	.190	-.167	1.1	.979	.135	-.115	
	.63	1.1	2.8	.084	2.4	3.77	2.66	1.696
.039	.972	.269	-.240	2.2	.974	.232	-.206	

	.78	1.5	4.4	.073	2.6	4.25	3.03	1.913
.049	.967	.325	-.292	3.6	.969	.299	-.268	
	.94	1.9	6.3	.066	2.8	4.66	3.35	2.098
.061	.961	.367	-.328	5.4	.964	.348	-.312	
	1.09	2.3	8.5	.061	2.9	5.01	3.63	2.253
.073	.956	.399	-.355	7.4	.959	.385	-.343	
	1.25	2.8	10.8	.057	3.0	5.29	3.88	2.381
.087	.950	.423	-.373	9.6	.953	.413	-.366	
	1.41	3.3	13.4	.054	3.0	5.51	4.10	2.481
.101	.944	.442	-.385	12.1	.947	.434	-.381	
	1.56	3.7	16.0	.052	3.0	5.67	4.29	2.550
.118	.936	.455	-.391	14.7	.940	.450	-.390	
	1.72	4.2	18.7	.050	3.0	5.70	4.45	2.567
.136	.926	.460	-.386	17.3	.932	.459	-.390	
	1.88	4.7	21.3	.048	3.0	5.60	4.59	2.519
.159	.914	.456	-.370	20.0	.921	.460	-.380	
	2.03	5.1	23.9	.047	3.0	5.33	4.69	2.399
.187	.896	.442	-.338	22.6	.906	.451	-.357	
	2.19	5.5	26.3	.047	3.0	4.89	4.76	2.199
.224	.869	.416	-.285	25.1	.884	.432	-.316	
	2.35	5.9	28.5	.046	3.0	4.23	4.80	1.903
.281	.824	.372	-.195	27.4	.851	.398	-.248	
	2.50	6.3	30.3	.046	3.0	3.29	4.81	1.482
.383	.733	.302	-.034	29.4	.790	.343	-.133	
	2.66	6.6	31.6	.047	3.0	1.93	4.77	.868
.682	.465	.216	.319	30.9	.652	.260	.088	
	2.81	6.9	32.1	.048	3.0	1.10	4.66	.495
1.216	.103	.262	.635	31.8	.123	.255	.623	

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 11 OCCURRED 1
 TIMES. AVERAGE NUMBER ITERATIONS = 1.0645
 Equations solved using the Ponce correction to C2
 *
 PRINT HYD ID=37 CODE=0

HYDROGRAPH FROM AREA

RTE.E12

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	1.500	31.2	3.000
.5	4.500	.2	6.000	.2	
	.100	.0	1.600	31.3	3.100
.4	4.600	.2	6.100	.2	
	.200	.0	1.700	20.5	3.200
.4	4.700	.2	6.200	.1	
	.300	.0	1.800	13.8	3.300
.3	4.800	.2	6.300	.0	
	.400	.0	1.900	10.9	3.400
.3	4.900	.2	6.400	.0	
	.500	.0	2.000	8.6	3.500
.3	5.000	.2	6.500	.0	

	.600	.0	2.100	6.5	3.600
.3	5.100	.2	6.600	.0	
	.700	.0	2.200	3.7	3.700
.2	5.200	.2	6.700	.0	
	.800	.0	2.300	2.4	3.800
.2	5.300	.2	6.800	.0	
	.900	.0	2.400	1.8	3.900
.2	5.400	.2	6.900	.0	
	1.000	.0	2.500	1.4	4.000
.2	5.500	.2	7.000	.0	
	1.100	.0	2.600	1.1	4.100
.2	5.600	.2	7.100	.0	
	1.200	.4	2.700	.9	4.200
.2	5.700	.2	7.200	.0	
	1.300	6.0	2.800	.7	4.300
.2	5.800	.2			
	1.400	22.3	2.900	.6	4.400
.2	5.900	.2			

RUNOFF VOLUME = 1.37837 INCHES = 1.4232 ACRE-FEET
 PEAK DISCHARGE RATE = 31.30 CFS AT 1.600 HOURS BASIN
 AREA = .0194 SQ. MI.

*
*

COMPUTE NM HYD ID=38 HYD NO=BASIN.E4 DA=.00577 SQ MI
 %A=0.0 %B=5.0 %C=5.0 %D=90.0
 TP=-0.133 HR RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 20.548 CFS UNIT VOLUME = 1.030 B =
 526.28 P60 = 1.8400
 AREA = .005193 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153
 SHAPE CONSTANT, N = 3.989065
 UNIT PEAK = 1.5377 CFS UNIT VOLUME = .9989 B =
 354.44 P60 = 1.8400
 AREA = .000577 SQ MI IA = .42500 INCHES INF =
 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .100000

PRINT HYD ID=38 CODE=10

BASIN.E4
 HYDROGRAPH FROM AREA

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS		HRS	CFS
.1	.000	.0	2.000	3.4	4.000
.1	6.000	.1	3.000	.2	5.000
.1	1.000	.0			

RUNOFF VOLUME = 1.85129 INCHES = .5697 ACRE-FEET
 PEAK DISCHARGE RATE = 13.11 CFS AT 1.500 HOURS BASIN
 AREA = .0058 SQ. MI.

*
*

ADD HYD ID=39 HYD=AP1 ID I=38 II=33
 PRINT HYD ID=39 CODE=10

HYDROGRAPH FROM AREA AP1

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS		HRS	CFS
.4	.000	.0	4.000	7.5	8.000
.2	12.000	.1	16.000	.0	9.000
.1	1.000	.0	5.000	6.6	10.000
.1	13.000	.0	17.000	.0	11.000
.1	2.000	18.3	6.000	5.5	
.1	14.000	.0	18.000	.0	
.1	3.000	8.2	7.000	2.9	
.1	15.000	.0			

RUNOFF VOLUME = .75112 INCHES = 5.3592 ACRE-FEET
 PEAK DISCHARGE RATE = 64.53 CFS AT 1.500 HOURS BASIN
 AREA = .1338 SQ. MI.

*
*

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.026
 DIA=4.0 N=0.013

	RATING CURVE	PIPE SECTION	1.0
MAX	WATER	FLOW	FLOW
WIDTH	SURFACE	AREA	RATE
FT	ELEV	SQ FT	CFS

.00	.00	.00	.00
1.21	1.78	.21	.25
5.27	2.44	.42	.69
12.26	2.91	.63	1.25
22.05	3.25	.83	1.90
34.43	3.51	1.04	2.60
49.13	3.71	1.25	3.36
65.82	3.85	1.46	4.15
84.15	3.94	1.67	4.96
103.74	3.99	1.88	5.79
124.15	4.00	2.08	6.62
144.94	4.00	2.29	7.45
165.61	4.00	2.50	8.27
185.62	4.00	2.71	9.06
204.35	4.00	2.92	9.82
221.12	4.00	3.13	10.54
235.07	4.00	3.34	11.20
245.05	4.00	3.54	11.77
249.15	4.00	3.75	12.24
249.15	4.00	4.00	12.57

ROUTE MCUNGE ID=40 HYD=RTE.E1E4 INFLOW ID=39
 DT=0.0 L=400 NS=0 SLOPE=0.026
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
 ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED

*

PRINT HYD ID=40 CODE=0

HYDROGRAPH FROM AREA

RTE.E1E4

FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS			HRS	CFS	HRS
CFS	HRS	CFS	CFS	HRS	CFS	CFS	

	.000	.0	3.800	7.6	7.600
.8	11.400	.1	15.200	.0	
	.100	.0	3.900	7.5	7.700
.7	11.500	.1	15.300	.0	
	.200	.0	4.000	7.5	7.800
.6	11.600	.1	15.400	.0	
	.300	.0	4.100	7.4	7.900
.5	11.700	.1	15.500	.0	
	.400	.0	4.200	7.3	8.000
.4	11.800	.1	15.600	.0	
	.500	.0	4.300	7.2	8.100
.4	11.900	.1	15.700	.0	
	.600	.0	4.400	7.1	8.200
.4	12.000	.1	15.800	.0	
	.700	.0	4.500	7.0	8.300
.3	12.100	.1	15.900	.0	
	.800	.0	4.600	6.9	8.400
.3	12.200	.1	16.000	.0	
	.900	.0	4.700	6.9	8.500
.3	12.300	.1	16.100	.0	
	1.000	.0	4.800	6.8	8.600
.3	12.400	.0	16.200	.0	
	1.100	.2	4.900	6.7	8.700
.2	12.500	.0	16.300	.0	
	1.200	3.7	5.000	6.6	8.800
.2	12.600	.0	16.400	.0	
	1.300	14.9	5.100	6.5	8.900
.2	12.700	.0	16.500	.0	
	1.400	53.4	5.200	6.4	9.000
.2	12.800	.0	16.600	.0	
	1.500	64.5	5.300	6.3	9.100
.2	12.900	.0	16.700	.0	
	1.600	47.4	5.400	6.2	9.200
.2	13.000	.0	16.800	.0	
	1.700	33.3	5.500	6.1	9.300
.2	13.100	.0	16.900	.0	
	1.800	25.3	5.600	6.0	9.400
.2	13.200	.0	17.000	.0	
	1.900	21.2	5.700	5.9	9.500
.2	13.300	.0	17.100	.0	
	2.000	18.3	5.800	5.7	9.600
.2	13.400	.0	17.200	.0	
	2.100	14.1	5.900	5.6	9.700
.2	13.500	.0	17.300	.0	
	2.200	11.4	6.000	5.5	9.800
.1	13.600	.0	17.400	.0	
	2.300	10.3	6.100	5.2	9.900
.1	13.700	.0	17.500	.0	
	2.400	9.7	6.200	5.0	10.000
.1	13.800	.0	17.600	.0	
	2.500	9.3	6.300	4.8	10.100
.1	13.900	.0	17.700	.0	
	2.600	8.9	6.400	4.6	10.200
.1	14.000	.0	17.800	.0	

	2.700	8.7	6.500	4.4	10.300
.1	14.100	.0	17.900	.0	
	2.800	8.5	6.600	4.2	10.400
.1	14.200	.0	18.000	.0	
	2.900	8.4	6.700	3.7	10.500
.1	14.300	.0	18.100	.0	
	3.000	8.2	6.800	3.4	10.600
.1	14.400	.0	18.200	.0	
	3.100	8.1	6.900	3.1	10.700
.1	14.500	.0	18.300	.0	
	3.200	8.0	7.000	2.9	10.800
.1	14.600	.0	18.400	.0	
	3.300	8.0	7.100	2.7	10.900
.1	14.700	.0	18.500	.0	
	3.400	7.9	7.200	2.3	11.000
.1	14.800	.0	18.600	.0	
	3.500	7.8	7.300	1.6	11.100
.1	14.900	.0	18.700	.0	
	3.600	7.8	7.400	1.3	11.200
.1	15.000	.0	18.800	.0	
	3.700	7.7	7.500	1.0	11.300
.1	15.100	.0			

RUNOFF VOLUME = .75112 INCHES = 5.3592 ACRE-FEET
 PEAK DISCHARGE RATE = 64.53 CFS AT 1.500 HOURS BASIN
 AREA = .1338 SQ. MI.

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ADD HYD ID=41 HYD=AP2 ID I=37 II=40
 PRINT HYD ID=41 CODE=10

HYDROGRAPH FROM AREA AP2

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	4.000	7.7	8.000
.4	12.000	.1	16.000	.0	
	1.000	.0	5.000	6.8	9.000
.2	13.000	.0	17.000	.0	
	2.000	27.0	6.000	5.7	10.000
.1	14.000	.0	18.000	.0	
	3.000	8.7	7.000	2.9	11.000
.1	15.000	.0			

RUNOFF VOLUME = .83041 INCHES = 6.7823 ACRE-FEET
 PEAK DISCHARGE RATE = 95.72 CFS AT 1.500 HOURS BASIN
 AREA = .1531 SQ. MI.

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*

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.026
DIA=4.0 N=0.013

		RATING CURVE	PIPE SECTION	1.0
		WATER	FLOW	FLOW
MAX		SURFACE	AREA	RATE
WIDTH		ELEV	SQ FT	CFS
FT				
		.00	.00	
.00	.00	.21	.25	
1.21	1.78	.42	.69	
5.27	2.44	.63	1.25	
12.26	2.91	.83	1.90	
22.05	3.25	1.04	2.60	
34.43	3.51	1.25	3.36	
49.13	3.71	1.46	4.15	
65.82	3.85	1.67	4.96	
84.15	3.94	1.88	5.79	
103.74	3.99	2.08	6.62	
124.15	4.00	2.29	7.45	
144.94	4.00	2.50	8.27	
165.61	4.00	2.71	9.06	
185.62	4.00	2.92	9.82	
204.35	4.00	3.13	10.54	
221.12	4.00	3.34	11.20	
235.07	4.00	3.54	11.77	
245.05	4.00	3.75	12.24	
249.15	4.00	4.00	12.57	
249.15	4.00			

ROUTE MCUNGE

ID=42 HYD=RTE.E1E4 INFLOW ID=41

DT=0.0 L=600 NS=0 SLOPE=0.026
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
 ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED

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PRINT HYD

ID=42 CODE=0

HYDROGRAPH FROM AREA

RTE.E1E4

FLOW	TIME	FLOW	TIME	FLOW	TIME
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	3.800	7.9	7.600
.8	11.400	.1	15.200	.0	
	.100	.0	3.900	7.8	7.700
.7	11.500	.1	15.300	.0	
	.200	.0	4.000	7.7	7.800
.6	11.600	.1	15.400	.0	
	.300	.0	4.100	7.6	7.900
.5	11.700	.1	15.500	.0	
	.400	.0	4.200	7.5	8.000
.4	11.800	.1	15.600	.0	
	.500	.0	4.300	7.4	8.100
.4	11.900	.1	15.700	.0	
	.600	.0	4.400	7.3	8.200
.4	12.000	.1	15.800	.0	
	.700	.0	4.500	7.2	8.300
.3	12.100	.1	15.900	.0	
	.800	.0	4.600	7.1	8.400
.3	12.200	.1	16.000	.0	
	.900	.0	4.700	7.1	8.500
.3	12.300	.1	16.100	.0	
	1.000	.0	4.800	7.0	8.600
.3	12.400	.0	16.200	.0	
	1.100	.2	4.900	6.9	8.700
.2	12.500	.0	16.300	.0	
	1.200	4.2	5.000	6.8	8.800
.2	12.600	.0	16.400	.0	
	1.300	20.9	5.100	6.7	8.900
.2	12.700	.0	16.500	.0	
	1.400	75.7	5.200	6.6	9.000
.2	12.800	.0	16.600	.0	
	1.500	95.7	5.300	6.5	9.100
.2	12.900	.0	16.700	.0	
	1.600	78.7	5.400	6.4	9.200
.2	13.000	.0	16.800	.0	
	1.700	53.8	5.500	6.3	9.300
.2	13.100	.0	16.900	.0	
	1.800	39.2	5.600	6.2	9.400
.2	13.200	.0	17.000	.0	
	1.900	32.1	5.700	6.1	9.500
.2	13.300	.0	17.100	.0	

	2.000	27.0		5.800	6.0	9.600
.2	13.400	.0		17.200	.0	
	2.100	20.7		5.900	5.9	9.700
.2	13.500	.0		17.300	.0	
	2.200	15.1		6.000	5.7	9.800
.1	13.600	.0		17.400	.0	
	2.300	12.7		6.100	5.5	9.900
.1	13.700	.0		17.500	.0	
	2.400	11.5		6.200	5.1	10.000
.1	13.800	.0		17.600	.0	
	2.500	10.6		6.300	4.8	10.100
.1	13.900	.0		17.700	.0	
	2.600	10.0		6.400	4.6	10.200
.1	14.000	.0		17.800	.0	
	2.700	9.6		6.500	4.5	10.300
.1	14.100	.0		17.900	.0	
	2.800	9.2		6.600	4.2	10.400
.1	14.200	.0		18.000	.0	
	2.900	8.9		6.700	3.7	10.500
.1	14.300	.0		18.100	.0	
	3.000	8.7		6.800	3.4	10.600
.1	14.400	.0		18.200	.0	
	3.100	8.5		6.900	3.1	10.700
.1	14.500	.0		18.300	.0	
	3.200	8.4		7.000	2.9	10.800
.1	14.600	.0		18.400	.0	
	3.300	8.3		7.100	2.7	10.900
.1	14.700	.0		18.500	.0	
	3.400	8.2		7.200	2.3	11.000
.1	14.800	.0		18.600	.0	
	3.500	8.1		7.300	1.6	11.100
.1	14.900	.0		18.700	.0	
	3.600	8.0		7.400	1.3	11.200
.1	15.000	.0		18.800	.0	
	3.700	7.9		7.500	1.0	11.300
.1	15.100	.0				

RUNOFF VOLUME = .83041 INCHES = 6.7823 ACRE-FEET
 PEAK DISCHARGE RATE = 95.72 CFS AT 1.500 HOURS BASIN
 AREA = .1531 SQ. MI.

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ADD HYD
 PRINT HYD

ID=43 HYD=AP3 ID I=42 II=24
 ID=43 CODE=10

HYDROGRAPH FROM AREA AP3

	TIME		FLOW		TIME		FLOW		TIME
FLOW	TIME		FLOW		TIME		FLOW		TIME
	HRS		CFS		HRS		CFS		HRS
CFS	HRS		CFS		HRS		CFS		CFS

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RUNOFF VOLUME =      .94256 INCHES      =      10.2712 ACRE-FEET
PEAK DISCHARGE RATE =      179.46 CFS    AT      1.500 HOURS    BASIN
AREA =      .2043 SQ. MI.

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	TIME	FLOW		TIME	FLOW		TIME
FLOW	TIME	FLOW		TIME	FLOW		TIME
	HRS	CFS		HRS	CFS		HRS
CFS	HRS	CFS		HRS	CFS		
	.000	.0		4.000	8.2		8.000
.4	12.000	.1		16.000	.0		
	1.000	.0		5.000	7.3		9.000
.2	13.000	.0		17.000	.0		
	2.000	47.6		6.000	6.3		10.000
.1	14.000	.0		18.000	.0		
	3.000	10.1		7.000	2.9		11.000
.1	15.000	.0					
	RUNOFF VOLUME =	.94274 INCHES	=		10.3436 ACRE-FEET		
	PEAK DISCHARGE RATE =	181.79 CFS	AT	1.500 HOURS	BASIN		
AREA =	.2057 SQ. MI.						

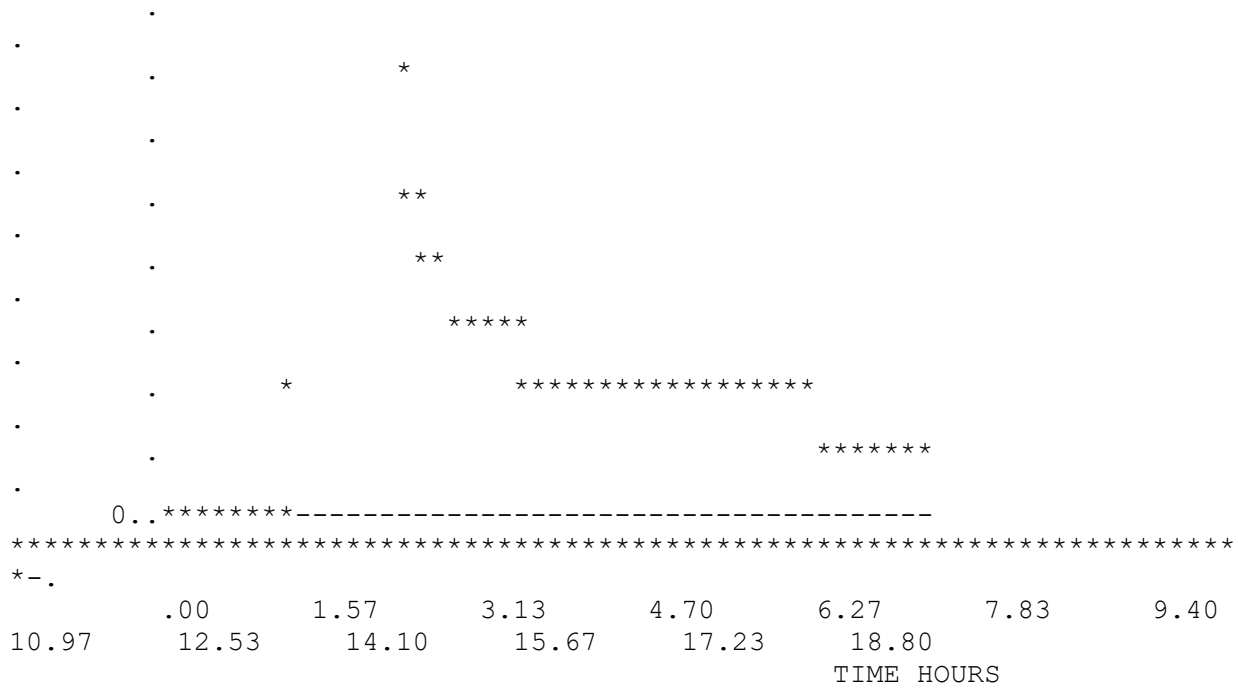
PLOT HYD ID=45

FLOW RATE (CFS)

182. .-----*

145. .-----*

[illegible]



* *		ROUTE RESERVOIR						ID=46 HYD=POND.E		INFLOW ID=45 CODE=5			
		OUTFLOW		STORAGE		DEPTH							
		0 0.04		5444									
		0.01		0.23		5444.5							
		0.02		0.43		5445							
		0.03		0.66		5445.5							
		0.04		0.91		5446							
		0.5 1.20		5446.5									
		1.3 1.52		5447									
		2.2 1.88		5447.5									
		3.3 2.26		5448									
		6.7 2.68		5448.5									
		8.7 3.12		5449									
		10.8		3.60		5449.5							
		13.1		4.10		5450							
		15.5		4.65		5450.5							
		18.0		5.22		5451							
		20.7		5.82		5451.5							
		23.5		6.44		5452							

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5444.00	.040	.00
.50	.00	5444.00	.040	.00

1.00	.00	5444.00	.040	.00
1.50	181.79	5447.92	2.200	3.13
2.00	47.59	5451.44	5.751	20.39
2.50	14.56	5451.58	5.921	21.16
3.00	10.13	5451.29	5.570	19.57
3.50	8.81	5450.97	5.184	17.84
4.00	8.17	5450.66	4.830	16.29
4.50	7.67	5450.38	4.512	14.90
5.00	7.27	5450.12	4.231	13.67
5.50	6.83	5449.88	3.981	12.55
6.00	6.28	5449.65	3.754	11.51
6.50	4.49	5449.41	3.517	10.43
7.00	2.87	5449.14	3.258	9.30
7.50	1.00	5448.84	2.979	8.06
8.00	.43	5448.52	2.699	6.79
8.50	.28	5448.25	2.471	5.01
9.00	.21	5448.05	2.303	3.65
9.50	.17	5447.89	2.176	3.06
10.00	.13	5447.74	2.062	2.73
10.50	.11	5447.61	1.961	2.43
11.00	.09	5447.49	1.870	2.17
11.50	.07	5447.37	1.788	1.97
12.00	.06	5447.27	1.713	1.78
12.50	.05	5447.17	1.645	1.61
13.00	.04	5447.09	1.583	1.46
13.50	.03	5447.01	1.527	1.32
14.00	.03	5446.93	1.477	1.19
14.50	.02	5446.86	1.431	1.08
15.00	.02	5446.80	1.389	.97
15.50	.01	5446.74	1.352	.88
16.00	.01	5446.68	1.318	.79
16.50	.01	5446.64	1.287	.72
17.00	.01	5446.59	1.259	.65
17.50	.01	5446.55	1.234	.58
18.00	.00	5446.52	1.211	.53
18.50	.00	5446.48	1.191	.48
19.00	.00	5446.45	1.171	.45
19.50	.00	5446.42	1.153	.43
20.00	.00	5446.39	1.136	.40
20.50	.00	5446.36	1.120	.37
21.00	.00	5446.34	1.105	.35
21.50	.00	5446.31	1.091	.33
22.00	.00	5446.29	1.078	.31
22.50	.00	5446.27	1.066	.29
23.00	.00	5446.25	1.054	.27
23.50	.00	5446.23	1.044	.25
24.00	.00	5446.21	1.033	.24
24.50	.00	5446.20	1.024	.22
25.00	.00	5446.18	1.015	.21
25.50	.00	5446.17	1.007	.19
26.00	.00	5446.15	.999	.18
26.50	.00	5446.14	.992	.17
27.00	.00	5446.13	.985	.16
27.50	.00	5446.12	.979	.15

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	5446.11	.973	.14
28.50	.00	5446.10	.967	.13
29.00	.00	5446.09	.962	.12
29.50	.00	5446.08	.957	.11
30.00	.00	5446.07	.952	.11
30.50	.00	5446.07	.948	.10
31.00	.00	5446.06	.944	.09
31.50	.00	5446.05	.940	.09
32.00	.00	5446.05	.937	.08
32.50	.00	5446.04	.934	.08
33.00	.00	5446.04	.930	.07
33.50	.00	5446.03	.928	.07
34.00	.00	5446.03	.925	.06
34.50	.00	5446.02	.922	.06
35.00	.00	5446.02	.920	.06
35.50	.00	5446.01	.918	.05
36.00	.00	5446.01	.916	.05
36.50	.00	5446.01	.914	.05
37.00	.00	5446.00	.912	.04
37.50	.00	5446.00	.910	.04
38.00	.00	5446.00	.908	.04
38.50	.00	5445.99	.907	.04
39.00	.00	5445.99	.905	.04
39.50	.00	5445.99	.904	.04
40.00	.00	5445.98	.902	.04
40.50	.00	5445.98	.900	.04
41.00	.00	5445.98	.899	.04
41.50	.00	5445.97	.897	.04
42.00	.00	5445.97	.895	.04
42.50	.00	5445.97	.894	.04
43.00	.00	5445.96	.892	.04
43.50	.00	5445.96	.890	.04
44.00	.00	5445.96	.889	.04
44.50	.00	5445.95	.887	.04
45.00	.00	5445.95	.886	.04
45.50	.00	5445.95	.884	.04
46.00	.00	5445.94	.882	.04
46.50	.00	5445.94	.881	.04
47.00	.00	5445.94	.879	.04
47.50	.00	5445.94	.878	.04
48.00	.00	5445.93	.876	.04
48.50	.00	5445.93	.874	.04
49.00	.00	5445.93	.873	.04
49.50	.00	5445.92	.871	.04
50.00	.00	5445.92	.870	.04
50.50	.00	5445.92	.868	.04
51.00	.00	5445.91	.866	.04
51.50	.00	5445.91	.865	.04
52.00	.00	5445.91	.863	.04
52.50	.00	5445.90	.862	.04

53.00	.00	5445.90	.860	.04
53.50	.00	5445.90	.859	.04
54.00	.00	5445.89	.857	.04
54.50	.00	5445.89	.855	.04
55.00	.00	5445.89	.854	.04
55.50	.00	5445.88	.852	.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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56.00	.00	5445.88	.851	.04
56.50	.00	5445.88	.849	.04
57.00	.00	5445.88	.848	.04
57.50	.00	5445.87	.846	.04
58.00	.00	5445.87	.845	.04
58.50	.00	5445.87	.843	.04
59.00	.00	5445.86	.841	.04
59.50	.00	5445.86	.840	.04

PEAK DISCHARGE = 21.508 CFS - PEAK OCCURS AT HOUR 2.30
 MAXIMUM WATER SURFACE ELEVATION = 5451.644
 MAXIMUM STORAGE = 5.9988 AC-FT INCREMENTAL TIME=
 .100000HRS

*
 PRINT HYD ID=46 CODE=10

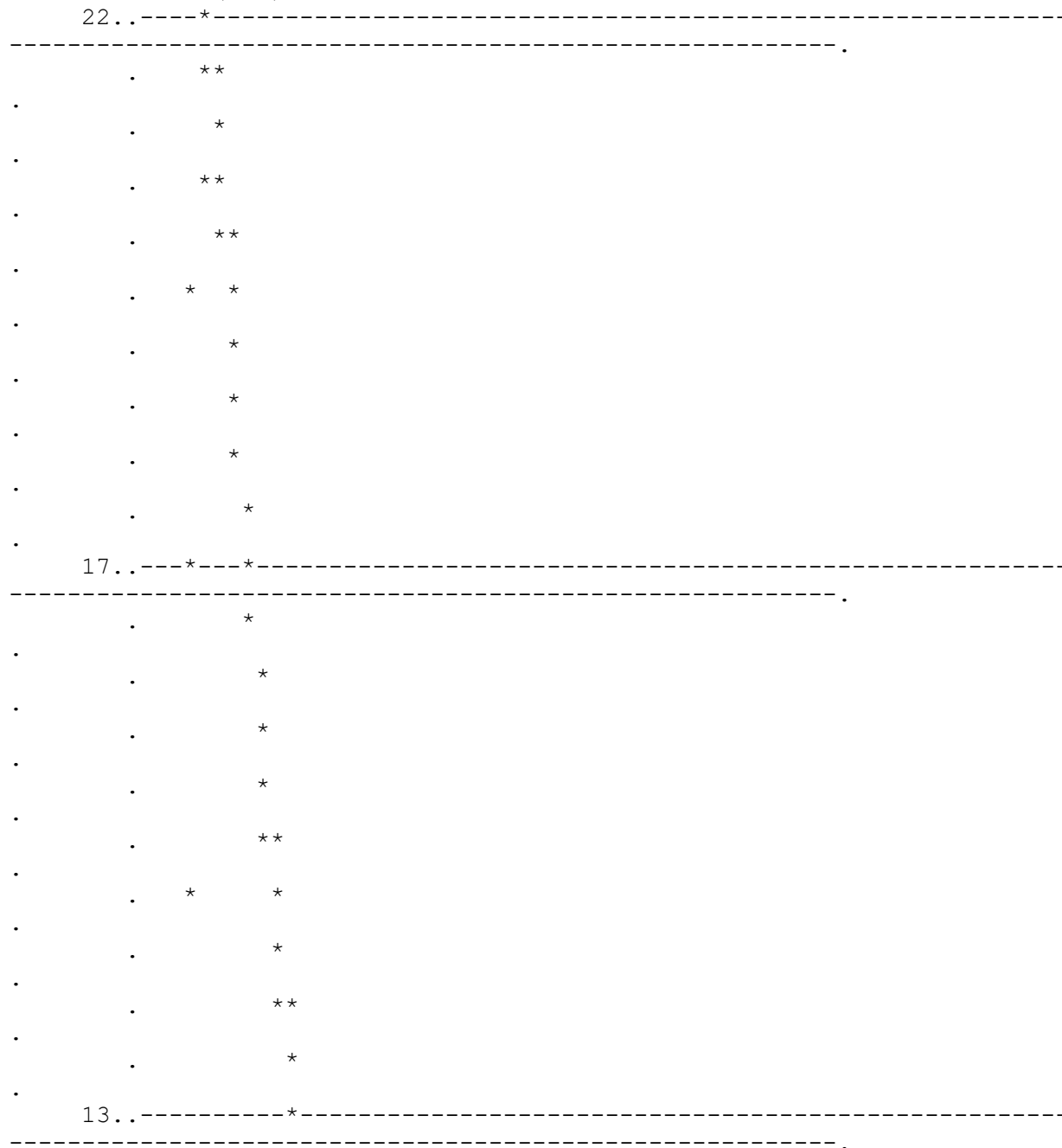
HYDROGRAPH FROM AREA POND.E

FLOW	TIME	FLOW	TIME	FLOW	TIME
	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
CFS	HRS	CFS	HRS	CFS	HRS
	.000	.0	12.000	1.8	24.000
.2	36.000	.0	48.000	.0	
	1.000	.0	13.000	1.5	25.000
.2	37.000	.0	49.000	.0	
	2.000	20.4	14.000	1.2	26.000
.2	38.000	.0	50.000	.0	
	3.000	19.6	15.000	1.0	27.000
.2	39.000	.0	51.000	.0	
	4.000	16.3	16.000	.8	28.000
.1	40.000	.0	52.000	.0	
	5.000	13.7	17.000	.6	29.000
.1	41.000	.0	53.000	.0	
	6.000	11.5	18.000	.5	30.000
.1	42.000	.0	54.000	.0	
	7.000	9.3	19.000	.5	31.000
.1	43.000	.0	55.000	.0	
	8.000	6.8	20.000	.4	32.000
.1	44.000	.0	56.000	.0	
	9.000	3.6	21.000	.3	33.000
.1	45.000	.0	57.000	.0	
	10.000	2.7	22.000	.3	34.000
.1	46.000	.0	58.000	.0	

	11.000	2.2	23.000	.3	35.000
.1	47.000	.0	59.000	.0	

RUNOFF VOLUME = .86995 INCHES = 9.5450 ACRE-FEET
 PEAK DISCHARGE RATE = 21.51 CFS AT 2.300 HOURS BASIN
 AREA = .2057 SQ. MI.

PLOT HYD ID=46
 FLOW RATE (CFS)




```

          *****
          *****
0.***-----
*****-
34.94      .00      4.99      9.98      14.98      19.97      24.96      29.95
          39.93      44.93      49.92      54.91      59.90
                                TIME HOURS

```

```

*
  COMPUTE NM HYD      ID=47  HYD NO=BASIN.E6  DA=.00488 SQ MI
                        %A=0.0  %B=5.0  %C=5.0  %D=90.0
                        TP=-0.133 HR  RAIN=-1

      K = .072485HR    TP = .133000HR    K/TP RATIO = .545000
SHAPE CONSTANT, N = 7.106420
      UNIT PEAK = 17.379 CFS    UNIT VOLUME = 1.030 B =
526.28    P60 = 1.8400
      AREA = .004392 SQ MI    IA = .10000 INCHES    INF =
.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

```

```

      K = .118257HR    TP = .133000HR    K/TP RATIO = .889153
SHAPE CONSTANT, N = 3.989065
      UNIT PEAK = 1.3005 CFS    UNIT VOLUME = .9989 B =
354.44    P60 = 1.8400
      AREA = .000488 SQ MI    IA = .42500 INCHES    INF =
1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .100000

```

```

  PRINT HYD      ID=47 CODE=10

```

```

                                HYDROGRAPH FROM AREA
BASIN.E6

      TIME      FLOW      TIME      FLOW      TIME
      FLOW      TIME      FLOW      TIME      FLOW      TIME
      HRS      CFS      HRS      CFS      HRS      CFS      HRS
CFS      HRS      CFS      HRS      CFS      HRS
      .000      .0      2.000      2.9      4.000
.1      6.000      .1
      1.000      .0      3.000      .1      5.000
.1

      RUNOFF VOLUME = 1.85129 INCHES = .4818 ACRE-FEET
      PEAK DISCHARGE RATE = 11.09 CFS AT 1.500 HOURS BASIN
AREA = .0049 SQ. MI.

```

*

ADD HYD
PRINT HYD

ID=48 HYD=TOTALE ID I=46 II=47
ID=46 CODE=10

HYDROGRAPH FROM AREA POND.E

FLOW	TIME	FLOW	TIME	FLOW	TIME
	HRS	CFS	HRS	CFS	HRS
	.000	.0	12.000	1.8	24.000
.2	36.000	.0	48.000	.0	
	1.000	.0	13.000	1.5	25.000
.2	37.000	.0	49.000	.0	
	2.000	20.4	14.000	1.2	26.000
.2	38.000	.0	50.000	.0	
	3.000	19.6	15.000	1.0	27.000
.2	39.000	.0	51.000	.0	
	4.000	16.3	16.000	.8	28.000
.1	40.000	.0	52.000	.0	
	5.000	13.7	17.000	.6	29.000
.1	41.000	.0	53.000	.0	
	6.000	11.5	18.000	.5	30.000
.1	42.000	.0	54.000	.0	
	7.000	9.3	19.000	.5	31.000
.1	43.000	.0	55.000	.0	
	8.000	6.8	20.000	.4	32.000
.1	44.000	.0	56.000	.0	
	9.000	3.6	21.000	.3	33.000
.1	45.000	.0	57.000	.0	
	10.000	2.7	22.000	.3	34.000
.1	46.000	.0	58.000	.0	
	11.000	2.2	23.000	.3	35.000
.1	47.000	.0	59.000	.0	

RUNOFF VOLUME = .86995 INCHES = 9.5450 ACRE-FEET
PEAK DISCHARGE RATE = 21.51 CFS AT 2.300 HOURS BASIN
AREA = .2057 SQ. MI.

*

*

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 13:24:44

APPENDIX C

ROADWAY HYDAULICS

MANNING'S N = 0.017 SLOPE = 0.025

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.9	4.0	11.6	0.1	7.0	37.5	0.0
2.0	9.5	0.7	5.0	23.5	0.3	8.0	37.6	0.7
3.0	9.6	0.0	6.0	35.5	0.1	9.0	47.0	0.9

WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY
		SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)

0.010	0.010	0.002	0.001	0.341	0.390	0.323	0.012
0.020	0.020	0.006	0.004	0.682	0.619	0.646	0.026
0.030	0.030	0.015	0.012	1.023	0.811	0.969	0.040
0.040	0.040	0.026	0.025	1.363	0.983	1.292	0.055
0.050	0.050	0.040	0.046	1.704	1.140	1.615	0.070
0.060	0.060	0.058	0.075	2.045	1.287	1.938	0.086
0.070	0.070	0.079	0.113	2.386	1.427	2.261	0.102
0.080	0.080	0.103	0.161	2.727	1.560	2.584	0.118
0.090	0.090	0.131	0.221	3.068	1.687	2.907	0.134
0.100	0.100	0.162	0.292	3.409	1.810	3.230	0.151
0.110	0.110	0.195	0.377	3.749	1.929	3.553	0.168
0.120	0.120	0.233	0.475	4.090	2.044	3.876	0.185
0.130	0.130	0.274	0.545	5.042	1.985	4.810	0.191
0.140	0.140	0.330	0.620	6.604	1.876	6.355	0.195
0.150	0.150	0.402	0.745	8.166	1.855	7.900	0.204
0.160	0.160	0.488	0.918	9.729	1.881	9.445	0.215
0.170	0.170	0.590	1.141	11.291	1.933	10.990	0.228
0.180	0.180	0.708	1.417	12.853	2.001	12.535	0.242
0.190	0.190	0.841	1.749	14.416	2.079	14.080	0.257
0.200	0.200	0.990	2.142	15.978	2.164	15.625	0.273
0.210	0.210	1.154	2.598	17.540	2.252	17.170	0.289
0.220	0.220	1.333	3.123	19.102	2.343	18.715	0.305
0.230	0.230	1.528	3.720	20.665	2.435	20.260	0.322
0.240	0.240	1.738	4.394	22.227	2.528	21.805	0.339
0.250	0.250	1.964	5.147	23.789	2.621	23.350	0.357
0.260	0.260	2.205	5.984	25.352	2.713	24.895	0.375
0.270	0.270	2.462	6.908	26.914	2.806	26.440	0.392
0.280	0.280	2.734	7.923	28.476	2.898	27.985	0.411
0.290	0.290	3.014	9.316	28.496	3.091	27.988	0.439
0.300	0.300	3.294	10.797	28.517	3.278	27.991	0.467
0.310	0.310	3.574	12.364	28.537	3.460	27.994	0.496
0.320	0.320	3.854	14.013	28.557	3.636	27.997	0.526
0.330	0.330	4.134	15.743	28.577	3.809	28.000	0.556
0.340	0.340	4.414	17.552	28.598	3.977	28.003	0.586
0.350	0.350	4.694	19.438	28.618	4.141	28.006	0.617
0.360	0.360	4.974	21.400	28.638	4.302	28.009	0.648
0.370	0.370	5.254	23.435	28.658	4.460	28.012	0.679
0.380	0.380	5.534	25.542	28.678	4.615	28.015	0.711
0.390	0.390	5.814	27.720	28.699	4.768	28.018	0.744
0.400	0.400	6.094	29.968	28.719	4.917	28.021	0.776

0.410	0.410	6.375	32.284	28.739	5.064	28.024	0.809	SANDMARK RD EGL=.84 Qmax=34.7 Qact=13.7
0.420	0.420	6.655	34.668	28.759	5.209	28.027	0.842	
0.430	0.430	6.935	37.118	28.780	5.352	28.030	0.876	
0.440	0.440	7.216	39.634	28.800	5.493	28.033	0.909	
0.450	0.450	7.496	42.214	28.820	5.632	28.036	0.943	
0.460	0.460	7.776	44.857	28.840	5.768	28.039	0.978	
0.470	0.470	8.057	47.563	28.861	5.903	28.042	1.012	
0.480	0.480	8.337	50.330	28.881	6.037	28.045	1.047	
0.490	0.490	8.618	53.159	28.901	6.169	28.048	1.082	
WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL	
INC	AREA	RATE	PER	VEL	PLUS	ENERGY		
FT.	SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)		
0.500	0.500	8.898	56.048	28.921	6.299	28.052	1.117	
0.510	0.510	9.179	58.996	28.941	6.428	28.055	1.153	
0.520	0.520	9.459	62.003	28.962	6.555	28.058	1.188	
0.530	0.530	9.740	65.069	28.982	6.681	28.061	1.224	
0.540	0.540	10.020	68.192	29.002	6.805	28.064	1.260	
0.550	0.550	10.301	71.371	29.022	6.929	28.067	1.297	
0.560	0.560	10.582	74.607	29.043	7.051	28.070	1.333	
0.570	0.570	10.862	77.899	29.063	7.171	28.073	1.370	
0.580	0.580	11.143	81.245	29.083	7.291	28.076	1.407	
0.590	0.590	11.424	84.646	29.103	7.410	28.079	1.444	
0.600	0.600	11.705	88.102	29.124	7.527	28.082	1.481	
0.610	0.610	11.986	91.610	29.144	7.643	28.085	1.519	
0.620	0.620	12.266	95.172	29.164	7.759	28.088	1.556	
0.630	0.630	12.547	98.786	29.184	7.873	28.091	1.594	
0.640	0.640	12.828	102.453	29.204	7.986	28.094	1.632	
0.650	0.650	13.109	106.171	29.225	8.099	28.097	1.670	
0.660	0.660	13.390	109.940	29.245	8.210	28.100	1.709	
0.670	0.670	13.676	111.369	30.240	8.143	29.095	1.701	
0.680	0.680	13.972	112.950	31.235	8.084	30.089	1.696	
0.690	0.690	14.278	114.679	32.230	8.032	31.084	1.693	
0.700	0.700	14.594	116.551	33.225	7.986	32.079	1.692	
0.710	0.710	14.920	118.564	34.220	7.947	33.074	1.692	
0.720	0.720	15.255	120.715	35.215	7.913	34.068	1.694	
0.730	0.730	15.601	123.002	36.209	7.884	35.063	1.697	
0.740	0.740	15.957	125.423	37.204	7.860	36.058	1.701	
0.750	0.750	16.322	127.977	38.199	7.841	37.053	1.706	
0.760	0.760	16.698	130.662	39.194	7.825	38.047	1.712	
0.770	0.770	17.083	133.478	40.189	7.813	39.042	1.720	
0.780	0.780	17.478	136.424	41.184	7.805	40.037	1.728	
0.790	0.790	17.884	139.500	42.179	7.800	41.032	1.736	
0.800	0.800	18.299	142.706	43.174	7.799	42.026	1.746	
0.810	0.810	18.724	146.040	44.169	7.799	43.021	1.756	
0.820	0.820	19.160	149.504	45.164	7.803	44.016	1.767	
0.830	0.830	19.605	153.098	46.159	7.809	45.011	1.779	
0.840	0.840	20.060	156.821	47.154	7.818	46.005	1.791	

MANNING'S N = 0.017 SLOPE = 0.045

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.9	4.0	11.6	0.1	7.0	37.5	0.0
2.0	9.5	0.7	5.0	23.5	0.3	8.0	37.6	0.7
3.0	9.6	0.0	6.0	35.5	0.1	9.0	47.0	0.9

WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY
		SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)

0.010	0.010	0.002	0.001	0.341	0.523	0.323	0.014
0.020	0.020	0.006	0.005	0.682	0.830	0.646	0.031
0.030	0.030	0.015	0.016	1.023	1.088	0.969	0.048
0.040	0.040	0.026	0.034	1.363	1.318	1.292	0.067
0.050	0.050	0.040	0.062	1.704	1.530	1.615	0.086
0.060	0.060	0.058	0.100	2.045	1.727	1.938	0.106
0.070	0.070	0.079	0.152	2.386	1.914	2.261	0.127
0.080	0.080	0.103	0.216	2.727	2.093	2.584	0.148
0.090	0.090	0.131	0.296	3.068	2.263	2.907	0.170
0.100	0.100	0.162	0.392	3.409	2.428	3.230	0.192
0.110	0.110	0.195	0.506	3.749	2.587	3.553	0.214
0.120	0.120	0.233	0.638	4.090	2.742	3.876	0.237
0.130	0.130	0.274	0.731	5.042	2.664	4.810	0.240
0.140	0.140	0.330	0.831	6.604	2.517	6.355	0.239
0.150	0.150	0.402	1.000	8.166	2.489	7.900	0.246
0.160	0.160	0.488	1.232	9.729	2.523	9.445	0.259
0.170	0.170	0.590	1.531	11.291	2.593	10.990	0.275
0.180	0.180	0.708	1.901	12.853	2.685	12.535	0.292
0.190	0.190	0.841	2.347	14.416	2.790	14.080	0.311
0.200	0.200	0.990	2.873	15.978	2.903	15.625	0.331
0.210	0.210	1.154	3.486	17.540	3.021	17.170	0.352
0.220	0.220	1.333	4.190	19.102	3.143	18.715	0.374
0.230	0.230	1.528	4.992	20.665	3.267	20.260	0.396
0.240	0.240	1.738	5.895	22.227	3.391	21.805	0.419
0.250	0.250	1.964	6.906	23.789	3.516	23.350	0.442
0.260	0.260	2.205	8.028	25.352	3.640	24.895	0.466
0.270	0.270	2.462	9.268	26.914	3.765	26.440	0.490
0.280	0.280	2.734	10.630	28.476	3.888	27.985	0.515
0.290	0.290	3.014	12.499	28.496	4.147	27.988	0.558
0.300	0.300	3.294	14.486	28.517	4.398	27.991	0.601
0.310	0.310	3.574	16.588	28.537	4.642	27.994	0.645
0.320	0.320	3.854	18.801	28.557	4.879	27.997	0.690
0.330	0.330	4.134	21.122	28.577	5.110	28.000	0.736
0.340	0.340	4.414	23.549	28.598	5.335	28.003	0.783
0.350	0.350	4.694	26.079	28.618	5.556	28.006	0.830
0.360	0.360	4.974	28.710	28.638	5.772	28.009	0.878
0.370	0.370	5.254	31.441	28.658	5.984	28.012	0.927
0.380	0.380	5.534	34.268	28.678	6.192	28.015	0.976
0.390	0.390	5.814	37.190	28.699	6.396	28.018	1.026
0.400	0.400	6.094	40.206	28.719	6.597	28.021	1.077

REDBLOOM ROAD
EGL @ 0.84
Qact=24.7 CFS
Qcap=26.62 CFS

0.410	0.410	6.375	43.314	28.739	6.795	28.024	1.128	
0.420	0.420	6.655	46.512	28.759	6.989	28.027	1.180	
0.430	0.430	6.935	49.799	28.780	7.181	28.030	1.232	
0.440	0.440	7.216	53.174	28.800	7.369	28.033	1.285	
0.450	0.450	7.496	56.635	28.820	7.555	28.036	1.338	
0.460	0.460	7.776	60.182	28.840	7.739	28.039	1.392	
0.470	0.470	8.057	63.812	28.861	7.920	28.042	1.446	
0.480	0.480	8.337	67.525	28.881	8.099	28.045	1.500	
0.490	0.490	8.618	71.320	28.901	8.276	28.048	1.555	
WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL	
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY	
	SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)		
0.500	0.500	8.898	75.196	28.921	8.451	28.052	1.611	
0.510	0.510	9.179	79.152	28.941	8.623	28.055	1.667	
0.520	0.520	9.459	83.186	28.962	8.794	28.058	1.723	
0.530	0.530	9.740	87.299	28.982	8.963	28.061	1.780	
0.540	0.540	10.020	91.489	29.002	9.130	28.064	1.837	
0.550	0.550	10.301	95.754	29.022	9.296	28.067	1.894	
0.560	0.560	10.582	100.096	29.043	9.459	28.070	1.952	
0.570	0.570	10.862	104.512	29.063	9.621	28.073	2.010	
0.580	0.580	11.143	109.002	29.083	9.782	28.076	2.068	
0.590	0.590	11.424	113.565	29.103	9.941	28.079	2.127	
0.600	0.600	11.705	118.201	29.124	10.098	28.082	2.186	
0.610	0.610	11.986	122.908	29.144	10.255	28.085	2.246	
0.620	0.620	12.266	127.687	29.164	10.409	28.088	2.305	
0.630	0.630	12.547	132.536	29.184	10.563	28.091	2.365	
0.640	0.640	12.828	137.455	29.204	10.715	28.094	2.426	
0.650	0.650	13.109	142.443	29.225	10.866	28.097	2.486	
0.660	0.660	13.390	147.500	29.245	11.015	28.100	2.547	
0.670	0.670	13.676	149.417	30.240	10.925	29.095	2.527	
0.680	0.680	13.972	151.538	31.235	10.846	30.089	2.510	
0.690	0.690	14.278	153.857	32.230	10.776	31.084	2.496	
0.700	0.700	14.594	156.369	33.225	10.715	32.079	2.486	
0.710	0.710	14.920	159.070	34.220	10.662	33.074	2.478	
0.720	0.720	15.255	161.956	35.215	10.616	34.068	2.473	
0.730	0.730	15.601	165.024	36.209	10.578	35.063	2.470	
0.740	0.740	15.957	168.272	37.204	10.546	36.058	2.470	
0.750	0.750	16.322	171.699	38.199	10.519	37.053	2.471	
0.760	0.760	16.698	175.301	39.194	10.499	38.047	2.474	
0.770	0.770	17.083	179.080	40.189	10.483	39.042	2.479	
0.780	0.780	17.478	183.032	41.184	10.472	40.037	2.486	
0.790	0.790	17.884	187.159	42.179	10.465	41.032	2.494	
0.800	0.800	18.299	191.460	43.174	10.463	42.026	2.503	
0.810	0.810	18.724	195.933	44.169	10.464	43.021	2.513	
0.820	0.820	19.160	200.581	45.164	10.469	44.016	2.525	
0.830	0.830	19.605	205.402	46.159	10.477	45.011	2.537	
0.840	0.840	20.060	210.397	47.154	10.489	46.005	2.551	

MANNING'S N = 0.017 SLOPE = 0.040

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.9	4.0	11.6	0.1	7.0	37.5	0.0
2.0	9.5	0.7	5.0	23.5	0.3	8.0	37.6	0.7
3.0	9.6	0.0	6.0	35.5	0.1	9.0	47.0	0.9

WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY
		SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)

0.010	0.010	0.002	0.001	0.341	0.493	0.323	0.014
0.020	0.020	0.006	0.005	0.682	0.783	0.646	0.030
0.030	0.030	0.015	0.015	1.023	1.026	0.969	0.046
0.040	0.040	0.026	0.032	1.363	1.243	1.292	0.064
0.050	0.050	0.040	0.058	1.704	1.442	1.615	0.082
0.060	0.060	0.058	0.095	2.045	1.629	1.938	0.101
0.070	0.070	0.079	0.143	2.386	1.805	2.261	0.121
0.080	0.080	0.103	0.204	2.727	1.973	2.584	0.141
0.090	0.090	0.131	0.279	3.068	2.134	2.907	0.161
0.100	0.100	0.162	0.370	3.409	2.289	3.230	0.182
0.110	0.110	0.195	0.477	3.749	2.439	3.553	0.203
0.120	0.120	0.233	0.601	4.090	2.585	3.876	0.224
0.130	0.130	0.274	0.689	5.042	2.511	4.810	0.228
0.140	0.140	0.330	0.784	6.604	2.373	6.355	0.228
0.150	0.150	0.402	0.942	8.166	2.347	7.900	0.236
0.160	0.160	0.488	1.162	9.729	2.379	9.445	0.248
0.170	0.170	0.590	1.444	11.291	2.445	10.990	0.263
0.180	0.180	0.708	1.792	12.853	2.531	12.535	0.280
0.190	0.190	0.841	2.212	14.416	2.630	14.080	0.298
0.200	0.200	0.990	2.709	15.978	2.737	15.625	0.317
0.210	0.210	1.154	3.287	17.540	2.849	17.170	0.336
0.220	0.220	1.333	3.951	19.102	2.963	18.715	0.357
0.230	0.230	1.528	4.706	20.665	3.080	20.260	0.378
0.240	0.240	1.738	5.558	22.227	3.197	21.805	0.399
0.250	0.250	1.964	6.511	23.789	3.315	23.350	0.421
0.260	0.260	2.205	7.569	25.352	3.432	24.895	0.443
0.270	0.270	2.462	8.738	26.914	3.549	26.440	0.466
0.280	0.280	2.734	10.023	28.476	3.666	27.985	0.489
0.290	0.290	3.014	11.784	28.496	3.910	27.988	0.528
0.300	0.300	3.294	13.658	28.517	4.146	27.991	0.567
0.310	0.310	3.574	15.639	28.537	4.376	27.994	0.608
0.320	0.320	3.854	17.726	28.557	4.600	27.997	0.649
0.330	0.330	4.134	19.914	28.577	4.817	28.000	0.691
0.340	0.340	4.414	22.202	28.598	5.030	28.003	0.734
0.350	0.350	4.694	24.588	28.618	5.238	28.006	0.777
0.360	0.360	4.974	27.069	28.638	5.442	28.009	0.821
0.370	0.370	5.254	29.643	28.658	5.642	28.012	0.865
0.380	0.380	5.534	32.308	28.678	5.838	28.015	0.910
0.390	0.390	5.814	35.063	28.699	6.031	28.018	0.956
0.400	0.400	6.094	37.907	28.719	6.220	28.021	1.002

SOUTH SKY
STREET EGL=0.84
Qact=28.47 CFS
Qcap=11.3 CFS

0.410	0.410	6.375	40.837	28.739	6.406	28.024	1.048
0.420	0.420	6.655	43.852	28.759	6.589	28.027	1.095
0.430	0.430	6.935	46.951	28.780	6.770	28.030	1.143
0.440	0.440	7.216	50.133	28.800	6.948	28.033	1.191
0.450	0.450	7.496	53.396	28.820	7.123	28.036	1.239
0.460	0.460	7.776	56.740	28.840	7.297	28.039	1.288
0.470	0.470	8.057	60.163	28.861	7.467	28.042	1.337
0.480	0.480	8.337	63.664	28.881	7.636	28.045	1.387
0.490	0.490	8.618	67.242	28.901	7.803	28.048	1.437
WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY
	SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)	
0.500	0.500	8.898	70.896	28.921	7.967	28.052	1.487
0.510	0.510	9.179	74.625	28.941	8.130	28.055	1.538
0.520	0.520	9.459	78.429	28.962	8.291	28.058	1.589
0.530	0.530	9.740	82.306	28.982	8.450	28.061	1.641
0.540	0.540	10.020	86.256	29.002	8.608	28.064	1.693
0.550	0.550	10.301	90.278	29.022	8.764	28.067	1.745
0.560	0.560	10.582	94.371	29.043	8.918	28.070	1.797
0.570	0.570	10.862	98.535	29.063	9.071	28.073	1.850
0.580	0.580	11.143	102.768	29.083	9.222	28.076	1.903
0.590	0.590	11.424	107.070	29.103	9.372	28.079	1.956
0.600	0.600	11.705	111.441	29.124	9.521	28.082	2.010
0.610	0.610	11.986	115.879	29.144	9.668	28.085	2.064
0.620	0.620	12.266	120.384	29.164	9.814	28.088	2.118
0.630	0.630	12.547	124.956	29.184	9.959	28.091	2.173
0.640	0.640	12.828	129.594	29.204	10.102	28.094	2.227
0.650	0.650	13.109	134.296	29.225	10.244	28.097	2.282
0.660	0.660	13.390	139.064	29.245	10.385	28.100	2.338
0.670	0.670	13.676	140.872	30.240	10.300	29.095	2.320
0.680	0.680	13.972	142.872	31.235	10.225	30.089	2.306
0.690	0.690	14.278	145.058	32.230	10.160	31.084	2.295
0.700	0.700	14.594	147.426	33.225	10.102	32.079	2.287
0.710	0.710	14.920	149.973	34.220	10.052	33.074	2.282
0.720	0.720	15.255	152.693	35.215	10.009	34.068	2.278
0.730	0.730	15.601	155.586	36.209	9.973	35.063	2.277
0.740	0.740	15.957	158.649	37.204	9.943	36.058	2.278
0.750	0.750	16.322	161.879	38.199	9.918	37.053	2.280
0.760	0.760	16.698	165.276	39.194	9.898	38.047	2.284
0.770	0.770	17.083	168.838	40.189	9.883	39.042	2.289
0.780	0.780	17.478	172.565	41.184	9.873	40.037	2.296
0.790	0.790	17.884	176.455	42.179	9.867	41.032	2.304
0.800	0.800	18.299	180.510	43.174	9.864	42.026	2.314
0.810	0.810	18.724	184.728	44.169	9.866	43.021	2.324
0.820	0.820	19.160	189.109	45.164	9.870	44.016	2.335
0.830	0.830	19.605	193.655	46.159	9.878	45.011	2.348
0.840	0.840	20.060	198.364	47.154	9.889	46.005	2.361

MANNING'S N = 0.017 SLOPE = 0.045

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.9	5.0	28.0	0.0	9.0	88.0	0.0
2.0	12.4	0.8	6.0	30.0	0.1	10.0	88.6	0.7
3.0	20.4	0.7	7.0	49.0	0.7	11.0	91.0	0.7
4.0	27.4	0.7	8.0	86.0	0.1	12.0	98.0	0.9

WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
FT.	INC	AREA	RATE	PER	VEL	PLUS	ENERGY
		SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)

0.010	0.010	0.003	0.001	0.510	0.536	0.501	0.014
0.020	0.020	0.010	0.009	1.019	0.850	1.001	0.031
0.030	0.030	0.023	0.025	1.529	1.114	1.502	0.049
0.040	0.040	0.040	0.054	2.039	1.350	2.002	0.068
0.050	0.050	0.063	0.098	2.548	1.566	2.503	0.088
0.060	0.060	0.090	0.159	3.058	1.769	3.004	0.109
0.070	0.070	0.123	0.240	3.568	1.960	3.504	0.130
0.080	0.080	0.160	0.343	4.078	2.143	4.005	0.151
0.090	0.090	0.204	0.454	4.901	2.226	4.819	0.167
0.100	0.100	0.257	0.592	5.859	2.305	5.768	0.183
0.110	0.110	0.319	0.769	6.817	2.409	6.717	0.200
0.120	0.120	0.391	0.988	7.774	2.527	7.666	0.219
0.130	0.130	0.473	1.253	8.732	2.653	8.615	0.239
0.140	0.140	0.563	1.568	9.690	2.783	9.564	0.260
0.150	0.150	0.664	1.935	10.648	2.915	10.512	0.282
0.160	0.160	0.774	2.358	11.606	3.049	11.461	0.305
0.170	0.170	0.893	2.841	12.564	3.182	12.410	0.327
0.180	0.180	1.022	3.387	13.521	3.315	13.359	0.351
0.190	0.190	1.160	3.998	14.479	3.446	14.308	0.375
0.200	0.200	1.308	4.679	15.437	3.577	15.257	0.399
0.210	0.210	1.465	5.432	16.395	3.707	16.206	0.424
0.220	0.220	1.632	6.259	17.353	3.835	17.155	0.449
0.230	0.230	1.808	7.165	18.310	3.962	18.104	0.474
0.240	0.240	1.994	8.151	19.268	4.088	19.052	0.500
0.250	0.250	2.189	9.221	20.226	4.212	20.001	0.526
0.260	0.260	2.394	10.378	21.184	4.335	20.950	0.552
0.270	0.270	2.608	11.624	22.142	4.456	21.899	0.579
0.280	0.280	2.832	12.961	23.100	4.576	22.848	0.606
0.290	0.290	3.065	14.393	24.057	4.695	23.797	0.633
0.300	0.300	3.308	15.923	25.015	4.813	24.746	0.660
0.310	0.310	3.560	17.551	25.973	4.930	25.695	0.688
0.320	0.320	3.822	19.283	26.931	5.045	26.644	0.716
0.330	0.330	4.093	21.119	27.889	5.159	27.592	0.744
0.340	0.340	4.374	23.062	28.847	5.273	28.541	0.772
0.350	0.350	4.664	25.115	29.804	5.385	29.490	0.801
0.360	0.360	4.964	27.280	30.762	5.496	30.439	0.830
0.370	0.370	5.273	29.559	31.720	5.606	31.388	0.859
0.380	0.380	5.591	31.956	32.678	5.715	32.337	0.888
0.390	0.390	5.920	34.471	33.636	5.823	33.286	0.917

WOODMONT
EGL @ 0.84
Qact = 28.4
Qreq = 13.11

0.400	0.400	6.257	37.109	34.593	5.931	34.235	0.947
0.410	0.410	6.604	39.870	35.551	6.037	35.184	0.977
0.420	0.420	6.961	42.757	36.509	6.143	36.132	1.007
0.430	0.430	7.327	45.773	37.467	6.247	37.081	1.037
0.440	0.440	7.702	48.920	38.425	6.351	38.030	1.067
0.450	0.450	8.088	52.199	39.383	6.454	38.979	1.098
0.460	0.460	8.482	55.614	40.340	6.557	39.928	1.129
0.470	0.470	8.886	59.166	41.298	6.658	40.877	1.160
0.480	0.480	9.300	62.857	42.256	6.759	41.826	1.191
WSEL	DEPTH	FLOW	FLOW	WETTED	FLOW	TOPWID	TOTAL
INC	AREA	RATE	PER	VEL	PLUS	ENERGY	
FT.	SQ.FT.	(CFS)	(FT)	(FPS)	OBSTRUCTIONS	(FT)	
0.490	0.490	9.723	66.690	43.214	6.859	42.775	1.222
0.500	0.500	10.155	70.667	44.172	6.959	43.724	1.253
0.510	0.510	10.597	74.790	45.130	7.058	44.672	1.285
0.520	0.520	11.049	79.061	46.087	7.156	45.621	1.316
0.530	0.530	11.509	83.482	47.045	7.253	46.570	1.348
0.540	0.540	11.980	88.055	48.003	7.350	47.519	1.380
0.550	0.550	12.460	92.782	48.961	7.447	48.468	1.412
0.560	0.560	12.949	97.666	49.919	7.542	49.417	1.445
0.570	0.570	13.448	102.708	50.876	7.637	50.366	1.477
0.580	0.580	13.957	107.911	51.834	7.732	51.315	1.510
0.590	0.590	14.474	113.275	52.792	7.826	52.264	1.543
0.600	0.600	15.002	118.805	53.750	7.919	53.212	1.575
0.610	0.610	15.539	124.500	54.708	8.012	54.161	1.609
0.620	0.620	16.085	130.364	55.666	8.105	55.110	1.642
0.630	0.630	16.641	136.398	56.623	8.197	56.059	1.675
0.640	0.640	17.206	142.605	57.581	8.288	57.008	1.708
0.650	0.650	17.781	148.985	58.539	8.379	57.957	1.742
0.660	0.660	18.365	155.542	59.497	8.469	58.906	1.776
0.670	0.670	18.959	162.277	60.455	8.559	59.855	1.810
0.680	0.680	19.571	166.205	63.146	8.492	62.545	1.802
0.690	0.690	20.209	171.326	65.371	8.478	64.771	1.808
0.700	0.700	20.865	177.529	67.132	8.508	66.531	1.826
0.710	0.710	21.540	183.988	68.893	8.542	68.292	1.845
0.720	0.720	22.230	191.096	70.428	8.596	69.827	1.869
0.730	0.730	22.936	198.443	71.963	8.652	71.362	1.894
0.740	0.740	23.658	205.734	73.665	8.696	73.064	1.916
0.750	0.750	24.397	213.285	75.367	8.742	74.765	1.939
0.760	0.760	25.154	221.100	77.069	8.790	76.467	1.962
0.770	0.770	25.927	229.181	78.771	8.840	78.169	1.985
0.780	0.780	26.717	237.532	80.473	8.891	79.871	2.009
0.790	0.790	27.524	246.154	82.175	8.943	81.572	2.034
0.800	0.800	28.347	255.460	83.668	9.012	83.066	2.063
0.810	0.810	29.185	265.027	85.162	9.081	84.559	2.093
0.820	0.820	30.039	274.859	86.655	9.150	86.053	2.122
0.830	0.830	30.907	284.958	88.149	9.220	87.546	2.152
0.840	0.840	31.789	295.328	89.643	9.290	89.039	2.182
0.850	0.850	32.687	305.971	91.136	9.361	90.533	2.213
0.860	0.860	33.600	316.891	92.630	9.431	92.026	2.244
0.870	0.870	34.528	328.090	94.123	9.502	93.520	2.274
0.880	0.880	35.470	339.572	95.617	9.573	95.013	2.306
0.890	0.890	36.428	351.338	97.111	9.645	96.507	2.337

APPENDIX D
ORIGINAL DMP APPROVAL LETTER

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



July 14, 2014

Brian Patterson, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: Valle Prado Units 1&2 - Tracts 9 and OS-3 (File: C09D011)
Drainage Report for Valle Prado at the Trails Units 3A,
Engineer's Stamp Date 6-24-2014
Revised Grading and Drainage Plans, Engineer's Stamp Date 7-10-2014
Supplemental Calculations, Engineer's Stamp Date 7-10-2014
Revised Inlet and Storm Drain Network Map, Received Stamp Date 7-10-2014
Revised Preliminary Plat, Received Stamp Date 7-10-2014

Dear Mr. Patterson:

Based upon the information provided in your submittals received 6-24-14 and 7-10-14, the above referenced submittals are approved for Grading Permit with the following exceptions:

PO Box 1293

On the G & D plans:

- 1) A cap should be shown on the Woodmont SD, east of South Sky Street on the Grading and Drainage plans, or at least on the As-builts.
- 2) The temporary pond should note that the Volume shown is for the developed flows only, and the undeveloped discharge calculations are part of another project.
- 3) On Sheet 1 of Grading and Drainage Plan, is that a wall between Lots 17 and 18?

Albuquerque

On the Inlet and SD Map:

- 4) A typo on the Inlet and SD Map shows Inlet #6 as "IN4"
- 5) Verify that the capacity for SDP6 is 269.5 cfs. It seems relatively high.
- 6) On the Fully Developed Basin Map, the basin boundary is missing between Basin 1 and 3
- 7) In the Drainage Report, page 2 has a typo in last paragraph and should be "...Basin 5 (3.1cfs), ..."
- 8) Resubmit the INROADS Storm Drain Network File(Appendix C), to be reflective of the of the current SD Map.

New Mexico 87103

www.cabq.gov

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressee via Email, Tim Simms, Monica Ortiz

APPENDIX E

FIRST FLUSH

Basins 1, 2, 3 & 5, Offsite Basin 3, Offsite Basin 4, Offsite Basin Well and Future Basins 1, 2 & 3 all drain to the proposed storm drain network located in South Sky Street, Red Bloom Road and Sandmark Road. This storm drain network combines with flows from the existing storm drain network in Woodmont Avenue and discharges into Pond E. Pond E has an available storage volume capacity of 6.4 ac-ft. and a maximum developed volume of 5.9 ac-ft. The first flush retention for the upstream basins that enter Pond E was calculated to need a volume of 1.3 ac-ft. This was done by calculating the cumulative impervious land treatment of the upstream basins (Basins E1.1, E1.2, E.2, E4 and E6 from the DMP as well as the basins listed in the beginning of the paragraph) for a %D of 47%. This is multiplied by 0.44' and then the corresponding area of 75.6 ac, which results in 1.3 ac-ft. Due to the existing infrastructure constraints, Pond E is able to achieve 0.9 ac-ft. of first flush volume, while having a maximum discharge of $Q=21.2$ cfs which is below that allowable discharge of $Q=22.3$ cfs as defined in the DMP. The maximum discharge from Pond E is accomplished by using a standpipe in the pond to control the outflow. Due to all of the upstream flows being conveyed through Pond E, the existing 12" orifice plate located at AP-E per the DMP that currently limits the developed flows downstream is not needed and shall be removed.

A portion of Basin 4 and Future Basin 4 are intercepted by inlets located in Two Rock Road. These flows ($Q=6.2$ cfs) are conveyed north to an existing temporary pond. A temporary berm will be placed on the south side of the temporary pond to increase its capacity. In the future, this storm drain network will tie to an existing storm drain network located in Treeline Avenue. The remaining flows from Basin 4 and Future Basin 4 combine with flows from Offsite Basin 2 and enter a proposed retention pond that is located in Offsite Basin 2, just southeast of Two Rock Road.

In the interim condition, Valle Prado Unit 1, desiltation ponds will be placed just upstream of Red Bloom Road, Sandmark Road and South Sky St. These temporary ponds have been designed as a desiltation pond which will remove sedimentation before they enter the downstream streets.

V. CONCLUSION

This report provides a detailed study of the developed runoff and street capacities for the proposed Valle Prado Units 1 and 2 at the Trails Unit 3A Subdivision. Included is the preliminary plat, basin map, grading plan, and all necessary hydrologic and hydraulic analyses. The proposed drainage plan for Valle Prado Units 1 and 2 can be safely conveyed by the existing and proposed improvements in this drainage plan. This drainage

April 23, 2015

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

Ms. Rita Harmon
Hydrology Section
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87102

Re: Grading and Drainage Certification, Valle Prado Unit 1
DRB Case No. 1004404, (C09/D011)

Dear Rita:

We are submitting the final grading and drainage certification for Valle Prado Unit 1. Enclosed for your review is the approved grading and drainage plan dated 11/19/14, with as-built elevations for Unit 1 and Pond E. The Unit 1 lots have been graded, and curb and gutter, pavement and storm drain improvements have been constructed. Grading of the Unit 2 lots and public infrastructure has not been completed. The Unit 2 lots will be certified once grading and construction of improvements has been completed.

The Valle Prado Addendum #2 AHYMO analysis, which removed offsite Pond 2, dated 11/19/14, has been updated with a revised stage-storage-discharge curve for Pond E based on the as-built grades for Pond E. The table below shows a comparison of the Pond E operations from Addendum #2 and the as-built condition.

POND E SUMMARY		
Description	Addendum #2	As-built Condition
Peak Inflow, cfs	180.6	182.7
Time to Peak, hrs	1.5	1.5
Peak Outflow, cfs	20.9	21.3
Time to Peak, hrs	2.5	2.5
Max Water Surface, feet	5451.57	5451.67
Storage Volume, ac-ft	6.59	6.53
Peak Flow AP-E, cfs	21.8	22.3
Time to Peak, hrs	2.0	2.0

The as-built Pond E analysis results in a peak discharge at Analysis Point E of 22.3 cfs, which matches the allowed discharge in the Trails Units 1-3 DMP of 22.3 cfs. The results of this analysis show that Pond E functions per the intent of the design in the Valle Prado Units 1 and 2 Drainage Report Addendum #2, dated 11/19/14 and meets the requirements of the Trails DMP.

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

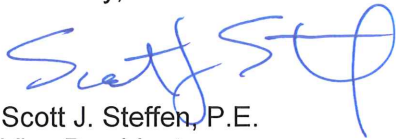
Rita Harmon, P.E.
Planning Department
April 23, 2015
Page 2

The final certification was originally submitted to City Hydrology on February 24, 2015. Curtis Cherne provided a comment per the attached email, dated February 27, 2015, regarding the Pond E rip-rap. In response to the comment, additional rip-rap, along with a swale directing water from the gas easement to Pond E, have been constructed and are shown on the as-built grading plan.

After reviewing the as-built elevations and visiting the site on 4/23/15, it is my belief that the Valle Prado Unit 1 subdivision has been graded in substantial compliance with the approved grading plan and will drain in compliance with the approved drainage plan.

Your review and approval is requested for Release of Financial Guaranty for Valle Prado Unit 1. I appreciate your time and consideration. If you have questions or require additional information, please contact me at 823-1000.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott J. Steffen".

Scott J. Steffen, P.E.
Vice President
Community Development & Planning

Enclosure

cc: Rick Beltramo, Wexford Construction

APPENDIX F: BASIN LAND TREATMENTS

BASIN SUMMARY FOR TRACT 9 @ THE TRAILS UNIT 3A (VALLE PRADO)

BASIN	AREA		UNITS		% LAND TREATMENT					100YR
I.D.	(AC)		#		A	B	C	D		6 HR
BASIN 1	3.2	0.0050000	17		0.0%	24.0%	24.0%	52.0%		8.9
BASIN 2	2.9	0.0045313	14		0.0%	26.0%	26.0%	48.0%		7.9
BASIN 3	4.4	0.0068750	15		0.0%	31.0%	31.0%	38.0%		11.2
BASIN 4	2.3	0.0035938	11		0.0%	26.0%	26.0%	48.0%		6.3
BASIN 5	1.2	0.0018750	4		0.0%	31.5%	31.5%	37.0%		3.1
BASIN A	6.8	0.0106719	40		0.0%	22.1%	22.1%	55.8%		19.5
BASIN B	4.0	0.0062500	25		0.0%	20.7%	20.7%	58.7%		11.6
BASIN C	4.9	0.0076563	28		0.0%	22.6%	22.6%	54.8%		15.7
BASIN 6	3.1	0.0048438	12		0.0%	29.5%	29.5%	41.0%		8.1
OFFSITE BASIN 2	0.6	0.0009375			80.0%	20.0%	0.0%	0.0%		0.6
OFFSITE BASIN 3	0.7	0.0010938			76.0%	24.0%	0.0%	0.0%		0.7
OFFSITE BASIN 4	0.9	0.0014063			80.0%	20.0%	0.0%	0.0%		0.9
OFFSITE BASIN 5	2.1	0.0032813			95.0%	5.0%	0.0%	0.0%		2.0
OFFSITE BASIN WELL	1.0	0.0015625			0.0%	40.0%	40.0%	20.0%		2.3
OFFSITE BASIN 6	0.9	0.0014063			0.0%	0.0%	100.0%	90.0%		2.3
INTERIM BASIN 1	2.6	0.0040625			46.2%	11.2%	42.8%	0.0%		5.3
INTERIM BASIN 2	1.1	0.0017188			4.6%	0.0%	65.4%	0.0%		3.1
OFFSITE BASIN 7	1.1	0.0017813			0.0%	60.1%	39.9%	0.0%		2.7
*BASIN E4	3.7	0.0057813								13.1
TOTAL	39.0		166							125.3

* PER DMP

APPENDIX G:
TEMPORARY POND CALCULATIONS

Temp Pond								
			AVG.			TOTAL		TOTAL
ELEV.	AREA	AREA	AREA	HEIGHT	VOLUME	VOLUME		VOLUME
(FT)	SF	(AC)	(AC)	(FT)	(AC-FT)	(AC-FT)		CFS
9	446.9	0.010				0.000000		
			0.018	0.5	0.009			
9.5	1163.7	0.027				0.009244		
			0.037	0.5	0.019			
10	2081	0.048				0.027866		
			0.094	1	0.094			
11	6121	0.141				0.122012		
			0.168	1	0.168			
12	8480.9	0.195				0.289618		
			0.223	1	0.223			
13	10941	0.251				0.512551		22326.73

which is greater than the required volume of 22026 CF

Retention Pond Volume Calculations for Valle Prado Southwest Pond

NOTE: Blue shaded cells require user input, all other cells should not be edited.

ASSUMPTIONS:

1. Area less than 40 acres (simplified hydrograph method).
2. 100-year, 6-hour storm event

Peak Flow per Acre - DPM Section 22.2 Table A-9

Zone	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.7
3	1.87	2.6	3.45	5.02
4	2.2	2.92	3.73	5.25

Basin Name :

Choose Zone (1 - 4)

Basin Area = (acres)

Exist Conditions				Proposed Conditions			
Treatment	Percentage	Area	Q (cfs)	Treatment	Percentage	Area	Q (cfs)
A	100.0%	2.60	3.36	A	46.2%	1.20	1.55
B	0.0%	0.00	0.00	B	11.2%	0.29	0.59
C	0.0%	0.00	0.00	C	42.7%	1.11	3.19
D	0.0%	0.00	0.00	D	0.0%	0.00	0.00
Q Peak - exist.=			3.36	Peak Q Developed=			5.33

Use my calculated exist cond. flow as the peak controlled discharge (1 = yes, or N) ??

N

If No, what is the maximum allowable discharge ?

0

Excess Precipitation - DPM Section 22.2 Table A-8

Zone	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.8	1.08	1.46	2.64

Determine Developed E (avg excess precipitation for the developed basin)

$$\%A \times E = 0.20$$

$$\%B \times E = 0.07$$

$$\%C \times E = 0.42$$

$$\%D \times E = 0.00$$

$$\text{Avg E(in)} = 0.70$$

Determine Tb (hours)

$$T_b = 0.721$$

Determine Tc (Note: Tc is assumed to be 0.2 hours, this should be checked using DPM 22.2.B.2)

$$T_c = 0.2$$

Determine Tp and Duration of Peak (hours)

$$T_p = 0.273333$$

$$\text{Peak Duration} = 0$$

Compute the required retention volume using the simple hydrograph, Figure A-3 in DPM Section 22.2

$$\text{Time to Control Q (hrs)} = 0.000$$

$$\text{Time to end of Control Q (hrs)} = 0.720959$$

$$\text{Duration of Control Q (hrs)} = 0.721$$

$$\text{Required Detention Volume (CF)} = 6916.26$$

$$0.158775545$$

Convert from 100YR - 6HR to 100YR - 10DAY EQUATION A-9 from DPM Chapter 22

$$V_{10\text{days}} = V_{360} + A_D * (P_{10\text{DAYS}} - P_{360}) / 12 \text{ in/ft}$$

$$V_{10\text{days}} = 6916.26 \text{ CF}$$

Retention Pond Volume Calculations for Valle Prado Northeast Pond

NOTE: Blue shaded cells require user input, all other cells should not be edited.

ASSUMPTIONS:

1. Area less than 40 acres (simplified hydrograph method).
2. 100-year, 6-hour storm event

Peak Flow per Acre - DPM Section 22.2 Table A-9

Zone	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.7
3	1.87	2.6	3.45	5.02
4	2.2	2.92	3.73	5.25

Basin Name :

Choose Zone (1 - 4)

Basin Area = (acres)

Exist Conditions				Proposed Conditions			
Treatment	Percentage	Area	Q (cfs)	Treatment	Percentage	Area	Q (cfs)
A	100.0%	1.12	1.44	A	4.6%	0.05	0.07
B	0.0%	0.00	0.00	B	0.0%	0.00	0.00
C	0.0%	0.00	0.00	C	95.4%	1.07	3.07
D	0.0%	0.00	0.00	D	0.0%	0.00	0.00
Q Peak - exist.=			1.44	Peak Q Developed=			3.13

Use my calculated exist cond. flow as the peak controlled discharge (1 = yes, or N) ??

N

If No, what is the maximum allowable discharge ?

0

Excess Precipitation - DPM Section 22.2 Table A-8

Zone	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.8	1.08	1.46	2.64

Determine Developed E (avg excess precipitation for the developed basin)

$$\%A \times E = 0.02$$

$$\%B \times E = 0.00$$

$$\%C \times E = 0.94$$

$$\%D \times E = 0.00$$

$$\text{Avg } E(\text{in}) = 0.96$$

Determine Tb (hours)

$$T_b = 0.727$$

Determine Tc (Note: Tc is assumed to be 0.2 hours, this should be checked using DPM 22.2.B.2)

$$T_c = 0.2$$

Determine Tp and Duration of Peak (hours)

$$T_p = 0.273333$$

$$\text{Peak Duration} = 0$$

Compute the required retention volume using the simple hydrograph, Figure A-3 in DPM Section 22.2

$$\text{Time to Control } Q \text{ (hrs)} = 0.000$$

$$\text{Time to end of Control } Q \text{ (hrs)} = 0.726631$$

$$\text{Duration of Control } Q \text{ (hrs)} = 0.727$$

Required Detention Volume (CF) = 4096.54

0.094043651

Convert from 100YR - 6HR to 100YR - 10DAY EQUATION A-9 from DPM Chapter 22

$$V_{10\text{days}} = V_{360} + A_D * (P_{10\text{DAYS}} - P_{360}) / 12 \text{ in/ft}$$

$$V_{10\text{days}} = 4096.54 \text{ CF}$$

EXHIBITS

**EXHIBIT A: ORIGINAL FULLY DEVELOPED BASIN
MAP**

EXHIBIT B: PROPOSED BASIN MAP

EXHIBIT C: PHASE 4 GRADING PLAN

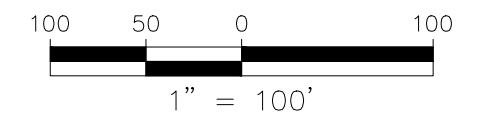
EXHIBIT D: PHASE 5 GRADING PLAN

EXHIBIT E: BULK LAND PLAT

EXHIBIT A

ORIGINAL FULLY DEVELOPED BASIN MAP

VALLE PRADO FULLY DEVELOPED BASIN MAP



LEGEND

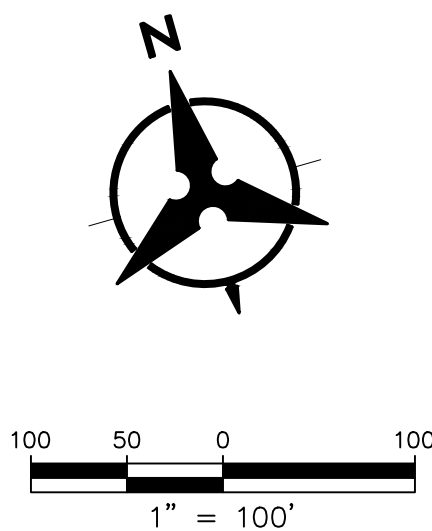
- BASIN BOUNDARY
- FLOW ARROW
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- TEMPORARY BERM
- DMP BASIN BOUNDARY

BASIN I.D.	AREA (AC)	Q (100YR-6HR) CFS
BASIN 1	3.2	8.9
BASIN 2	2.9	7.9
BASIN 3	4.4	11.2
BASIN 4	2.3	6.3
BASIN 5	1.2	3.1
BASIN A	6.8	19.5
BASIN B	4.9	13.7
BASIN C	3.8	11.3
FUTURE BASIN 4	3.1	8.1
OFFSITE BASIN 2	0.6	0.6
OFFSITE BASIN 3	0.7	0.7
OFFSITE BASIN 4	0.9	0.9
OFFSITE BASIN 5	2.1	2.0
OFFSITE BASIN WELL	1.0	2.3
OFFSITE BASIN 6	0.9	2.3
TOTAL	38.8	98.8



EXHIBIT B
PROPOSED BASIN MAP

VALLE PRADO
FULLY DEVELOPED BASIN MAP



LEGEND

- BASIN BOUNDARY
- FLOW ARROW
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- TEMPORARY BERM
- DMP BASIN BOUNDARY
- INTERIM BASIN BOUNDARY

FOR TRACT 9 @ THE TRAILS UNIT 3

BASIN I.D.	AREA (AC)	100YR 6 HR
BASIN 1	3.2	8.9
BASIN 2	2.9	7.9
BASIN 3	4.4	11.2
BASIN 4	2.3	6.3
BASIN 5	1.2	3.1
BASIN A	6.8	19.5
BASIN B	4.0	11.6
BASIN C	4.9	15.7
BASIN 6	3.1	8.1
OFFSITE BASIN 2	0.6	0.6
OFFSITE BASIN 3	0.7	0.7
OFFSITE BASIN 4	0.9	0.9
OFFSITE BASIN 5	2.1	2.0
OFFSITE BASIN WELL	1.0	2.3
OFFSITE BASIN 6	0.9	2.3
INTERIM BASIN 1	2.6	5.3
INTERIM BASIN 2	1.1	3.1
OFFSITE BASIN 7	1.1	2.7
*BASIN E4	3.7	13.1
TOTAL	39.0	125.3
* PER DMP		

EXHIBIT C
PHASE 4 GRADING PLAN

ALL SLOPES ON HOA TRACTS TO BE STABILIZED
BY NATIVE SEED AND MULCH PER STD SPEC 1012
WITH GRAVEL MULCH OR BETTER.



NOTE: DASHED LINES IN TYP. SIDE LOT LINE SECTIONS REPRESENT THE FINAL CONDITION AFTER THE GARDEN, STEM, AND PRIVACY WALLS HAVE BEEN CONSTRUCTED. THE INTERIM CONDITION, WHICH IS TO BE CONSTRUCTED BY THE GRADING CONTRACTOR AND CERTIFIED BY THE ENGINEER, IS REPRESENTED BY THE SOLID LINES. RETAINING WALLS WILL BE CONSTRUCTED PRIOR TO GRADING CERTIFICATION.



TYPICAL RETAINING WALL NOMENCLATURE
NOT TO SCALE

(RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL. HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT AND DESIGN REGULATIONS FOR WALLS, FENCES, AND RETAINING WALLS.



TO SET SPOT ② - ADD 0.17' TO SPOT ①
TO SET SPOT ③ - MULTIPLY D1 BY 1.0% AND ADD TO SPOT ②
TO SET SPOT ④ - MULTIPLY D2 BY 1.0% AND ADD TO SPOT ③
TO SET SPOT ⑤ - ADD 0.2' TO SPOT ④

BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE ELEVATION.
SEE GRADING PLANS FOR EXACT ELEVATIONS.
CONTRACTOR SHALL CONSTRUCT TEMPORARY DESILTATION BASIN AT EACH LOT.

1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.

2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.

5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.

7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).

10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.

11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT. ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.

5. PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.

6. EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

8. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.

9. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

10. PAVING AND ROADWAY GRADES SHALL BE $\pm 0.1'$ FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE $\pm 0.05'$ FROM BUILDING PLAN ELEVATIONS.

11. ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.

12. RETAINING WALLS ARE REQUIRED BETWEEN LOTS THAT HAVE PAD ELEVATIONS THAT ARE GREATER THAN 2' DIFFERENCE.



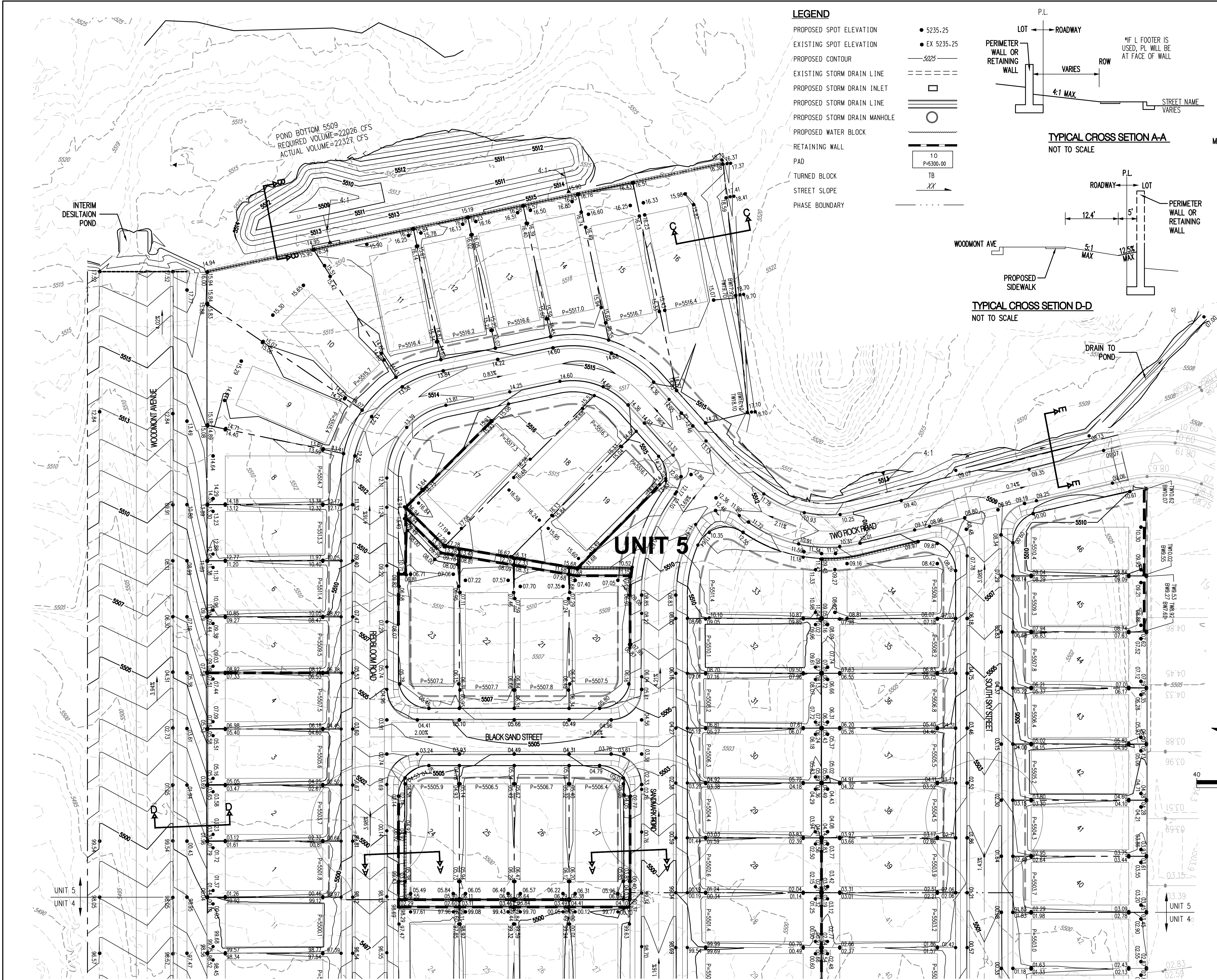
1. CONTRACTOR IS TO MASS GRADE ROADS TO 2' BEYOND FUTURE CURB. EXCESS FROM DRY UTILITY TRENCH IS TO BE USED TO BACK FILL BEHIND CURB.

2. FRONT YARDS ARE TO BE GRADED AS SHOWN ON THIS DETAIL FOR FINAL GRADING AND CERTIFICATION THIS DETAIL TO BE COORDINATED WITH.

3. HOME BUILDER TO BRING FRONT YARD TO ULTIMATE FRONT YARD GRADES AFTER HOME CONSTRUCTION IS COMPLETED. SEE ULTIMATE FRONT YARD GRADING DETAIL ON THIS SHEET.

[illegible]

EXHIBIT D
PHASE 5 GRADING PLAN



P:\20190414\CDP\Plans\General\Units5\20190414_GradingPlan_Unit5.dwg
March 08, 2019 - 2:16pm

AS-BUILT INFORMATION

CONTRACTOR

DATE

WORKS BY

DATE

INSPECTOR'S

DATE

ACCEPTANCE BY

DATE

VERIFICATION BY

DATE

DRAWING BY

DATE

REVISIONS

DATE

RECORDED BY

DATE

NO.

BENCH MARKS

ACS MONUMENT STAMPED "UNION"

GEOGRAPHIC POSITION (NAD 83)

N.M. STATE PLANE COORDINATES (CENTRAL ZONE)

N = 1,523,503.475 E = 1,493,655.030

GROUND-TO-GRID FACTOR = 0.999664360

$\Delta x = -00'16''58.96''$

NAVD 1988 ELEVATION = 5524.950

NO.

SURVEY INFORMATION

FIELD NOTES

DATE

BY

NO.

ENGINEER'S SEAL



REMARKS

REVISIONS

DESIGN

By

No.

Date

DATE: 01/2019

Drawn By: AR

Checked By: JPM

DATE: 01/2019

DATE: 01/2019

CITY OF ALBUQUERQUE

PUBLIC WORKS DEPARTMENT

VALLE PRADO

UNIT 5

GRADING AND DRAINAGE PLAN

Design Review Committee

City Engineer Approval

City Project No.

Zone Map No.

Sheet

Of

Mo./Day/Yr.

Mo./Day/Yr.

1

2

City Project No.

Zone Map No.

Sheet

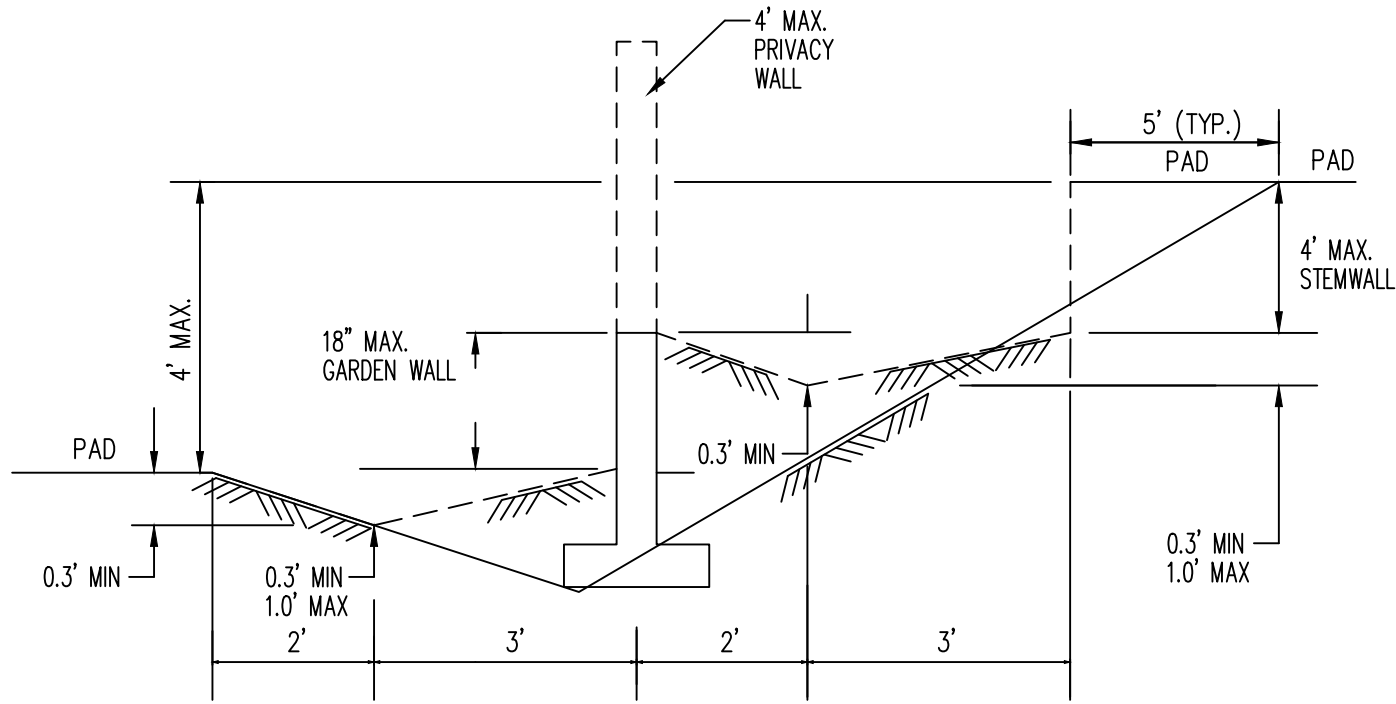
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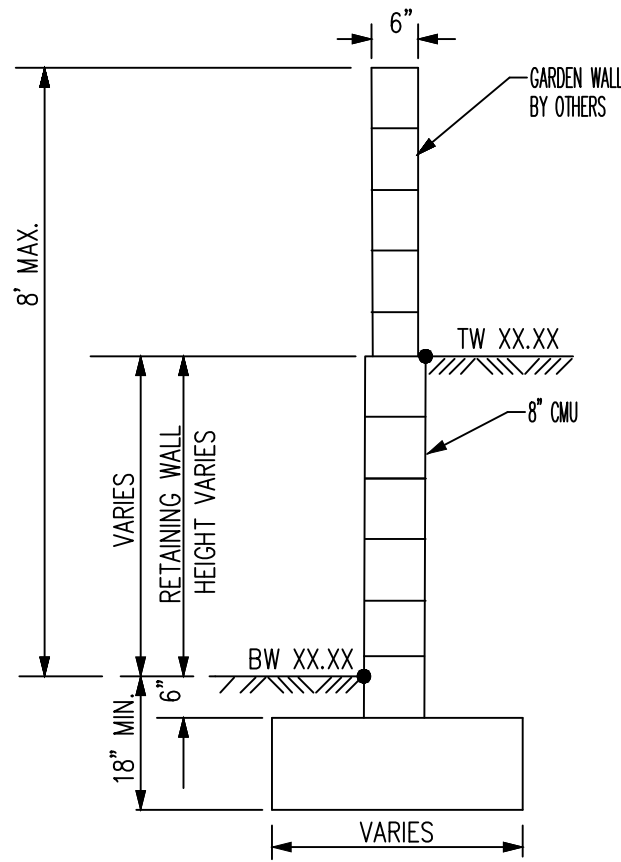
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NOTE
ALL SLOPES ON HOA TRACTS TO BE STABILIZED
BY NATIVE SEED AND MULCH PER STD SPEC 1012
WITH GRAVEL MULCH OR BETTER.



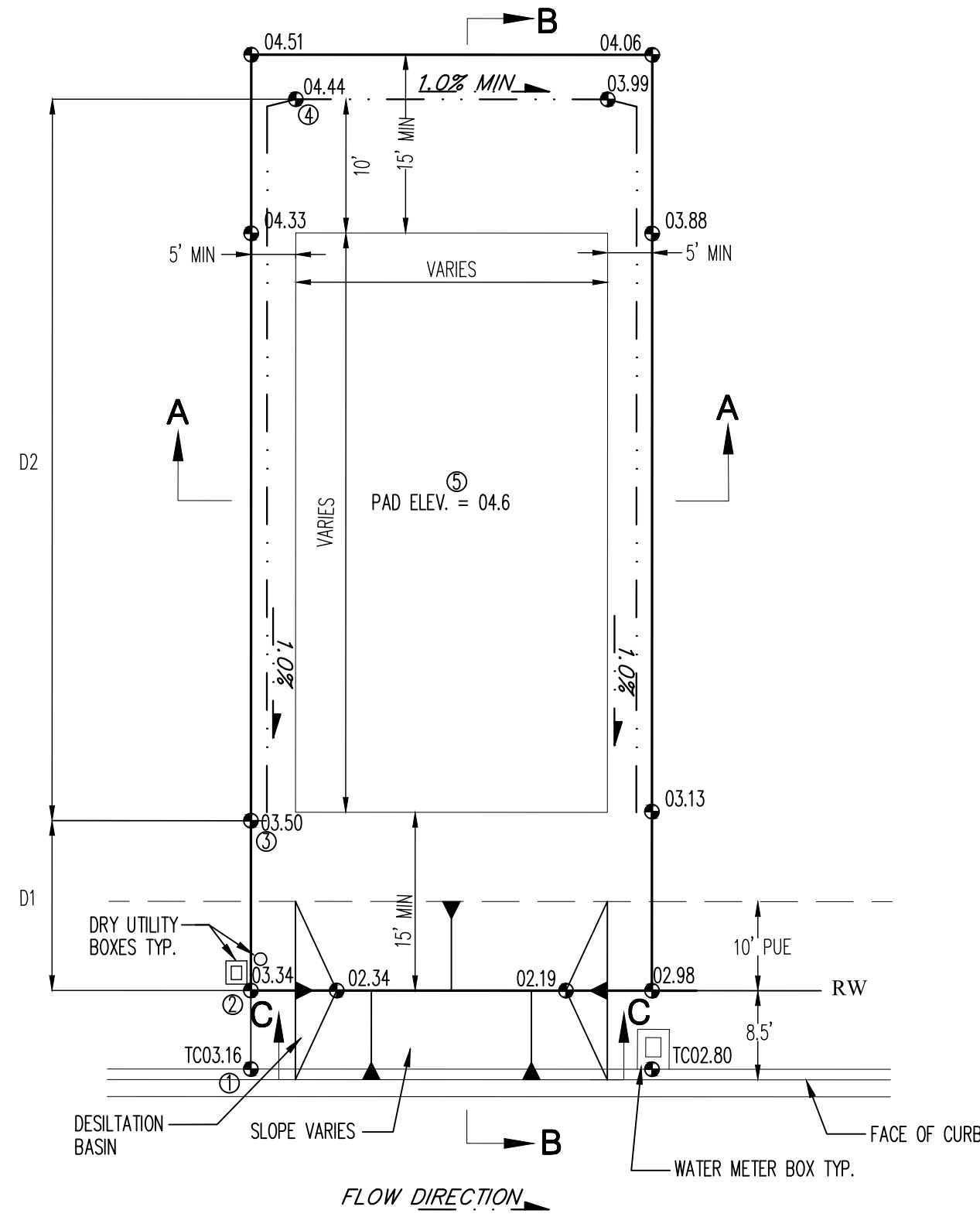
TYPICAL SIDE LOT LINE SECTION
NOT TO SCALE

NOTE: DASHED LINES IN TYP. SIDE LOT
LINE SECTIONS REPRESENT THE FINAL
CONDITION AFTER THE GARDEN, STEM,
AND PRIVACY WALLS HAVE BEEN CONSTRUCTED.
THE INTERIM CONDITION, WHICH IS TO BE
CONSTRUCTED BY THE GRADING CONTRACTOR
AND CERTIFIED BY THE ENGINEER, IS
REPRESENTED BY THE SOLID LINES.
RETAINING WALLS WILL BE CONSTRUCTED
PRIOR TO GRADING CERTIFICATION.



TYPICAL RETAINING WALL NOMENCLATURE
NOT TO SCALE

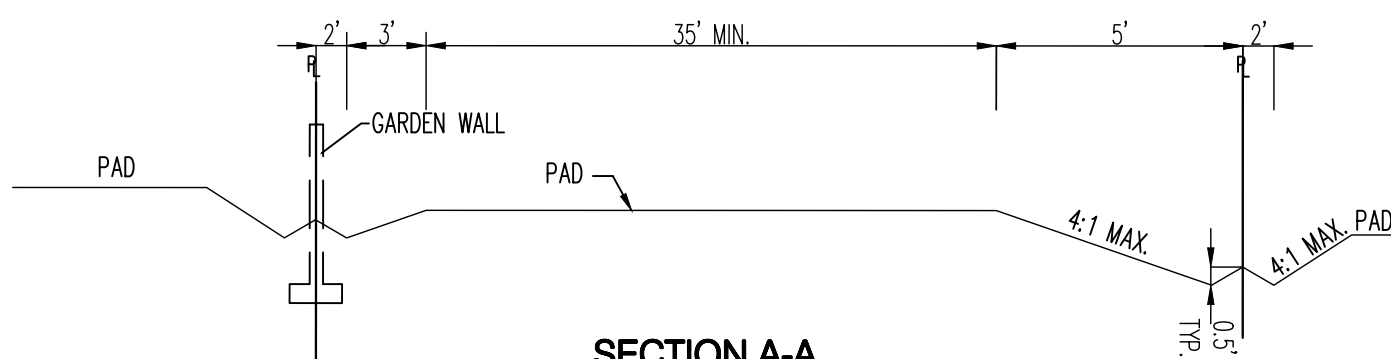
(RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN
FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL.)
HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE
ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT
AND DESIGN REGULATIONS FOR WALLS, FENCES, AND
RETAINING WALLS.



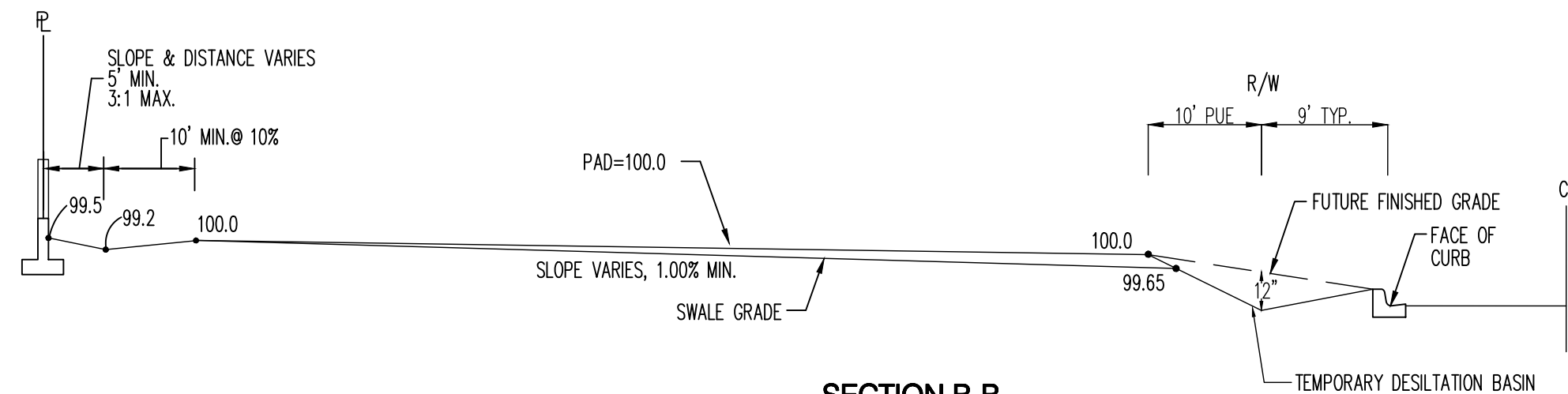
TYPICAL LOT GRADE DETAIL
WITH DESILTATION BASIN FOR SEDIMENTATION CONTROL
NOT TO SCALE

TO SET SPOT ② - ADD 0.17' TO SPOT ①
TO SET SPOT ③ - MULTIPLY D1 BY 1.0% AND ADD TO SPOT ②
TO SET SPOT ④ - MULTIPLY D2 BY 1.0% AND ADD TO SPOT ③
TO SET SPOT ⑤ - ADD 0.2' TO SPOT ④

BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE ELEVATION.
SEE GRADING PLANS FOR EXACT ELEVATIONS.
CONTRACTOR SHALL CONSTRUCT TEMPORARY DESILTATION BASIN AT EACH LOT.



SECTION A-A
TYPICAL SIDE YARD SWALE
NOT TO SCALE



SECTION B-B
NOT TO SCALE

NOTE:

1. CONTRACTOR IS TO MASS GRADE ROADS TO 2' BEYOND FUTURE CURB.
EXCESS FROM DRY UTILITY TRENCH IS TO BE USED TO BACK FILL BEHIND
CURB.

2. FRONT YARDS ARE TO BE GRADED AS SHOWN ON THIS DETAIL FOR FINAL
GRADING AND CERTIFICATION THIS DETAIL TO BE COORDINATED WITH.

3. HOME BUILDER TO BRING FRONT YARD TO ULTIMATE FRONT YARD GRADES
AFTER HOME CONSTRUCTION IS COMPLETED. SEE ULTIMATE FRONT YARD
GRADING DETAIL ON THIS SHEET.

GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
- THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
- ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
- CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
- ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
- THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
- ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
- THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

GRADING NOTES

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
- ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT. ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
- TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
- EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
- THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
- A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
- PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATIONS.
- ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.
- RETAINING WALLS ARE REQUIRED BETWEEN LOTS THAT HAVE PAD ELEVATIONS THAT ARE GREATER THAN 2' DIFFERENCE.

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REMARKS		REVISIONS		DESIGN		DATE		DATE		DATE	
CONTRACTOR	DATE	ACS MONUMENT STAMPED "UNION"	DATE	NO.	BY	DATE	DATE	By	DATE	REVISIONS	DESIGN	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
WORKED BY	DATE	GEOGRAPHIC POSITION (NAD 83)	DATE																
INSPECTED BY	DATE	N.M. STATE PLANE COORDINATES (CENTRAL ZONE)	DATE																
ACCEPTANCE BY	DATE	N = 1,523,503.475 E = 1,493,655.030	DATE																
VERIFICATION BY	DATE	GROUND-TO-GRID FACTOR = 0.999664360	DATE																
DRAWN BY	DATE	Δx = -00'16"58.96"	DATE																
RECORDED BY	DATE	NAVD 1988 ELEVATION = 5524.950	DATE																
NO.																			



Bohannon & Huston
www.bhinc.com 800.877.5332



**CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT**

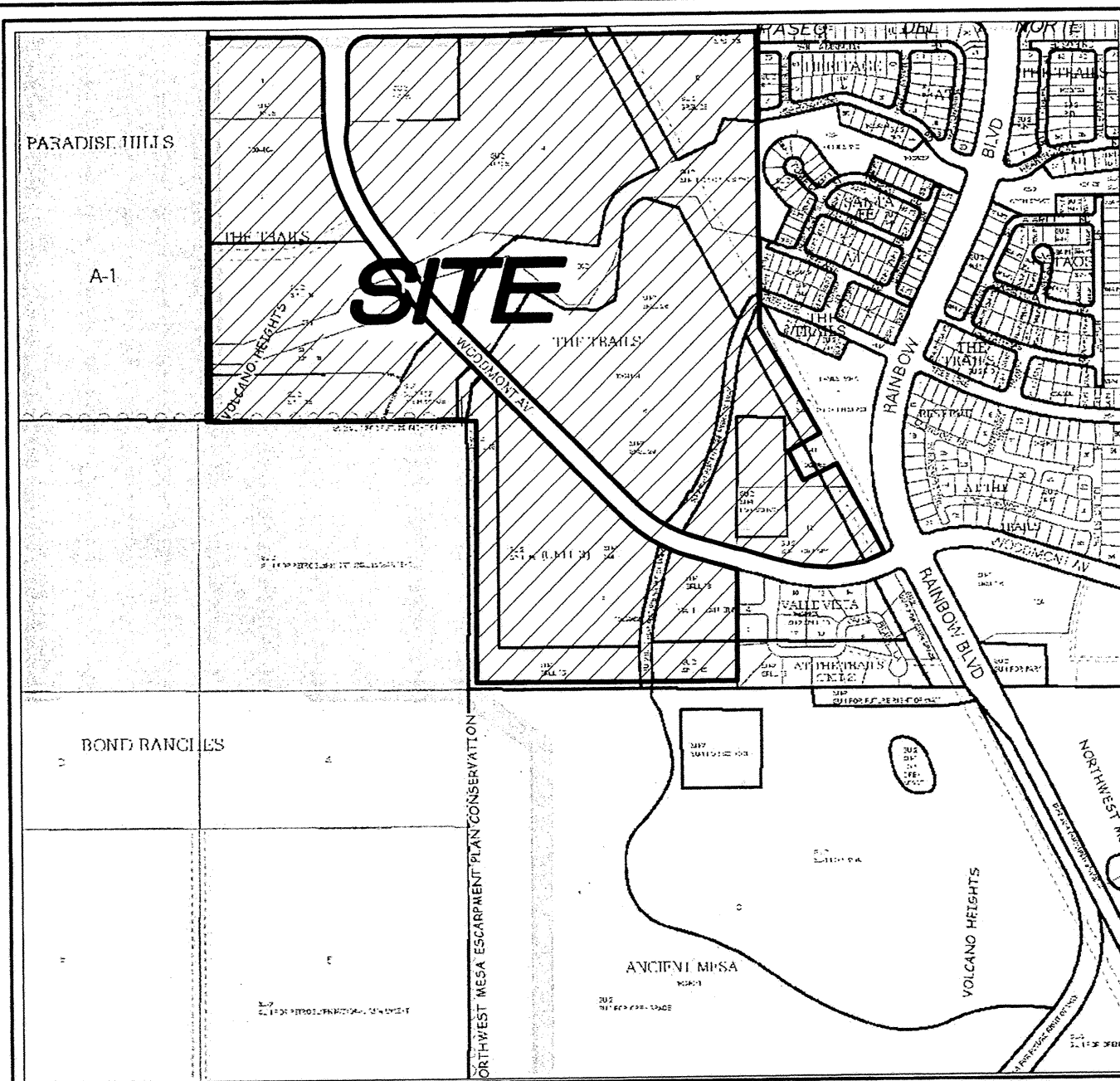
VALLE PRADO

GRADING AND DRAINAGE DETAILS

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
	C-09-Z	2	2

EXHIBIT E
BULK LAND PLAT



VICINITY MAP
Not To Scale

GENERAL NOTES

- Bearings are grid based upon the New Mexico State Plane Coordinate System, Central Zone (NAD 27).
- Distances are ground.
- Record plat bearings and distances where they differ from those measured by field survey are shown in parenthesis ().
- All corners are a 5/8" rebar and cap stamped "HUGG L.S. 9750" unless otherwise indicated hereon.
- Albuquerque City Zone Atlas page C-8 and C-9.
- U.C.L.S. Log Number 2007391925.
- No direct access to Paseo Del Norte will be allowed.
- All street centerline monumentation shall be installed at all centerline PC's, PT's, angle points and street intersections and shown thus (). All centerline monumentation will be set using the standard four (4") aluminum monument stamped "City of Albuquerque Centerline Monument— Do not disturb, PS Number 9750" and will be set flush with the final asphalt lift.
- Manholes will be offset at all points of curvature, points of tangency, street intersections, and all other angle points to allow use of centerline monumentation.
- Current Zoning per the Volcano Heights Sector Development Plan as follows:
Tracts 1 and 4 are designated SU-2 UR
Tracts 2, 7 and 8 are designated SU-2 SRLL
Tracts 6, 9 and 5 are designated SU-2 SRSL
Tract 3 is designated SU-2 VC
Tracts OS-1 thru OS-3 are designated SU-2 SU-1 Open Space

SUBDIVISION DATA

- Total number of existing Tracts: 11
- Total number of Tracts created: 13
- Total mileage of full width streets created: 0
- Gross Subdivision acreage: 158.6623 acres.
- Tracts OS-1 thru OS-3 are Private Open Space Areas conveyed to The Trails Community Association, Inc. Maintenance of said Tracts shall be the responsibility of said Trails Community Association, Inc. There shall be no direct vehicular access from adjacent tracts, parcels or lots.
- Tracts OS-1 thru OS-3 are subject to a blanket access, public open space and public storm drain easements to be granted with the filing of this plat. Said Tracts OS-1, OS-2 and OS-3 are also subject to a blanket easement for public water and public sanitary sewer to be granted to the City of Albuquerque and New Mexico Utilities, Inc. with the filing of this plat.

TREASURERS CERTIFICATION

This is to certify that taxes are current and paid on the following:
100906405025130203; see attachment for additional UPC's
Trails LLC
f. J. J. J. 12-21-07
Bernalillo County Treasurer Date

PUBLIC UTILITY EASEMENTS

PUBLIC UTILITY EASEMENTS shown on this plat are granted for the common and joint use of:

- PNM Electric Services for installation, maintenance, and service of underground electrical lines, transformers, and other equipment and related facilities reasonably necessary to provide electrical service.
- PNM Gas Services for installation, maintenance, and service of natural gas lines, valves and other equipment and facilities reasonably necessary to provide natural gas.
- QWest Corporation for the installation, maintenance, and service of such lines, cable, and other related equipment and facilities reasonably necessary to provide communication services, including but not limited to ground pedestals and closures.
- Comcast Cable for the installation, maintenance, and service of such lines, cable, and other related equipment and facilities reasonably necessary to provide Cable TV service.
- New Mexico Utilities, Inc. for the installation, maintenance, and service of underground water and sanitary sewer lines, valves and other equipment and facilities reasonably necessary to provide water and sanitary sewer service.

Included, is the right to build, rebuild, construct, reconstruct, locate, relocate, change, remove, modify, renew, operate, and maintain facilities for the purposes described above, together with free access to, from, and over said easements, including sufficient working area space for electric transformers, with the right and privilege to trim and remove trees, shrubs or bushes which interfere with the purposes set forth herein. No building, sign, pool (aboveground or subsurface), hot tub, concrete or wood pool decking, or other structure shall be erected or constructed on said easements, nor shall any well be drilled or operated thereon. Property owners shall be solely responsible for correcting any violations of National Electrical Safety Code by construction of pools, decking, or any structures adjacent to or near easements shown on this plat.

Easements for electric transformers/switchgears, as installed, shall extend ten feet (10') in front of transformer/switchgear doors and five feet (5') on each side.

DISCLAIMER

In approving this plat, PNM Electric Services and Gas Services (PNM) did not conduct a Title Search of the properties shown hereon. Consequently, PNM does not waive nor release any easement or easement rights to which it may be entitled.

PURPOSE OF PLAT:

The purpose of this Bulk Land Plat is to:

- Eliminate the existing interior tract lines and create the Thirteen (13) New Bulk Tracts shown hereon to facilitate platting of future Trails Units.
- Grant the Public Roadway and Drainage Easements to the City of Albuquerque as shown hereon.
- Grant the Public Water and Sanitary Sewer Easement to New Mexico Utilities, Inc (NMUI), as shown hereon.
- Show the various Public Easements Vacated by 07DRB-70296

SHEET INDEX

- | | |
|--------------|---|
| SHEET 1 OF 5 | Approvals, General Notes, Etc... |
| SHEET 2 OF 5 | Legal Description, Free consent and dedication |
| SHEET 3 OF 5 | Overall Plat Boundary and Vacated Lot lines and easements |
| SHEET 4 OF 5 | North 1/2 of Trails Unit 3A |
| SHEET 5 OF 5 | South 1/2 of Trails Unit 3A |
| SHEET 6 OF 6 | Curve and Line Tables |

DOCH 2007171107

12/21/2007 01:42 PM Page: 1 of 6
PLAT R: 332.00 B: 2007C P: 0352 M. Toulouse, Bernalillo County
070618_SHTS 1-J.dwg

BULK LAND PLAT OF

THE TRAILS UNIT 3A

(BEING A REPLAT OF TRACTS 1 THRU 8, OS-1 AND OS-2, THE TRAILS UNIT 3 AND TRACT 12, THE TRAILS UNIT 2)

WITHIN

THE TOWN OF ALAMEDA GRANT

IN

PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST

NEW MEXICO PRINCIPAL MERIDIAN

CITY OF ALBUQUERQUE

BERNALILLO COUNTY, NEW MEXICO

SEPTEMBER, 2007

PROJECT NUMBER: 1004404

Application Number: 07DRB-70296

PLAT APPROVAL

Utility Approvals:

<u>Les S. Munter</u>	<u>10-04-07</u>
PNM Gas and Electric Services	Date
<u>David Delid</u>	<u>10/8/07</u>
QWest Corporation	Date
<u>Gonna Bunker</u>	<u>10-3-07</u>
Comcast	Date
<u>Michael O. J. J.</u>	<u>12/19/07</u>
New Mexico Utilities	Date

Note: These properties lie within the New Mexico Utilities, Inc. (NMU, Inc.) Franchise area. Water and Sanitary Sewer capabilities are based upon the NMU, Inc. facilities, not the City of Albuquerque.

City Approvals:

<u>[Signature]</u>	<u>10-3-07</u>
City Surveyor	Date
<u>N/A</u>	<u></u>
Real Property Division	Date
<u>N/A</u>	<u></u>
Environmental Health Department	Date
<u>[Signature]</u>	<u>11-28-07</u>
Traffic Engineering, Transportation Division	Date
<u>N/A</u>	<u></u>
ABCWUA	Date
<u>Christina S. Sanchez</u>	<u>11/28/07</u>
Parks and Recreation Department	Date
<u>Bradley L. Bingham</u>	<u>11/29/07</u>
AMAFCA	Date
<u>[Signature]</u>	<u>11-28-07</u>
City Engineer	Date
<u>Andrew Guice</u>	<u>12-21-07</u>
DRB Chairperson, Planning Department	Date

SURVEYORS CERTIFICATION

I, Russ P. Hugg, New Mexico Professional Surveyor Number 9750, hereby certify that this plat of survey was prepared from field notes of an actual ground survey performed by me or under my supervision; that it meets the Standards for Land Surveys in New Mexico as adopted by the New Mexico State Board of Registration for Professional Engineers and Professional Surveyors; that it meets the minimum requirements for surveys and monumentation of the Albuquerque Subdivision Ordinance; that it shows all easements of record; and that it is true and correct to the best of my knowledge and belief.

[Signature]
Russ P. Hugg
NMPS No. 9750
September 25, 2007

SHEET 1 OF 6

SURV TEK, INC.

Consulting Surveyors

9364 Valley View Drive N.W. Albuquerque, New Mexico 87114

Phone: 505-897-3366

Fax: 505-897-3377

LEGAL DESCRIPTION

Those certain parcels of land situate within the Town of Alameda Grant in projected Sections 16 and 17, Township 11 North, Range 2 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico, comprising:

All of Tracts 1 thru 8, OS-1 and OS-2, The Trails Unit 3, as the same is shown and designated on the plat entitled "BULK LAND PLAT OF THE TRAILS UNIT 3 (BEING A REPLAT OF UNPLATTED LANDS OF TRAILS, LLC AND TRACT H-2, TRAILS UNIT 1) WITHIN THE TOWN OF ALAMEDA GRANT IN PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO", filed in the office of the County Clerk of Bernalillo County, New Mexico, on March 16, 2006 in Book 2006C, Page 85.

AND

All of Tract 12, The Trails Unit 2, as the same is shown and designated on the plat entitled "BULK LAND PLAT OF THE TRAILS UNIT 2 (BEING A REPLAT OF TRACTS G AND J, THE TRAILS AND UNPLATTED DEED PARCELS) WITHIN THE TOWN OF ALAMEDA GRANT IN PROJECTED SECTION 16, TOWNSHIP 11 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO", filed in the office of the County Clerk of Bernalillo County on October 18, 2004 in Book 2004C, Page 332.

Said Parcels contains 158.6623 acres, more or less.

FREE CONSENT AND DEDICATION

SURVEYED and REPLATTED and now comprising, "BULK LAND PLAT OF THE TRAILS UNIT 3A (BEING A REPLAT OF TRACTS 1 THRU 8, OS-1 AND OS-2, THE TRAILS UNIT 3 AND TRACT 12, THE TRAILS UNIT 2) WITHIN THE TOWN OF ALAMEDA GRANT IN PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO", with the free consent of and in accordance with the wishes and desires of the undersigned owner(s) and proprietor(s) thereof. Said owner(s) and proprietor(s) do hereby grant to the use of the public forever, the public utility easements as shown hereon. Said owner(s) and proprietor(s) do hereby warrant that they hold among them, complete and indefeasible title in fee simple to the land subdivided. Said owner(s) and proprietor(s) do hereby consent to all of the foregoing and do hereby represent that they are so authorized to act.

OWNER(S)

THE TRAILS, LLC
a Nevada limited liability company
Longford Group, Inc., it's manager

By

John K. Murtagh, President

Kelly Murtagh, Vice President

THE TRAILS COMMUNITY ASSOCIATION, INC.

Tracy Murphy, President

Date

ACKNOWLEDGEMENT

STATE OF NEW MEXICO
COUNTY OF BERNALILLO SS

The foregoing instrument was acknowledged before me this 2nd day of October, 2007, by John K. Murtagh, President
KELLY MURTAGH, VICE PRESIDENT
of The Longford Group, Inc.

Q Krapcha My commission expires 12-1-08

Notary Public

ACKNOWLEDGEMENT

STATE OF NEVADA NM
COUNTY OF CLARK SS
Bernalillo

The foregoing instrument was acknowledged before me this 2nd day of October, 2007, by Tracy Murphy, President of The Trails Community Association, Inc.

Q Krapcha My commission expires 12-1-08

Notary Public

NOTICE OF SUBDIVISION PLAT CONDITIONS

TRACTS 1 thru 8 AND TRACTS OS-1 AND OS-2
THE TRAILS UNIT 3

The plat of TRACTS 1 THRU 8 AND TRACTS OS-1 AND OS-2, THE TRAILS UNIT 3 has been granted a variance or waiver from certain subdivision requirements pursuant to Section 7 of the City of Albuquerque Subdivision Ordinance.

Future subdivision of lands within this plat, zoning Site Development Plan approvals, and development permits may be conditioned upon dedication of right-of-way and easements, and/or upon infrastructure improvements by the owner for water, sanitary sewer, streets, drainage, grading, and parks in accordance with current resolutions, ordinances, and policies in effect at the time for any specific proposal.

The City and AMAFCA (with reference to drainage) may require and/or permit easements to be added, modified, or removed when future plats and/or Site Development Plans are approved.

By its approval of this subdivision, the City makes no representation or warranties as to availability of utilities, or final approval of all requirements including (but not limited to) the following items: water and sanitary sewer availability; future street dedications and/or improvements; park and open space requirements; drainage requirements and/or improvements; and excavation, filling, or grading requirements. Any person intending development of lands within this subdivision is cautioned to investigate the status of these items.

At such time as all such conditions have been satisfactorily met, the City Engineer shall approve a recordable document, removing such conditions from all of from a portion of the area within the subject subdivision.

Note: There is a Notice of subdivision plat conditions for Tracts 1 thru 8 and Tracts OS-1 and OS-2, The Trails Unit 3, filed in the office of the County Clerk of Bernalillo County, New Mexico on March 16, 2006 in Book A113, page 6952

SECTION 14-14-4-7 PROHIBITION ON PRIVATE RESTRICTIONS ON THE INSTALLATION OF SOLAR COLLECTORS

"No property within the area of requested final action shall at any time be subject to a deed restriction, covenant, or binding agreement prohibiting solar collectors from being installed on buildings or erected on the lots or parcels within the area of proposed plat. The foregoing requirement shall be a condition to approval of this plat or site development plan for subdivision"

NOTICE OF SUBDIVISION PLAT CONDITIONS

TRACTS 1 thru 10 AND TRACTS OS-1 and OS-2
THE TRAILS UNIT 3A

The plat of TRACTS 1 THRU 10 AND TRACTS OS-1 and OS-2, THE TRAILS UNIT 3A has been granted a variance or waiver from certain subdivision requirements pursuant to Section 7 of the City of Albuquerque Subdivision Ordinance.

Future subdivision of lands within this plat, zoning Site Development Plan approvals, and development permits may be conditioned upon dedication of right-of-way and easements, and/or upon infrastructure improvements by the owner for water, sanitary sewer, streets, drainage, grading, and parks in accordance with current resolutions, ordinances, and policies in effect at the time for any specific proposal.

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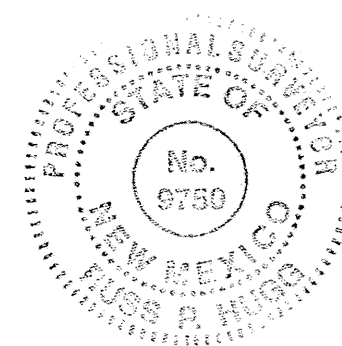
At such time as all such conditions have been satisfactorily met, the City Engineer shall approve a recordable document, removing such conditions from all of from a portion of the area within the subject subdivision.

Note: There is a Notice of subdivision plat conditions for Tracts 1 thru 10 and Tracts OS-1 and OS-2, The Trails Unit 3A, filed in the office of the County Clerk of Bernalillo County, New Mexico on _____, 2007 in Book _____, page _____

as Document Number _____

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12/21/2007 01:42 PM Page: 2 of 6
PLAT R: \$32.00 B: 2007C P: 0352 M. Toulouse, Bernalillo County



SHEET 2 OF 6

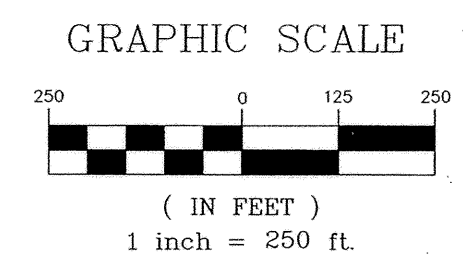
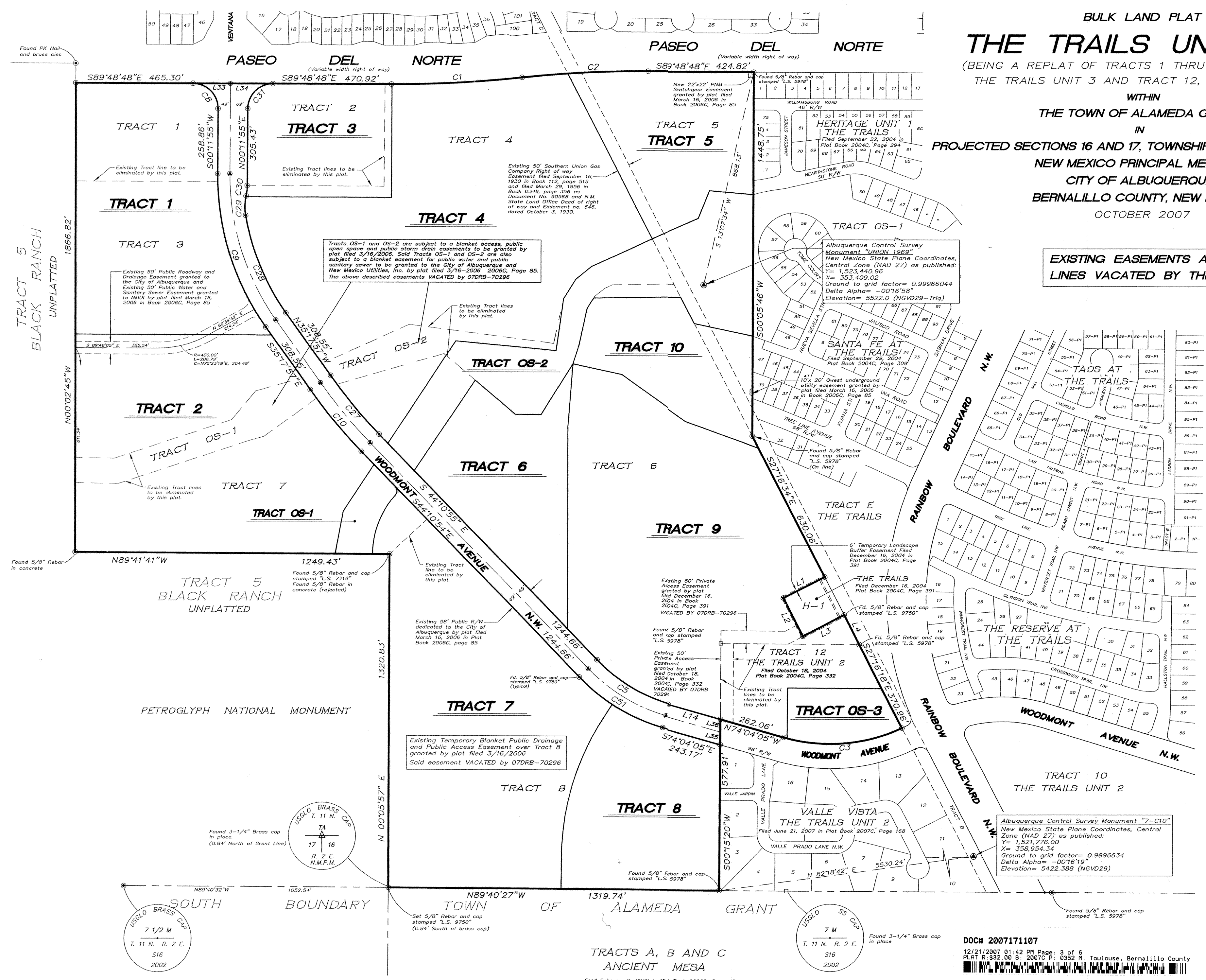
SURV TEK, INC.

Consulting Surveyors
9384 Valley View Drive N.W. Albuquerque, New Mexico 87114 Phone: 505-897-3366
Fax: 505-897-3377

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BULK LAND PLAT OF
THE TRAILS UNIT 3A
(BEING A REPLAT OF TRACTS 1 THRU 8, OS-1 AND OS-2,
THE TRAILS UNIT 3 AND TRACT 12, THE TRAILS UNIT 2)
WITHIN
THE TOWN OF ALAMEDA GRANT
IN
PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST
NEW MEXICO PRINCIPAL MERIDIAN
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
OCTOBER 2007

EXISTING EASEMENTS AND TRACT
LINES VACATED BY THIS PLAT



DOCH 2007171107
12/21/2007 01:42 PM Page: 3 of 6
PLAT R: \$32.00 B: 2007C P: 0352 M. Toulouse, Bernalillo County

SURV TEK, INC.
Consulting Surveyors



BULK LAND PLAT OF
THE TRAILS UNIT 3A
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THE TRAILS UNIT 3 AND TRACT 12, THE TRAILS UNIT 2)
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PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST
NEW MEXICO PRINCIPAL MERIDIAN
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
OCTOBER 2007



SEE SHEET 5 OF 6

070618_SHTS 4-5_9-20-07.dwg

SURV TEK, INC.
Consulting Surveyors

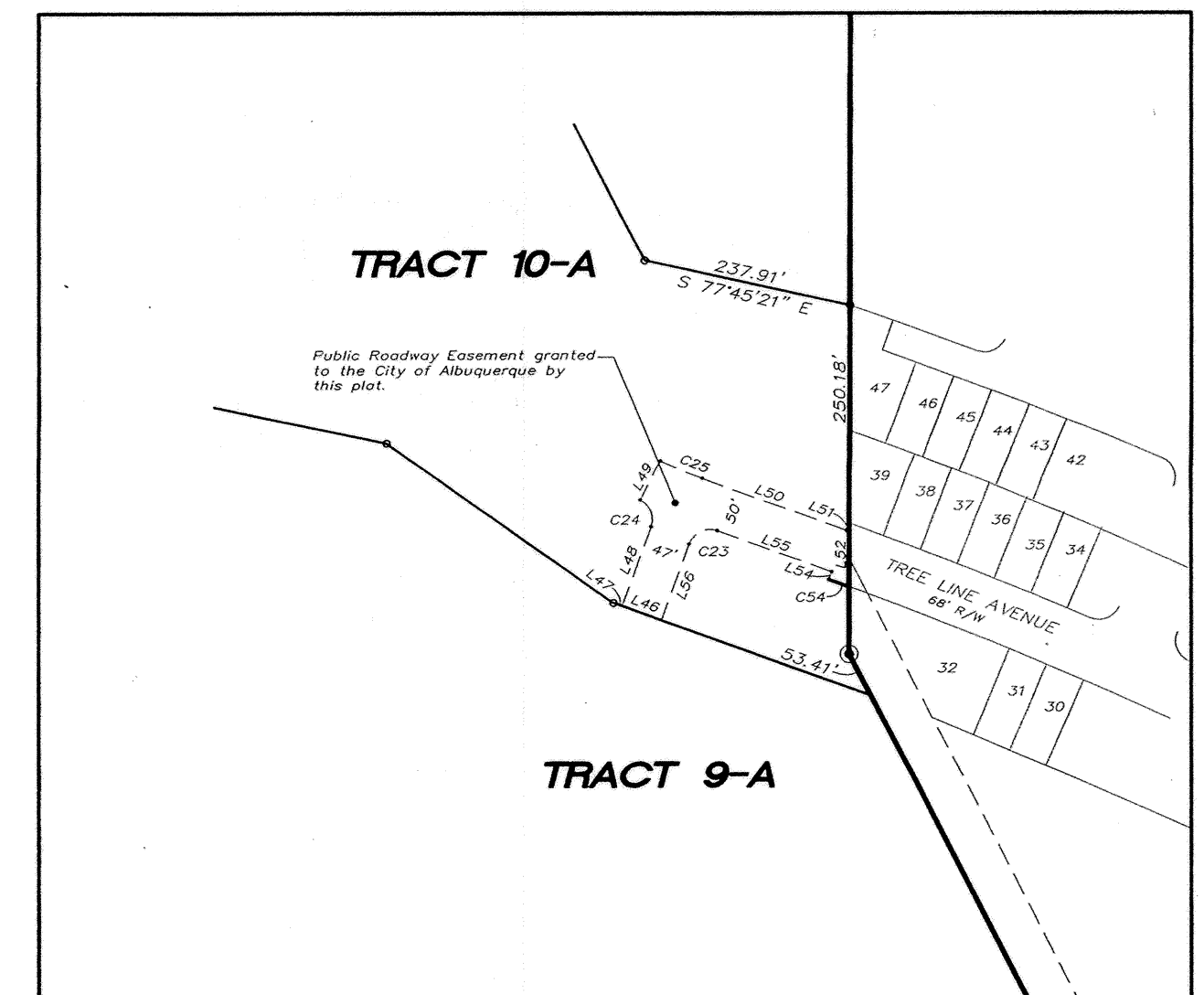
9384 Valley View Drive N.W. Albuquerque, New Mexico 87114
Phone: 505-897-3366
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070618_SHTS 4-5_9-20-07.dwg

BULK LAND PLAT OF
THE TRAILS UNIT 3A
 (BEING A REPLAT OF TRACTS 1 THRU 8, OS-1 AND OS-2,
 THE TRAILS UNIT 3 AND TRACT 12, THE TRAILS UNIT 2)
 WITHIN
 THE TOWN OF ALAMEDA GRANT
 IN
 PROJECTED SECTIONS 16 AND 17, TOWNSHIP 11 NORTH, RANGE 2 EAST
 NEW MEXICO PRINCIPAL MERIDIAN
 CITY OF ALBUQUERQUE
 BERNALILLO COUNTY, NEW MEXICO
 OCTOBER 2007

LINE TABLE		
LINE	LENGTH	BEARING
L1	184.00'	S62°43'26"W
L2	170.00'	S27°16'34"E
L3	184.00'	N62°43'26"E
L4	130.51'	S27°16'34"E
L5	66.10'	S32°52'08"W
L6	124.07'	S00°19'33"W
L7	243.17'	S74°04'05"E
L8	229.42'	N74°04'05"W
L9	207.93'	S49°49'12"E
L10	102.11'	S89°33'10"E
L11	237.43'	N32°12'03"E
L12	199.32'	S77°51'46"E
L13	57.66'	N32°26'33"E
L14	215.67'	N74°04'05"W
L15	50.59'	N51°14'55"E
L16	33.00'	N64°57'37"E
L17	250.90'	N89°01'47"E
L18	174.90'	S27°16'30"E
L19	221.41'	S33°20'36"W
L20	172.48'	S10°36'24"W
L21	211.17'	N07°50'45"E
L22	92.07'	N32°26'33"E
L23	79.17'	N51°14'55"E
L24	118.15'	N22°01'51"E
L25	174.85'	S84°56'30"E
L26	70.00'	S15°56'41"W
L27	55.00'	N74°03'19"W
L28	77.52'	N17°42'46"E
L29	153.58'	N12°11'46"E
L30	69.99'	N15°56'41"E
L31	152.04'	S44°10'54"E
L32	200.51'	N00°21'41"E
L33	149.02'	S89°48'48"E
L34	168.98'	S89°48'48"E
L37	70.00'	N45°49'06"E
L38	55.00'	S44°10'54"E
L39	70.00'	S45°49'06"W
L40	70.15'	N60°17'12"E
L41	55.00'	S29°42'48"E
L42	70.20'	S60°17'12"W
L43	70.21'	S60°24'54"W
L44	55.00'	N29°35'06"W
L45	70.17'	N60°24'54"E
L46	47.00'	N70°03'17"W
L47	10.50'	N70°03'17"W
L48	96.04'	N19°56'43"E
L49	50.00'	N26°43'51"E
L50	173.64'	S70°03'17"E
L51	9.00'	N19°56'43"E
L52	72.36'	S00°05'46"W
L54	9.00'	N19°56'43"E
L55	137.56'	N70°03'17"W
L56	92.43'	S19°56'43"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD	CHORD BEARING	DELTA
C1	519.79'	4578.00'	260.17'	519.51'	N86°56'02"E	6°30'20"
C2	502.08'	4422.00'	251.31'	501.81'	N86°56'02"E	6°30'20"
C3	481.26'	672.00'	251.47'	471.05'	S85°24'55"W	41°02'00"
C4	365.13'	700.00'	186.82'	361.00'	S59°07'30"E	29°53'10"
C5	339.57'	651.00'	173.74'	335.73'	S59°07'30"E	29°53'10"
C6	310.06'	2000.00'	155.34'	309.75'	S39°44'26"E	8°52'57"
C7	619.56'	1000.00'	320.08'	609.70'	S17°33'01"E	35°29'53"
C8	157.10'	100.00'	100.02'	141.44'	N44°48'26"W	90°00'43"
C9	649.92'	1049.00'	335.77'	639.57'	S17°33'01"E	35°29'53"
C10	317.65'	2049.00'	159.15'	317.34'	S39°44'26"E	8°52'57"
C11	256.74'	351.33'	134.41'	251.07'	S21°04'27"W	41°52'12"
C12	37.61'	25.00'	23.39'	34.16'	N01°05'11"W	86°11'28"
C14	55.01'	951.00'	27.51'	55.00'	S29°39'31"E	3°18'51"
C15	66.12'	951.00'	33.07'	66.11'	S33°18'27"E	3°59'01"
C16	55.01'	1049.00'	27.51'	55.00'	S29°37'28"E	3°00'16"
C17	76.40'	1049.00'	38.21'	76.38'	S33°12'47"E	4°10'22"
C18	213.08'	301.33'	111.21'	208.67'	S20°22'10"W	40°30'58"
C19	41.53'	25.00'	27.37'	36.92'	S88°13'22"W	95°11'27"
C23	39.27'	25.00'	25.00'	35.36'	S64°56'43"W	90°00'00"
C24	36.31'	25.00'	22.20'	33.20'	N21°39'43"W	83°12'52"
C25	52.23'	441.00'	26.14'	52.20'	S66°39'43"E	6°47'08"
C27	302.46'	1951.00'	151.53'	302.16'	S39°44'26"E	8°52'57"
C28	424.24'	951.00'	215.71'	420.73'	S22°31'10"E	25°33'34"
C29	76.55'	200.00'	38.75'	76.09'	S01°13'33"W	21°55'52"
C30	41.86'	200.00'	21.01'	41.79'	N06°11'42"E	11°59'33"
C31	157.06'	100.00'	99.98'	141.41'	S45°11'34"W	89°59'17"
C32	584.44'	1028.98'	300.34'	576.62'	S16°35'51"W	32°32'35"
C37	3.10'	200.00'	1.55'	3.10'	S11°44'50"W	0°53'16"
C38	73.45'	200.00'	37.15'	73.04'	S00°46'54"W	21°02'35"
C39	2.20'	4578.00'	1.10'	2.20'	S89°49'38"E	0°01'39"
C40	517.59'	4578.00'	259.07'	517.32'	N86°55'12"E	6°28'40"
C41	181.99'	4422.00'	91.01'	181.98'	S84°51'37"W	2°21'29"
C42	320.09'	4422.00'	160.11'	320.02'	S88°06'47"W	4°08'51"
C49	466.76'	672.00'	243.24'	457.43'	N84°47'49"E	39°47'47"
C50	14.51'	672.00'	7.25'	14.51'	S74°41'11"E	1°14'13"
C51	390.69'	749.00'	199.90'	386.27'	S59°07'30"E	29°53'10"
C52	169.28'	749.00'	85.00'	168.92'	S50°39'23"E	12°56'58"
C53	221.41'	749.00'	111.52'	220.60'	S65°35'58"E	16°56'13"
C54	24.57'	4966.00'	12.28'	24.57'	N69°54'47"W	0°17'00"



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12/21/2007 01:42 PM Page: 6 of 6
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(IN FEET)
 1 inch = 200 ft.

