Preliminary

Drainage Report

For

Tentative Tract Map No. 20549

Adelanto, CA

Prepared
October 2022

United Engineering Group - California
8885 Haven Avenue
Suite 195
Rancho Cucamonga, CA 91730

Tel: (909) 466-9240

Provided for:

Heller Development Company
18520 Burbank Blvd Suite 200
Tarzana, CA 91356

Project # 30214

This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein. The registered civil engineer has also judged the qualifications of any employees that have provided data and calculations upon which the recommendations, conclusions, and decisions are based.

Christopher F. Lenz, PE 63001

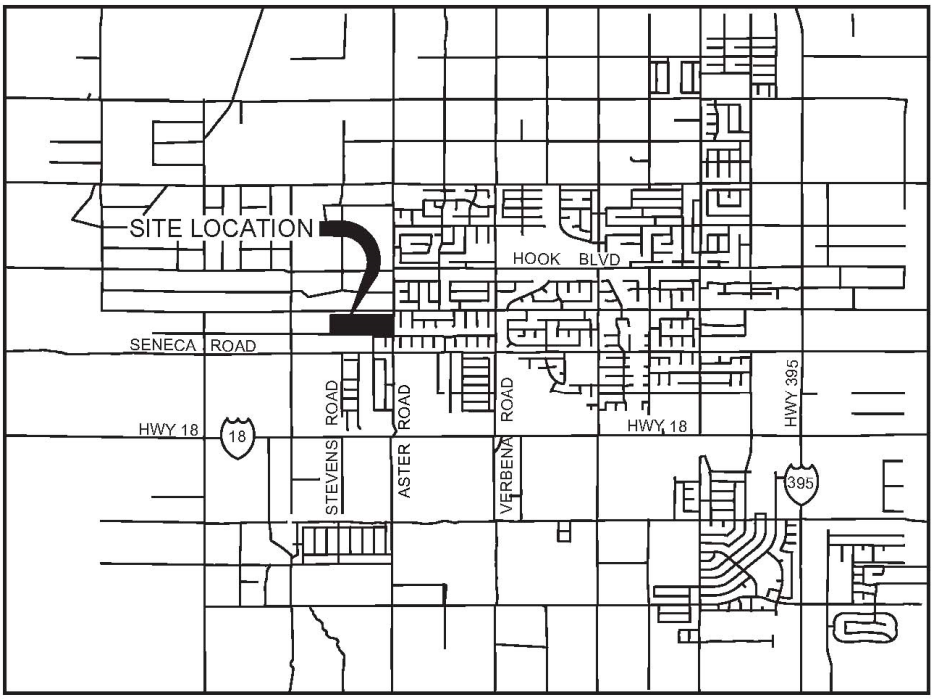
TABLE OF CONTENTS

DESCRIPTION **PAGE**

APPENDICES

I. INTRODUCTION

TTM 20549 is a residential subdivision of approximately 30 acres into 114 single family residential lots, located at the southwest corner of Aster Road and Villa Street in the City of Adelanto. The property is rectangular shaped and is bordered by paved roads to the north and east, with existing subdivisions to the east and southeast. Minimum lot size is 5,000 sf. For purposes of this report, WQMP calculations are provided, but a WQMP should be prepared with the final drainage report and project design.



VICINITY MAP

N.T.S.

The purpose of this study is to determine the I0-year and I00-year storm runoff emanating from on-site and off-site areas for the Project. The study will determine the peak flow rates for the existing conditions, the peak flow rate and volumes for the proposed conditions, and proposed conditions flow rate and stored volume after routing through one (1) detention basin. Additional analysis will confirm hydraulic capacity of proposed street sections compared to rationale expected runoff.

The scope of the study includes the following:

- Determination of points of flow concentration and watershed areas
- Determination of the I00-year storm runoff based upon the on-site drainage conditions utilizing the San Bernardino County Flood Control District (SBCFCD) SCS Unit Hydrograph Method
- Determination of the 10-year and I00-year peak flow rates for the off-

site area utilizing the San Bernardino County Flood Control District (SBCFCD) Rational Method.

II. SITE DISCUSSION

The current property is vacant, undeveloped and undisturbed land with varying slopes. The topography indicates that the runoff drains in a primarily northern direction in the form of sheet flow. There are two defined washes on-site in the middle and west ends of the property. The washes are identified in the Adelanto Master Plan of Drainage as lines 2B (middle) and 2B1(west). On-site runoff outlets the property along the northern edge of the site at two locations (see Exiting Condition Exhibit).

III. RAINFALL DATA

The San Bernardino County Flood Control District (SBCFCD) hydrology Manual, (Reference 1) was used to develop the hydrological parameters for the 10-year and 100-year storm events. The Rational Method was used to determine the peak flow rates associated with the existing project conditions as well as the time of concentration used in the Unit Hydrograph method. In addition, the Unit Hydrograph Method was utilized to determine the runoff volume. Computations were performed using the CivilCADD drainage software for San Bernardino County Developed by CivilDesign Corporation. Rainfall data was taken from NOAA Atlas 14.

Return Period – Duration	Isohyetal (in)
10 year – 1 hour	0.63
2 year – 6 hour	0.82
2 year – 24 hour	1.50
100 year – 1 hour	1.06
100 year – 6 hour	2.28
100 year – 24 hour	4.54

Hydrologic Soil Group “C” and an Antecedent Moisture Conditions (AMC) 2 (10yr) and 3 (100yr) are used for the study area. The percentage impervious is 50, and the SCS runoff is 69. Refer to Appendix C for additional detail.

The project’s post developed runoff is designed to be contained in three (3) basins that will act as both water quality infiltration, and flood storage for peak runoff mitigation.

IV. ONSITE RUNOFF

Existing Condition/Pre-Development

The runoff from the subject site in the existing condition is primarily sheet flow with two concentrations of flow as runoff exits the site. The site drains northerly. It is shown as Areas A and B on the Existing Conditions Drainage Exhibit in Appendix A. The peak flow rate is 13.2 cfs for area A and 30.8 cfs for area B. The runoff from area B follows the Channel 2B alignment. Peak flow rates of 11.9 cfs and 27.7 cfs will be the limiting factor of design outflow (90% of existing).

Proposed Condition/Post Development

The proposed condition is to utilize three (3) basins for water quality and flood routing for the site. The design will incorporate controlled basin outlets at the northeastern corner of the site and into channel 2B. This approach will maintain the existing drainage patterns. A portion of the proposed condition area C will be diverted easterly to Line B2, the basin will be sized to mitigate the post development runoff to less than the existing condition. The site run-off has been subsequently routed to the basins for water quality and flood control. The Rationale method was prepared for the determination of time of concentrations for use in the development of the Unit Hydrographs. The post development 100-year runoff is 17.3 cfs for Area A. The post development 100-year runoff is 10.9 cfs for Area B. And the post development 100-year runoff is 35.6 cfs for Area C.

The post development runoff for each area is then routed through the proposed basins to confirm post development runoff can be mitigated to less than pre-development runoff. The basins are proposed as dual-purpose retention and detention basins. Roughly the bottom 2 feet of the basins act as water quality retention only, with no outfall, relying solely on infiltration. The volume above serves as detention area for flood storage and volume needed for peak flow mitigation. In order to drain the top flood storage, an 18" outlet pipe has been used for preliminary calculations for Basins A and B, and a 24" outlet pipe has been used for Basin C. The following tables detail proposed basins shown on the TTM;

Basin A

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.138	0.130	0.138	0.138
2.000	0.300	0.130	0.300	0.300
3.000	0.488	8.000	0.460	0.516
4.000	0.704	8.000	0.676	0.732

Basin B

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.067	0.060	0.067	0.067
2.000	0.152	7.900	0.125	0.179
3.000	0.256	7.900	0.229	0.283
4.000	0.382	7.900	0.355	0.409

Basin C

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.208	0.200	0.207	0.209
2.000	0.444	8.000	0.416	0.472
3.000	0.707	17.100	0.648	0.766
4.000	1.001	17.100	0.942	1.060

After routing through the proposed basin, the post development 100-year runoff is 8.0 cfs with 0.53 ac-ft stored at a depth of 3.17 feet for Basin A. 7.9 cfs with 0.15 ac-ft stored at a depth of 2.0 feet for Basin B. And 17.1 cfs with 0.76 ac-ft stored at a depth of 3.19 feet for Basin C. Note that the basins have been preliminarily oversized at 2.1 ac-ft versus 1.44 ac-ft required. The basin have been designed at 4' deep. Preliminary 18" and 24" outlet pipes were used for calculations. At time of final design the final outlet structures shall be specified and designed per this report. Refer to Appendices D and E for detailed output files and the TTM for grading detail.

The primary hydraulic design element studied for the onsite flows are the proposed roads within the project that will be used to carry runoff. At the minimum design slope of 0.4% the roads yield a capacity of 33 cfs within the curbs and 47 cfs within the right-of-way. At time of final design, curb inlets will be designed to convey runoff to the basin, or to dewater intersections at the builder's discretion. The post development sub areas were analyzed using the Rationale Method to determine peak runoff and confirm containment in the curb and right of way. The 100 yr peak overall site runoff of 35.6 cfs is contained within the right of way capacity of 47 cfs. Refer to the Proposed Conditions Drainage Exhibit in Appendix A and Appendix F for additional detail.

V. OFFSITE RUNOFF

The offsite areas that impact the site are Channel 2B1 and Channel 2B. The design flow for Channel 2B1 is 850 cfs. This flow was analyzed in the existing condition and proposed pads along that edge will be elevated above the highwater elevations. It is assumed that the ultimate channel will further

reduce the highwater elevation along the project edge. The design flow for Channel 2B along the middle of the property is 450 cfs. The project is proposing to construct the regional channel through the property. The channel is designed as a 6' deep channel with 12' bottom width. The channel is designed with multiple 1' drop sections to reduce channel velocities to below erosive levels. The channel hydraulic analysis shows the channel carrying the 450 cfs at a depth of 4.7 feet (subcritical), a velocity of 4.72 fps, and 1.29' of freeboard. Refer to Appendix F and the TTM for additional detail.

VI. STORMWATER TREATMENT

Stormwater treatment will be provided by the bottom 1-2 feet of the basins, where the required volume will infiltrate into the ground. As shown on the TTM, the basins exceed the required water quality volume of 0.73 ac-ft. Infiltration testing will be required at time of final design to ensure sufficient rates to de-water the basin in 30 hours (with a factor of safety of 2). Water quality calculations were prepared based on the San Bernardino County Model Water Quality Management Plan Guidance document. The following calculations were used in the preliminary sizing of the proposed facilities;

- WQ Contributing area – 29.6 ac
- 2 yr 1 hour rainfall – 0.36"
- Impervious ratio – 50% (from SBCFCD hydrology Manual)
- C_{BMP} = 0.34
- Drainage Area Region – Desert – Regression Coefficient P_6 = 1.2371
- P_6 = 1.2371 x 0.36" = 0.44"
- Regression Constant a = 1.963 for 48 hours
- $P_0 = a * C_{BMP} * P_6 = 1.963 \times 0.34 \times 0.44 = 0.294$
- $V_0 = (P_0 * A)/12 = (0.294 \times 29.6)/12 = 0.73$ ac-ft

VII. CONCLUSION

The proposed development of tract 20549, a 30-acre, 114 lot single family detached subdivision can be mitigated as designed and analyzed in this report to be compatible with the City of Adelanto Master Plan of Drainage. The development of the subject site will not significantly change area drainage patterns, impact any of the surrounding properties, or change any of the regional master plan facilities. The project will construct combination retention and detention basins of sufficient size to handle water quality through infiltration, and flood mitigation through detention. As designed,

the basins exceed the required storage volume. The project will also construct the Channel 2B facility to both route the regional runoff through the site per the Master Plan of Drainage, and to provide for an outlet point for the routed basin discharge. The streets have been analyzed and are confirmed to contain the 10-year runoff within the curb, and the 100-year runoff within the right of way. At time of final design, the basins, outlet structures, street grades, and curb inlets will be designed and analyzed in conjunction with final grading and paving plans to confirm capacity.

REFERENCES

1. San Bernardino County Flood Control and Water Conservation District Hydrology Manual, August 1986.

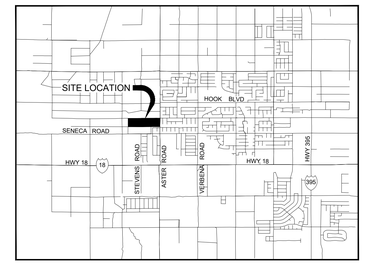
2. City of Adelanto Drainage Master Plan Update, Figure 3-1 Proposed Systems Map, So and Associates Engineers, March 1992.

APPENDIX A:
SITE PLANS – PRE AND POST CONDITIONS

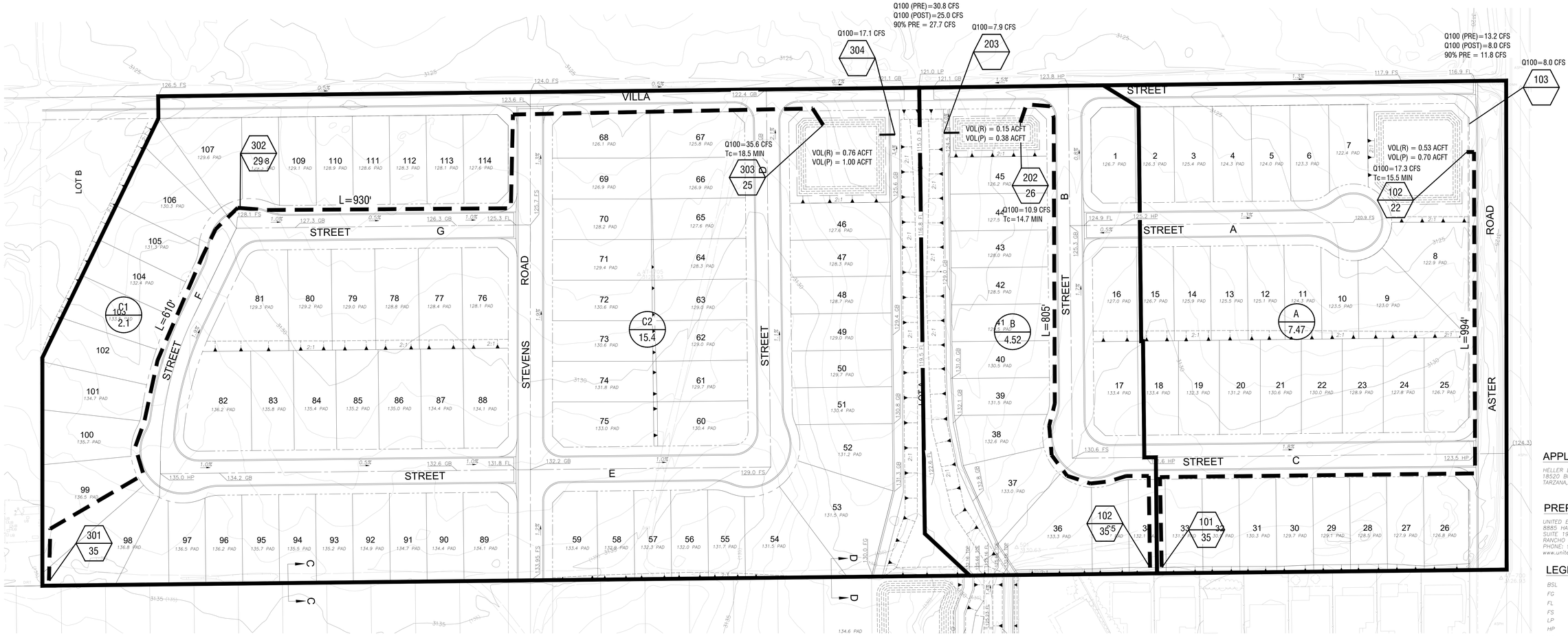
IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

PROPOSED CONDITIONS EXHIBIT
TENTATIVE MAP - TRACT NO. 20549

UNITED ENGINEERING GROUP CA., INC OCT 2022



VICINITY MAP
N.T.S.



APPLICANT/OWNER:

HELLER DEVELOPMETN COMPANY
18520 BURBANK BLVD, SUITE 200
TARZANA, CA 91356

PREPARED BY:

UNITED ENGINEERING GROUP–CA, INC.
8885 HAVEN AVENUE
SUITE 195
RANCHO CUCAMONGA, CA 91730
PHONE: 909.466.9240
www.unitedeng.com

LEGEND

BSL	BUILDING SETBACK LINE
FG	FINISH GRADE
FL	FLOW LINE
FS	FINISH SURFACE
LP	LOW POINT
HP	HIGH POINT
GB	GRADE BREAK
TC	TOP OF CURB
(XXX.XX)	EXISTING ELEVATION
40	LOT NUMBER
141.1 PAD	PAD ELEVATION
	2:1 SLOPE (UNLESS NOTED)
	TRACT BOUNDARY
(S)	EXISTING SEWER
(W)	EXISTING WATER
S	PROPOSED SEWER
W	PROPOSED WATER
SD	PROPOSED STORM DRAIN
	CONTRIBUTORY AREA
	PROJECT BOUNDARY
	FLOWPATH
	FLOW DIRECTION
102 / XX	NODE/CONCENTRATION POINT / FLOWLINE ELEVATION
A2 / 24.4	SUBAREA / ACRES

N

50' 25' 0' 50'
GRAPHIC SCALE: 1"=50'

SUBMITTALS:
DESIGNED BY:
DRAWN BY:
CHECKED BY:

REVISIONS		
NO.	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER F. LENZ — NO. 63001 EXP. 6/30/24 — CIVIL — STATE OF CALIFORNIA

CHRISTOPHER F. LENZ DATE
R.C.E. No. 63001

LICENSED LAND SURVEYOR — DEAN C. PHILLIPS — EXP. 9/30/23 — NO. 6974 — STATE OF CALIFORNIA

DEAN C. PHILLIPS DATE
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VILLA & ASTER

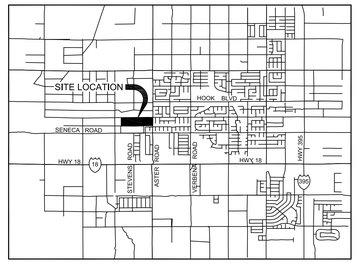
PROPOSED CONDITIONS EXHIBIT
TRACT 20549

JULY 2022
SHEET 1 OF 1
PROJECT NUMBER
CA–30214

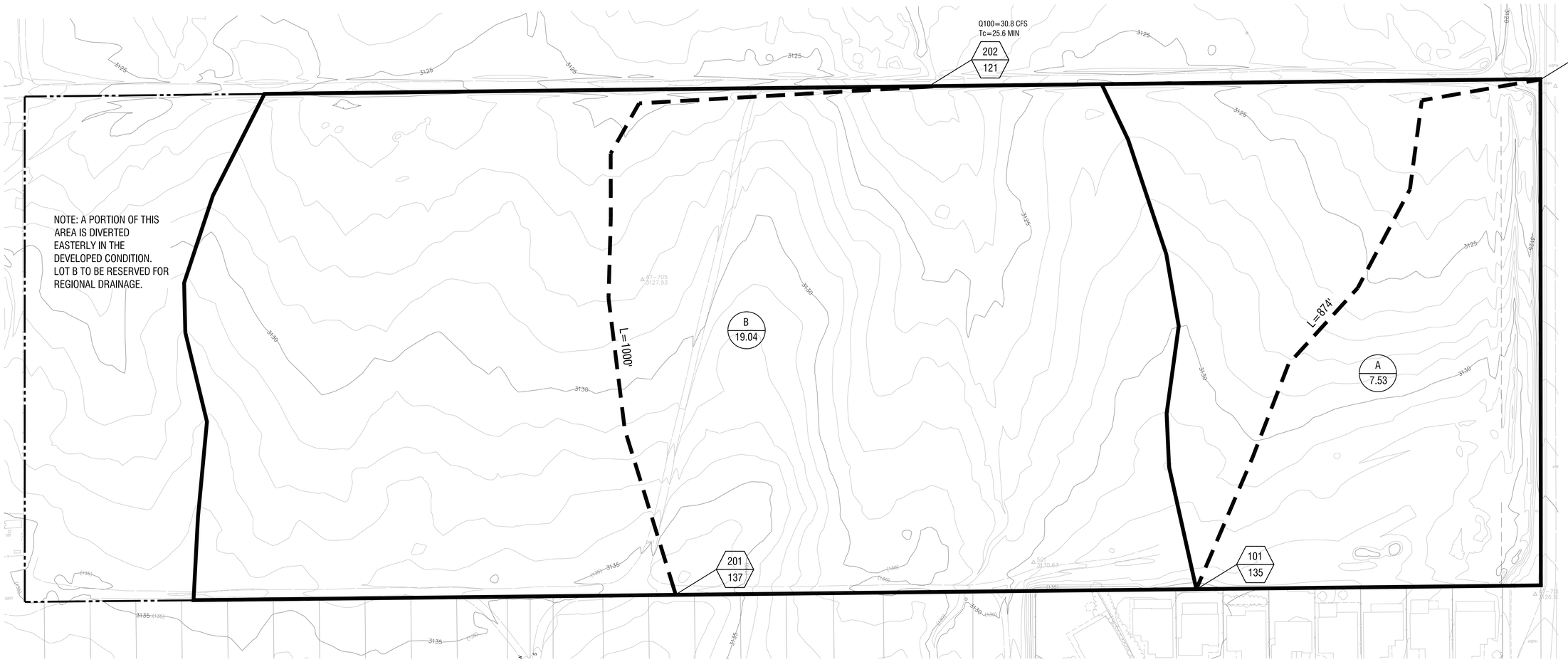
IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

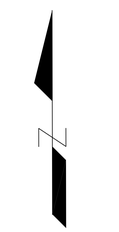
EXISTING CONDITIONS EXHIBIT
TENTATIVE MAP - TRACT NO. 20549

UNITED ENGINEERING GROUP CA., INC JULY 2022



VICINITY MAP
N.T.S.





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BSL	BUILDING SETBACK LINE
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CHRISTOPHER F. LENZ DATE
R.C.E. No. 63001

LICENSED LAND SURVEYOR — DEAN C. PHILLIPS — EXP. 9/30/23 — NO. 6974 — STATE OF CALIFORNIA

DEAN C. PHILLIPS DATE
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VILLA & ASTER

EXISTING CONDITIONS EXHIBIT
TRACT 20549

JULY 2022

SHEET 1 OF 1

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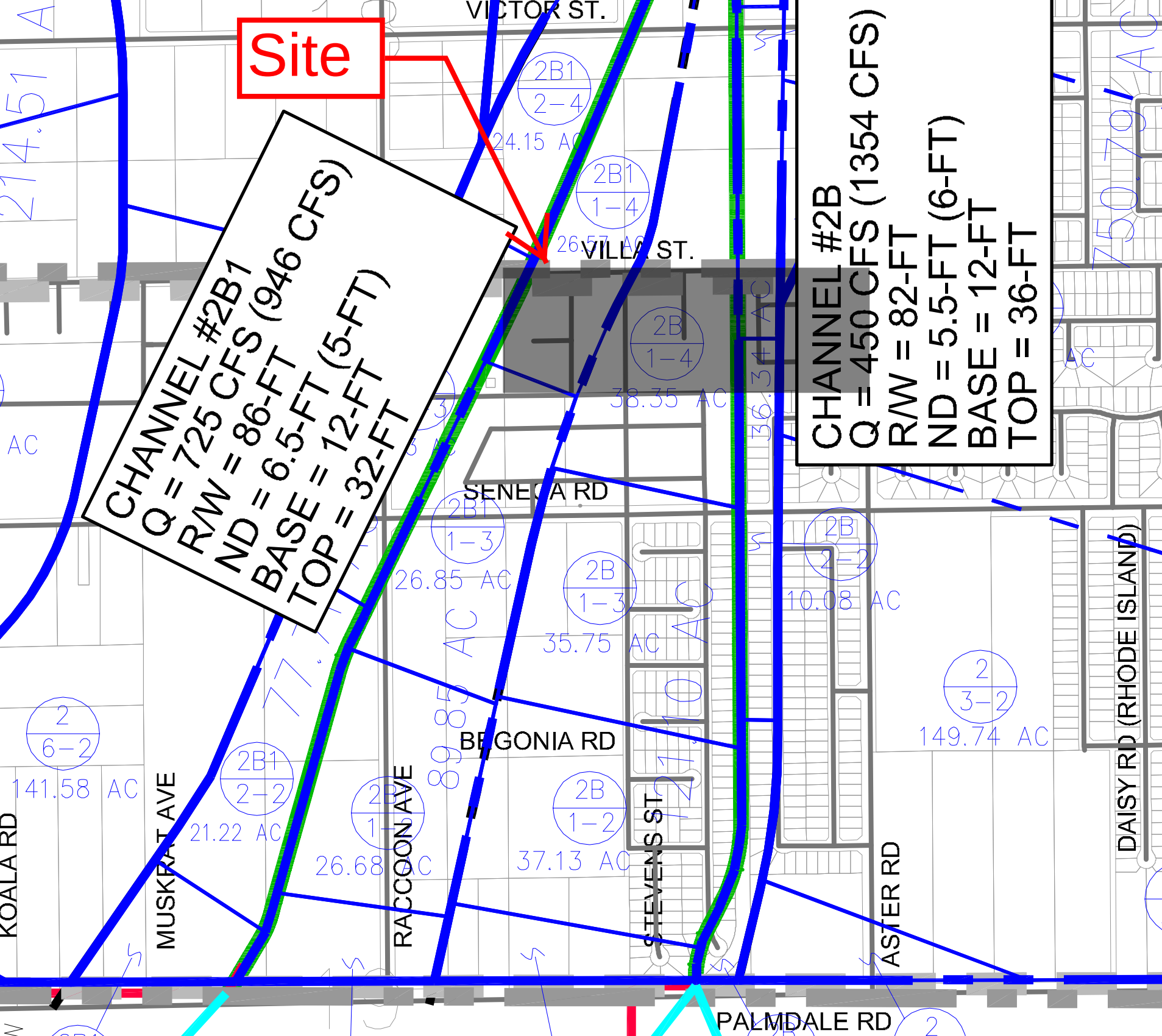

Site
CHANNEL #2B1
Q = 725 CFS (946 CFS)
R/W = 86-FT
ND = 6.5-FT (5-FT)
BASE = 12-FT
TOP = 32-FT
CHANNEL #2B
Q = 450 CFS (1354 CFS)
R/W = 82-FT
ND = 5.5-FT (6-FT)
BASE = 12-FT
TOP = 36-FT
VICTOR ST.
VILLA ST.
SENECA RD
BEGONIA RD
PALMDALE RD
KOALA RD
MUSKRAT AVE
RACCOON AVE
STEVENS ST
ASTER RD
DAISY RD (RHODE ISLAND)
2B1 2-4 24.15 AC
2B1 1-4 26.57 AC
2B 1-4 38.35 AC
2B1 1-3 26.85 AC
2B 1-3 35.75 AC
2B 2-2 10.08 AC
2 3-2 149.74 AC
2 6-2 141.58 AC
2B1 2-2 21.22 AC
2B 1-2 37.13 AC

APPENDIX B:
TENTATIVE TRACT MAP 20398

IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

TENTATIVE MAP - TRACT NO. 20549

BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST ¼ OF SECTION 18, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

UNITED ENGINEERING GROUP CA., INC OCTOBER 2022

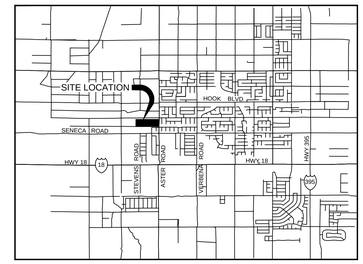
LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED ADELANTO IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
THE EAST 1/2 OF THE WEST 1/2 OF THE NORTH 1/2 OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 18, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 2:
THE EAST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 18, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 3:
THE WEST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 18, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.



VICINITY MAP
N.T.S.

LOT TABLE

LOT #	SQ. FT.	AC.	LOT #	SQ. FT.	AC.
1	7,553	0.17	58	6,000	0.14
2	6,806	0.16	59	7,164	0.16
3	6,806	0.16	60	7,599	0.17
4	6,806	0.16	61	7,040	0.16
5	6,806	0.16	62	7,040	0.16
6	6,697	0.15	63	7,040	0.16
7	5,790	0.13	64	7,040	0.16
8	10,735	0.25	65	7,040	0.16
9	10,862	0.25	66	7,083	0.16
10	5,582	0.13	67	7,761	0.18
11	6,361	0.15	68	7,941	0.18
12	6,382	0.15	69	7,370	0.17
13	6,382	0.15	70	7,361	0.17
14	6,382	0.15	71	7,395	0.17
15	6,382	0.15	72	7,430	0.17
16	7,541	0.17	73	7,464	0.17
17	7,539	0.17	74	7,498	0.17
18	6,997	0.16	75	8,208	0.19
19	7,082	0.16	76	8,395	0.19
20	7,084	0.16	77	8,063	0.19
21	7,086	0.16	78	8,061	0.19
22	7,088	0.16	79	8,059	0.19
23	7,090	0.16	80	8,057	0.18
24	7,092	0.16	81	11,517	0.26
25	7,498	0.17	82	11,150	0.26
26	7,558	0.17	83	7,782	0.18
27	6,373	0.15	84	7,763	0.18
28	6,373	0.15	85	7,763	0.18
29	6,373	0.15	86	7,763	0.18
30	6,373	0.15	87	7,762	0.18
31	6,373	0.15	88	8,084	0.19
32	6,373	0.15	89	7,166	0.16
33	6,373	0.15	90	6,000	0.14
34	6,373	0.15	91	6,000	0.14
35	6,073	0.14	92	6,000	0.14
36	12,239	0.28	93	6,000	0.14
37	8,843	0.20	94	6,000	0.14
38	6,549	0.15	95	6,000	0.14
39	6,502	0.15	96	5,978	0.14
40	6,575	0.15	97	5,583	0.13
41	6,575	0.15	98	14,489	0.33
42	6,575	0.15	99	12,426	0.29
43	6,575	0.15	100	7,620	0.17
44	6,575	0.15	101	7,891	0.18
45	6,575	0.15	102	8,027	0.18
46	6,784	0.16	103	7,493	0.17
47	6,782	0.16	104	6,729	0.15
48	6,780	0.16	105	6,677	0.15
49	6,779	0.16	106	8,317	0.19
50	6,777	0.16	107	12,073	0.28
51	6,744	0.15	108	5,653	0.13
52	8,940	0.21	109	5,998	0.14
53	13,735	0.32	110	6,000	0.14
54	10,994	0.25	111	6,000	0.14
55	5,806	0.13	112	6,000	0.14
56	6,000	0.14	113	6,000	0.14
57	6,000	0.14	114	7,056	0.16

RESIDENTIAL LOT AREAS

AREA FOR LOTS 1–114
TOTAL 839,617 SF 19.27 AC
AVERAGE 7,365 SF 0.17 AC

LOT #	SQ. FT.	AC.
A	60,094	1.38
B	25,344	0.58
C	16,855	0.39
D	8,441	0.19
E	20,773	0.48
TOTAL	131,507	3.02

LETTERED LOT DESCRIPTIONS:

LOT "A" STORM DRAIN CHANNEL TO BE MAINTAINED BY THE CITY OF ADELANTO.
LOT "B" TO BE DEDICATED TO THE CITY OF ADELANTO FOR FUTURE STORM DRAIN CHANNEL.
LOT "C" WATER QUALITY/RETENTION BASIN TO BE MAINTAINED BY THE CITY OF ADELANTO.
LOT "D" WATER QUALITY/RETENTION BASIN TO BE MAINTAINED BY THE CITY OF ADELANTO.
LOT "E" WATER QUALITY/RETENTION BASIN TO BE MAINTAINED BY THE CITY OF ADELANTO.

UTILITY PURVEYORS:

WATER
ADELANTO PUBLIC UTILITY AUTHORITY
11600 AIR EXPRESSWAY
ADELANTO, CA. 92301
(760) 246–2300

SEWER
ADELANTO PUBLIC UTILITY AUTHORITY
11600 AIR EXPRESSWAY
ADELANTO, CA. 92301
(760) 246–2300

ELECTRIC
SOUTHERN CALIFORNIA EDISON
12353 HESPERIA ROAD
VICTORVILLE, CA. 92395
(800) 684–8123

GAS
SOUTHWEST GAS CORP.
13471 MARIPOSA ROAD
VICTORVILLE, CA. 92395
(877) 860–6020

TELEPHONE
VERIZON
12133 HESPERIA ROAD
VICTORVILLE, CA. 92395
(760) 243–3801

CABLE
SPECTRUM
12180 RIDGECREST ROAD, #102
VICTORVILLE, CA. 92395
(833) 267–6097

GENERAL NOTES:

1. *ASSESSOR'S PARCEL NUMBER: 3132–081–02, 07, 08*
2. *THE PROPERTY SHOWN HEREIN CONTAINS THE ENTIRE CONTIGUOUS OWNERSHIP.*
3. *TOTAL GROSS AREA = 30.15 AC.*
   TOTAL NET AREA = 22.32 AC.
   TOTAL AREA TO BE DEDICATED FOR R/W = 7.83 AC.
4. *STREETS "A", "B", "C", "D", "E", "F", "G", VILLA RD., AND STEVENS RD. ARE STREETS FOR PUBLIC DEDICATION.*
5. *LOTS 1 THROUGH 114 ARE 5,000 SQ. FT. MIN. (RESIDENTIAL LOTS)*
6. *GROSS DENSITY: 3.78 DU/AC*
   NET DENSITY: 5.11 DU/AC
   AVERAGE LOT SIZE = 7,365 SQ. FT.
   MINIMUM LOT SIZE = 5,583 SQ. FT.
   MAXIMUM LOT SIZE = 14,489 SQ. FT.
7. *TOTAL NUMBER OF RESIDENTIAL LOTS = 114*
   TOTAL NUMBER OF LETTERED LOTS = 5
8. *LINEAR FEET OF STREETS:*
   "A" STREET = 384'
   "B" STREET = 505'
   "C" STREET = 584'
   "D" STREET = 512'
   "E" STREET = 827'
   "F" STREET = 353'
   "G" STREET = 399'
   VILLA RD. = 1,984'
   STEVENS RD. = 662'
9. *ALL FRONT YARD BUILDING SETBACK LINES (BSL) ARE SHOWN TO AN AVERAGE DEPTH. MINIMUM FRONT YARD BSL = 20'.*
10. *TOPOGRAPHY SOURCE: ARROWHEAD MAPPING. CONTOUR INTERVAL: 1 FOOT*
11. *ALL SLOPES ARE 2:1 OR FLATTER UNLESS OTHERWISE NOTED.*
12. *LOT DIMENSION SHOWN HEREIN ARE APPROXIMATE.*
13. *FEMA 100 YEAR FLOOD ZONE "D" (FLOOD HAZARDS ARE UNDETERMINED, BUT POSSIBLE)*
14. *THIS MAP IS COMPILED FROM RECORD INFORMATION ONLY AND IS NOT TO BE USED AS A BOUNDARY SURVEY.*
15. *THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS MAP ARE APPROXIMATE. (NO RECORDS AVAILABLE)*
16. *ADD 3000 FEET TO ALL ELEVATIONS SHOWN HEREIN TO OBTAIN TRUE DATUM.*

LAND USE/ZONING INFORMATION:

ADJACENT LAND USE:
NORTH.....VACANT
SOUTH.....SINGLE FAMILY RESIDENTIAL AND VACANT (TR20398)
EAST.....SINGLE FAMILY RESIDENTIAL
WEST.....VACANT

ADJACENT EXISTING ZONING:
NORTH.....R1 (MAX. 4 DU/AC.)
SOUTH.....R1 (MAX. 4 DU/AC.)
EAST.....R1 (MAX. 4 DU/AC.)
WEST.....R1 (MAX. 4 DU/AC.)

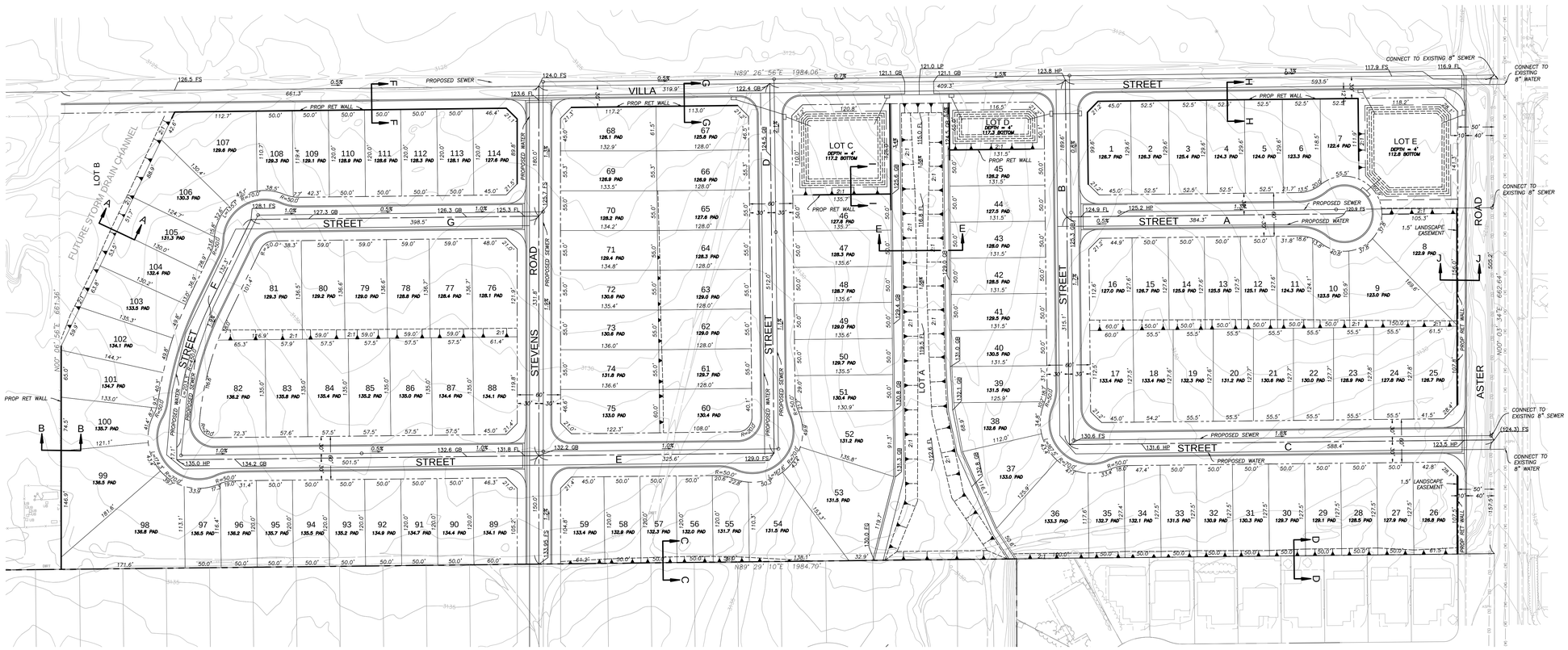
EXISTING ZONING: SINGLE FAMILY RESIDENTIAL (R–S5)
PROPOSED ZONING: SINGLE FAMILY RESIDENTIAL (R–S5)

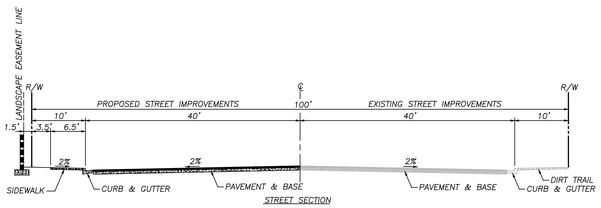
APPLICANT/OWNER:

HELLER DEVELOPMENT COMPANY
C/O RICHARD HELLER
18520 BURBANK BLVD, STE 200
TARZANA, CA 91356

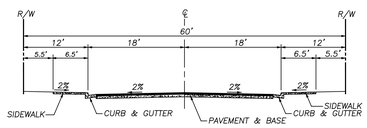
PREPARED BY:

UNITED ENGINEERING GROUP–CA, INC.
8885 HAVEN AVENUE
SUITE 195
RANCHO CUCAMONGA, CA 91730
PHONE: 909.466.9240
www.unitedeng.com

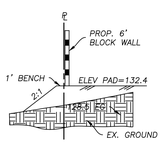




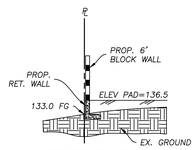
STREET SECTION
ASTER ROAD
N.T.S.



TYPICAL LOCAL STREET SECTION
STREETS "A" thru "E", STEVENS ROAD AND VILLA STREET
N.T.S.



SECTION A - A
N.T.S.



SECTION B - B
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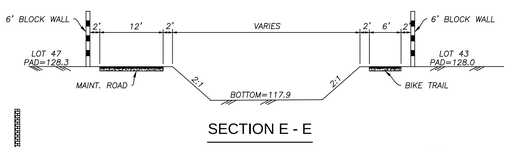

SECTION E - E
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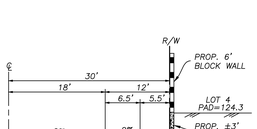
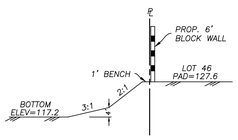
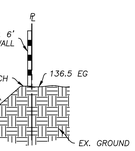


SECTION H - H
N.T.S.



SECTION I - I
N.T.S.



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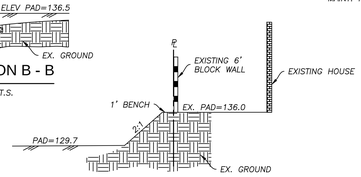

SECTION D - D
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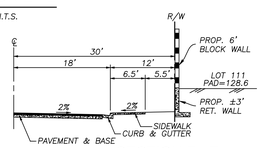
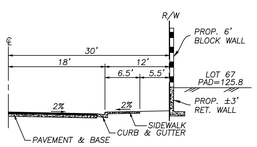
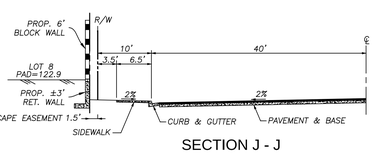


SECTION F - F
N.T.S.



SECTION G - G
N.T.S.



SECTION J - J
N.T.S.

LEGEND

BSL	BUILDING SETBACK LINE
FG	FINISH GRADE
FL	FLOW LINE
FS	FINISH SURFACE
LP	LOW POINT
HP	HIGH POINT
GB	GRADE BREAK
TC	TOP OF CURB
(XXX.XX)	EXISTING ELEVATION
40	LOT NUMBER
141.1 PAD	PAD ELEVATION
2:1	SLOPE (UNLESS NOTED)
	TRACT BOUNDARY
(S)	EXISTING SEWER
(W)	EXISTING WATER
S	PROPOSED SEWER
W	PROPOSED WATER
SD	PROPOSED STORM DRAIN

60' 30' 0' 60'
GRAPHIC SCALE: 1"=60'

SUBMITTALS:
DESIGNED BY:
DRAWN BY:
CHECKED BY:

REVISIONS		
NO.	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER F. LENZ — NO. 63001 EXP. 6/30/24 CIVIL — STATE OF CALIFORNIA

CHRISTOPHER F. LENZ DATE
R.C.E. No. 63001

LICENSED LAND SURVEYOR — DEAN C. PHILLIPS — EXP. 9/30/23 NO. 6974 — STATE OF CALIFORNIA

DEAN C. PHILLIPS DATE
L.S. No. 6974
dphillips@unitedeng.com

united engineering group
8885 Haven Avenue
Suite 195
Rancho Cucamonga,
CA 91730
Phone: 909.466.9240
www.unitedeng.com

VILLA & ASTER

TENTATIVE TRACT MAP
TRACT 20549

OCTOBER 2022

SHEET 1 OF 1

PROJECT NUMBER
CA–30214

APPENDIX C:
PROJECT RATIONAL
HYDROLOGY STUDY INFORMATION

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1

Rational Hydrology Study Date: 03/09/22

Villa Aster
Q and Tc Check
Existing Condition
Area B - 100 yr

Program License Serial Number 6232

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.060 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 201.000 to Point/Station 202.000

**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 79.00
Adjusted SCS curve number for AMC 3 = 93.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.129 (In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 137.000(Ft.)
Bottom (of initial area) elevation = 121.000(Ft.)
Difference in elevation = 16.000(Ft.)
Slope = 0.01600 s(%)= 1.60
TC = k(0.706)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 25.585 min.
Rainfall intensity = 1.925(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.840
Subarea runoff = 30.782(CFS)

Total initial stream area = 19.040(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.129(In/Hr)
End of computations, Total Study Area = 19.04 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 79.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1

Rational Hydrology Study Date: 03/09/22

Villa Aster
Q and Tc Check
Existing Condition
Area A - 100 year

Program License Serial Number 6232

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.060 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 101.000 to Point/Station 102.000

**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 79.00
Adjusted SCS curve number for AMC 3 = 93.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.129 (In/Hr)
Initial subarea data:
Initial area flow distance = 874.000(Ft.)
Top (of initial area) elevation = 135.000(Ft.)
Bottom (of initial area) elevation = 117.000(Ft.)
Difference in elevation = 18.000(Ft.)
Slope = 0.02059 s(%)= 2.06
TC = k(0.706)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.049 min.
Rainfall intensity = 2.071(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.844
Subarea runoff = 13.162(CFS)

Total initial stream area = 7.530(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.129(In/Hr)
End of computations, Total Study Area = 7.53 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 79.0

villaasterpro

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 03/09/22

Villa Aster
Qpeak and Tc Check
Proposed Condition
Area C = 100yr

Program License Serial Number 6232

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.060 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 301.000 to Point/Station 302.000
**** INITIAL AREA EVALUATION ****

RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.6000 Max loss rate(Fm)= 0.157(In/Hr)
Initial subarea data:
Initial area flow distance = 610.000(Ft.)
Top (of initial area) elevation = 35.000(Ft.)
Bottom (of initial area) elevation = 29.000(Ft.)
Difference in elevation = 6.000(Ft.)
Slope = 0.00984 s(%)= 0.98
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.504 min.
Rainfall intensity = 3.011(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.853
Subarea runoff = 5.394(CFS)
Total initial stream area = 2.100(Ac.)
Pervious area fraction = 0.600
Initial area Fm value = 0.157(In/Hr)

++
Process from Point/Station 302.000 to Point/Station 303.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****

Top of street segment elevation = 29.000(Ft.)
End of street segment elevation = 25.000(Ft.)
Length of street segment = 930.000(Ft.)

Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 20.000(Ft.)
Distance from crown to crossfall grade break = 18.000(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line = 10.000(Ft.)
Slope from curb to property line (v/hz) = 0.020
Gutter width = 2.000(Ft.)
Gutter hike from flowline = 0.000(In.)
Manning's N in gutter = 0.0120
Manning's N from gutter to grade break = 0.0150
Manning's N from grade break to crown = 0.0150
Estimated mean flow rate at midpoint of street = 20.527(CFS)
Depth of flow = 0.491(Ft.), Average velocity = 3.117(Ft/s)
Note: depth of flow exceeds top of street crown.
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width = 20.000(Ft.)
Flow velocity = 3.12(Ft/s)
Travel time = 4.97 min. TC = 18.48 min.
Adding area flow to street
RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.6000 Max loss rate(Fm)= 0.157(In/Hr)
Rainfall intensity = 2.418(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.842
Subarea runoff = 30.211(CFS) for 15.400(Ac.)
Total runoff = 35.605(CFS)
Effective area this stream = 17.50(Ac.)
Total Study Area (Main Stream No. 1) = 17.50(Ac.)
Area averaged Fm value = 0.157(In/Hr)
Street flow at end of street = 35.605(CFS)
Half street flow at end of street = 35.605(CFS)
Depth of flow = 0.640(Ft.), Average velocity = 3.547(Ft/s)
Warning: depth of flow exceeds top of curb
Note: depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property = 6.98(Ft.)
Flow width (from curb towards crown)= 20.000(Ft.)
End of computations, Total Study Area = 17.50 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged SCS curve number = 69.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 03/09/22

Villa Aster
Qpeak and Tc Check
Proposed Condition
Area B - 100yr

Program License Serial Number 6232

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.060 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 201.000 to Point/Station 202.000
**** INITIAL AREA EVALUATION ****

RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.6000 Max loss rate(Fm)= 0.157(In/Hr)
Initial subarea data:
Initial area flow distance = 805.000(Ft.)
Top (of initial area) elevation = 35.000(Ft.)
Bottom (of initial area) elevation = 26.000(Ft.)
Difference in elevation = 9.000(Ft.)
Slope = 0.01118 s(%)= 1.12
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.707 min.
Rainfall intensity = 2.836(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.850
Subarea runoff = 10.900(CFS)
Total initial stream area = 4.520(Ac.)
Pervious area fraction = 0.600
Initial area Fm value = 0.157(In/Hr)
End of computations, Total Study Area = 4.52 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged SCS curve number = 69.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 03/09/22

Villa Aster
Qpeak and Tc Check
Proposed Condition
Area A - 100yr

Program License Serial Number 6232

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.060 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

RESIDENTIAL(3 - 4 dwl/acre)
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.6000 Max loss rate(Fm)= 0.157(In/Hr)
Initial subarea data:
Initial area flow distance = 994.000(Ft.)
Top (of initial area) elevation = 35.000(Ft.)
Bottom (of initial area) elevation = 22.000(Ft.)
Difference in elevation = 13.000(Ft.)
Slope = 0.01308 s(%)= 1.31
TC = k(0.412)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.507 min.
Rainfall intensity = 2.733(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.848
Subarea runoff = 17.319(CFS)
Total initial stream area = 7.470(Ac.)
Pervious area fraction = 0.600
Initial area Fm value = 0.157(In/Hr)
End of computations, Total Study Area = 7.47 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged SCS curve number = 69.0

APPENDIX D:
PROJECT SCS UNIT HYDROGRAPH HYDROLOGY STUDY INFORMATION

villaasterproc

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/10/22

++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6232

Villa and Aster
SCS Hydrograph
Developed Condition
Area C 100yr 24hr

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

	Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100	17.50	1	1.06
Rainfall data for year 100	17.50	6	2.28
Rainfall data for year 100	17.50	24	4.54

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	17.50	1.000	0.262	0.500	0.131

Area-averaged adjusted loss rate Fm (In/Hr) = 0.131

********* Area-Averaged low loss rate fraction, Yb **********

Area	Area	SCS CN	SCS CN	S	Pervious

villaasterproc

(Ac.)	Fract	(AMC2)	(AMC3)		Yield Fr
8.75	0.500	69.0	86.2	1.60	0.674
8.75	0.500	98.0	98.0	0.20	0.948

Area-averaged catchment yield fraction, Y = 0.811
Area-averaged low loss fraction, Yb = 0.189
User entry of time of concentration = 0.318 (hours)
++
Watershed area = 17.50(Ac.)
Catchment Lag time = 0.254 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 32.7568
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.131(In/Hr)
Average low loss rate fraction (Yb) = 0.189 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.503(In)
Computed peak 30-minute rainfall = 0.861(In)
Specified peak 1-hour rainfall = 1.060(In)
Computed peak 3-hour rainfall = 1.695(In)
Specified peak 6-hour rainfall = 2.280(In)
Specified peak 24-hour rainfall = 4.540(In)

Rainfall depth area reduction factors:
Using a total area of 17.50(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.503(In)
30-minute factor = 0.999 Adjusted rainfall = 0.860(In)
1-hour factor = 0.999 Adjusted rainfall = 1.059(In)
3-hour factor = 1.000 Adjusted rainfall = 1.695(In)
6-hour factor = 1.000 Adjusted rainfall = 2.280(In)
24-hour factor = 1.000 Adjusted rainfall = 4.540(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 211.64 (CFS))	
1	2.016	4.266
2	11.410	19.881
3	36.586	53.284
4	56.859	42.906
5	67.714	22.972
6	74.853	15.108
7	79.992	10.877
8	83.806	8.073
9	86.934	6.619
10	89.363	5.141
11	91.248	3.990
12	92.862	3.415
13	94.214	2.863
14	95.326	2.353
15	96.249	1.953
16	97.030	1.652
17	97.623	1.255
18	98.032	0.867
19	98.375	0.726
20	98.765	0.825
21	99.158	0.832

22	99.514	0.753
23	99.731	0.461
24	100.000	0.230

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5026	0.5026
2	0.6187	0.1162
3	0.6988	0.0800
4	0.7618	0.0630
5	0.8145	0.0527
6	0.8603	0.0458
7	0.9010	0.0407
8	0.9378	0.0368
9	0.9716	0.0337
10	1.0028	0.0312
11	1.0318	0.0291
12	1.0591	0.0273
13	1.0961	0.0369
14	1.1314	0.0353
15	1.1653	0.0339
16	1.1979	0.0326
17	1.2294	0.0315
18	1.2599	0.0305
19	1.2894	0.0295
20	1.3180	0.0286
21	1.3459	0.0278
22	1.3729	0.0271
23	1.3993	0.0264
24	1.4250	0.0257
25	1.4502	0.0251
26	1.4747	0.0246
27	1.4987	0.0240
28	1.5222	0.0235
29	1.5453	0.0230
30	1.5679	0.0226
31	1.5900	0.0222
32	1.6118	0.0218
33	1.6332	0.0214
34	1.6542	0.0210
35	1.6748	0.0207
36	1.6952	0.0203
37	1.7151	0.0200
38	1.7348	0.0197
39	1.7542	0.0194
40	1.7733	0.0191
41	1.7921	0.0188
42	1.8106	0.0186
43	1.8290	0.0183
44	1.8470	0.0181
45	1.8648	0.0178
46	1.8825	0.0176
47	1.8998	0.0174
48	1.9170	0.0172
49	1.9340	0.0170
50	1.9508	0.0168
51	1.9674	0.0166
52	1.9838	0.0164
53	2.0000	0.0162
54	2.0160	0.0160
55	2.0319	0.0159
56	2.0476	0.0157
57	2.0632	0.0156

58	2.0786	0.0154
59	2.0938	0.0152
60	2.1089	0.0151
61	2.1239	0.0150
62	2.1387	0.0148
63	2.1534	0.0147
64	2.1679	0.0145
65	2.1823	0.0144
66	2.1966	0.0143
67	2.2108	0.0142
68	2.2248	0.0140
69	2.2388	0.0139
70	2.2526	0.0138
71	2.2663	0.0137
72	2.2799	0.0136
73	2.2956	0.0157
74	2.3111	0.0156
75	2.3266	0.0155
76	2.3420	0.0154
77	2.3572	0.0153
78	2.3724	0.0152
79	2.3874	0.0151
80	2.4024	0.0150
81	2.4173	0.0149
82	2.4321	0.0148
83	2.4467	0.0147
84	2.4614	0.0146
85	2.4759	0.0145
86	2.4903	0.0144
87	2.5046	0.0143
88	2.5189	0.0143
89	2.5331	0.0142
90	2.5472	0.0141
91	2.5612	0.0140
92	2.5752	0.0139
93	2.5890	0.0139
94	2.6028	0.0138
95	2.6165	0.0137
96	2.6302	0.0136
97	2.6438	0.0136
98	2.6573	0.0135
99	2.6707	0.0134
100	2.6841	0.0134
101	2.6974	0.0133
102	2.7106	0.0132
103	2.7238	0.0132
104	2.7369	0.0131
105	2.7499	0.0130
106	2.7629	0.0130
107	2.7758	0.0129
108	2.7887	0.0129
109	2.8015	0.0128
110	2.8142	0.0127
111	2.8269	0.0127
112	2.8396	0.0126
113	2.8521	0.0126
114	2.8646	0.0125
115	2.8771	0.0125
116	2.8895	0.0124
117	2.9018	0.0123
118	2.9141	0.0123
119	2.9264	0.0122
120	2.9386	0.0122

121	2.9507	0.0121
122	2.9628	0.0121
123	2.9749	0.0120
124	2.9868	0.0120
125	2.9988	0.0119
126	3.0107	0.0119
127	3.0225	0.0118
128	3.0343	0.0118
129	3.0461	0.0118
130	3.0578	0.0117
131	3.0695	0.0117
132	3.0811	0.0116
133	3.0927	0.0116
134	3.1042	0.0115
135	3.1157	0.0115
136	3.1271	0.0114
137	3.1385	0.0114
138	3.1499	0.0114
139	3.1612	0.0113
140	3.1725	0.0113
141	3.1837	0.0112
142	3.1949	0.0112
143	3.2061	0.0112
144	3.2172	0.0111
145	3.2283	0.0111
146	3.2393	0.0110
147	3.2503	0.0110
148	3.2613	0.0110
149	3.2722	0.0109
150	3.2831	0.0109
151	3.2940	0.0109
152	3.3048	0.0108
153	3.3156	0.0108
154	3.3263	0.0107
155	3.3371	0.0107
156	3.3477	0.0107
157	3.3584	0.0106
158	3.3690	0.0106
159	3.3796	0.0106
160	3.3901	0.0105
161	3.4006	0.0105
162	3.4111	0.0105
163	3.4215	0.0104
164	3.4320	0.0104
165	3.4423	0.0104
166	3.4527	0.0103
167	3.4630	0.0103
168	3.4733	0.0103
169	3.4835	0.0103
170	3.4938	0.0102
171	3.5040	0.0102
172	3.5141	0.0102
173	3.5243	0.0101
174	3.5344	0.0101
175	3.5445	0.0101
176	3.5545	0.0100
177	3.5645	0.0100
178	3.5745	0.0100
179	3.5845	0.0100
180	3.5944	0.0099
181	3.6043	0.0099
182	3.6142	0.0099
183	3.6241	0.0099

184	3.6339	0.0098
185	3.6437	0.0098
186	3.6535	0.0098
187	3.6632	0.0097
188	3.6729	0.0097
189	3.6826	0.0097
190	3.6923	0.0097
191	3.7019	0.0096
192	3.7115	0.0096
193	3.7211	0.0096
194	3.7307	0.0096
195	3.7402	0.0095
196	3.7498	0.0095
197	3.7593	0.0095
198	3.7687	0.0095
199	3.7782	0.0094
200	3.7876	0.0094
201	3.7970	0.0094
202	3.8064	0.0094
203	3.8157	0.0094
204	3.8250	0.0093
205	3.8343	0.0093
206	3.8436	0.0093
207	3.8529	0.0093
208	3.8621	0.0092
209	3.8713	0.0092
210	3.8805	0.0092
211	3.8897	0.0092
212	3.8989	0.0091
213	3.9080	0.0091
214	3.9171	0.0091
215	3.9262	0.0091
216	3.9352	0.0091
217	3.9443	0.0090
218	3.9533	0.0090
219	3.9623	0.0090
220	3.9713	0.0090
221	3.9802	0.0090
222	3.9892	0.0089
223	3.9981	0.0089
224	4.0070	0.0089
225	4.0159	0.0089
226	4.0247	0.0089
227	4.0336	0.0088
228	4.0424	0.0088
229	4.0512	0.0088
230	4.0600	0.0088
231	4.0687	0.0088
232	4.0775	0.0087
233	4.0862	0.0087
234	4.0949	0.0087
235	4.1036	0.0087
236	4.1122	0.0087
237	4.1209	0.0086
238	4.1295	0.0086
239	4.1381	0.0086
240	4.1467	0.0086
241	4.1553	0.0086
242	4.1639	0.0086
243	4.1724	0.0085
244	4.1809	0.0085
245	4.1894	0.0085
246	4.1979	0.0085

247	4.2064	0.0085
248	4.2148	0.0085
249	4.2233	0.0084
250	4.2317	0.0084
251	4.2401	0.0084
252	4.2485	0.0084
253	4.2568	0.0084
254	4.2652	0.0084
255	4.2735	0.0083
256	4.2818	0.0083
257	4.2901	0.0083
258	4.2984	0.0083
259	4.3067	0.0083
260	4.3150	0.0083
261	4.3232	0.0082
262	4.3314	0.0082
263	4.3396	0.0082
264	4.3478	0.0082
265	4.3560	0.0082
266	4.3641	0.0082
267	4.3723	0.0081
268	4.3804	0.0081
269	4.3885	0.0081
270	4.3966	0.0081
271	4.4047	0.0081
272	4.4128	0.0081
273	4.4208	0.0081
274	4.4289	0.0080
275	4.4369	0.0080
276	4.4449	0.0080
277	4.4529	0.0080
278	4.4609	0.0080
279	4.4688	0.0080
280	4.4768	0.0080
281	4.4847	0.0079
282	4.4927	0.0079
283	4.5006	0.0079
284	4.5085	0.0079
285	4.5163	0.0079
286	4.5242	0.0079
287	4.5321	0.0079
288	4.5399	0.0078

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0078	0.0015	0.0064
2	0.0079	0.0015	0.0064
3	0.0079	0.0015	0.0064
4	0.0079	0.0015	0.0064
5	0.0079	0.0015	0.0064
6	0.0079	0.0015	0.0064
7	0.0080	0.0015	0.0065
8	0.0080	0.0015	0.0065
9	0.0080	0.0015	0.0065
10	0.0080	0.0015	0.0065
11	0.0081	0.0015	0.0065
12	0.0081	0.0015	0.0065
13	0.0081	0.0015	0.0066
14	0.0081	0.0015	0.0066
15	0.0081	0.0015	0.0066
16	0.0082	0.0015	0.0066

17	0.0082	0.0015	0.0066
18	0.0082	0.0016	0.0067
19	0.0082	0.0016	0.0067
20	0.0083	0.0016	0.0067
21	0.0083	0.0016	0.0067
22	0.0083	0.0016	0.0067
23	0.0083	0.0016	0.0068
24	0.0084	0.0016	0.0068
25	0.0084	0.0016	0.0068
26	0.0084	0.0016	0.0068
27	0.0084	0.0016	0.0068
28	0.0085	0.0016	0.0069
29	0.0085	0.0016	0.0069
30	0.0085	0.0016	0.0069
31	0.0085	0.0016	0.0069
32	0.0086	0.0016	0.0069
33	0.0086	0.0016	0.0070
34	0.0086	0.0016	0.0070
35	0.0086	0.0016	0.0070
36	0.0087	0.0016	0.0070
37	0.0087	0.0016	0.0071
38	0.0087	0.0016	0.0071
39	0.0088	0.0017	0.0071
40	0.0088	0.0017	0.0071
41	0.0088	0.0017	0.0072
42	0.0088	0.0017	0.0072
43	0.0089	0.0017	0.0072
44	0.0089	0.0017	0.0072
45	0.0089	0.0017	0.0072
46	0.0090	0.0017	0.0073
47	0.0090	0.0017	0.0073
48	0.0090	0.0017	0.0073
49	0.0091	0.0017	0.0073
50	0.0091	0.0017	0.0074
51	0.0091	0.0017	0.0074
52	0.0091	0.0017	0.0074
53	0.0092	0.0017	0.0075
54	0.0092	0.0017	0.0075
55	0.0093	0.0018	0.0075
56	0.0093	0.0018	0.0075
57	0.0093	0.0018	0.0076
58	0.0094	0.0018	0.0076
59	0.0094	0.0018	0.0076
60	0.0094	0.0018	0.0076
61	0.0095	0.0018	0.0077
62	0.0095	0.0018	0.0077
63	0.0095	0.0018	0.0077
64	0.0096	0.0018	0.0078
65	0.0096	0.0018	0.0078
66	0.0096	0.0018	0.0078
67	0.0097	0.0018	0.0079
68	0.0097	0.0018	0.0079
69	0.0098	0.0018	0.0079
70	0.0098	0.0019	0.0079
71	0.0099	0.0019	0.0080
72	0.0099	0.0019	0.0080
73	0.0099	0.0019	0.0081
74	0.0100	0.0019	0.0081
75	0.0100	0.0019	0.0081
76	0.0100	0.0019	0.0081
77	0.0101	0.0019	0.0082
78	0.0101	0.0019	0.0082
79	0.0102	0.0019	0.0083

80	0.0102	0.0019	0.0083
81	0.0103	0.0019	0.0083
82	0.0103	0.0020	0.0084
83	0.0104	0.0020	0.0084
84	0.0104	0.0020	0.0084
85	0.0105	0.0020	0.0085
86	0.0105	0.0020	0.0085
87	0.0106	0.0020	0.0086
88	0.0106	0.0020	0.0086
89	0.0107	0.0020	0.0087
90	0.0107	0.0020	0.0087
91	0.0108	0.0020	0.0087
92	0.0108	0.0020	0.0088
93	0.0109	0.0021	0.0088
94	0.0109	0.0021	0.0089
95	0.0110	0.0021	0.0089
96	0.0110	0.0021	0.0090
97	0.0111	0.0021	0.0090
98	0.0112	0.0021	0.0090
99	0.0112	0.0021	0.0091
100	0.0113	0.0021	0.0091
101	0.0114	0.0021	0.0092
102	0.0114	0.0022	0.0092
103	0.0115	0.0022	0.0093
104	0.0115	0.0022	0.0094
105	0.0116	0.0022	0.0094
106	0.0117	0.0022	0.0095
107	0.0118	0.0022	0.0095
108	0.0118	0.0022	0.0096
109	0.0119	0.0022	0.0096
110	0.0119	0.0023	0.0097
111	0.0120	0.0023	0.0098
112	0.0121	0.0023	0.0098
113	0.0122	0.0023	0.0099
114	0.0122	0.0023	0.0099
115	0.0123	0.0023	0.0100
116	0.0124	0.0023	0.0101
117	0.0125	0.0024	0.0101
118	0.0126	0.0024	0.0102
119	0.0127	0.0024	0.0103
120	0.0127	0.0024	0.0103
121	0.0129	0.0024	0.0104
122	0.0129	0.0024	0.0105
123	0.0130	0.0025	0.0106
124	0.0131	0.0025	0.0106
125	0.0132	0.0025	0.0107
126	0.0133	0.0025	0.0108
127	0.0134	0.0025	0.0109
128	0.0135	0.0026	0.0110
129	0.0136	0.0026	0.0111
130	0.0137	0.0026	0.0111
131	0.0139	0.0026	0.0112
132	0.0139	0.0026	0.0113
133	0.0141	0.0027	0.0114
134	0.0142	0.0027	0.0115
135	0.0143	0.0027	0.0116
136	0.0144	0.0027	0.0117
137	0.0146	0.0028	0.0118
138	0.0147	0.0028	0.0119
139	0.0149	0.0028	0.0121
140	0.0150	0.0028	0.0121
141	0.0152	0.0029	0.0123
142	0.0153	0.0029	0.0124

143	0.0155	0.0029	0.0125
144	0.0156	0.0029	0.0126
145	0.0136	0.0026	0.0110
146	0.0137	0.0026	0.0111
147	0.0139	0.0026	0.0113
148	0.0140	0.0027	0.0114
149	0.0143	0.0027	0.0116
150	0.0144	0.0027	0.0117
151	0.0147	0.0028	0.0119
152	0.0148	0.0028	0.0120
153	0.0151	0.0029	0.0122
154	0.0152	0.0029	0.0124
155	0.0156	0.0029	0.0126
156	0.0157	0.0030	0.0127
157	0.0160	0.0030	0.0130
158	0.0162	0.0031	0.0132
159	0.0166	0.0031	0.0134
160	0.0168	0.0032	0.0136
161	0.0172	0.0032	0.0139
162	0.0174	0.0033	0.0141
163	0.0178	0.0034	0.0145
164	0.0181	0.0034	0.0146
165	0.0186	0.0035	0.0150
166	0.0188	0.0036	0.0153
167	0.0194	0.0037	0.0157
168	0.0197	0.0037	0.0159
169	0.0203	0.0038	0.0165
170	0.0207	0.0039	0.0168
171	0.0214	0.0040	0.0173
172	0.0218	0.0041	0.0176
173	0.0226	0.0043	0.0183
174	0.0230	0.0044	0.0187
175	0.0240	0.0045	0.0195
176	0.0246	0.0046	0.0199
177	0.0257	0.0049	0.0209
178	0.0264	0.0050	0.0214
179	0.0278	0.0053	0.0226
180	0.0286	0.0054	0.0232
181	0.0305	0.0058	0.0247
182	0.0315	0.0060	0.0255
183	0.0339	0.0064	0.0275
184	0.0353	0.0067	0.0287
185	0.0273	0.0052	0.0221
186	0.0291	0.0055	0.0236
187	0.0337	0.0064	0.0274
188	0.0368	0.0070	0.0299
189	0.0458	0.0087	0.0371
190	0.0527	0.0100	0.0428
191	0.0800	0.0109	0.0691
192	0.1162	0.0109	0.1053
193	0.5026	0.0109	0.4917
194	0.0630	0.0109	0.0521
195	0.0407	0.0077	0.0330
196	0.0312	0.0059	0.0253
197	0.0369	0.0070	0.0299
198	0.0326	0.0062	0.0265
199	0.0295	0.0056	0.0239
200	0.0271	0.0051	0.0220
201	0.0251	0.0048	0.0204
202	0.0235	0.0044	0.0191
203	0.0222	0.0042	0.0180
204	0.0210	0.0040	0.0170
205	0.0200	0.0038	0.0162

206	0.0191	0.0036	0.0155
207	0.0183	0.0035	0.0148
208	0.0176	0.0033	0.0143
209	0.0170	0.0032	0.0138
210	0.0164	0.0031	0.0133
211	0.0159	0.0030	0.0129
212	0.0154	0.0029	0.0125
213	0.0150	0.0028	0.0121
214	0.0145	0.0028	0.0118
215	0.0142	0.0027	0.0115
216	0.0138	0.0026	0.0112
217	0.0157	0.0030	0.0127
218	0.0154	0.0029	0.0125
219	0.0151	0.0028	0.0122
220	0.0148	0.0028	0.0120
221	0.0145	0.0027	0.0118
222	0.0143	0.0027	0.0116
223	0.0140	0.0027	0.0114
224	0.0138	0.0026	0.0112
225	0.0136	0.0026	0.0110
226	0.0134	0.0025	0.0108
227	0.0132	0.0025	0.0107
228	0.0130	0.0025	0.0105
229	0.0128	0.0024	0.0104
230	0.0126	0.0024	0.0102
231	0.0125	0.0024	0.0101
232	0.0123	0.0023	0.0100
233	0.0121	0.0023	0.0098
234	0.0120	0.0023	0.0097
235	0.0118	0.0022	0.0096
236	0.0117	0.0022	0.0095
237	0.0116	0.0022	0.0094
238	0.0114	0.0022	0.0093
239	0.0113	0.0021	0.0092
240	0.0112	0.0021	0.0091
241	0.0111	0.0021	0.0090
242	0.0110	0.0021	0.0089
243	0.0109	0.0021	0.0088
244	0.0107	0.0020	0.0087
245	0.0106	0.0020	0.0086
246	0.0105	0.0020	0.0086
247	0.0104	0.0020	0.0085
248	0.0103	0.0020	0.0084
249	0.0103	0.0019	0.0083
250	0.0102	0.0019	0.0082
251	0.0101	0.0019	0.0082
252	0.0100	0.0019	0.0081
253	0.0099	0.0019	0.0080
254	0.0098	0.0019	0.0080
255	0.0097	0.0018	0.0079
256	0.0097	0.0018	0.0078
257	0.0096	0.0018	0.0078
258	0.0095	0.0018	0.0077
259	0.0094	0.0018	0.0077
260	0.0094	0.0018	0.0076
261	0.0093	0.0018	0.0075
262	0.0092	0.0017	0.0075
263	0.0092	0.0017	0.0074
264	0.0091	0.0017	0.0074
265	0.0090	0.0017	0.0073
266	0.0090	0.0017	0.0073
267	0.0089	0.0017	0.0072
268	0.0089	0.0017	0.0072

269	0.0088	0.0017	0.0071
270	0.0087	0.0017	0.0071
271	0.0087	0.0016	0.0070
272	0.0086	0.0016	0.0070
273	0.0086	0.0016	0.0070
274	0.0085	0.0016	0.0069
275	0.0085	0.0016	0.0069
276	0.0084	0.0016	0.0068
277	0.0084	0.0016	0.0068
278	0.0083	0.0016	0.0067
279	0.0083	0.0016	0.0067
280	0.0082	0.0016	0.0067
281	0.0082	0.0015	0.0066
282	0.0081	0.0015	0.0066
283	0.0081	0.0015	0.0066
284	0.0080	0.0015	0.0065
285	0.0080	0.0015	0.0065
286	0.0080	0.0015	0.0064
287	0.0079	0.0015	0.0064
288	0.0079	0.0015	0.0064

Total soil rain loss = 0.76(In)
Total effective rainfall = 3.78(In)
Peak flow rate in flood hydrograph = 35.61(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	10.0	20.0	30.0	40.0
0+ 5	0.0002	0.03	Q				
0+10	0.0012	0.15	Q				
0+15	0.0046	0.49	Q				
0+20	0.0099	0.77	Q				
0+25	0.0162	0.91	Q				
0+30	0.0232	1.01	VQ				
0+35	0.0307	1.08	VQ				
0+40	0.0385	1.14	VQ				
0+45	0.0467	1.18	VQ				
0+50	0.0551	1.22	VQ				
0+55	0.0637	1.25	VQ				
1+ 0	0.0724	1.27	VQ				
1+ 5	0.0813	1.30	VQ				
1+10	0.0904	1.31	VQ				
1+15	0.0996	1.33	VQ				
1+20	0.1088	1.34	VQ				
1+25	0.1181	1.36	VQ				
1+30	0.1275	1.37	VQ				
1+35	0.1370	1.37	VQ				
1+40	0.1465	1.38	|Q				
1+45	0.1561	1.39	|Q				
1+50	0.1658	1.40	|Q				
1+55	0.1755	1.41	|Q				
2+ 0	0.1852	1.41	|Q				
2+ 5	0.1950	1.42	|Q				
2+10	0.2047	1.42	|Q				
2+15	0.2146	1.43	|Q				
2+20	0.2244	1.43	|Q				

2+25	0.2343	1.43	Q			
2+30	0.2442	1.44	Q			
2+35	0.2541	1.44	Q			
2+40	0.2641	1.45	Q			
2+45	0.2741	1.45	Q			
2+50	0.2841	1.46	QV			
2+55	0.2942	1.46	QV			
3+ 0	0.3043	1.47	QV			
3+ 5	0.3144	1.47	QV			
3+10	0.3245	1.47	QV			
3+15	0.3347	1.48	QV			
3+20	0.3450	1.48	QV			
3+25	0.3552	1.49	QV			
3+30	0.3655	1.49	QV			
3+35	0.3758	1.50	QV			
3+40	0.3862	1.50	QV			
3+45	0.3966	1.51	QV			
3+50	0.4070	1.51	QV			
3+55	0.4174	1.52	Q V			
4+ 0	0.4279	1.52	Q V			
4+ 5	0.4384	1.53	Q V			
4+10	0.4490	1.53	Q V			
4+15	0.4596	1.54	Q V			
4+20	0.4702	1.54	Q V			
4+25	0.4809	1.55	Q V			
4+30	0.4916	1.56	Q V			
4+35	0.5024	1.56	Q V			
4+40	0.5132	1.57	Q V			
4+45	0.5240	1.57	Q V			
4+50	0.5349	1.58	Q V			
4+55	0.5458	1.58	Q V			
5+ 0	0.5567	1.59	Q V			
5+ 5	0.5677	1.59	Q V			
5+10	0.5787	1.60	Q V			
5+15	0.5898	1.61	Q V			
5+20	0.6009	1.61	Q V			
5+25	0.6120	1.62	Q V			
5+30	0.6232	1.63	Q V			
5+35	0.6345	1.63	Q V			
5+40	0.6457	1.64	Q V			
5+45	0.6571	1.64	Q V			
5+50	0.6684	1.65	Q V			
5+55	0.6798	1.66	Q V			
6+ 0	0.6913	1.66	Q V			
6+ 5	0.7028	1.67	Q V			
6+10	0.7144	1.68	Q V			
6+15	0.7260	1.68	Q V			
6+20	0.7376	1.69	Q V			
6+25	0.7493	1.70	Q V			
6+30	0.7611	1.71	Q V			
6+35	0.7728	1.71	Q V			
6+40	0.7847	1.72	Q V			
6+45	0.7966	1.73	Q V			
6+50	0.8085	1.74	Q V			
6+55	0.8205	1.74	Q V			
7+ 0	0.8326	1.75	Q V			
7+ 5	0.8447	1.76	Q V			
7+10	0.8569	1.77	Q V			
7+15	0.8691	1.77	Q V			
7+20	0.8814	1.78	Q V			
7+25	0.8937	1.79	Q V			
7+30	0.9061	1.80	Q V			
7+35	0.9185	1.81	Q V			

7+40	0.9311	1.82	Q V			
7+45	0.9436	1.83	Q V			
7+50	0.9563	1.83	Q V			
7+55	0.9689	1.84	Q V			
8+ 0	0.9817	1.85	Q V			
8+ 5	0.9945	1.86	Q V			
8+10	1.0074	1.87	Q V			
8+15	1.0204	1.88	Q V			
8+20	1.0334	1.89	Q V			
8+25	1.0465	1.90	Q V			
8+30	1.0596	1.91	Q V			
8+35	1.0728	1.92	Q V			
8+40	1.0861	1.93	Q V			
8+45	1.0995	1.94	Q V			
8+50	1.1129	1.95	Q V			
8+55	1.1265	1.96	Q V			
9+ 0	1.1400	1.97	Q V			
9+ 5	1.1537	1.98	Q V			
9+10	1.1675	2.00	Q V			
9+15	1.1813	2.01	Q V			
9+20	1.1952	2.02	Q V			
9+25	1.2092	2.03	Q V			
9+30	1.2233	2.04	Q V			
9+35	1.2374	2.06	Q V			
9+40	1.2517	2.07	Q V			
9+45	1.2660	2.08	Q V			
9+50	1.2805	2.10	Q V			
9+55	1.2950	2.11	Q V			
10+ 0	1.3096	2.12	Q V			
10+ 5	1.3243	2.14	Q V			
10+10	1.3391	2.15	Q V			
10+15	1.3540	2.17	Q V			
10+20	1.3691	2.18	Q V			
10+25	1.3842	2.20	Q V			
10+30	1.3994	2.21	Q V			
10+35	1.4147	2.23	Q V			
10+40	1.4302	2.24	Q V			
10+45	1.4458	2.26	Q V			
10+50	1.4614	2.28	Q V			
10+55	1.4772	2.29	Q V			
11+ 0	1.4932	2.31	Q V			
11+ 5	1.5092	2.33	Q V			
11+10	1.5254	2.35	Q V			
11+15	1.5417	2.37	Q V			
11+20	1.5581	2.39	Q V			
11+25	1.5747	2.41	Q V			
11+30	1.5914	2.43	Q V			
11+35	1.6083	2.45	Q V			
11+40	1.6253	2.47	Q V			
11+45	1.6424	2.49	Q V			
11+50	1.6597	2.51	Q V			
11+55	1.6772	2.54	Q V			
12+ 0	1.6948	2.56	Q V			
12+ 5	1.7126	2.58	Q V			
12+10	1.7303	2.57	Q V			
12+15	1.7475	2.50	Q V			
12+20	1.7644	2.45	Q V			
12+25	1.7812	2.44	Q V			
12+30	1.7980	2.44	Q V			
12+35	1.8148	2.45	Q V			
12+40	1.8318	2.46	Q V			
12+45	1.8489	2.48	Q V			
12+50	1.8662	2.51	Q V			

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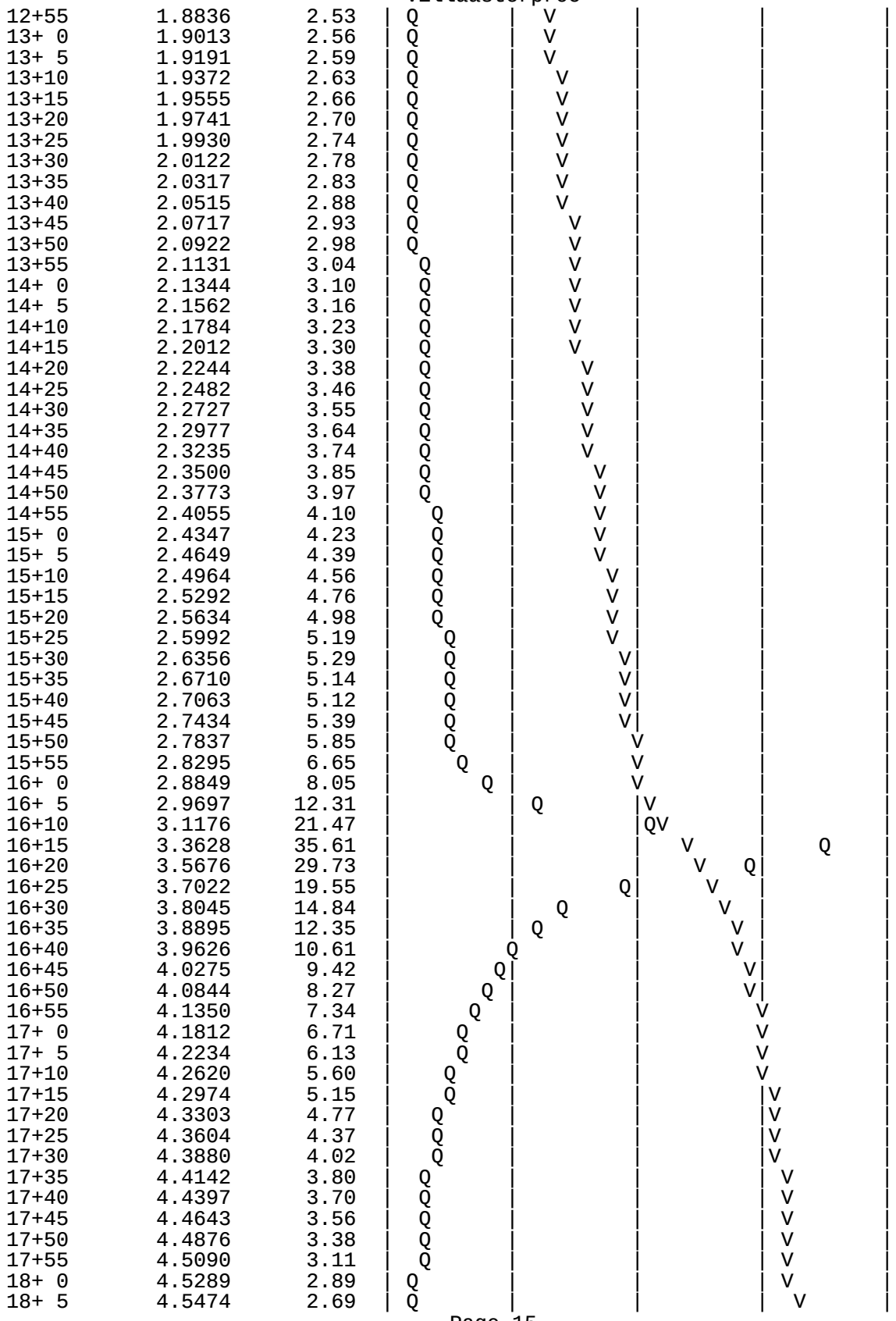

12+55	1.8836	2.53	
13+ 0	1.9013	2.56	
13+ 5	1.9191	2.59	
13+10	1.9372	2.63	
13+15	1.9555	2.66	
13+20	1.9741	2.70	
13+25	1.9930	2.74	
13+30	2.0122	2.78	
13+35	2.0317	2.83	
13+40	2.0515	2.88	
13+45	2.0717	2.93	
13+50	2.0922	2.98	
13+55	2.1131	3.04	
14+ 0	2.1344	3.10	
14+ 5	2.1562	3.16	
14+10	2.1784	3.23	
14+15	2.2012	3.30	
14+20	2.2244	3.38	
14+25	2.2482	3.46	
14+30	2.2727	3.55	
14+35	2.2977	3.64	
14+40	2.3235	3.74	
14+45	2.3500	3.85	
14+50	2.3773	3.97	
14+55	2.4055	4.10	
15+ 0	2.4347	4.23	
15+ 5	2.4649	4.39	
15+10	2.4964	4.56	
15+15	2.5292	4.76	
15+20	2.5634	4.98	
15+25	2.5992	5.19	
15+30	2.6356	5.29	
15+35	2.6710	5.14	
15+40	2.7063	5.12	
15+45	2.7434	5.39	
15+50	2.7837	5.85	
15+55	2.8295	6.65	
16+ 0	2.8849	8.05	
16+ 5	2.9697	12.31	
16+10	3.1176	21.47	
16+15	3.3628	35.61	
16+20	3.5676	29.73	
16+25	3.7022	19.55	
16+30	3.8045	14.84	
16+35	3.8895	12.35	
16+40	3.9626	10.61	
16+45	4.0275	9.42	
16+50	4.0844	8.27	
16+55	4.1350	7.34	
17+ 0	4.1812	6.71	
17+ 5	4.2234	6.13	
17+10	4.2620	5.60	
17+15	4.2974	5.15	
17+20	4.3303	4.77	
17+25	4.3604	4.37	
17+30	4.3880	4.02	
17+35	4.4142	3.80	
17+40	4.4397	3.70	
17+45	4.4643	3.56	
17+50	4.4876	3.38	
17+55	4.5090	3.11	
18+ 0	4.5289	2.89	
18+ 5	4.5474	2.69	

18+10	4.5656	2.64	Q			V	
18+15	4.5840	2.66	Q			V	
18+20	4.6023	2.67	Q			V	
18+25	4.6205	2.64	Q			V	
18+30	4.6384	2.60	Q			V	
18+35	4.6561	2.57	Q			V	
18+40	4.6735	2.53	Q			V	
18+45	4.6906	2.49	Q			V	
18+50	4.7075	2.45	Q			V	
18+55	4.7241	2.41	Q			V	
19+ 0	4.7405	2.38	Q			V	
19+ 5	4.7566	2.34	Q			V	
19+10	4.7725	2.31	Q			V	
19+15	4.7881	2.27	Q			V	
19+20	4.8036	2.24	Q			V	
19+25	4.8188	2.21	Q			V	
19+30	4.8339	2.18	Q			V	
19+35	4.8487	2.15	Q			V	
19+40	4.8634	2.13	Q			V	
19+45	4.8778	2.10	Q			V	
19+50	4.8921	2.08	Q			V	
19+55	4.9062	2.05	Q			V	
20+ 0	4.9202	2.03	Q			V	
20+ 5	4.9340	2.00	Q			V	
20+10	4.9476	1.98	Q			V	
20+15	4.9611	1.96	Q			V	
20+20	4.9744	1.94	Q			V	
20+25	4.9876	1.91	Q			V	
20+30	5.0006	1.89	Q			V	
20+35	5.0135	1.87	Q			V	
20+40	5.0263	1.86	Q			V	
20+45	5.0390	1.84	Q			V	
20+50	5.0515	1.82	Q			V	
20+55	5.0639	1.80	Q			V	
21+ 0	5.0762	1.79	Q			V	
21+ 5	5.0884	1.77	Q			V	
21+10	5.1005	1.75	Q			V	
21+15	5.1124	1.74	Q			V	
21+20	5.1243	1.72	Q			V	
21+25	5.1361	1.71	Q			V	
21+30	5.1477	1.69	Q			V	
21+35	5.1593	1.68	Q			V	
21+40	5.1708	1.67	Q			V	
21+45	5.1822	1.65	Q			V	
21+50	5.1934	1.64	Q			V	
21+55	5.2047	1.63	Q			V	
22+ 0	5.2158	1.61	Q			V	
22+ 5	5.2268	1.60	Q			V	
22+10	5.2378	1.59	Q			V	
22+15	5.2486	1.58	Q			V	
22+20	5.2594	1.57	Q			V	
22+25	5.2702	1.56	Q			V	
22+30	5.2808	1.55	Q			V	
22+35	5.2914	1.54	Q			V	
22+40	5.3019	1.52	Q			V	
22+45	5.3123	1.51	Q			V	
22+50	5.3227	1.50	Q			V	
22+55	5.3330	1.49	Q			V	
23+ 0	5.3432	1.48	Q			V	
23+ 5	5.3533	1.48	Q			V	
23+10	5.3634	1.47	Q			V	
23+15	5.3735	1.46	Q			V	
23+20	5.3834	1.45	Q			V	

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23+25	5.3934	1.44	|Q	|	|	|	V|
23+30	5.4032	1.43	|Q	|	|	|	V|
23+35	5.4130	1.42	|Q	|	|	|	V|
23+40	5.4228	1.41	|Q	|	|	|	V|
23+45	5.4324	1.41	|Q	|	|	|	V|
23+50	5.4421	1.40	|Q	|	|	|	V|
23+55	5.4516	1.39	|Q	|	|	|	V|
24+ 0	5.4612	1.38	|Q	|	|	|	V|
24+ 5	5.4704	1.35	|Q	|	|	|	V|
24+10	5.4788	1.21	|Q	|	|	|	V|
24+15	5.4848	0.87	Q	|	|	|	V|
24+20	5.4889	0.59	Q	|	|	|	V|
24+25	5.4919	0.44	Q	|	|	|	V|
24+30	5.4943	0.34	Q	|	|	|	V|
24+35	5.4962	0.27	Q	|	|	|	V|
24+40	5.4977	0.22	Q	|	|	|	V|
24+45	5.4989	0.18	Q	|	|	|	V|
24+50	5.4999	0.14	Q	|	|	|	V|
24+55	5.5007	0.12	Q	|	|	|	V|
25+ 0	5.5014	0.10	Q	|	|	|	V|
25+ 5	5.5019	0.08	Q	|	|	|	V|
25+10	5.5024	0.06	Q	|	|	|	V|
25+15	5.5027	0.05	Q	|	|	|	V|
25+20	5.5030	0.04	Q	|	|	|	V|
25+25	5.5032	0.03	Q	|	|	|	V|
25+30	5.5033	0.02	Q	|	|	|	V|
25+35	5.5035	0.02	Q	|	|	|	V|
25+40	5.5036	0.01	Q	|	|	|	V|
25+45	5.5036	0.01	Q	|	|	|	V|
25+50	5.5037	0.00	Q	|	|	|	V|
25+55	5.5037	0.00	Q	|	|	|	V

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/10/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6232

Villa and Aster
SCS Hydrograph
Developed Condition
Area B - 100yr 24hr

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
4.52	1	1.06
Rainfall data for year 100		
4.52	6	2.28
Rainfall data for year 100		
4.52	24	4.54

++

```
      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       69.0      86.2          4.52      1.000     0.262    0.500
0.131

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.131

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           2.26   0.500         69.0      86.2       1.60     0.674
           2.26   0.500         98.0      98.0       0.20     0.948

      Area-averaged catchment yield fraction, Y =  0.811
      Area-averaged low loss fraction, Yb =  0.189
      User entry of time of concentration  =   0.230 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =       4.52(Ac.)
      Catchment Lag time =   0.184 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 45.2899
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.050(In/Hr)
      Average low loss rate fraction (Yb) = 0.189 (decimal)
      Note: user entry of the Fm value
      DESERT S-Graph Selected
      Computed peak 5-minute rainfall =  0.503(In)
      Computed peak 30-minute rainfall =  0.861(In)
      Specified peak 1-hour rainfall =  1.060(In)
      Computed peak 3-hour rainfall =  1.695(In)
      Specified peak 6-hour rainfall =  2.280(In)
      Specified peak 24-hour rainfall =  4.540(In)


      Rainfall depth area reduction factors:
      Using a total area of       4.52(Ac.) (Ref: fig. E-4)

      5-minute factor = 1.000     Adjusted rainfall =  0.503(In)
      30-minute factor = 1.000    Adjusted rainfall =  0.861(In)
      1-hour factor = 1.000       Adjusted rainfall =  1.060(In)
      3-hour factor = 1.000       Adjusted rainfall =  1.695(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.280(In)
      24-hour factor = 1.000      Adjusted rainfall =  4.540(In)
      ------------------------------------------------------------------
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                      U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
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      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ------------------------------------------------------------------
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(K = 54.66 (CFS))

1	3.365	1.839
2	24.923	11.784
3	55.845	16.904
4	70.325	7.915
5	78.657	4.554
6	84.140	2.997
7	88.185	2.211
8	91.006	1.542
9	93.225	1.213
10	94.928	0.931
11	96.264	0.730
12	97.275	0.552
13	97.957	0.373
14	98.440	0.264
15	98.980	0.296
16	99.485	0.276
17	99.796	0.170
18	100.000	0.112

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5029	0.5029
2	0.6191	0.1162
3	0.6992	0.0801
4	0.7622	0.0630
5	0.8150	0.0528
6	0.8608	0.0458
7	0.9015	0.0407
8	0.9384	0.0368
9	0.9721	0.0338
10	1.0034	0.0312
11	1.0325	0.0291
12	1.0598	0.0273
13	1.0967	0.0369
14	1.1320	0.0353
15	1.1659	0.0339
16	1.1985	0.0326
17	1.2300	0.0315
18	1.2604	0.0304
19	1.2899	0.0295
20	1.3185	0.0286
21	1.3463	0.0278
22	1.3734	0.0271
23	1.3997	0.0264
24	1.4254	0.0257
25	1.4505	0.0251
26	1.4751	0.0245
27	1.4991	0.0240
28	1.5225	0.0235
29	1.5456	0.0230
30	1.5681	0.0226
31	1.5903	0.0221
32	1.6120	0.0217
33	1.6334	0.0214
34	1.6544	0.0210
35	1.6750	0.0206
36	1.6953	0.0203

37	1.7153	0.0200
38	1.7349	0.0197
39	1.7543	0.0194
40	1.7734	0.0191
41	1.7922	0.0188
42	1.8108	0.0186
43	1.8291	0.0183
44	1.8471	0.0181
45	1.8650	0.0178
46	1.8826	0.0176
47	1.9000	0.0174
48	1.9171	0.0172
49	1.9341	0.0170
50	1.9509	0.0168
51	1.9675	0.0166
52	1.9839	0.0164
53	2.0001	0.0162
54	2.0161	0.0160
55	2.0320	0.0159
56	2.0477	0.0157
57	2.0633	0.0156
58	2.0787	0.0154
59	2.0939	0.0152
60	2.1090	0.0151
61	2.1240	0.0150
62	2.1388	0.0148
63	2.1535	0.0147
64	2.1680	0.0145
65	2.1824	0.0144
66	2.1967	0.0143
67	2.2109	0.0142
68	2.2249	0.0140
69	2.2389	0.0139
70	2.2527	0.0138
71	2.2664	0.0137
72	2.2800	0.0136
73	2.2956	0.0157
74	2.3112	0.0156
75	2.3267	0.0155
76	2.3420	0.0154
77	2.3573	0.0153
78	2.3725	0.0152
79	2.3875	0.0151
80	2.4025	0.0150
81	2.4174	0.0149
82	2.4322	0.0148
83	2.4468	0.0147
84	2.4614	0.0146
85	2.4760	0.0145
86	2.4904	0.0144
87	2.5047	0.0143
88	2.5190	0.0143
89	2.5332	0.0142
90	2.5473	0.0141
91	2.5613	0.0140
92	2.5753	0.0139
93	2.5891	0.0139
94	2.6029	0.0138
95	2.6166	0.0137
96	2.6303	0.0136

97	2.6439	0.0136
98	2.6574	0.0135
99	2.6708	0.0134
100	2.6842	0.0134
101	2.6975	0.0133
102	2.7107	0.0132
103	2.7239	0.0132
104	2.7370	0.0131
105	2.7500	0.0130
106	2.7630	0.0130
107	2.7759	0.0129
108	2.7888	0.0129
109	2.8016	0.0128
110	2.8143	0.0127
111	2.8270	0.0127
112	2.8396	0.0126
113	2.8522	0.0126
114	2.8647	0.0125
115	2.8772	0.0125
116	2.8896	0.0124
117	2.9019	0.0123
118	2.9142	0.0123
119	2.9265	0.0122
120	2.9387	0.0122
121	2.9508	0.0121
122	2.9629	0.0121
123	2.9749	0.0120
124	2.9869	0.0120
125	2.9989	0.0119
126	3.0108	0.0119
127	3.0226	0.0118
128	3.0344	0.0118
129	3.0462	0.0118
130	3.0579	0.0117
131	3.0696	0.0117
132	3.0812	0.0116
133	3.0928	0.0116
134	3.1043	0.0115
135	3.1158	0.0115
136	3.1272	0.0114
137	3.1386	0.0114
138	3.1500	0.0114
139	3.1613	0.0113
140	3.1726	0.0113
141	3.1838	0.0112
142	3.1950	0.0112
143	3.2062	0.0112
144	3.2173	0.0111
145	3.2284	0.0111
146	3.2394	0.0110
147	3.2504	0.0110
148	3.2614	0.0110
149	3.2723	0.0109
150	3.2832	0.0109
151	3.2941	0.0109
152	3.3049	0.0108
153	3.3157	0.0108
154	3.3264	0.0107
155	3.3371	0.0107
156	3.3478	0.0107

157	3.3585	0.0106
158	3.3691	0.0106
159	3.3797	0.0106
160	3.3902	0.0105
161	3.4007	0.0105
162	3.4112	0.0105
163	3.4216	0.0104
164	3.4320	0.0104
165	3.4424	0.0104
166	3.4528	0.0103
167	3.4631	0.0103
168	3.4734	0.0103
169	3.4836	0.0103
170	3.4939	0.0102
171	3.5041	0.0102
172	3.5142	0.0102
173	3.5244	0.0101
174	3.5345	0.0101
175	3.5445	0.0101
176	3.5546	0.0100
177	3.5646	0.0100
178	3.5746	0.0100
179	3.5846	0.0100
180	3.5945	0.0099
181	3.6044	0.0099
182	3.6143	0.0099
183	3.6241	0.0099
184	3.6340	0.0098
185	3.6438	0.0098
186	3.6535	0.0098
187	3.6633	0.0097
188	3.6730	0.0097
189	3.6827	0.0097
190	3.6924	0.0097
191	3.7020	0.0096
192	3.7116	0.0096
193	3.7212	0.0096
194	3.7308	0.0096
195	3.7403	0.0095
196	3.7499	0.0095
197	3.7593	0.0095
198	3.7688	0.0095
199	3.7783	0.0094
200	3.7877	0.0094
201	3.7971	0.0094
202	3.8065	0.0094
203	3.8158	0.0094
204	3.8251	0.0093
205	3.8344	0.0093
206	3.8437	0.0093
207	3.8530	0.0093
208	3.8622	0.0092
209	3.8714	0.0092
210	3.8806	0.0092
211	3.8898	0.0092
212	3.8989	0.0091
213	3.9081	0.0091
214	3.9172	0.0091
215	3.9263	0.0091
216	3.9353	0.0091

217	3.9444	0.0090
218	3.9534	0.0090
219	3.9624	0.0090
220	3.9714	0.0090
221	3.9803	0.0090
222	3.9893	0.0089
223	3.9982	0.0089
224	4.0071	0.0089
225	4.0159	0.0089
226	4.0248	0.0089
227	4.0336	0.0088
228	4.0425	0.0088
229	4.0513	0.0088
230	4.0600	0.0088
231	4.0688	0.0088
232	4.0775	0.0087
233	4.0863	0.0087
234	4.0950	0.0087
235	4.1037	0.0087
236	4.1123	0.0087
237	4.1210	0.0086
238	4.1296	0.0086
239	4.1382	0.0086
240	4.1468	0.0086
241	4.1554	0.0086
242	4.1639	0.0086
243	4.1725	0.0085
244	4.1810	0.0085
245	4.1895	0.0085
246	4.1980	0.0085
247	4.2065	0.0085
248	4.2149	0.0085
249	4.2233	0.0084
250	4.2318	0.0084
251	4.2402	0.0084
252	4.2486	0.0084
253	4.2569	0.0084
254	4.2653	0.0084
255	4.2736	0.0083
256	4.2819	0.0083
257	4.2902	0.0083
258	4.2985	0.0083
259	4.3068	0.0083
260	4.3150	0.0083
261	4.3233	0.0082
262	4.3315	0.0082
263	4.3397	0.0082
264	4.3479	0.0082
265	4.3561	0.0082
266	4.3642	0.0082
267	4.3724	0.0081
268	4.3805	0.0081
269	4.3886	0.0081
270	4.3967	0.0081
271	4.4048	0.0081
272	4.4129	0.0081
273	4.4209	0.0081
274	4.4290	0.0080
275	4.4370	0.0080
276	4.4450	0.0080

277	4.4530	0.0080
278	4.4610	0.0080
279	4.4689	0.0080
280	4.4769	0.0080
281	4.4848	0.0079
282	4.4927	0.0079
283	4.5006	0.0079
284	4.5085	0.0079
285	4.5164	0.0079
286	4.5243	0.0079
287	4.5321	0.0079
288	4.5400	0.0078

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0078	0.0015	0.0064
2	0.0079	0.0015	0.0064
3	0.0079	0.0015	0.0064
4	0.0079	0.0015	0.0064
5	0.0079	0.0015	0.0064
6	0.0079	0.0015	0.0064
7	0.0080	0.0015	0.0065
8	0.0080	0.0015	0.0065
9	0.0080	0.0015	0.0065
10	0.0080	0.0015	0.0065
11	0.0081	0.0015	0.0065
12	0.0081	0.0015	0.0065
13	0.0081	0.0015	0.0066
14	0.0081	0.0015	0.0066
15	0.0081	0.0015	0.0066
16	0.0082	0.0015	0.0066
17	0.0082	0.0015	0.0066
18	0.0082	0.0016	0.0067
19	0.0082	0.0016	0.0067
20	0.0083	0.0016	0.0067
21	0.0083	0.0016	0.0067
22	0.0083	0.0016	0.0067
23	0.0083	0.0016	0.0068
24	0.0084	0.0016	0.0068
25	0.0084	0.0016	0.0068
26	0.0084	0.0016	0.0068
27	0.0084	0.0016	0.0068
28	0.0085	0.0016	0.0069
29	0.0085	0.0016	0.0069
30	0.0085	0.0016	0.0069
31	0.0085	0.0016	0.0069
32	0.0086	0.0016	0.0069
33	0.0086	0.0016	0.0070
34	0.0086	0.0016	0.0070
35	0.0086	0.0016	0.0070
36	0.0087	0.0016	0.0070
37	0.0087	0.0016	0.0071
38	0.0087	0.0016	0.0071
39	0.0088	0.0017	0.0071
40	0.0088	0.0017	0.0071
41	0.0088	0.0017	0.0072

42	0.0088	0.0017	0.0072
43	0.0089	0.0017	0.0072
44	0.0089	0.0017	0.0072
45	0.0089	0.0017	0.0072
46	0.0090	0.0017	0.0073
47	0.0090	0.0017	0.0073
48	0.0090	0.0017	0.0073
49	0.0091	0.0017	0.0073
50	0.0091	0.0017	0.0074
51	0.0091	0.0017	0.0074
52	0.0091	0.0017	0.0074
53	0.0092	0.0017	0.0075
54	0.0092	0.0017	0.0075
55	0.0093	0.0018	0.0075
56	0.0093	0.0018	0.0075
57	0.0093	0.0018	0.0076
58	0.0094	0.0018	0.0076
59	0.0094	0.0018	0.0076
60	0.0094	0.0018	0.0076
61	0.0095	0.0018	0.0077
62	0.0095	0.0018	0.0077
63	0.0095	0.0018	0.0077
64	0.0096	0.0018	0.0078
65	0.0096	0.0018	0.0078
66	0.0096	0.0018	0.0078
67	0.0097	0.0018	0.0079
68	0.0097	0.0018	0.0079
69	0.0098	0.0018	0.0079
70	0.0098	0.0019	0.0079
71	0.0099	0.0019	0.0080
72	0.0099	0.0019	0.0080
73	0.0099	0.0019	0.0081
74	0.0100	0.0019	0.0081
75	0.0100	0.0019	0.0081
76	0.0100	0.0019	0.0081
77	0.0101	0.0019	0.0082
78	0.0101	0.0019	0.0082
79	0.0102	0.0019	0.0083
80	0.0102	0.0019	0.0083
81	0.0103	0.0019	0.0083
82	0.0103	0.0020	0.0084
83	0.0104	0.0020	0.0084
84	0.0104	0.0020	0.0084
85	0.0105	0.0020	0.0085
86	0.0105	0.0020	0.0085
87	0.0106	0.0020	0.0086
88	0.0106	0.0020	0.0086
89	0.0107	0.0020	0.0087
90	0.0107	0.0020	0.0087
91	0.0108	0.0020	0.0087
92	0.0108	0.0020	0.0088
93	0.0109	0.0021	0.0088
94	0.0109	0.0021	0.0089
95	0.0110	0.0021	0.0089
96	0.0110	0.0021	0.0090
97	0.0111	0.0021	0.0090
98	0.0112	0.0021	0.0090
99	0.0112	0.0021	0.0091
100	0.0113	0.0021	0.0091
101	0.0114	0.0021	0.0092

102	0.0114	0.0022	0.0092
103	0.0115	0.0022	0.0093
104	0.0115	0.0022	0.0094
105	0.0116	0.0022	0.0094
106	0.0117	0.0022	0.0095
107	0.0118	0.0022	0.0095
108	0.0118	0.0022	0.0096
109	0.0119	0.0022	0.0096
110	0.0119	0.0023	0.0097
111	0.0120	0.0023	0.0098
112	0.0121	0.0023	0.0098
113	0.0122	0.0023	0.0099
114	0.0122	0.0023	0.0099
115	0.0123	0.0023	0.0100
116	0.0124	0.0023	0.0101
117	0.0125	0.0024	0.0101
118	0.0126	0.0024	0.0102
119	0.0127	0.0024	0.0103
120	0.0127	0.0024	0.0103
121	0.0129	0.0024	0.0104
122	0.0129	0.0024	0.0105
123	0.0130	0.0025	0.0106
124	0.0131	0.0025	0.0106
125	0.0132	0.0025	0.0107
126	0.0133	0.0025	0.0108
127	0.0134	0.0025	0.0109
128	0.0135	0.0026	0.0110
129	0.0136	0.0026	0.0111
130	0.0137	0.0026	0.0111
131	0.0139	0.0026	0.0112
132	0.0139	0.0026	0.0113
133	0.0141	0.0027	0.0114
134	0.0142	0.0027	0.0115
135	0.0143	0.0027	0.0116
136	0.0144	0.0027	0.0117
137	0.0146	0.0028	0.0118
138	0.0147	0.0028	0.0119
139	0.0149	0.0028	0.0121
140	0.0150	0.0028	0.0121
141	0.0152	0.0029	0.0123
142	0.0153	0.0029	0.0124
143	0.0155	0.0029	0.0125
144	0.0156	0.0029	0.0126
145	0.0136	0.0026	0.0110
146	0.0137	0.0026	0.0111
147	0.0139	0.0026	0.0113
148	0.0140	0.0027	0.0114
149	0.0143	0.0027	0.0116
150	0.0144	0.0027	0.0117
151	0.0147	0.0028	0.0119
152	0.0148	0.0028	0.0120
153	0.0151	0.0029	0.0122
154	0.0152	0.0029	0.0124
155	0.0156	0.0029	0.0126
156	0.0157	0.0030	0.0127
157	0.0160	0.0030	0.0130
158	0.0162	0.0031	0.0132
159	0.0166	0.0031	0.0134
160	0.0168	0.0032	0.0136
161	0.0172	0.0032	0.0139

162	0.0174	0.0033	0.0141
163	0.0178	0.0034	0.0145
164	0.0181	0.0034	0.0146
165	0.0186	0.0035	0.0150
166	0.0188	0.0036	0.0153
167	0.0194	0.0037	0.0157
168	0.0197	0.0037	0.0159
169	0.0203	0.0038	0.0165
170	0.0206	0.0039	0.0167
171	0.0214	0.0040	0.0173
172	0.0217	0.0041	0.0176
173	0.0226	0.0042	0.0184
174	0.0230	0.0042	0.0189
175	0.0240	0.0042	0.0198
176	0.0245	0.0042	0.0204
177	0.0257	0.0042	0.0215
178	0.0264	0.0042	0.0222
179	0.0278	0.0042	0.0236
180	0.0286	0.0042	0.0244
181	0.0304	0.0042	0.0263
182	0.0315	0.0042	0.0273
183	0.0339	0.0042	0.0297
184	0.0353	0.0042	0.0311
185	0.0273	0.0042	0.0231
186	0.0291	0.0042	0.0249
187	0.0338	0.0042	0.0296
188	0.0368	0.0042	0.0327
189	0.0458	0.0042	0.0417
190	0.0528	0.0042	0.0486
191	0.0801	0.0042	0.0759
192	0.1162	0.0042	0.1121
193	0.5029	0.0042	0.4987
194	0.0630	0.0042	0.0589
195	0.0407	0.0042	0.0366
196	0.0312	0.0042	0.0271
197	0.0369	0.0042	0.0327
198	0.0326	0.0042	0.0285
199	0.0295	0.0042	0.0253
200	0.0271	0.0042	0.0229
201	0.0251	0.0042	0.0209
202	0.0235	0.0042	0.0193
203	0.0221	0.0042	0.0180
204	0.0210	0.0040	0.0170
205	0.0200	0.0038	0.0162
206	0.0191	0.0036	0.0155
207	0.0183	0.0035	0.0148
208	0.0176	0.0033	0.0143
209	0.0170	0.0032	0.0138
210	0.0164	0.0031	0.0133
211	0.0159	0.0030	0.0129
212	0.0154	0.0029	0.0125
213	0.0150	0.0028	0.0121
214	0.0145	0.0028	0.0118
215	0.0142	0.0027	0.0115
216	0.0138	0.0026	0.0112
217	0.0157	0.0030	0.0127
218	0.0154	0.0029	0.0125
219	0.0151	0.0028	0.0122
220	0.0148	0.0028	0.0120
221	0.0145	0.0027	0.0118

222	0.0143	0.0027	0.0116
223	0.0140	0.0027	0.0114
224	0.0138	0.0026	0.0112
225	0.0136	0.0026	0.0110
226	0.0134	0.0025	0.0108
227	0.0132	0.0025	0.0107
228	0.0130	0.0025	0.0105
229	0.0128	0.0024	0.0104
230	0.0126	0.0024	0.0102
231	0.0125	0.0024	0.0101
232	0.0123	0.0023	0.0100
233	0.0121	0.0023	0.0098
234	0.0120	0.0023	0.0097
235	0.0118	0.0022	0.0096
236	0.0117	0.0022	0.0095
237	0.0116	0.0022	0.0094
238	0.0114	0.0022	0.0093
239	0.0113	0.0021	0.0092
240	0.0112	0.0021	0.0091
241	0.0111	0.0021	0.0090
242	0.0110	0.0021	0.0089
243	0.0109	0.0021	0.0088
244	0.0107	0.0020	0.0087
245	0.0106	0.0020	0.0086
246	0.0105	0.0020	0.0086
247	0.0104	0.0020	0.0085
248	0.0103	0.0020	0.0084
249	0.0103	0.0019	0.0083
250	0.0102	0.0019	0.0082
251	0.0101	0.0019	0.0082
252	0.0100	0.0019	0.0081
253	0.0099	0.0019	0.0080
254	0.0098	0.0019	0.0080
255	0.0097	0.0018	0.0079
256	0.0097	0.0018	0.0078
257	0.0096	0.0018	0.0078
258	0.0095	0.0018	0.0077
259	0.0094	0.0018	0.0077
260	0.0094	0.0018	0.0076
261	0.0093	0.0018	0.0075
262	0.0092	0.0017	0.0075
263	0.0092	0.0017	0.0074
264	0.0091	0.0017	0.0074
265	0.0090	0.0017	0.0073
266	0.0090	0.0017	0.0073
267	0.0089	0.0017	0.0072
268	0.0089	0.0017	0.0072
269	0.0088	0.0017	0.0071
270	0.0087	0.0017	0.0071
271	0.0087	0.0016	0.0070
272	0.0086	0.0016	0.0070
273	0.0086	0.0016	0.0070
274	0.0085	0.0016	0.0069
275	0.0085	0.0016	0.0069
276	0.0084	0.0016	0.0068
277	0.0084	0.0016	0.0068
278	0.0083	0.0016	0.0067
279	0.0083	0.0016	0.0067
280	0.0082	0.0016	0.0067
281	0.0082	0.0015	0.0066

```
      282              0.0081          0.0015              0.0066
      283              0.0081          0.0015              0.0066
      284              0.0080          0.0015              0.0065
      285              0.0080          0.0015              0.0065
      286              0.0080          0.0015              0.0064
      287              0.0079          0.0015              0.0064
      288              0.0079          0.0015              0.0064
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.69(In)
      Total effective rainfall =      3.85(In)
      Peak flow rate in flood hydrograph =     10.84(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ------------------------------------------------------------------
--
                   Hydrograph in   5   Minute intervals ((CFS))

      ------------------------------------------------------------------
--
  Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0
20.0

-------------------------------------------------------------------------
    0+ 5       0.0001      0.01  Q         |         |         |
|
    0+10       0.0007      0.09  Q         |         |         |
|
    0+15       0.0020      0.19  Q         |         |         |
|
    0+20       0.0037      0.25  Q         |         |         |
|
    0+25       0.0056      0.27  Q         |         |         |
|
    0+30       0.0076      0.29  Q         |         |         |
|
    0+35       0.0098      0.31  Q         |         |         |
|
    0+40       0.0120      0.32  Q         |         |         |
|
    0+45       0.0142      0.33  Q         |         |         |
|
    0+50       0.0165      0.34  Q         |         |         |
|
    0+55       0.0189      0.34  Q         |         |         |
|
    1+ 0       0.0212      0.35  Q         |         |         |
|
    1+ 5       0.0236      0.35  Q         |         |         |
|
    1+10       0.0261      0.35  Q         |         |         |
|
    1+15       0.0285      0.35  Q         |         |         |
|
```

1+20	0.0310	0.36	Q			
1+25	0.0334	0.36	Q			
1+30	0.0359	0.36	Q			
1+35	0.0384	0.36	QV			
1+40	0.0409	0.36	QV			
1+45	0.0434	0.36	QV			
1+50	0.0459	0.36	QV			
1+55	0.0484	0.37	QV			
2+ 0	0.0510	0.37	QV			
2+ 5	0.0535	0.37	QV			
2+10	0.0560	0.37	QV			
2+15	0.0586	0.37	QV			
2+20	0.0612	0.37	QV			
2+25	0.0637	0.37	QV			
2+30	0.0663	0.37	QV			
2+35	0.0689	0.37	QV			
2+40	0.0715	0.38	QV			
2+45	0.0741	0.38	Q V			
2+50	0.0767	0.38	Q V			
2+55	0.0793	0.38	Q V			
3+ 0	0.0819	0.38	Q V			
3+ 5	0.0845	0.38	Q V			
3+10	0.0872	0.38	Q V			
3+15	0.0898	0.38	Q V			
3+20	0.0925	0.39	Q V			
3+25	0.0951	0.39	Q V			
3+30	0.0978	0.39	Q V			
3+35	0.1005	0.39	Q V			
3+40	0.1032	0.39	Q V			
3+45	0.1059	0.39	Q V			

3+50	0.1086	0.39	Q V	|	|	|
3+55	0.1113	0.39	Q V	|	|	|
4+ 0	0.1140	0.40	Q V	|	|	|
4+ 5	0.1167	0.40	Q V	|	|	|
4+10	0.1195	0.40	Q V	|	|	|
4+15	0.1222	0.40	Q V	|	|	|
4+20	0.1250	0.40	Q V	|	|	|
4+25	0.1278	0.40	Q V	|	|	|
4+30	0.1305	0.40	Q V	|	|	|
4+35	0.1333	0.41	Q V	|	|	|
4+40	0.1361	0.41	Q V	|	|	|
4+45	0.1390	0.41	Q V	|	|	|
4+50	0.1418	0.41	Q V	|	|	|
4+55	0.1446	0.41	Q V	|	|	|
5+ 0	0.1475	0.41	Q V	|	|	|
5+ 5	0.1503	0.41	Q V	|	|	|
5+10	0.1532	0.42	Q V	|	|	|
5+15	0.1560	0.42	Q V	|	|	|
5+20	0.1589	0.42	Q V	|	|	|
5+25	0.1618	0.42	Q V	|	|	|
5+30	0.1647	0.42	Q V	|	|	|
5+35	0.1677	0.42	Q V	|	|	|
5+40	0.1706	0.43	Q V	|	|	|
5+45	0.1735	0.43	Q V	|	|	|
5+50	0.1765	0.43	Q V	|	|	|
5+55	0.1795	0.43	Q V	|	|	|
6+ 0	0.1824	0.43	Q V	|	|	|
6+ 5	0.1854	0.43	Q V	|	|	|
6+10	0.1884	0.44	Q V	|	|	|
6+15	0.1914	0.44	Q V	|	|	|

6+20	0.1945	0.44	Q	V			
6+25	0.1975	0.44	Q	V			
6+30	0.2006	0.44	Q	V			
6+35	0.2036	0.45	Q	V			
6+40	0.2067	0.45	Q	V			
6+45	0.2098	0.45	Q	V			
6+50	0.2129	0.45	Q	V			
6+55	0.2160	0.45	Q	V			
7+ 0	0.2192	0.46	Q	V			
7+ 5	0.2223	0.46	Q	V			
7+10	0.2255	0.46	Q	V			
7+15	0.2287	0.46	Q	V			
7+20	0.2319	0.46	Q	V			
7+25	0.2351	0.47	Q	V			
7+30	0.2383	0.47	Q	V			
7+35	0.2415	0.47	Q	V			
7+40	0.2448	0.47	Q	V			
7+45	0.2481	0.47	Q	V			
7+50	0.2513	0.48	Q	V			
7+55	0.2546	0.48	Q	V			
8+ 0	0.2580	0.48	Q	V			
8+ 5	0.2613	0.48	Q	V			
8+10	0.2646	0.49	Q	V			
8+15	0.2680	0.49	Q	V			
8+20	0.2714	0.49	Q	V			
8+25	0.2748	0.49	Q	V			
8+30	0.2782	0.50	Q	V			
8+35	0.2817	0.50	Q	V			
8+40	0.2851	0.50	|Q	V			
8+45	0.2886	0.51	|Q	V			

8+50	0.2921	0.51	|Q	V |	|	|
8+55	0.2956	0.51	|Q	V |	|	|
9+ 0	0.2992	0.51	|Q	V |	|	|
9+ 5	0.3027	0.52	|Q	V |	|	|
9+10	0.3063	0.52	|Q	V |	|	|
9+15	0.3099	0.52	|Q	V |	|	|
9+20	0.3135	0.53	|Q	V |	|	|
9+25	0.3172	0.53	|Q	V |	|	|
9+30	0.3209	0.53	|Q	V |	|	|
9+35	0.3246	0.54	|Q	V |	|	|
9+40	0.3283	0.54	|Q	V|	|	|
9+45	0.3320	0.54	|Q	V|	|	|
9+50	0.3358	0.55	|Q	V|	|	|
9+55	0.3396	0.55	|Q	V|	|	|
10+ 0	0.3434	0.55	|Q	V|	|	|
10+ 5	0.3472	0.56	|Q	V|	|	|
10+10	0.3511	0.56	|Q	V|	|	|
10+15	0.3549	0.56	|Q	V|	|	|
10+20	0.3589	0.57	|Q	V|	|	|
10+25	0.3628	0.57	|Q	V	|	|
10+30	0.3668	0.58	|Q	V	|	|
10+35	0.3708	0.58	|Q	V	|	|
10+40	0.3748	0.59	|Q	V	|	|
10+45	0.3789	0.59	|Q	V	|	|
10+50	0.3830	0.59	|Q	V	|	|
10+55	0.3871	0.60	|Q	V	|	|
11+ 0	0.3912	0.60	|Q	V	|	|
11+ 5	0.3954	0.61	|Q	V	|	|
11+10	0.3997	0.61	|Q	|V	|	|
11+15	0.4039	0.62	|Q	|V	|	|

11+20	0.4082	0.62	Q	V		
11+25	0.4125	0.63	Q	V		
11+30	0.4169	0.63	Q	V		
11+35	0.4213	0.64	Q	V		
11+40	0.4257	0.65	Q	V		
11+45	0.4302	0.65	Q	V		
11+50	0.4348	0.66	Q	V		
11+55	0.4393	0.66	Q	V		
12+ 0	0.4439	0.67	Q	V		
12+ 5	0.4486	0.67	Q	V		
12+10	0.4531	0.66	Q	V		
12+15	0.4575	0.64	Q	V		
12+20	0.4618	0.63	Q	V		
12+25	0.4662	0.63	Q	V		
12+30	0.4705	0.63	Q	V		
12+35	0.4749	0.63	Q	V		
12+40	0.4793	0.64	Q	V		
12+45	0.4837	0.65	Q	V		
12+50	0.4882	0.65	Q	V		
12+55	0.4928	0.66	Q	V		
13+ 0	0.4974	0.67	Q	V		
13+ 5	0.5020	0.68	Q	V		
13+10	0.5068	0.69	Q	V		
13+15	0.5116	0.70	Q	V		
13+20	0.5165	0.71	Q	V		
13+25	0.5214	0.72	Q	V		
13+30	0.5265	0.73	Q	V		
13+35	0.5316	0.74	Q	V		
13+40	0.5368	0.76	Q	V		
13+45	0.5421	0.77	Q	V		

13+50	0.5476	0.79	Q	V		
13+55	0.5531	0.80	Q	V		
14+ 0	0.5587	0.82	Q	V		
14+ 5	0.5645	0.84	Q	V		
14+10	0.5704	0.85	Q	V		
14+15	0.5764	0.87	Q	V		
14+20	0.5825	0.90	Q	V		
14+25	0.5889	0.92	Q	V		
14+30	0.5954	0.94	Q	V		
14+35	0.6021	0.97	Q	V		
14+40	0.6090	1.00	Q	V		
14+45	0.6161	1.04	Q	V		
14+50	0.6236	1.08	Q	V		
14+55	0.6313	1.12	Q	V		
15+ 0	0.6394	1.17	Q	V		
15+ 5	0.6479	1.23	Q	V		
15+10	0.6567	1.29	Q	V		
15+15	0.6661	1.36	Q	V		
15+20	0.6760	1.43	Q	V		
15+25	0.6863	1.50	Q	V		
15+30	0.6965	1.47	Q	V		
15+35	0.7061	1.40	Q	V		
15+40	0.7161	1.45	Q	V		
15+45	0.7270	1.58	Q	V		
15+50	0.7393	1.78	Q	V		
15+55	0.7538	2.11	Q	V		
16+ 0	0.7725	2.71	Q	V		
16+ 5	0.8030	4.43	Q	V		
16+10	0.8655	9.07	Q	V		
16+15	0.9402	10.84	Q	V		

16+20	0.9847	6.47	|	Q	V	|
16+25	1.0155	4.47	| Q	|	V	|
16+30	1.0396	3.49	| Q |	|	V	|
16+35	1.0602	2.99	| Q |	|	V|	
16+40	1.0775	2.52	| Q |	|	V|	
16+45	1.0927	2.20	| Q |	|	V	
16+50	1.1060	1.93	| Q |	|	V	
16+55	1.1177	1.71	| Q |	|	V	
17+ 0	1.1281	1.51	| Q |	|	|V	
17+ 5	1.1373	1.34	| Q |	|	|V	
17+10	1.1457	1.22	| Q |	|	|V	
17+15	1.1537	1.16	| Q |	|	|V	
17+20	1.1612	1.09	| Q |	|	| V	
17+25	1.1680	0.99	|Q |	|	| V	
17+30	1.1742	0.91	|Q |	|	| V	
17+35	1.1799	0.82	|Q |	|	| V	
17+40	1.1853	0.78	|Q |	|	| V	
17+45	1.1904	0.75	|Q |	|	| V	
17+50	1.1954	0.73	|Q |	|	| V	
17+55	1.2002	0.70	|Q |	|	| V	
18+ 0	1.2049	0.68	|Q |	|	| V	
18+ 5	1.2095	0.66	|Q |	|	| V	
18+10	1.2140	0.66	|Q |	|	| V	
18+15	1.2187	0.68	|Q |	|	| V	
18+20	1.2234	0.68	|Q |	|	| V	
18+25	1.2280	0.67	|Q |	|	| V	
18+30	1.2325	0.66	|Q |	|	| V	
18+35	1.2370	0.65	|Q |	|	| V	
18+40	1.2414	0.64	|Q |	|	| V	
18+45	1.2457	0.63	|Q |	|	| V	

18+50	1.2500	0.62	|Q	|	|	|	V
18+55	1.2543	0.61	|Q	|	|	|	V
19+ 0	1.2584	0.60	|Q	|	|	|	V
19+ 5	1.2625	0.60	|Q	|	|	|	V
19+10	1.2666	0.59	|Q	|	|	|	V
19+15	1.2705	0.58	|Q	|	|	|	V
19+20	1.2745	0.57	|Q	|	|	|	V
19+25	1.2783	0.56	|Q	|	|	|	V
19+30	1.2822	0.56	|Q	|	|	|	V
19+35	1.2859	0.55	|Q	|	|	|	V
19+40	1.2897	0.54	|Q	|	|	|	V
19+45	1.2934	0.53	|Q	|	|	|	V
19+50	1.2970	0.53	|Q	|	|	|	V
19+55	1.3006	0.52	|Q	|	|	|	V
20+ 0	1.3041	0.52	|Q	|	|	|	V
20+ 5	1.3077	0.51	|Q	|	|	|	V
20+10	1.3111	0.50	|Q	|	|	|	V
20+15	1.3146	0.50	Q	|	|	|	V
20+20	1.3180	0.49	Q	|	|	|	V
20+25	1.3213	0.49	Q	|	|	|	V
20+30	1.3246	0.48	Q	|	|	|	V
20+35	1.3279	0.48	Q	|	|	|	V
20+40	1.3312	0.47	Q	|	|	|	V
20+45	1.3344	0.47	Q	|	|	|	V
20+50	1.3376	0.46	Q	|	|	|	V
20+55	1.3408	0.46	Q	|	|	|	V
21+ 0	1.3439	0.46	Q	|	|	|	V
21+ 5	1.3471	0.45	Q	|	|	|	V
21+10	1.3502	0.45	Q	|	|	|	V
21+15	1.3532	0.44	Q	|	|	|	V

21+20	1.3562	0.44	Q	|	|	|	V |
21+25	1.3593	0.44	Q	|	|	|	V |
21+30	1.3622	0.43	Q	|	|	|	V |
21+35	1.3652	0.43	Q	|	|	|	V |
21+40	1.3681	0.43	Q	|	|	|	V |
21+45	1.3711	0.42	Q	|	|	|	V |
21+50	1.3739	0.42	Q	|	|	|	V |
21+55	1.3768	0.42	Q	|	|	|	V |
22+ 0	1.3797	0.41	Q	|	|	|	V |
22+ 5	1.3825	0.41	Q	|	|	|	V |
22+10	1.3853	0.41	Q	|	|	|	V |
22+15	1.3881	0.40	Q	|	|	|	V |
22+20	1.3908	0.40	Q	|	|	|	V |
22+25	1.3936	0.40	Q	|	|	|	V |
22+30	1.3963	0.40	Q	|	|	|	V |
22+35	1.3990	0.39	Q	|	|	|	V |
22+40	1.4017	0.39	Q	|	|	|	V |
22+45	1.4044	0.39	Q	|	|	|	V |
22+50	1.4071	0.39	Q	|	|	|	V |
22+55	1.4097	0.38	Q	|	|	|	V |
23+ 0	1.4123	0.38	Q	|	|	|	V |
23+ 5	1.4149	0.38	Q	|	|	|	V|
23+10	1.4175	0.38	Q	|	|	|	V|
23+15	1.4201	0.37	Q	|	|	|	V|
23+20	1.4227	0.37	Q	|	|	|	V|
23+25	1.4252	0.37	Q	|	|	|	V|
23+30	1.4277	0.37	Q	|	|	|	V|
23+35	1.4303	0.37	Q	|	|	|	V|
23+40	1.4328	0.36	Q	|	|	|	V|
23+45	1.4352	0.36	Q	|	|	|	V|

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   23+50       1.4377      0.36  Q         |         |         |
V|
   23+55       1.4402      0.36  Q         |         |         |
V|
   24+ 0       1.4426      0.36  Q         |         |         |
V|
   24+ 5       1.4450      0.34  Q         |         |         |
V|
   24+10       1.4468      0.26  Q         |         |         |
V|
   24+15       1.4479      0.16  Q         |         |         |
V|
   24+20       1.4486      0.11  Q         |         |         |
V|
   24+25       1.4491      0.08  Q         |         |         |
V|
   24+30       1.4495      0.06  Q         |         |         |
V|
   24+35       1.4498      0.04  Q         |         |         |
V|
   24+40       1.4500      0.03  Q         |         |         |
V|
   24+45       1.4502      0.02  Q         |         |         |
V|
   24+50       1.4503      0.02  Q         |         |         |
V|
   24+55       1.4504      0.01  Q         |         |         |
V|
   25+ 0       1.4504      0.01  Q         |         |         |
V|
   25+ 5       1.4505      0.01  Q         |         |         |
V|
   25+10       1.4505      0.01  Q         |         |         |
V|
   25+15       1.4506      0.00  Q         |         |         |
V|
   25+20       1.4506      0.00  Q         |         |         |
V|
   25+25       1.4506      0.00  Q         |         |         |
V
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Study date 03/10/22

++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6232

Villa and Aster
SCS Hydrograph
Developed Condition
Area A - 100yr 24hr

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

	Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100	7.47	1	1.06
Rainfall data for year 100	7.47	6	2.28
Rainfall data for year 100	7.47	24	4.54

++

```
      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       69.0      86.2          7.47      1.000     0.262    0.500
0.131

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.131

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           3.73   0.500         69.0      86.2       1.60     0.674
           3.73   0.500         98.0      98.0       0.20     0.948

      Area-averaged catchment yield fraction, Y =  0.811
      Area-averaged low loss fraction, Yb =  0.189
      User entry of time of concentration  =   0.255 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =       7.47(Ac.)
      Catchment Lag time =   0.204 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 40.8497
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.131(In/Hr)
      Average low loss rate fraction (Yb) = 0.189 (decimal)
      DESERT S-Graph Selected
      Computed peak 5-minute rainfall =  0.503(In)
      Computed peak 30-minute rainfall =  0.861(In)
      Specified peak 1-hour rainfall =  1.060(In)
      Computed peak 3-hour rainfall =  1.695(In)
      Specified peak 6-hour rainfall =  2.280(In)
      Specified peak 24-hour rainfall =  4.540(In)


      Rainfall depth area reduction factors:
      Using a total area of       7.47(Ac.) (Ref: fig. E-4)

      5-minute factor = 1.000     Adjusted rainfall =  0.503(In)
      30-minute factor = 1.000    Adjusted rainfall =  0.861(In)
      1-hour factor = 1.000       Adjusted rainfall =  1.060(In)
      3-hour factor = 1.000       Adjusted rainfall =  1.695(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.280(In)
      24-hour factor = 1.000      Adjusted rainfall =  4.540(In)
      ----------------------------------------------------------------
---

                      U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ----------------------------------------------------------------
---
                 (K =        90.34 (CFS))
```

1	2.842	2.568
2	19.667	15.200
3	50.356	27.724
4	66.455	14.545
5	75.478	8.151
6	81.438	5.384
7	85.763	3.907
8	89.034	2.955
9	91.414	2.150
10	93.364	1.761
11	94.883	1.373
12	96.114	1.112
13	97.082	0.874
14	97.780	0.630
15	98.227	0.404
16	98.698	0.425
17	99.188	0.443
18	99.591	0.364
19	99.848	0.233
20	100.000	0.137

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5028	0.5028
2	0.6190	0.1162
3	0.6991	0.0801
4	0.7621	0.0630
5	0.8149	0.0528
6	0.8607	0.0458
7	0.9014	0.0407
8	0.9383	0.0368
9	0.9720	0.0337
10	1.0032	0.0312
11	1.0323	0.0291
12	1.0596	0.0273
13	1.0965	0.0369
14	1.1319	0.0353
15	1.1658	0.0339
16	1.1984	0.0326
17	1.2299	0.0315
18	1.2603	0.0304
19	1.2898	0.0295
20	1.3184	0.0286
21	1.3462	0.0278
22	1.3733	0.0271
23	1.3996	0.0264
24	1.4253	0.0257
25	1.4504	0.0251
26	1.4750	0.0245
27	1.4990	0.0240
28	1.5225	0.0235
29	1.5455	0.0230
30	1.5681	0.0226
31	1.5902	0.0221
32	1.6120	0.0217
33	1.6333	0.0214
34	1.6543	0.0210
35	1.6750	0.0206

36	1.6953	0.0203
37	1.7152	0.0200
38	1.7349	0.0197
39	1.7543	0.0194
40	1.7734	0.0191
41	1.7922	0.0188
42	1.8107	0.0186
43	1.8290	0.0183
44	1.8471	0.0181
45	1.8649	0.0178
46	1.8825	0.0176
47	1.8999	0.0174
48	1.9171	0.0172
49	1.9341	0.0170
50	1.9509	0.0168
51	1.9674	0.0166
52	1.9838	0.0164
53	2.0001	0.0162
54	2.0161	0.0160
55	2.0320	0.0159
56	2.0477	0.0157
57	2.0633	0.0156
58	2.0787	0.0154
59	2.0939	0.0152
60	2.1090	0.0151
61	2.1239	0.0150
62	2.1388	0.0148
63	2.1534	0.0147
64	2.1680	0.0145
65	2.1824	0.0144
66	2.1967	0.0143
67	2.2109	0.0142
68	2.2249	0.0140
69	2.2388	0.0139
70	2.2527	0.0138
71	2.2664	0.0137
72	2.2799	0.0136
73	2.2956	0.0157
74	2.3112	0.0156
75	2.3267	0.0155
76	2.3420	0.0154
77	2.3573	0.0153
78	2.3724	0.0152
79	2.3875	0.0151
80	2.4025	0.0150
81	2.4173	0.0149
82	2.4321	0.0148
83	2.4468	0.0147
84	2.4614	0.0146
85	2.4759	0.0145
86	2.4904	0.0144
87	2.5047	0.0143
88	2.5190	0.0143
89	2.5332	0.0142
90	2.5473	0.0141
91	2.5613	0.0140
92	2.5752	0.0139
93	2.5891	0.0139
94	2.6029	0.0138
95	2.6166	0.0137

96	2.6303	0.0136
97	2.6438	0.0136
98	2.6573	0.0135
99	2.6708	0.0134
100	2.6842	0.0134
101	2.6975	0.0133
102	2.7107	0.0132
103	2.7239	0.0132
104	2.7370	0.0131
105	2.7500	0.0130
106	2.7630	0.0130
107	2.7759	0.0129
108	2.7888	0.0129
109	2.8016	0.0128
110	2.8143	0.0127
111	2.8270	0.0127
112	2.8396	0.0126
113	2.8522	0.0126
114	2.8647	0.0125
115	2.8772	0.0125
116	2.8896	0.0124
117	2.9019	0.0123
118	2.9142	0.0123
119	2.9265	0.0122
120	2.9387	0.0122
121	2.9508	0.0121
122	2.9629	0.0121
123	2.9749	0.0120
124	2.9869	0.0120
125	2.9989	0.0119
126	3.0108	0.0119
127	3.0226	0.0118
128	3.0344	0.0118
129	3.0462	0.0118
130	3.0579	0.0117
131	3.0695	0.0117
132	3.0812	0.0116
133	3.0927	0.0116
134	3.1043	0.0115
135	3.1157	0.0115
136	3.1272	0.0114
137	3.1386	0.0114
138	3.1500	0.0114
139	3.1613	0.0113
140	3.1726	0.0113
141	3.1838	0.0112
142	3.1950	0.0112
143	3.2062	0.0112
144	3.2173	0.0111
145	3.2284	0.0111
146	3.2394	0.0110
147	3.2504	0.0110
148	3.2614	0.0110
149	3.2723	0.0109
150	3.2832	0.0109
151	3.2941	0.0109
152	3.3049	0.0108
153	3.3157	0.0108
154	3.3264	0.0107
155	3.3371	0.0107

156	3.3478	0.0107
157	3.3584	0.0106
158	3.3691	0.0106
159	3.3796	0.0106
160	3.3902	0.0105
161	3.4007	0.0105
162	3.4112	0.0105
163	3.4216	0.0104
164	3.4320	0.0104
165	3.4424	0.0104
166	3.4528	0.0103
167	3.4631	0.0103
168	3.4734	0.0103
169	3.4836	0.0103
170	3.4938	0.0102
171	3.5040	0.0102
172	3.5142	0.0102
173	3.5243	0.0101
174	3.5345	0.0101
175	3.5445	0.0101
176	3.5546	0.0100
177	3.5646	0.0100
178	3.5746	0.0100
179	3.5846	0.0100
180	3.5945	0.0099
181	3.6044	0.0099
182	3.6143	0.0099
183	3.6241	0.0099
184	3.6340	0.0098
185	3.6438	0.0098
186	3.6535	0.0098
187	3.6633	0.0097
188	3.6730	0.0097
189	3.6827	0.0097
190	3.6924	0.0097
191	3.7020	0.0096
192	3.7116	0.0096
193	3.7212	0.0096
194	3.7308	0.0096
195	3.7403	0.0095
196	3.7498	0.0095
197	3.7593	0.0095
198	3.7688	0.0095
199	3.7782	0.0094
200	3.7877	0.0094
201	3.7971	0.0094
202	3.8064	0.0094
203	3.8158	0.0094
204	3.8251	0.0093
205	3.8344	0.0093
206	3.8437	0.0093
207	3.8530	0.0093
208	3.8622	0.0092
209	3.8714	0.0092
210	3.8806	0.0092
211	3.8898	0.0092
212	3.8989	0.0091
213	3.9080	0.0091
214	3.9171	0.0091
215	3.9262	0.0091

216	3.9353	0.0091
217	3.9443	0.0090
218	3.9534	0.0090
219	3.9624	0.0090
220	3.9713	0.0090
221	3.9803	0.0090
222	3.9892	0.0089
223	3.9982	0.0089
224	4.0070	0.0089
225	4.0159	0.0089
226	4.0248	0.0089
227	4.0336	0.0088
228	4.0424	0.0088
229	4.0512	0.0088
230	4.0600	0.0088
231	4.0688	0.0088
232	4.0775	0.0087
233	4.0862	0.0087
234	4.0949	0.0087
235	4.1036	0.0087
236	4.1123	0.0087
237	4.1209	0.0086
238	4.1296	0.0086
239	4.1382	0.0086
240	4.1468	0.0086
241	4.1554	0.0086
242	4.1639	0.0086
243	4.1725	0.0085
244	4.1810	0.0085
245	4.1895	0.0085
246	4.1980	0.0085
247	4.2064	0.0085
248	4.2149	0.0085
249	4.2233	0.0084
250	4.2317	0.0084
251	4.2401	0.0084
252	4.2485	0.0084
253	4.2569	0.0084
254	4.2653	0.0084
255	4.2736	0.0083
256	4.2819	0.0083
257	4.2902	0.0083
258	4.2985	0.0083
259	4.3068	0.0083
260	4.3150	0.0083
261	4.3233	0.0082
262	4.3315	0.0082
263	4.3397	0.0082
264	4.3479	0.0082
265	4.3560	0.0082
266	4.3642	0.0082
267	4.3724	0.0081
268	4.3805	0.0081
269	4.3886	0.0081
270	4.3967	0.0081
271	4.4048	0.0081
272	4.4128	0.0081
273	4.4209	0.0081
274	4.4289	0.0080
275	4.4370	0.0080

276	4.4450	0.0080
277	4.4530	0.0080
278	4.4609	0.0080
279	4.4689	0.0080
280	4.4769	0.0080
281	4.4848	0.0079
282	4.4927	0.0079
283	4.5006	0.0079
284	4.5085	0.0079
285	4.5164	0.0079
286	4.5243	0.0079
287	4.5321	0.0079
288	4.5400	0.0078

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0078	0.0015	0.0064
2	0.0079	0.0015	0.0064
3	0.0079	0.0015	0.0064
4	0.0079	0.0015	0.0064
5	0.0079	0.0015	0.0064
6	0.0079	0.0015	0.0064
7	0.0080	0.0015	0.0065
8	0.0080	0.0015	0.0065
9	0.0080	0.0015	0.0065
10	0.0080	0.0015	0.0065
11	0.0081	0.0015	0.0065
12	0.0081	0.0015	0.0065
13	0.0081	0.0015	0.0066
14	0.0081	0.0015	0.0066
15	0.0081	0.0015	0.0066
16	0.0082	0.0015	0.0066
17	0.0082	0.0015	0.0066
18	0.0082	0.0016	0.0067
19	0.0082	0.0016	0.0067
20	0.0083	0.0016	0.0067
21	0.0083	0.0016	0.0067
22	0.0083	0.0016	0.0067
23	0.0083	0.0016	0.0068
24	0.0084	0.0016	0.0068
25	0.0084	0.0016	0.0068
26	0.0084	0.0016	0.0068
27	0.0084	0.0016	0.0068
28	0.0085	0.0016	0.0069
29	0.0085	0.0016	0.0069
30	0.0085	0.0016	0.0069
31	0.0085	0.0016	0.0069
32	0.0086	0.0016	0.0069
33	0.0086	0.0016	0.0070
34	0.0086	0.0016	0.0070
35	0.0086	0.0016	0.0070
36	0.0087	0.0016	0.0070
37	0.0087	0.0016	0.0071
38	0.0087	0.0016	0.0071
39	0.0088	0.0017	0.0071
40	0.0088	0.0017	0.0071

41	0.0088	0.0017	0.0072
42	0.0088	0.0017	0.0072
43	0.0089	0.0017	0.0072
44	0.0089	0.0017	0.0072
45	0.0089	0.0017	0.0072
46	0.0090	0.0017	0.0073
47	0.0090	0.0017	0.0073
48	0.0090	0.0017	0.0073
49	0.0091	0.0017	0.0073
50	0.0091	0.0017	0.0074
51	0.0091	0.0017	0.0074
52	0.0091	0.0017	0.0074
53	0.0092	0.0017	0.0075
54	0.0092	0.0017	0.0075
55	0.0093	0.0018	0.0075
56	0.0093	0.0018	0.0075
57	0.0093	0.0018	0.0076
58	0.0094	0.0018	0.0076
59	0.0094	0.0018	0.0076
60	0.0094	0.0018	0.0076
61	0.0095	0.0018	0.0077
62	0.0095	0.0018	0.0077
63	0.0095	0.0018	0.0077
64	0.0096	0.0018	0.0078
65	0.0096	0.0018	0.0078
66	0.0096	0.0018	0.0078
67	0.0097	0.0018	0.0079
68	0.0097	0.0018	0.0079
69	0.0098	0.0018	0.0079
70	0.0098	0.0019	0.0079
71	0.0099	0.0019	0.0080
72	0.0099	0.0019	0.0080
73	0.0099	0.0019	0.0081
74	0.0100	0.0019	0.0081
75	0.0100	0.0019	0.0081
76	0.0100	0.0019	0.0081
77	0.0101	0.0019	0.0082
78	0.0101	0.0019	0.0082
79	0.0102	0.0019	0.0083
80	0.0102	0.0019	0.0083
81	0.0103	0.0019	0.0083
82	0.0103	0.0020	0.0084
83	0.0104	0.0020	0.0084
84	0.0104	0.0020	0.0084
85	0.0105	0.0020	0.0085
86	0.0105	0.0020	0.0085
87	0.0106	0.0020	0.0086
88	0.0106	0.0020	0.0086
89	0.0107	0.0020	0.0087
90	0.0107	0.0020	0.0087
91	0.0108	0.0020	0.0087
92	0.0108	0.0020	0.0088
93	0.0109	0.0021	0.0088
94	0.0109	0.0021	0.0089
95	0.0110	0.0021	0.0089
96	0.0110	0.0021	0.0090
97	0.0111	0.0021	0.0090
98	0.0112	0.0021	0.0090
99	0.0112	0.0021	0.0091
100	0.0113	0.0021	0.0091

101	0.0114	0.0021	0.0092
102	0.0114	0.0022	0.0092
103	0.0115	0.0022	0.0093
104	0.0115	0.0022	0.0094
105	0.0116	0.0022	0.0094
106	0.0117	0.0022	0.0095
107	0.0118	0.0022	0.0095
108	0.0118	0.0022	0.0096
109	0.0119	0.0022	0.0096
110	0.0119	0.0023	0.0097
111	0.0120	0.0023	0.0098
112	0.0121	0.0023	0.0098
113	0.0122	0.0023	0.0099
114	0.0122	0.0023	0.0099
115	0.0123	0.0023	0.0100
116	0.0124	0.0023	0.0101
117	0.0125	0.0024	0.0101
118	0.0126	0.0024	0.0102
119	0.0127	0.0024	0.0103
120	0.0127	0.0024	0.0103
121	0.0129	0.0024	0.0104
122	0.0129	0.0024	0.0105
123	0.0130	0.0025	0.0106
124	0.0131	0.0025	0.0106
125	0.0132	0.0025	0.0107
126	0.0133	0.0025	0.0108
127	0.0134	0.0025	0.0109
128	0.0135	0.0026	0.0110
129	0.0136	0.0026	0.0111
130	0.0137	0.0026	0.0111
131	0.0139	0.0026	0.0112
132	0.0139	0.0026	0.0113
133	0.0141	0.0027	0.0114
134	0.0142	0.0027	0.0115
135	0.0143	0.0027	0.0116
136	0.0144	0.0027	0.0117
137	0.0146	0.0028	0.0118
138	0.0147	0.0028	0.0119
139	0.0149	0.0028	0.0121
140	0.0150	0.0028	0.0121
141	0.0152	0.0029	0.0123
142	0.0153	0.0029	0.0124
143	0.0155	0.0029	0.0125
144	0.0156	0.0029	0.0126
145	0.0136	0.0026	0.0110
146	0.0137	0.0026	0.0111
147	0.0139	0.0026	0.0113
148	0.0140	0.0027	0.0114
149	0.0143	0.0027	0.0116
150	0.0144	0.0027	0.0117
151	0.0147	0.0028	0.0119
152	0.0148	0.0028	0.0120
153	0.0151	0.0029	0.0122
154	0.0152	0.0029	0.0124
155	0.0156	0.0029	0.0126
156	0.0157	0.0030	0.0127
157	0.0160	0.0030	0.0130
158	0.0162	0.0031	0.0132
159	0.0166	0.0031	0.0134
160	0.0168	0.0032	0.0136

161	0.0172	0.0032	0.0139
162	0.0174	0.0033	0.0141
163	0.0178	0.0034	0.0145
164	0.0181	0.0034	0.0146
165	0.0186	0.0035	0.0150
166	0.0188	0.0036	0.0153
167	0.0194	0.0037	0.0157
168	0.0197	0.0037	0.0159
169	0.0203	0.0038	0.0165
170	0.0206	0.0039	0.0167
171	0.0214	0.0040	0.0173
172	0.0217	0.0041	0.0176
173	0.0226	0.0043	0.0183
174	0.0230	0.0044	0.0187
175	0.0240	0.0045	0.0195
176	0.0245	0.0046	0.0199
177	0.0257	0.0049	0.0209
178	0.0264	0.0050	0.0214
179	0.0278	0.0053	0.0225
180	0.0286	0.0054	0.0232
181	0.0304	0.0058	0.0247
182	0.0315	0.0060	0.0255
183	0.0339	0.0064	0.0275
184	0.0353	0.0067	0.0286
185	0.0273	0.0052	0.0221
186	0.0291	0.0055	0.0236
187	0.0337	0.0064	0.0274
188	0.0368	0.0070	0.0299
189	0.0458	0.0087	0.0372
190	0.0528	0.0100	0.0428
191	0.0801	0.0109	0.0692
192	0.1162	0.0109	0.1053
193	0.5028	0.0109	0.4919
194	0.0630	0.0109	0.0521
195	0.0407	0.0077	0.0330
196	0.0312	0.0059	0.0253
197	0.0369	0.0070	0.0299
198	0.0326	0.0062	0.0265
199	0.0295	0.0056	0.0239
200	0.0271	0.0051	0.0219
201	0.0251	0.0047	0.0204
202	0.0235	0.0044	0.0191
203	0.0221	0.0042	0.0180
204	0.0210	0.0040	0.0170
205	0.0200	0.0038	0.0162
206	0.0191	0.0036	0.0155
207	0.0183	0.0035	0.0148
208	0.0176	0.0033	0.0143
209	0.0170	0.0032	0.0138
210	0.0164	0.0031	0.0133
211	0.0159	0.0030	0.0129
212	0.0154	0.0029	0.0125
213	0.0150	0.0028	0.0121
214	0.0145	0.0028	0.0118
215	0.0142	0.0027	0.0115
216	0.0138	0.0026	0.0112
217	0.0157	0.0030	0.0127
218	0.0154	0.0029	0.0125
219	0.0151	0.0028	0.0122
220	0.0148	0.0028	0.0120

221	0.0145	0.0027	0.0118
222	0.0143	0.0027	0.0116
223	0.0140	0.0027	0.0114
224	0.0138	0.0026	0.0112
225	0.0136	0.0026	0.0110
226	0.0134	0.0025	0.0108
227	0.0132	0.0025	0.0107
228	0.0130	0.0025	0.0105
229	0.0128	0.0024	0.0104
230	0.0126	0.0024	0.0102
231	0.0125	0.0024	0.0101
232	0.0123	0.0023	0.0100
233	0.0121	0.0023	0.0098
234	0.0120	0.0023	0.0097
235	0.0118	0.0022	0.0096
236	0.0117	0.0022	0.0095
237	0.0116	0.0022	0.0094
238	0.0114	0.0022	0.0093
239	0.0113	0.0021	0.0092
240	0.0112	0.0021	0.0091
241	0.0111	0.0021	0.0090
242	0.0110	0.0021	0.0089
243	0.0109	0.0021	0.0088
244	0.0107	0.0020	0.0087
245	0.0106	0.0020	0.0086
246	0.0105	0.0020	0.0086
247	0.0104	0.0020	0.0085
248	0.0103	0.0020	0.0084
249	0.0103	0.0019	0.0083
250	0.0102	0.0019	0.0082
251	0.0101	0.0019	0.0082
252	0.0100	0.0019	0.0081
253	0.0099	0.0019	0.0080
254	0.0098	0.0019	0.0080
255	0.0097	0.0018	0.0079
256	0.0097	0.0018	0.0078
257	0.0096	0.0018	0.0078
258	0.0095	0.0018	0.0077
259	0.0094	0.0018	0.0077
260	0.0094	0.0018	0.0076
261	0.0093	0.0018	0.0075
262	0.0092	0.0017	0.0075
263	0.0092	0.0017	0.0074
264	0.0091	0.0017	0.0074
265	0.0090	0.0017	0.0073
266	0.0090	0.0017	0.0073
267	0.0089	0.0017	0.0072
268	0.0089	0.0017	0.0072
269	0.0088	0.0017	0.0071
270	0.0087	0.0017	0.0071
271	0.0087	0.0016	0.0070
272	0.0086	0.0016	0.0070
273	0.0086	0.0016	0.0070
274	0.0085	0.0016	0.0069
275	0.0085	0.0016	0.0069
276	0.0084	0.0016	0.0068
277	0.0084	0.0016	0.0068
278	0.0083	0.0016	0.0067
279	0.0083	0.0016	0.0067
280	0.0082	0.0016	0.0067

```
      281              0.0082          0.0015              0.0066
      282              0.0081          0.0015              0.0066
      283              0.0081          0.0015              0.0066
      284              0.0080          0.0015              0.0065
      285              0.0080          0.0015              0.0065
      286              0.0080          0.0015              0.0064
      287              0.0079          0.0015              0.0064
      288              0.0079          0.0015              0.0064
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.76(In)
      Total effective rainfall =      3.78(In)
      Peak flow rate in flood hydrograph =     17.32(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
                          24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
      ------------------------------------------------------------------
--
                   Hydrograph in   5   Minute intervals ((CFS))

      ------------------------------------------------------------------
--
  Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0
20.0

------------------------------------------------------------------------
    0+ 5       0.0001      0.02  Q         |         |         |
|
    0+10       0.0009      0.11  Q         |         |         |
|
    0+15       0.0029      0.29  Q         |         |         |
|
    0+20       0.0055      0.38  Q         |         |         |
|
    0+25       0.0085      0.44  Q         |         |         |
|
    0+30       0.0118      0.47  Q         |         |         |
|
    0+35       0.0152      0.50  Q         |         |         |
|
    0+40       0.0187      0.52  VQ        |         |         |
|
    0+45       0.0224      0.53  VQ        |         |         |
|
    0+50       0.0262      0.54  VQ        |         |         |
|
    0+55       0.0300      0.55  VQ        |         |         |
|
    1+ 0       0.0339      0.56  VQ        |         |         |
|
    1+ 5       0.0378      0.57  VQ        |         |         |
|
    1+10       0.0418      0.58  VQ        |         |         |
|
    1+15       0.0458      0.58  VQ        |         |         |
```

1+20	0.0498	0.58	VQ			
1+25	0.0538	0.59	VQ			
1+30	0.0579	0.59	VQ			
1+35	0.0620	0.60	|Q			
1+40	0.0661	0.60	|Q			
1+45	0.0703	0.60	|Q			
1+50	0.0744	0.60	|Q			
1+55	0.0786	0.60	|Q			
2+ 0	0.0828	0.61	|Q			
2+ 5	0.0869	0.61	|Q			
2+10	0.0911	0.61	|Q			
2+15	0.0953	0.61	|Q			
2+20	0.0996	0.61	|Q			
2+25	0.1038	0.61	|Q			
2+30	0.1080	0.62	|Q			
2+35	0.1123	0.62	|Q			
2+40	0.1166	0.62	|Q			
2+45	0.1209	0.62	|QV			
2+50	0.1252	0.62	|QV			
2+55	0.1295	0.63	|QV			
3+ 0	0.1338	0.63	|QV			
3+ 5	0.1381	0.63	|QV			
3+10	0.1425	0.63	|QV			
3+15	0.1469	0.63	|QV			
3+20	0.1512	0.64	|QV			
3+25	0.1556	0.64	|QV			
3+30	0.1600	0.64	|QV			
3+35	0.1645	0.64	|QV			
3+40	0.1689	0.64	|QV			
3+45	0.1734	0.65	|QV			

3+50	0.1778	0.65	|Q V	|	|	|
3+55	0.1823	0.65	|Q V	|	|	|
4+ 0	0.1868	0.65	|Q V	|	|	|
4+ 5	0.1913	0.66	|Q V	|	|	|
4+10	0.1959	0.66	|Q V	|	|	|
4+15	0.2004	0.66	|Q V	|	|	|
4+20	0.2050	0.66	|Q V	|	|	|
4+25	0.2095	0.66	|Q V	|	|	|
4+30	0.2141	0.67	|Q V	|	|	|
4+35	0.2187	0.67	|Q V	|	|	|
4+40	0.2234	0.67	|Q V	|	|	|
4+45	0.2280	0.67	|Q V	|	|	|
4+50	0.2327	0.68	|Q V	|	|	|
4+55	0.2373	0.68	|Q V	|	|	|
5+ 0	0.2420	0.68	|Q V	|	|	|
5+ 5	0.2467	0.68	|Q V	|	|	|
5+10	0.2515	0.69	|Q V	|	|	|
5+15	0.2562	0.69	|Q V	|	|	|
5+20	0.2610	0.69	|Q V	|	|	|
5+25	0.2658	0.69	|Q V	|	|	|
5+30	0.2706	0.70	|Q V	|	|	|
5+35	0.2754	0.70	|Q V	|	|	|
5+40	0.2802	0.70	|Q V	|	|	|
5+45	0.2851	0.71	|Q V	|	|	|
5+50	0.2900	0.71	|Q V	|	|	|
5+55	0.2949	0.71	|Q V	|	|	|
6+ 0	0.2998	0.71	|Q V	|	|	|
6+ 5	0.3047	0.72	|Q V	|	|	|
6+10	0.3097	0.72	|Q V	|	|	|
6+15	0.3146	0.72	|Q V	|	|	|

6+20	0.3196	0.73	Q V			
6+25	0.3247	0.73	Q V			
6+30	0.3297	0.73	Q V			
6+35	0.3348	0.73	Q V			
6+40	0.3398	0.74	Q V			
6+45	0.3449	0.74	Q V			
6+50	0.3501	0.74	Q V			
6+55	0.3552	0.75	Q V			
7+ 0	0.3604	0.75	Q V			
7+ 5	0.3656	0.75	Q V			
7+10	0.3708	0.76	Q V			
7+15	0.3761	0.76	Q V			
7+20	0.3813	0.76	Q V			
7+25	0.3866	0.77	Q V			
7+30	0.3919	0.77	Q V			
7+35	0.3973	0.78	Q V			
7+40	0.4026	0.78	Q V			
7+45	0.4080	0.78	Q V			
7+50	0.4135	0.79	Q V			
7+55	0.4189	0.79	Q V			
8+ 0	0.4244	0.80	Q V			
8+ 5	0.4299	0.80	Q V			
8+10	0.4354	0.80	Q V			
8+15	0.4410	0.81	Q V			
8+20	0.4466	0.81	Q V			
8+25	0.4522	0.82	Q V			
8+30	0.4578	0.82	Q V			
8+35	0.4635	0.82	Q V			
8+40	0.4692	0.83	Q V			
8+45	0.4750	0.83	Q V			

8+50	0.4807	0.84	|Q V |	|	|
8+55	0.4866	0.84	|Q V |	|	|
9+ 0	0.4924	0.85	|Q V |	|	|
9+ 5	0.4983	0.85	|Q V |	|	|
9+10	0.5042	0.86	|Q V |	|	|
9+15	0.5101	0.86	|Q V |	|	|
9+20	0.5161	0.87	|Q V |	|	|
9+25	0.5221	0.87	|Q V |	|	|
9+30	0.5281	0.88	|Q V |	|	|
9+35	0.5342	0.88	|Q V|	|	|
9+40	0.5404	0.89	|Q V|	|	|
9+45	0.5465	0.89	|Q V|	|	|
9+50	0.5527	0.90	|Q V|	|	|
9+55	0.5590	0.91	|Q V|	|	|
10+ 0	0.5653	0.91	|Q V|	|	|
10+ 5	0.5716	0.92	|Q V|	|	|
10+10	0.5779	0.92	|Q V|	|	|
10+15	0.5844	0.93	|Q V|	|	|
10+20	0.5908	0.94	|Q V	|	|
10+25	0.5973	0.94	|Q V	|	|
10+30	0.6039	0.95	|Q V	|	|
10+35	0.6105	0.96	|Q V	|	|
10+40	0.6171	0.96	|Q V	|	|
10+45	0.6238	0.97	|Q V	|	|
10+50	0.6305	0.98	|Q V	|	|
10+55	0.6373	0.99	|Q V	|	|
11+ 0	0.6442	0.99	|Q V	|	|
11+ 5	0.6511	1.00	| Q |V	|	|
11+10	0.6581	1.01	| Q |V	|	|
11+15	0.6651	1.02	| Q |V	|	|

11+20	0.6721	1.03	Q	V		
11+25	0.6793	1.04	Q	V		
11+30	0.6865	1.04	Q	V		
11+35	0.6937	1.05	Q	V		
11+40	0.7011	1.06	Q	V		
11+45	0.7084	1.07	Q	V		
11+50	0.7159	1.08	Q	V		
11+55	0.7234	1.09	Q	V		
12+ 0	0.7310	1.10	Q	V		
12+ 5	0.7387	1.11	Q	V		
12+10	0.7462	1.09	Q	V		
12+15	0.7535	1.06	Q	V		
12+20	0.7607	1.04	Q	V		
12+25	0.7678	1.04	Q	V		
12+30	0.7750	1.04	Q	V		
12+35	0.7822	1.05	Q	V		
12+40	0.7895	1.06	Q	V		
12+45	0.7968	1.07	Q	V		
12+50	0.8042	1.08	Q	V		
12+55	0.8117	1.09	Q	V		
13+ 0	0.8193	1.10	Q	V		
13+ 5	0.8270	1.12	Q	V		
13+10	0.8348	1.13	Q	V		
13+15	0.8427	1.15	Q	V		
13+20	0.8508	1.17	Q	V		
13+25	0.8589	1.18	Q	V		
13+30	0.8672	1.20	Q	V		
13+35	0.8756	1.22	Q	V		
13+40	0.8842	1.25	Q	V		
13+45	0.8930	1.27	Q	V		

13+50	0.9019	1.29	Q		V		
13+55	0.9109	1.32	Q		V		
14+ 0	0.9202	1.34	Q		V		
14+ 5	0.9296	1.37	Q		V		
14+10	0.9393	1.40	Q		V		
14+15	0.9492	1.44	Q		V		
14+20	0.9593	1.47	Q		V		
14+25	0.9697	1.51	Q		V		
14+30	0.9803	1.54	Q		V		
14+35	0.9912	1.59	Q		V		
14+40	1.0025	1.63	Q		V		
14+45	1.0140	1.68	Q		V		
14+50	1.0260	1.73	Q		V		
14+55	1.0383	1.79	Q		V		
15+ 0	1.0511	1.86	Q		V		
15+ 5	1.0644	1.93	Q		V		
15+10	1.0782	2.01	Q		V		
15+15	1.0926	2.10	Q		V		
15+20	1.1077	2.20	Q		V		
15+25	1.1235	2.29	Q		V		
15+30	1.1392	2.28	Q		V		
15+35	1.1543	2.19	Q		V		
15+40	1.1696	2.23	Q		V		
15+45	1.1861	2.39	Q		V		
15+50	1.2042	2.63	Q		V		
15+55	1.2252	3.05	Q		V		
16+ 0	1.2517	3.84	Q		V		
16+ 5	1.2950	6.29		Q		V	
16+10	1.3812	12.52				V Q	
16+15	1.5005	17.32				V	Q

16+20	1.5758	10.93			Q V	
16+25	1.6267	7.39		Q	V	
16+30	1.6660	5.71		Q	V	
16+35	1.6994	4.84	Q		V	
16+40	1.7281	4.17	Q		V	
16+45	1.7528	3.59	Q		V	
16+50	1.7749	3.20	Q		V	
16+55	1.7945	2.85	Q		V	
17+ 0	1.8122	2.57	Q		V	
17+ 5	1.8282	2.32	Q		V	
17+10	1.8426	2.09	Q		V	
17+15	1.8557	1.90	Q		V	
17+20	1.8682	1.82	Q		V	
17+25	1.8802	1.74	Q		V	
17+30	1.8913	1.62	Q		V	
17+35	1.9016	1.49	Q		V	
17+40	1.9111	1.38	Q		V	
17+45	1.9198	1.26	Q		V	
17+50	1.9282	1.22	Q		V	
17+55	1.9363	1.18	Q		V	
18+ 0	1.9441	1.14	Q		V	
18+ 5	1.9517	1.11	Q		V	
18+10	1.9593	1.10	Q		V	
18+15	1.9671	1.12	Q		V	
18+20	1.9748	1.12	Q		V	
18+25	1.9824	1.11	Q		V	
18+30	1.9900	1.10	Q		V	
18+35	1.9974	1.08	Q		V	
18+40	2.0048	1.06	Q		V	
18+45	2.0120	1.05	Q		V	

18+50	2.0191	1.03	Q				V
18+55	2.0261	1.02	Q				V
19+ 0	2.0330	1.00	Q				V
19+ 5	2.0398	0.99	Q				V
19+10	2.0465	0.97	Q				V
19+15	2.0532	0.96	Q				V
19+20	2.0597	0.95	Q				V
19+25	2.0661	0.93	Q				V
19+30	2.0725	0.92	Q				V
19+35	2.0787	0.91	Q				V
19+40	2.0849	0.90	Q				V
19+45	2.0911	0.89	Q				V
19+50	2.0971	0.88	Q				V
19+55	2.1031	0.87	Q				V
20+ 0	2.1090	0.86	Q				V
20+ 5	2.1148	0.85	Q				V
20+10	2.1205	0.84	Q				V
20+15	2.1262	0.83	Q				V
20+20	2.1319	0.82	Q				V
20+25	2.1375	0.81	Q				V
20+30	2.1430	0.80	Q				V
20+35	2.1485	0.79	Q				V
20+40	2.1539	0.79	Q				V
20+45	2.1592	0.78	Q				V
20+50	2.1645	0.77	Q				V
20+55	2.1698	0.76	Q				V
21+ 0	2.1750	0.76	Q				V
21+ 5	2.1802	0.75	Q				V
21+10	2.1853	0.74	Q				V
21+15	2.1904	0.74	Q				V

21+20	2.1954	0.73	|Q	|	|	|	V
21+25	2.2004	0.72	|Q	|	|	|	V
21+30	2.2053	0.72	|Q	|	|	|	V
21+35	2.2102	0.71	|Q	|	|	|	V
21+40	2.2151	0.71	|Q	|	|	|	V
21+45	2.2199	0.70	|Q	|	|	|	V
21+50	2.2247	0.70	|Q	|	|	|	V
21+55	2.2295	0.69	|Q	|	|	|	V
22+ 0	2.2342	0.69	|Q	|	|	|	V
22+ 5	2.2389	0.68	|Q	|	|	|	V
22+10	2.2435	0.68	|Q	|	|	|	V
22+15	2.2482	0.67	|Q	|	|	|	V
22+20	2.2527	0.67	|Q	|	|	|	V
22+25	2.2573	0.66	|Q	|	|	|	V
22+30	2.2618	0.66	|Q	|	|	|	V
22+35	2.2663	0.65	|Q	|	|	|	V
22+40	2.2708	0.65	|Q	|	|	|	V
22+45	2.2752	0.64	|Q	|	|	|	V
22+50	2.2796	0.64	|Q	|	|	|	V
22+55	2.2840	0.64	|Q	|	|	|	V
23+ 0	2.2883	0.63	|Q	|	|	|	V
23+ 5	2.2927	0.63	|Q	|	|	|	V
23+10	2.2969	0.62	|Q	|	|	|	V|
23+15	2.3012	0.62	|Q	|	|	|	V|
23+20	2.3055	0.62	|Q	|	|	|	V|
23+25	2.3097	0.61	|Q	|	|	|	V|
23+30	2.3139	0.61	|Q	|	|	|	V|
23+35	2.3180	0.60	|Q	|	|	|	V|
23+40	2.3222	0.60	|Q	|	|	|	V|
23+45	2.3263	0.60	|Q	|	|	|	

23+50	2.3304	0.59	|Q	|	|	|
23+55	2.3344	0.59	|Q	|	|	|
24+ 0	2.3385	0.59	|Q	|	|	|
24+ 5	2.3424	0.57	|Q	|	|	|
24+10	2.3456	0.47	Q	|	|	|
24+15	2.3476	0.29	Q	|	|	|
24+20	2.3490	0.20	Q	|	|	|
24+25	2.3500	0.14	Q	|	|	|
24+30	2.3507	0.11	Q	|	|	|
24+35	2.3513	0.08	Q	|	|	|
24+40	2.3518	0.06	Q	|	|	|
24+45	2.3521	0.05	Q	|	|	|
24+50	2.3524	0.04	Q	|	|	|
24+55	2.3526	0.03	Q	|	|	|
25+ 0	2.3527	0.02	Q	|	|	|
25+ 5	2.3528	0.02	Q	|	|	|
25+10	2.3529	0.01	Q	|	|	|
25+15	2.3530	0.01	Q	|	|	|
25+20	2.3531	0.01	Q	|	|	|
25+25	2.3531	0.00	Q	|	|	|
25+30	2.3531	0.00	Q	|	|	|
25+35	2.3531	0.00	Q	|	|	|

APPENDIX E:
BASIN ROUTING STUDY INFORMATION

villaasterprocroute

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 03/10/22

Villa and Aster
Basin Routing
Area C - 100yr 24hr

Program License Serial Number 6232

********** HYDROGRAPH INFORMATION **********

From study/file name: villaasterproc.rte
**********HYDROGRAPH DATA**********
Number of intervals = 311
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 35.606 (CFS)
Total volume = 5.504 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 303.000 to Point/Station 304.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 311
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.208	0.200	0.207	0.209
2.000	0.444	8.000	0.416	0.472
3.000	0.707	17.100	0.648	0.766
4.000	1.001	17.100	0.942	1.060

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Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 8.9 17.80 26.70 35.61	Depth (Ft.)
0.083	0.03	0.00	0.000	O	0.00
0.167	0.15	0.00	0.001	O	0.00
0.250	0.49	0.00	0.003	O	0.01
0.333	0.77	0.01	0.007	O	0.03
0.417	0.91	0.01	0.013	O	0.06
0.500	1.01	0.02	0.019	O	0.09
0.583	1.08	0.03	0.027	O	0.13
0.667	1.14	0.03	0.034	OI	0.16
0.750	1.18	0.04	0.042	OI	0.20
0.833	1.22	0.05	0.050	OI	0.24
0.917	1.25	0.06	0.058	OI	0.28
1.000	1.27	0.06	0.066	OI	0.32
1.083	1.30	0.07	0.075	OI	0.36
1.167	1.31	0.08	0.083	OI	0.40
1.250	1.33	0.09	0.092	OI	0.44
1.333	1.34	0.10	0.100	OI	0.48
1.417	1.36	0.10	0.109	OI	0.52
1.500	1.37	0.11	0.117	OI	0.56
1.583	1.37	0.12	0.126	OI	0.61
1.667	1.38	0.13	0.135	OI	0.65
1.750	1.39	0.14	0.143	OI	0.69
1.833	1.40	0.15	0.152	OI	0.73
1.917	1.41	0.15	0.160	OI	0.77
2.000	1.41	0.16	0.169	OI	0.81
2.083	1.42	0.17	0.178	OI	0.85
2.167	1.42	0.18	0.186	OI	0.90
2.250	1.43	0.19	0.195	OI	0.94
2.333	1.43	0.20	0.203	OI	0.98
2.417	1.43	0.31	0.211	OI	1.01
2.500	1.44	0.54	0.218	OI	1.04
2.583	1.44	0.73	0.224	OI	1.07
2.667	1.45	0.87	0.228	OI	1.09
2.750	1.45	0.99	0.232	OI	1.10
2.833	1.46	1.09	0.235	OI	1.11
2.917	1.46	1.16	0.237	|O	1.12
3.000	1.47	1.22	0.239	|O	1.13
3.083	1.47	1.27	0.240	|O	1.14
3.167	1.47	1.31	0.242	|O	1.14
3.250	1.48	1.35	0.243	|O	1.15
3.333	1.48	1.37	0.244	|O	1.15
3.417	1.49	1.40	0.244	|O	1.15
3.500	1.49	1.42	0.245	|O	1.16
3.583	1.50	1.43	0.245	|O	1.16
3.667	1.50	1.45	0.246	|O	1.16
3.750	1.51	1.46	0.246	|O	1.16
3.833	1.51	1.47	0.246	|O	1.16
3.917	1.52	1.48	0.247	|O	1.16
4.000	1.52	1.49	0.247	|O	1.17
4.083	1.53	1.50	0.247	|O	1.17
4.167	1.53	1.50	0.247	|O	1.17
4.250	1.54	1.51	0.248	|O	1.17
4.333	1.54	1.52	0.248	|O	1.17
4.417	1.55	1.52	0.248	|O	1.17
4.500	1.56	1.53	0.248	|O	1.17
4.583	1.56	1.53	0.248	|O	1.17
4.667	1.57	1.54	0.249	|O	1.17

4.750	1.57	1.55	0.249	O				1.17
4.833	1.58	1.55	0.249	O				1.17
4.917	1.58	1.56	0.249	O				1.17
5.000	1.59	1.56	0.249	O				1.17
5.083	1.59	1.57	0.249	O				1.18
5.167	1.60	1.58	0.250	O				1.18
5.250	1.61	1.58	0.250	O				1.18
5.333	1.61	1.59	0.250	O				1.18
5.417	1.62	1.59	0.250	O				1.18
5.500	1.63	1.60	0.250	O				1.18
5.583	1.63	1.60	0.251	O				1.18
5.667	1.64	1.61	0.251	O				1.18
5.750	1.64	1.62	0.251	O				1.18
5.833	1.65	1.62	0.251	O				1.18
5.917	1.66	1.63	0.251	O				1.18
6.000	1.66	1.64	0.251	O				1.18
6.083	1.67	1.64	0.252	O				1.18
6.167	1.68	1.65	0.252	O				1.19
6.250	1.68	1.66	0.252	O				1.19
6.333	1.69	1.66	0.252	O				1.19
6.417	1.70	1.67	0.252	O				1.19
6.500	1.71	1.68	0.253	O				1.19
6.583	1.71	1.68	0.253	O				1.19
6.667	1.72	1.69	0.253	O				1.19
6.750	1.73	1.70	0.253	O				1.19
6.833	1.74	1.70	0.253	O				1.19
6.917	1.74	1.71	0.254	O				1.19
7.000	1.75	1.72	0.254	O				1.19
7.083	1.76	1.73	0.254	O				1.20
7.167	1.77	1.73	0.254	O				1.20
7.250	1.77	1.74	0.255	O				1.20
7.333	1.78	1.75	0.255	O				1.20
7.417	1.79	1.76	0.255	O				1.20
7.500	1.80	1.76	0.255	O				1.20
7.583	1.81	1.77	0.256	O				1.20
7.667	1.82	1.78	0.256	O				1.20
7.750	1.83	1.79	0.256	O				1.20
7.833	1.83	1.80	0.256	O				1.20
7.917	1.84	1.81	0.257	O				1.21
8.000	1.85	1.81	0.257	O				1.21
8.083	1.86	1.82	0.257	O				1.21
8.167	1.87	1.83	0.257	O				1.21
8.250	1.88	1.84	0.258	O				1.21
8.333	1.89	1.85	0.258	O				1.21
8.417	1.90	1.86	0.258	O				1.21
8.500	1.91	1.87	0.258	O				1.21
8.583	1.92	1.88	0.259	O				1.22
8.667	1.93	1.89	0.259	O				1.22
8.750	1.94	1.90	0.259	O				1.22
8.833	1.95	1.91	0.260	O				1.22
8.917	1.96	1.92	0.260	O				1.22
9.000	1.97	1.93	0.260	O				1.22
9.083	1.98	1.94	0.261	O				1.22
9.167	2.00	1.95	0.261	O				1.22
9.250	2.01	1.96	0.261	O				1.23
9.333	2.02	1.97	0.262	O				1.23
9.417	2.03	1.98	0.262	O				1.23
9.500	2.04	1.99	0.262	O				1.23
9.583	2.06	2.01	0.263	O				1.23
9.667	2.07	2.02	0.263	O				1.23
9.750	2.08	2.03	0.263	O				1.23
9.833	2.10	2.04	0.264	O				1.24
9.917	2.11	2.05	0.264	O				1.24

10.000	2.12	2.07	0.264	O				1.24
10.083	2.14	2.08	0.265	O				1.24
10.167	2.15	2.09	0.265	O				1.24
10.250	2.17	2.11	0.266	O				1.24
10.333	2.18	2.12	0.266	O				1.25
10.417	2.20	2.13	0.267	O				1.25
10.500	2.21	2.15	0.267	O				1.25
10.583	2.23	2.16	0.267	OI				1.25
10.667	2.24	2.18	0.268	OI				1.25
10.750	2.26	2.19	0.268	OI				1.26
10.833	2.28	2.21	0.269	OI				1.26
10.917	2.29	2.22	0.269	OI				1.26
11.000	2.31	2.24	0.270	O				1.26
11.083	2.33	2.26	0.270	O				1.26
11.167	2.35	2.27	0.271	O				1.27
11.250	2.37	2.29	0.271	O				1.27
11.333	2.39	2.31	0.272	O				1.27
11.417	2.41	2.33	0.272	O				1.27
11.500	2.43	2.34	0.273	O				1.27
11.583	2.45	2.36	0.273	O				1.28
11.667	2.47	2.38	0.274	O				1.28
11.750	2.49	2.40	0.275	O				1.28
11.833	2.51	2.42	0.275	O				1.29
11.917	2.54	2.44	0.276	O				1.29
12.000	2.56	2.47	0.277	O				1.29
12.083	2.58	2.49	0.277	O				1.29
12.167	2.57	2.50	0.278	O				1.30
12.250	2.50	2.51	0.278	O				1.30
12.333	2.45	2.50	0.278	O				1.30
12.417	2.44	2.49	0.277	O				1.29
12.500	2.44	2.48	0.277	O				1.29
12.583	2.45	2.47	0.277	O				1.29
12.667	2.46	2.47	0.277	O				1.29
12.750	2.48	2.47	0.277	O				1.29
12.833	2.51	2.48	0.277	O				1.29
12.917	2.53	2.48	0.277	O				1.29
13.000	2.56	2.50	0.278	O				1.29
13.083	2.59	2.51	0.278	O				1.30
13.167	2.63	2.53	0.279	O				1.30
13.250	2.66	2.56	0.279	O				1.30
13.333	2.70	2.58	0.280	O				1.31
13.417	2.74	2.61	0.281	O				1.31
13.500	2.78	2.64	0.282	O				1.31
13.583	2.83	2.68	0.283	O				1.32
13.667	2.88	2.71	0.284	O				1.32
13.750	2.93	2.75	0.285	O				1.33
13.833	2.98	2.79	0.286	O				1.33
13.917	3.04	2.84	0.288	O				1.34
14.000	3.10	2.88	0.289	O				1.34
14.083	3.16	2.93	0.291	O				1.35
14.167	3.23	2.99	0.292	O				1.36
14.250	3.30	3.04	0.294	O				1.36
14.333	3.38	3.10	0.296	OI				1.37
14.417	3.46	3.17	0.298	OI				1.38
14.500	3.55	3.24	0.300	OI				1.39
14.583	3.64	3.31	0.302	OI				1.40
14.667	3.74	3.39	0.304	O				1.41
14.750	3.85	3.47	0.307	O				1.42
14.833	3.97	3.56	0.310	O				1.43
14.917	4.10	3.66	0.313	O				1.44
15.000	4.23	3.76	0.316	O				1.46
15.083	4.39	3.87	0.319	O				1.47
15.167	4.56	4.00	0.323	OI				1.49

15.250	4.76	4.13	0.327	OI				1.50
15.333	4.98	4.28	0.332	OI				1.52
15.417	5.19	4.45	0.336	OI				1.54
15.500	5.29	4.61	0.341	O				1.57
15.583	5.14	4.73	0.345	O				1.58
15.667	5.12	4.81	0.348	O				1.59
15.750	5.39	4.90	0.350	O				1.60
15.833	5.85	5.05	0.355	OI				1.62
15.917	6.65	5.30	0.362	OI				1.65
16.000	8.05	5.72	0.375	O I				1.71
16.083	12.31	6.63	0.402	O	I			1.82
16.167	21.47	8.76	0.466	O		I		2.08
16.250	35.61	12.97	0.588		O		I	2.55
16.333	29.73	17.10	0.709		O		I	3.01
16.417	19.55	17.10	0.761		O	I		3.18
16.500	14.84	17.10	0.762		I O			3.19
16.583	12.35	17.10	0.738		I O			3.10
16.667	10.61	16.85	0.700	I	O			2.97
16.750	9.42	15.39	0.658	I	O			2.81
16.833	8.27	14.00	0.617	I	O			2.66
16.917	7.34	12.68	0.579	I	O			2.51
17.000	6.71	11.48	0.544	I	O			2.38
17.083	6.13	10.40	0.513	I	O			2.26
17.167	5.60	9.43	0.485	I	O			2.16
17.250	5.15	8.57	0.460	I	O			2.06
17.333	4.77	7.81	0.438	I	O			1.98
17.417	4.37	7.15	0.418	I	O			1.89
17.500	4.02	6.54	0.400	I O				1.81
17.583	3.80	6.00	0.384	I O				1.74
17.667	3.70	5.54	0.370	IO				1.69
17.750	3.56	5.15	0.358	IO				1.64
17.833	3.38	4.81	0.347	IO				1.59
17.917	3.11	4.49	0.338	I O				1.55
18.000	2.89	4.19	0.329	IO				1.51
18.083	2.69	3.90	0.320	IO				1.47
18.167	2.64	3.65	0.312	IO				1.44
18.250	2.66	3.45	0.306	IO				1.42
18.333	2.67	3.29	0.301	O				1.40
18.417	2.64	3.16	0.297	O				1.38
18.500	2.60	3.05	0.294	O				1.36
18.583	2.57	2.95	0.291	O				1.35
18.667	2.53	2.87	0.289	O				1.34
18.750	2.49	2.80	0.287	O				1.33
18.833	2.45	2.73	0.285	O				1.32
18.917	2.41	2.67	0.283	O				1.32
19.000	2.38	2.61	0.281	O				1.31
19.083	2.34	2.56	0.279	O				1.30
19.167	2.31	2.51	0.278	O				1.30
19.250	2.27	2.47	0.277	O				1.29
19.333	2.24	2.42	0.275	O				1.29
19.417	2.21	2.38	0.274	IO				1.28
19.500	2.18	2.35	0.273	IO				1.28
19.583	2.15	2.31	0.272	IO				1.27
19.667	2.13	2.28	0.271	IO				1.27
19.750	2.10	2.24	0.270	IO				1.26
19.833	2.08	2.21	0.269	O				1.26
19.917	2.05	2.18	0.268	O				1.25
20.000	2.03	2.15	0.267	O				1.25
20.083	2.00	2.12	0.266	O				1.25
20.167	1.98	2.10	0.265	O				1.24
20.250	1.96	2.07	0.265	O				1.24
20.333	1.94	2.04	0.264	O				1.24
20.417	1.91	2.02	0.263	O				1.23

20.500	1.89	2.00	0.262	|O	|	|	|	1.23
20.583	1.87	1.97	0.262	|O	|	|	|	1.23
20.667	1.86	1.95	0.261	|O	|	|	|	1.22
20.750	1.84	1.93	0.260	|O	|	|	|	1.22
20.833	1.82	1.91	0.260	|O	|	|	|	1.22
20.917	1.80	1.89	0.259	|O	|	|	|	1.22
21.000	1.79	1.87	0.259	|O	|	|	|	1.21
21.083	1.77	1.85	0.258	|O	|	|	|	1.21
21.167	1.75	1.83	0.257	|O	|	|	|	1.21
21.250	1.74	1.81	0.257	|O	|	|	|	1.21
21.333	1.72	1.80	0.256	|O	|	|	|	1.20
21.417	1.71	1.78	0.256	|O	|	|	|	1.20
21.500	1.69	1.76	0.255	|O	|	|	|	1.20
21.583	1.68	1.75	0.255	|O	|	|	|	1.20
21.667	1.67	1.73	0.254	|O	|	|	|	1.20
21.750	1.65	1.72	0.254	|O	|	|	|	1.19
21.833	1.64	1.70	0.253	|O	|	|	|	1.19
21.917	1.63	1.69	0.253	|O	|	|	|	1.19
22.000	1.61	1.68	0.253	|O	|	|	|	1.19
22.083	1.60	1.66	0.252	|O	|	|	|	1.19
22.167	1.59	1.65	0.252	|O	|	|	|	1.19
22.250	1.58	1.64	0.251	|O	|	|	|	1.18
22.333	1.57	1.62	0.251	|O	|	|	|	1.18
22.417	1.56	1.61	0.251	|O	|	|	|	1.18
22.500	1.55	1.60	0.250	|O	|	|	|	1.18
22.583	1.54	1.59	0.250	|O	|	|	|	1.18
22.667	1.52	1.57	0.250	|O	|	|	|	1.18
22.750	1.51	1.56	0.249	|O	|	|	|	1.17
22.833	1.50	1.55	0.249	|O	|	|	|	1.17
22.917	1.49	1.54	0.249	|O	|	|	|	1.17
23.000	1.48	1.53	0.248	|O	|	|	|	1.17
23.083	1.48	1.52	0.248	|O	|	|	|	1.17
23.167	1.47	1.51	0.248	|O	|	|	|	1.17
23.250	1.46	1.50	0.247	|O	|	|	|	1.17
23.333	1.45	1.49	0.247	|O	|	|	|	1.17
23.417	1.44	1.48	0.247	|O	|	|	|	1.16
23.500	1.43	1.47	0.246	|O	|	|	|	1.16
23.583	1.42	1.46	0.246	|O	|	|	|	1.16
23.667	1.41	1.45	0.246	|O	|	|	|	1.16
23.750	1.41	1.44	0.246	|O	|	|	|	1.16
23.833	1.40	1.44	0.245	|O	|	|	|	1.16
23.917	1.39	1.43	0.245	|O	|	|	|	1.16
24.000	1.38	1.42	0.245	|O	|	|	|	1.16
24.083	1.35	1.41	0.245	|O	|	|	|	1.15
24.167	1.21	1.38	0.244	|O	|	|	|	1.15
24.250	0.87	1.31	0.242	IO	|	|	|	1.14
24.333	0.59	1.19	0.238	IO	|	|	|	1.13
24.417	0.44	1.06	0.234	O	|	|	|	1.11
24.500	0.34	0.92	0.230	O	|	|	|	1.09
24.583	0.27	0.80	0.226	O	|	|	|	1.08
24.667	0.22	0.68	0.223	O	|	|	|	1.06
24.750	0.18	0.58	0.220	O	|	|	|	1.05
24.833	0.14	0.50	0.217	O	|	|	|	1.04
24.917	0.12	0.42	0.215	O	|	|	|	1.03
25.000	0.10	0.36	0.213	O	|	|	|	1.02
25.083	0.08	0.30	0.211	O	|	|	|	1.01
25.167	0.06	0.26	0.210	O	|	|	|	1.01
25.250	0.05	0.21	0.208	O	|	|	|	1.00
25.333	0.04	0.20	0.207	O	|	|	|	1.00
25.417	0.03	0.20	0.206	O	|	|	|	0.99
25.500	0.02	0.20	0.205	O	|	|	|	0.99
25.583	0.02	0.20	0.204	O	|	|	|	0.98
25.667	0.01	0.19	0.203	O	|	|	|	0.97

25.750	0.01	0.19	0.201	O				0.97
25.833	0.00	0.19	0.200	O				0.96
25.917	0.00	0.19	0.199	O				0.96
26.000	0.00	0.19	0.197	O				0.95
26.083	0.00	0.19	0.196	O				0.94
26.167	0.00	0.19	0.195	O				0.94
26.250	0.00	0.19	0.194	O				0.93
26.333	0.00	0.18	0.192	O				0.92
26.417	0.00	0.18	0.191	O				0.92
26.500	0.00	0.18	0.190	O				0.91
26.583	0.00	0.18	0.188	O				0.91
26.667	0.00	0.18	0.187	O				0.90
26.750	0.00	0.18	0.186	O				0.89
26.833	0.00	0.18	0.185	O				0.89
26.917	0.00	0.18	0.184	O				0.88
27.000	0.00	0.18	0.182	O				0.88
27.083	0.00	0.17	0.181	O				0.87
27.167	0.00	0.17	0.180	O				0.87
27.250	0.00	0.17	0.179	O				0.86
27.333	0.00	0.17	0.178	O				0.85
27.417	0.00	0.17	0.176	O				0.85
27.500	0.00	0.17	0.175	O				0.84
27.583	0.00	0.17	0.174	O				0.84
27.667	0.00	0.17	0.173	O				0.83
27.750	0.00	0.17	0.172	O				0.83
27.833	0.00	0.16	0.171	O				0.82
27.917	0.00	0.16	0.170	O				0.82
28.000	0.00	0.16	0.168	O				0.81
28.083	0.00	0.16	0.167	O				0.80
28.167	0.00	0.16	0.166	O				0.80
28.250	0.00	0.16	0.165	O				0.79
28.333	0.00	0.16	0.164	O				0.79
28.417	0.00	0.16	0.163	O				0.78
28.500	0.00	0.16	0.162	O				0.78
28.583	0.00	0.15	0.161	O				0.77
28.667	0.00	0.15	0.160	O				0.77
28.750	0.00	0.15	0.159	O				0.76
28.833	0.00	0.15	0.158	O				0.76
28.917	0.00	0.15	0.157	O				0.75
29.000	0.00	0.15	0.156	O				0.75
29.083	0.00	0.15	0.155	O				0.74
29.167	0.00	0.15	0.154	O				0.74
29.250	0.00	0.15	0.153	O				0.73
29.333	0.00	0.15	0.151	O				0.73
29.417	0.00	0.14	0.150	O				0.72
29.500	0.00	0.14	0.150	O				0.72
29.583	0.00	0.14	0.149	O				0.71
29.667	0.00	0.14	0.148	O				0.71
29.750	0.00	0.14	0.147	O				0.70
29.833	0.00	0.14	0.146	O				0.70
29.917	0.00	0.14	0.145	O				0.70
30.000	0.00	0.14	0.144	O				0.69
30.083	0.00	0.14	0.143	O				0.69
30.167	0.00	0.14	0.142	O				0.68
30.250	0.00	0.14	0.141	O				0.68
30.333	0.00	0.13	0.140	O				0.67
30.417	0.00	0.13	0.139	O				0.67
30.500	0.00	0.13	0.138	O				0.66
30.583	0.00	0.13	0.137	O				0.66
30.667	0.00	0.13	0.136	O				0.66
30.750	0.00	0.13	0.135	O				0.65
30.833	0.00	0.13	0.134	O				0.65
30.917	0.00	0.13	0.134	O				0.64

31.000	0.00	0.13	0.133	O				0.64
31.083	0.00	0.13	0.132	O				0.63
31.167	0.00	0.13	0.131	O				0.63
31.250	0.00	0.13	0.130	O				0.63
31.333	0.00	0.12	0.129	O				0.62
31.417	0.00	0.12	0.128	O				0.62
31.500	0.00	0.12	0.128	O				0.61
31.583	0.00	0.12	0.127	O				0.61
31.667	0.00	0.12	0.126	O				0.61
31.750	0.00	0.12	0.125	O				0.60
31.833	0.00	0.12	0.124	O				0.60
31.917	0.00	0.12	0.123	O				0.59
32.000	0.00	0.12	0.123	O				0.59
32.083	0.00	0.12	0.122	O				0.59
32.167	0.00	0.12	0.121	O				0.58
32.250	0.00	0.12	0.120	O				0.58
32.333	0.00	0.11	0.119	O				0.57
32.417	0.00	0.11	0.119	O				0.57
32.500	0.00	0.11	0.118	O				0.57
32.583	0.00	0.11	0.117	O				0.56
32.667	0.00	0.11	0.116	O				0.56
32.750	0.00	0.11	0.115	O				0.56
32.833	0.00	0.11	0.115	O				0.55
32.917	0.00	0.11	0.114	O				0.55
33.000	0.00	0.11	0.113	O				0.54
33.083	0.00	0.11	0.112	O				0.54
33.167	0.00	0.11	0.112	O				0.54
33.250	0.00	0.11	0.111	O				0.53
33.333	0.00	0.11	0.110	O				0.53
33.417	0.00	0.11	0.110	O				0.53
33.500	0.00	0.10	0.109	O				0.52
33.583	0.00	0.10	0.108	O				0.52
33.667	0.00	0.10	0.107	O				0.52
33.750	0.00	0.10	0.107	O				0.51
33.833	0.00	0.10	0.106	O				0.51
33.917	0.00	0.10	0.105	O				0.51
34.000	0.00	0.10	0.105	O				0.50
34.083	0.00	0.10	0.104	O				0.50
34.167	0.00	0.10	0.103	O				0.50
34.250	0.00	0.10	0.102	O				0.49
34.333	0.00	0.10	0.102	O				0.49
34.417	0.00	0.10	0.101	O				0.49
34.500	0.00	0.10	0.100	O				0.48
34.583	0.00	0.10	0.100	O				0.48
34.667	0.00	0.10	0.099	O				0.48
34.750	0.00	0.09	0.099	O				0.47
34.833	0.00	0.09	0.098	O				0.47
34.917	0.00	0.09	0.097	O				0.47
35.000	0.00	0.09	0.097	O				0.46
35.083	0.00	0.09	0.096	O				0.46
35.167	0.00	0.09	0.095	O				0.46
35.250	0.00	0.09	0.095	O				0.46
35.333	0.00	0.09	0.094	O				0.45
35.417	0.00	0.09	0.093	O				0.45
35.500	0.00	0.09	0.093	O				0.45
35.583	0.00	0.09	0.092	O				0.44
35.667	0.00	0.09	0.092	O				0.44
35.750	0.00	0.09	0.091	O				0.44
35.833	0.00	0.09	0.090	O				0.43
35.917	0.00	0.09	0.090	O				0.43
36.000	0.00	0.09	0.089	O				0.43
36.083	0.00	0.09	0.089	O				0.43
36.167	0.00	0.08	0.088	O				0.42

36.250	0.00	0.08	0.087	O				0.42
36.333	0.00	0.08	0.087	O				0.42
36.417	0.00	0.08	0.086	O				0.41
36.500	0.00	0.08	0.086	O				0.41
36.583	0.00	0.08	0.085	O				0.41
36.667	0.00	0.08	0.085	O				0.41
36.750	0.00	0.08	0.084	O				0.40
36.833	0.00	0.08	0.083	O				0.40
36.917	0.00	0.08	0.083	O				0.40
37.000	0.00	0.08	0.082	O				0.40
37.083	0.00	0.08	0.082	O				0.39
37.167	0.00	0.08	0.081	O				0.39
37.250	0.00	0.08	0.081	O				0.39
37.333	0.00	0.08	0.080	O				0.39
37.417	0.00	0.08	0.080	O				0.38
37.500	0.00	0.08	0.079	O				0.38
37.583	0.00	0.08	0.079	O				0.38
37.667	0.00	0.08	0.078	O				0.38
37.750	0.00	0.07	0.078	O				0.37
37.833	0.00	0.07	0.077	O				0.37
37.917	0.00	0.07	0.077	O				0.37
38.000	0.00	0.07	0.076	O				0.37
38.083	0.00	0.07	0.076	O				0.36
38.167	0.00	0.07	0.075	O				0.36
38.250	0.00	0.07	0.075	O				0.36
38.333	0.00	0.07	0.074	O				0.36
38.417	0.00	0.07	0.074	O				0.35
38.500	0.00	0.07	0.073	O				0.35
38.583	0.00	0.07	0.073	O				0.35
38.667	0.00	0.07	0.072	O				0.35
38.750	0.00	0.07	0.072	O				0.34
38.833	0.00	0.07	0.071	O				0.34
38.917	0.00	0.07	0.071	O				0.34
39.000	0.00	0.07	0.070	O				0.34
39.083	0.00	0.07	0.070	O				0.34
39.167	0.00	0.07	0.069	O				0.33
39.250	0.00	0.07	0.069	O				0.33
39.333	0.00	0.07	0.068	O				0.33
39.417	0.00	0.07	0.068	O				0.33
39.500	0.00	0.06	0.068	O				0.32
39.583	0.00	0.06	0.067	O				0.32
39.667	0.00	0.06	0.067	O				0.32
39.750	0.00	0.06	0.066	O				0.32
39.833	0.00	0.06	0.066	O				0.32
39.917	0.00	0.06	0.065	O				0.31
40.000	0.00	0.06	0.065	O				0.31
40.083	0.00	0.06	0.064	O				0.31
40.167	0.00	0.06	0.064	O				0.31
40.250	0.00	0.06	0.064	O				0.31
40.333	0.00	0.06	0.063	O				0.30
40.417	0.00	0.06	0.063	O				0.30
40.500	0.00	0.06	0.062	O				0.30
40.583	0.00	0.06	0.062	O				0.30
40.667	0.00	0.06	0.062	O				0.30
40.750	0.00	0.06	0.061	O				0.29
40.833	0.00	0.06	0.061	O				0.29
40.917	0.00	0.06	0.060	O				0.29
41.000	0.00	0.06	0.060	O				0.29
41.083	0.00	0.06	0.060	O				0.29
41.167	0.00	0.06	0.059	O				0.28
41.250	0.00	0.06	0.059	O				0.28
41.333	0.00	0.06	0.058	O				0.28
41.417	0.00	0.06	0.058	O				0.28

41.500	0.00	0.06	0.058	O				0.28
41.583	0.00	0.06	0.057	O				0.28
41.667	0.00	0.05	0.057	O				0.27
41.750	0.00	0.05	0.056	O				0.27
41.833	0.00	0.05	0.056	O				0.27
41.917	0.00	0.05	0.056	O				0.27
42.000	0.00	0.05	0.055	O				0.27
42.083	0.00	0.05	0.055	O				0.26
42.167	0.00	0.05	0.055	O				0.26
42.250	0.00	0.05	0.054	O				0.26
42.333	0.00	0.05	0.054	O				0.26
42.417	0.00	0.05	0.054	O				0.26
42.500	0.00	0.05	0.053	O				0.26
42.583	0.00	0.05	0.053	O				0.25
42.667	0.00	0.05	0.053	O				0.25
42.750	0.00	0.05	0.052	O				0.25
42.833	0.00	0.05	0.052	O				0.25
42.917	0.00	0.05	0.051	O				0.25
43.000	0.00	0.05	0.051	O				0.25
43.083	0.00	0.05	0.051	O				0.24
43.167	0.00	0.05	0.050	O				0.24
43.250	0.00	0.05	0.050	O				0.24
43.333	0.00	0.05	0.050	O				0.24
43.417	0.00	0.05	0.049	O				0.24
43.500	0.00	0.05	0.049	O				0.24
43.583	0.00	0.05	0.049	O				0.23
43.667	0.00	0.05	0.048	O				0.23
43.750	0.00	0.05	0.048	O				0.23
43.833	0.00	0.05	0.048	O				0.23
43.917	0.00	0.05	0.048	O				0.23
44.000	0.00	0.05	0.047	O				0.23
44.083	0.00	0.05	0.047	O				0.23
44.167	0.00	0.04	0.047	O				0.22
44.250	0.00	0.04	0.046	O				0.22
44.333	0.00	0.04	0.046	O				0.22
44.417	0.00	0.04	0.046	O				0.22
44.500	0.00	0.04	0.045	O				0.22
44.583	0.00	0.04	0.045	O				0.22
44.667	0.00	0.04	0.045	O				0.22
44.750	0.00	0.04	0.044	O				0.21
44.833	0.00	0.04	0.044	O				0.21
44.917	0.00	0.04	0.044	O				0.21
45.000	0.00	0.04	0.044	O				0.21
45.083	0.00	0.04	0.043	O				0.21
45.167	0.00	0.04	0.043	O				0.21
45.250	0.00	0.04	0.043	O				0.21
45.333	0.00	0.04	0.042	O				0.20
45.417	0.00	0.04	0.042	O				0.20
45.500	0.00	0.04	0.042	O				0.20
45.583	0.00	0.04	0.042	O				0.20
45.667	0.00	0.04	0.041	O				0.20
45.750	0.00	0.04	0.041	O				0.20
45.833	0.00	0.04	0.041	O				0.20
45.917	0.00	0.04	0.041	O				0.19
46.000	0.00	0.04	0.040	O				0.19
46.083	0.00	0.04	0.040	O				0.19
46.167	0.00	0.04	0.040	O				0.19
46.250	0.00	0.04	0.039	O				0.19
46.333	0.00	0.04	0.039	O				0.19
46.417	0.00	0.04	0.039	O				0.19
46.500	0.00	0.04	0.039	O				0.19
46.583	0.00	0.04	0.038	O				0.18
46.667	0.00	0.04	0.038	O				0.18

46.750	0.00	0.04	0.038	O				0.18
46.833	0.00	0.04	0.038	O				0.18
46.917	0.00	0.04	0.037	O				0.18
47.000	0.00	0.04	0.037	O				0.18
47.083	0.00	0.04	0.037	O				0.18
47.167	0.00	0.04	0.037	O				0.18
47.250	0.00	0.04	0.036	O				0.18
47.333	0.00	0.03	0.036	O				0.17
47.417	0.00	0.03	0.036	O				0.17
47.500	0.00	0.03	0.036	O				0.17
47.583	0.00	0.03	0.036	O				0.17
47.667	0.00	0.03	0.035	O				0.17
47.750	0.00	0.03	0.035	O				0.17
47.833	0.00	0.03	0.035	O				0.17
47.917	0.00	0.03	0.035	O				0.17
48.000	0.00	0.03	0.034	O				0.17
48.083	0.00	0.03	0.034	O				0.16
48.167	0.00	0.03	0.034	O				0.16
48.250	0.00	0.03	0.034	O				0.16
48.333	0.00	0.03	0.033	O				0.16
48.417	0.00	0.03	0.033	O				0.16
48.500	0.00	0.03	0.033	O				0.16
48.583	0.00	0.03	0.033	O				0.16
48.667	0.00	0.03	0.033	O				0.16
48.750	0.00	0.03	0.032	O				0.16
48.833	0.00	0.03	0.032	O				0.15
48.917	0.00	0.03	0.032	O				0.15
49.000	0.00	0.03	0.032	O				0.15
49.083	0.00	0.03	0.032	O				0.15
49.167	0.00	0.03	0.031	O				0.15
49.250	0.00	0.03	0.031	O				0.15
49.333	0.00	0.03	0.031	O				0.15
49.417	0.00	0.03	0.031	O				0.15
49.500	0.00	0.03	0.031	O				0.15
49.583	0.00	0.03	0.030	O				0.15
49.667	0.00	0.03	0.030	O				0.14
49.750	0.00	0.03	0.030	O				0.14
49.833	0.00	0.03	0.030	O				0.14
49.917	0.00	0.03	0.030	O				0.14
50.000	0.00	0.03	0.029	O				0.14
50.083	0.00	0.03	0.029	O				0.14
50.167	0.00	0.03	0.029	O				0.14
50.250	0.00	0.03	0.029	O				0.14
50.333	0.00	0.03	0.029	O				0.14
50.417	0.00	0.03	0.028	O				0.14
50.500	0.00	0.03	0.028	O				0.14
50.583	0.00	0.03	0.028	O				0.13
50.667	0.00	0.03	0.028	O				0.13
50.750	0.00	0.03	0.028	O				0.13
50.833	0.00	0.03	0.027	O				0.13
50.917	0.00	0.03	0.027	O				0.13
51.000	0.00	0.03	0.027	O				0.13
51.083	0.00	0.03	0.027	O				0.13
51.167	0.00	0.03	0.027	O				0.13
51.250	0.00	0.03	0.027	O				0.13
51.333	0.00	0.03	0.026	O				0.13
51.417	0.00	0.03	0.026	O				0.13
51.500	0.00	0.03	0.026	O				0.13
51.583	0.00	0.02	0.026	O				0.12
51.667	0.00	0.02	0.026	O				0.12
51.750	0.00	0.02	0.026	O				0.12
51.833	0.00	0.02	0.025	O				0.12
51.917	0.00	0.02	0.025	O				0.12

52.000	0.00	0.02	0.025	O				0.12
52.083	0.00	0.02	0.025	O				0.12
52.167	0.00	0.02	0.025	O				0.12
52.250	0.00	0.02	0.025	O				0.12
52.333	0.00	0.02	0.024	O				0.12
52.417	0.00	0.02	0.024	O				0.12
52.500	0.00	0.02	0.024	O				0.12
52.583	0.00	0.02	0.024	O				0.11
52.667	0.00	0.02	0.024	O				0.11
52.750	0.00	0.02	0.024	O				0.11
52.833	0.00	0.02	0.023	O				0.11
52.917	0.00	0.02	0.023	O				0.11
53.000	0.00	0.02	0.023	O				0.11
53.083	0.00	0.02	0.023	O				0.11
53.167	0.00	0.02	0.023	O				0.11
53.250	0.00	0.02	0.023	O				0.11
53.333	0.00	0.02	0.022	O				0.11
53.417	0.00	0.02	0.022	O				0.11
53.500	0.00	0.02	0.022	O				0.11
53.583	0.00	0.02	0.022	O				0.11
53.667	0.00	0.02	0.022	O				0.11
53.750	0.00	0.02	0.022	O				0.10
53.833	0.00	0.02	0.022	O				0.10
53.917	0.00	0.02	0.021	O				0.10
54.000	0.00	0.02	0.021	O				0.10
54.083	0.00	0.02	0.021	O				0.10
54.167	0.00	0.02	0.021	O				0.10
54.250	0.00	0.02	0.021	O				0.10
54.333	0.00	0.02	0.021	O				0.10
54.417	0.00	0.02	0.021	O				0.10
54.500	0.00	0.02	0.021	O				0.10
54.583	0.00	0.02	0.020	O				0.10
54.667	0.00	0.02	0.020	O				0.10
54.750	0.00	0.02	0.020	O				0.10
54.833	0.00	0.02	0.020	O				0.10
54.917	0.00	0.02	0.020	O				0.10
55.000	0.00	0.02	0.020	O				0.09
55.083	0.00	0.02	0.020	O				0.09
55.167	0.00	0.02	0.019	O				0.09
55.250	0.00	0.02	0.019	O				0.09
55.333	0.00	0.02	0.019	O				0.09
55.417	0.00	0.02	0.019	O				0.09
55.500	0.00	0.02	0.019	O				0.09
55.583	0.00	0.02	0.019	O				0.09
55.667	0.00	0.02	0.019	O				0.09
55.750	0.00	0.02	0.019	O				0.09
55.833	0.00	0.02	0.018	O				0.09
55.917	0.00	0.02	0.018	O				0.09
56.000	0.00	0.02	0.018	O				0.09
56.083	0.00	0.02	0.018	O				0.09
56.167	0.00	0.02	0.018	O				0.09
56.250	0.00	0.02	0.018	O				0.09
56.333	0.00	0.02	0.018	O				0.09
56.417	0.00	0.02	0.018	O				0.08
56.500	0.00	0.02	0.017	O				0.08
56.583	0.00	0.02	0.017	O				0.08
56.667	0.00	0.02	0.017	O				0.08
56.750	0.00	0.02	0.017	O				0.08
56.833	0.00	0.02	0.017	O				0.08
56.917	0.00	0.02	0.017	O				0.08
57.000	0.00	0.02	0.017	O				0.08
57.083	0.00	0.02	0.017	O				0.08
57.167	0.00	0.02	0.017	O				0.08

57.250	0.00	0.02	0.016	O				0.08
57.333	0.00	0.02	0.016	O				0.08
57.417	0.00	0.02	0.016	O				0.08
57.500	0.00	0.02	0.016	O				0.08
57.583	0.00	0.02	0.016	O				0.08
57.667	0.00	0.02	0.016	O				0.08
57.750	0.00	0.02	0.016	O				0.08
57.833	0.00	0.02	0.016	O				0.08
57.917	0.00	0.02	0.016	O				0.08
58.000	0.00	0.01	0.016	O				0.07
58.083	0.00	0.01	0.015	O				0.07
58.167	0.00	0.01	0.015	O				0.07
58.250	0.00	0.01	0.015	O				0.07
58.333	0.00	0.01	0.015	O				0.07
58.417	0.00	0.01	0.015	O				0.07
58.500	0.00	0.01	0.015	O				0.07
58.583	0.00	0.01	0.015	O				0.07
58.667	0.00	0.01	0.015	O				0.07
58.750	0.00	0.01	0.015	O				0.07
58.833	0.00	0.01	0.015	O				0.07
58.917	0.00	0.01	0.014	O				0.07
59.000	0.00	0.01	0.014	O				0.07
59.083	0.00	0.01	0.014	O				0.07
59.167	0.00	0.01	0.014	O				0.07
59.250	0.00	0.01	0.014	O				0.07
59.333	0.00	0.01	0.014	O				0.07
59.417	0.00	0.01	0.014	O				0.07
59.500	0.00	0.01	0.014	O				0.07
59.583	0.00	0.01	0.014	O				0.07
59.667	0.00	0.01	0.014	O				0.07
59.750	0.00	0.01	0.014	O				0.06
59.833	0.00	0.01	0.013	O				0.06
59.917	0.00	0.01	0.013	O				0.06
60.000	0.00	0.01	0.013	O				0.06
60.083	0.00	0.01	0.013	O				0.06
60.167	0.00	0.01	0.013	O				0.06
60.250	0.00	0.01	0.013	O				0.06
60.333	0.00	0.01	0.013	O				0.06
60.417	0.00	0.01	0.013	O				0.06
60.500	0.00	0.01	0.013	O				0.06
60.583	0.00	0.01	0.013	O				0.06
60.667	0.00	0.01	0.013	O				0.06
60.750	0.00	0.01	0.012	O				0.06
60.833	0.00	0.01	0.012	O				0.06
60.917	0.00	0.01	0.012	O				0.06
61.000	0.00	0.01	0.012	O				0.06
61.083	0.00	0.01	0.012	O				0.06
61.167	0.00	0.01	0.012	O				0.06
61.250	0.00	0.01	0.012	O				0.06
61.333	0.00	0.01	0.012	O				0.06
61.417	0.00	0.01	0.012	O				0.06
61.500	0.00	0.01	0.012	O				0.06
61.583	0.00	0.01	0.012	O				0.06
61.667	0.00	0.01	0.012	O				0.06
61.750	0.00	0.01	0.012	O				0.06
61.833	0.00	0.01	0.011	O				0.06
61.917	0.00	0.01	0.011	O				0.05
62.000	0.00	0.01	0.011	O				0.05
62.083	0.00	0.01	0.011	O				0.05
62.167	0.00	0.01	0.011	O				0.05
62.250	0.00	0.01	0.011	O				0.05
62.333	0.00	0.01	0.011	O				0.05
62.417	0.00	0.01	0.011	O				0.05

62.500	0.00	0.01	0.011	O				0.05
62.583	0.00	0.01	0.011	O				0.05
62.667	0.00	0.01	0.011	O				0.05
62.750	0.00	0.01	0.011	O				0.05
62.833	0.00	0.01	0.011	O				0.05
62.917	0.00	0.01	0.011	O				0.05
63.000	0.00	0.01	0.010	O				0.05
63.083	0.00	0.01	0.010	O				0.05
63.167	0.00	0.01	0.010	O				0.05
63.250	0.00	0.01	0.010	O				0.05
63.333	0.00	0.01	0.010	O				0.05
63.417	0.00	0.01	0.010	O				0.05
63.500	0.00	0.01	0.010	O				0.05
63.583	0.00	0.01	0.010	O				0.05
63.667	0.00	0.01	0.010	O				0.05
63.750	0.00	0.01	0.010	O				0.05
63.833	0.00	0.01	0.010	O				0.05
63.917	0.00	0.01	0.010	O				0.05
64.000	0.00	0.01	0.010	O				0.05
64.083	0.00	0.01	0.010	O				0.05
64.167	0.00	0.01	0.010	O				0.05
64.250	0.00	0.01	0.009	O				0.05
64.333	0.00	0.01	0.009	O				0.05
64.417	0.00	0.01	0.009	O				0.04
64.500	0.00	0.01	0.009	O				0.04
64.583	0.00	0.01	0.009	O				0.04
64.667	0.00	0.01	0.009	O				0.04
64.750	0.00	0.01	0.009	O				0.04
64.833	0.00	0.01	0.009	O				0.04
64.917	0.00	0.01	0.009	O				0.04
65.000	0.00	0.01	0.009	O				0.04
65.083	0.00	0.01	0.009	O				0.04
65.167	0.00	0.01	0.009	O				0.04
65.250	0.00	0.01	0.009	O				0.04
65.333	0.00	0.01	0.009	O				0.04
65.417	0.00	0.01	0.009	O				0.04
65.500	0.00	0.01	0.009	O				0.04
65.583	0.00	0.01	0.008	O				0.04
65.667	0.00	0.01	0.008	O				0.04
65.750	0.00	0.01	0.008	O				0.04
65.833	0.00	0.01	0.008	O				0.04
65.917	0.00	0.01	0.008	O				0.04
66.000	0.00	0.01	0.008	O				0.04
66.083	0.00	0.01	0.008	O				0.04
66.167	0.00	0.01	0.008	O				0.04
66.250	0.00	0.01	0.008	O				0.04
66.333	0.00	0.01	0.008	O				0.04
66.417	0.00	0.01	0.008	O				0.04
66.500	0.00	0.01	0.008	O				0.04
66.583	0.00	0.01	0.008	O				0.04
66.667	0.00	0.01	0.008	O				0.04
66.750	0.00	0.01	0.008	O				0.04
66.833	0.00	0.01	0.008	O				0.04
66.917	0.00	0.01	0.008	O				0.04
67.000	0.00	0.01	0.008	O				0.04
67.083	0.00	0.01	0.008	O				0.04
67.167	0.00	0.01	0.007	O				0.04
67.250	0.00	0.01	0.007	O				0.04
67.333	0.00	0.01	0.007	O				0.04
67.417	0.00	0.01	0.007	O				0.04
67.500	0.00	0.01	0.007	O				0.04
67.583	0.00	0.01	0.007	O				0.03
67.667	0.00	0.01	0.007	O				0.03

67.750	0.00	0.01	0.007	O				0.03
67.833	0.00	0.01	0.007	O				0.03
67.917	0.00	0.01	0.007	O				0.03
68.000	0.00	0.01	0.007	O				0.03
68.083	0.00	0.01	0.007	O				0.03
68.167	0.00	0.01	0.007	O				0.03
68.250	0.00	0.01	0.007	O				0.03
68.333	0.00	0.01	0.007	O				0.03
68.417	0.00	0.01	0.007	O				0.03
68.500	0.00	0.01	0.007	O				0.03
68.583	0.00	0.01	0.007	O				0.03
68.667	0.00	0.01	0.007	O				0.03
68.750	0.00	0.01	0.007	O				0.03
68.833	0.00	0.01	0.007	O				0.03
68.917	0.00	0.01	0.007	O				0.03
69.000	0.00	0.01	0.006	O				0.03
69.083	0.00	0.01	0.006	O				0.03
69.167	0.00	0.01	0.006	O				0.03
69.250	0.00	0.01	0.006	O				0.03
69.333	0.00	0.01	0.006	O				0.03
69.417	0.00	0.01	0.006	O				0.03
69.500	0.00	0.01	0.006	O				0.03
69.583	0.00	0.01	0.006	O				0.03
69.667	0.00	0.01	0.006	O				0.03
69.750	0.00	0.01	0.006	O				0.03
69.833	0.00	0.01	0.006	O				0.03
69.917	0.00	0.01	0.006	O				0.03
70.000	0.00	0.01	0.006	O				0.03
70.083	0.00	0.01	0.006	O				0.03
70.167	0.00	0.01	0.006	O				0.03
70.250	0.00	0.01	0.006	O				0.03
70.333	0.00	0.01	0.006	O				0.03
70.417	0.00	0.01	0.006	O				0.03
70.500	0.00	0.01	0.006	O				0.03
70.583	0.00	0.01	0.006	O				0.03
70.667	0.00	0.01	0.006	O				0.03
70.750	0.00	0.01	0.006	O				0.03
70.833	0.00	0.01	0.006	O				0.03
70.917	0.00	0.01	0.006	O				0.03
71.000	0.00	0.01	0.006	O				0.03
71.083	0.00	0.01	0.005	O				0.03
71.167	0.00	0.01	0.005	O				0.03
71.250	0.00	0.01	0.005	O				0.03
71.333	0.00	0.01	0.005	O				0.03
71.417	0.00	0.01	0.005	O				0.03
71.500	0.00	0.01	0.005	O				0.03
71.583	0.00	0.01	0.005	O				0.03
71.667	0.00	0.01	0.005	O				0.03
71.750	0.00	0.01	0.005	O				0.03
71.833	0.00	0.00	0.005	O				0.02
71.917	0.00	0.00	0.005	O				0.02
72.000	0.00	0.00	0.005	O				0.02
72.083	0.00	0.00	0.005	O				0.02
72.167	0.00	0.00	0.005	O				0.02
72.250	0.00	0.00	0.005	O				0.02
72.333	0.00	0.00	0.005	O				0.02
72.417	0.00	0.00	0.005	O				0.02
72.500	0.00	0.00	0.005	O				0.02
72.583	0.00	0.00	0.005	O				0.02
72.667	0.00	0.00	0.005	O				0.02
72.750	0.00	0.00	0.005	O				0.02
72.833	0.00	0.00	0.005	O				0.02
72.917	0.00	0.00	0.005	O				0.02

73.000	0.00	0.00	0.005	O				0.02
73.083	0.00	0.00	0.005	O				0.02
73.167	0.00	0.00	0.005	O				0.02
73.250	0.00	0.00	0.005	O				0.02
73.333	0.00	0.00	0.005	O				0.02
73.417	0.00	0.00	0.005	O				0.02
73.500	0.00	0.00	0.005	O				0.02
73.583	0.00	0.00	0.005	O				0.02
73.667	0.00	0.00	0.004	O				0.02
73.750	0.00	0.00	0.004	O				0.02
73.833	0.00	0.00	0.004	O				0.02
73.917	0.00	0.00	0.004	O				0.02
74.000	0.00	0.00	0.004	O				0.02
74.083	0.00	0.00	0.004	O				0.02
74.167	0.00	0.00	0.004	O				0.02
74.250	0.00	0.00	0.004	O				0.02
74.333	0.00	0.00	0.004	O				0.02
74.417	0.00	0.00	0.004	O				0.02
74.500	0.00	0.00	0.004	O				0.02
74.583	0.00	0.00	0.004	O				0.02
74.667	0.00	0.00	0.004	O				0.02
74.750	0.00	0.00	0.004	O				0.02
74.833	0.00	0.00	0.004	O				0.02
74.917	0.00	0.00	0.004	O				0.02
75.000	0.00	0.00	0.004	O				0.02
75.083	0.00	0.00	0.004	O				0.02
75.167	0.00	0.00	0.004	O				0.02
75.250	0.00	0.00	0.004	O				0.02
75.333	0.00	0.00	0.004	O				0.02
75.417	0.00	0.00	0.004	O				0.02
75.500	0.00	0.00	0.004	O				0.02
75.583	0.00	0.00	0.004	O				0.02
75.667	0.00	0.00	0.004	O				0.02
75.750	0.00	0.00	0.004	O				0.02
75.833	0.00	0.00	0.004	O				0.02
75.917	0.00	0.00	0.004	O				0.02
76.000	0.00	0.00	0.004	O				0.02
76.083	0.00	0.00	0.004	O				0.02
76.167	0.00	0.00	0.004	O				0.02
76.250	0.00	0.00	0.004	O				0.02
76.333	0.00	0.00	0.004	O				0.02
76.417	0.00	0.00	0.004	O				0.02
76.500	0.00	0.00	0.004	O				0.02
76.583	0.00	0.00	0.004	O				0.02
76.667	0.00	0.00	0.004	O				0.02
76.750	0.00	0.00	0.003	O				0.02
76.833	0.00	0.00	0.003	O				0.02
76.917	0.00	0.00	0.003	O				0.02
77.000	0.00	0.00	0.003	O				0.02
77.083	0.00	0.00	0.003	O				0.02
77.167	0.00	0.00	0.003	O				0.02
77.250	0.00	0.00	0.003	O				0.02
77.333	0.00	0.00	0.003	O				0.02
77.417	0.00	0.00	0.003	O				0.02
77.500	0.00	0.00	0.003	O				0.02
77.583	0.00	0.00	0.003	O				0.02
77.667	0.00	0.00	0.003	O				0.02
77.750	0.00	0.00	0.003	O				0.02
77.833	0.00	0.00	0.003	O				0.02
77.917	0.00	0.00	0.003	O				0.02
78.000	0.00	0.00	0.003	O				0.02
78.083	0.00	0.00	0.003	O				0.02
78.167	0.00	0.00	0.003	O				0.02

78.250	0.00	0.00	0.003	O				0.01
78.333	0.00	0.00	0.003	O				0.01
78.417	0.00	0.00	0.003	O				0.01
78.500	0.00	0.00	0.003	O				0.01
78.583	0.00	0.00	0.003	O				0.01
78.667	0.00	0.00	0.003	O				0.01
78.750	0.00	0.00	0.003	O				0.01
78.833	0.00	0.00	0.003	O				0.01
78.917	0.00	0.00	0.003	O				0.01
79.000	0.00	0.00	0.003	O				0.01
79.083	0.00	0.00	0.003	O				0.01
79.167	0.00	0.00	0.003	O				0.01
79.250	0.00	0.00	0.003	O				0.01
79.333	0.00	0.00	0.003	O				0.01
79.417	0.00	0.00	0.003	O				0.01
79.500	0.00	0.00	0.003	O				0.01
79.583	0.00	0.00	0.003	O				0.01
79.667	0.00	0.00	0.003	O				0.01
79.750	0.00	0.00	0.003	O				0.01
79.833	0.00	0.00	0.003	O				0.01
79.917	0.00	0.00	0.003	O				0.01
80.000	0.00	0.00	0.003	O				0.01
80.083	0.00	0.00	0.003	O				0.01
80.167	0.00	0.00	0.003	O				0.01
80.250	0.00	0.00	0.003	O				0.01
80.333	0.00	0.00	0.003	O				0.01
80.417	0.00	0.00	0.003	O				0.01
80.500	0.00	0.00	0.003	O				0.01
80.583	0.00	0.00	0.003	O				0.01
80.667	0.00	0.00	0.003	O				0.01
80.750	0.00	0.00	0.003	O				0.01
80.833	0.00	0.00	0.003	O				0.01
80.917	0.00	0.00	0.003	O				0.01
81.000	0.00	0.00	0.002	O				0.01
81.083	0.00	0.00	0.002	O				0.01
81.167	0.00	0.00	0.002	O				0.01
81.250	0.00	0.00	0.002	O				0.01
81.333	0.00	0.00	0.002	O				0.01
81.417	0.00	0.00	0.002	O				0.01
81.500	0.00	0.00	0.002	O				0.01
81.583	0.00	0.00	0.002	O				0.01
81.667	0.00	0.00	0.002	O				0.01
81.750	0.00	0.00	0.002	O				0.01
81.833	0.00	0.00	0.002	O				0.01
81.917	0.00	0.00	0.002	O				0.01
82.000	0.00	0.00	0.002	O				0.01
82.083	0.00	0.00	0.002	O				0.01
82.167	0.00	0.00	0.002	O				0.01
82.250	0.00	0.00	0.002	O				0.01
82.333	0.00	0.00	0.002	O				0.01
82.417	0.00	0.00	0.002	O				0.01
82.500	0.00	0.00	0.002	O				0.01
82.583	0.00	0.00	0.002	O				0.01
82.667	0.00	0.00	0.002	O				0.01
82.750	0.00	0.00	0.002	O				0.01
82.833	0.00	0.00	0.002	O				0.01
82.917	0.00	0.00	0.002	O				0.01
83.000	0.00	0.00	0.002	O				0.01
83.083	0.00	0.00	0.002	O				0.01
83.167	0.00	0.00	0.002	O				0.01
83.250	0.00	0.00	0.002	O				0.01
83.333	0.00	0.00	0.002	O				0.01
83.417	0.00	0.00	0.002	O				0.01

83.500	0.00	0.00	0.002	O				0.01
83.583	0.00	0.00	0.002	O				0.01
83.667	0.00	0.00	0.002	O				0.01
83.750	0.00	0.00	0.002	O				0.01
83.833	0.00	0.00	0.002	O				0.01
83.917	0.00	0.00	0.002	O				0.01
84.000	0.00	0.00	0.002	O				0.01
84.083	0.00	0.00	0.002	O				0.01
84.167	0.00	0.00	0.002	O				0.01
84.250	0.00	0.00	0.002	O				0.01
84.333	0.00	0.00	0.002	O				0.01
84.417	0.00	0.00	0.002	O				0.01
84.500	0.00	0.00	0.002	O				0.01
84.583	0.00	0.00	0.002	O				0.01
84.667	0.00	0.00	0.002	O				0.01
84.750	0.00	0.00	0.002	O				0.01
84.833	0.00	0.00	0.002	O				0.01
84.917	0.00	0.00	0.002	O				0.01
85.000	0.00	0.00	0.002	O				0.01
85.083	0.00	0.00	0.002	O				0.01
85.167	0.00	0.00	0.002	O				0.01
85.250	0.00	0.00	0.002	O				0.01
85.333	0.00	0.00	0.002	O				0.01
85.417	0.00	0.00	0.002	O				0.01
85.500	0.00	0.00	0.002	O				0.01
85.583	0.00	0.00	0.002	O				0.01
85.667	0.00	0.00	0.002	O				0.01
85.750	0.00	0.00	0.002	O				0.01
85.833	0.00	0.00	0.002	O				0.01
85.917	0.00	0.00	0.002	O				0.01
86.000	0.00	0.00	0.002	O				0.01
86.083	0.00	0.00	0.002	O				0.01
86.167	0.00	0.00	0.002	O				0.01
86.250	0.00	0.00	0.002	O				0.01
86.333	0.00	0.00	0.002	O				0.01
86.417	0.00	0.00	0.002	O				0.01
86.500	0.00	0.00	0.002	O				0.01
86.583	0.00	0.00	0.002	O				0.01
86.667	0.00	0.00	0.002	O				0.01
86.750	0.00	0.00	0.002	O				0.01
86.833	0.00	0.00	0.002	O				0.01
86.917	0.00	0.00	0.002	O				0.01
87.000	0.00	0.00	0.002	O				0.01
87.083	0.00	0.00	0.002	O				0.01
87.167	0.00	0.00	0.002	O				0.01
87.250	0.00	0.00	0.002	O				0.01
87.333	0.00	0.00	0.002	O				0.01
87.417	0.00	0.00	0.001	O				0.01
87.500	0.00	0.00	0.001	O				0.01
87.583	0.00	0.00	0.001	O				0.01
87.667	0.00	0.00	0.001	O				0.01
87.750	0.00	0.00	0.001	O				0.01
87.833	0.00	0.00	0.001	O				0.01
87.917	0.00	0.00	0.001	O				0.01
88.000	0.00	0.00	0.001	O				0.01
88.083	0.00	0.00	0.001	O				0.01
88.167	0.00	0.00	0.001	O				0.01
88.250	0.00	0.00	0.001	O				0.01
88.333	0.00	0.00	0.001	O				0.01
88.417	0.00	0.00	0.001	O				0.01
88.500	0.00	0.00	0.001	O				0.01
88.583	0.00	0.00	0.001	O				0.01
88.667	0.00	0.00	0.001	O				0.01

88.750	0.00	0.00	0.001	O	|	|	|	|	0.01
88.833	0.00	0.00	0.001	O	|	|	|	|	0.01
88.917	0.00	0.00	0.001	O	|	|	|	|	0.01
89.000	0.00	0.00	0.001	O	|	|	|	|	0.01
89.083	0.00	0.00	0.001	O	|	|	|	|	0.01
89.167	0.00	0.00	0.001	O	|	|	|	|	0.01
89.250	0.00	0.00	0.001	O	|	|	|	|	0.01
89.333	0.00	0.00	0.001	O	|	|	|	|	0.01
89.417	0.00	0.00	0.001	O	|	|	|	|	0.01
89.500	0.00	0.00	0.001	O	|	|	|	|	0.01
89.583	0.00	0.00	0.001	O	|	|	|	|	0.01
89.667	0.00	0.00	0.001	O	|	|	|	|	0.01
89.750	0.00	0.00	0.001	O	|	|	|	|	0.01
89.833	0.00	0.00	0.001	O	|	|	|	|	0.01
89.917	0.00	0.00	0.001	O	|	|	|	|	0.01
90.000	0.00	0.00	0.001	O	|	|	|	|	0.01
90.083	0.00	0.00	0.001	O	|	|	|	|	0.01
90.167	0.00	0.00	0.001	O	|	|	|	|	0.01
90.250	0.00	0.00	0.001	O	|	|	|	|	0.01
90.333	0.00	0.00	0.001	O	|	|	|	|	0.01
90.417	0.00	0.00	0.001	O	|	|	|	|	0.01
90.500	0.00	0.00	0.001	O	|	|	|	|	0.01
90.583	0.00	0.00	0.001	O	|	|	|	|	0.01
90.667	0.00	0.00	0.001	O	|	|	|	|	0.01
90.750	0.00	0.00	0.001	O	|	|	|	|	0.01
90.833	0.00	0.00	0.001	O	|	|	|	|	0.01
90.917	0.00	0.00	0.001	O	|	|	|	|	0.01
91.000	0.00	0.00	0.001	O	|	|	|	|	0.01
91.083	0.00	0.00	0.001	O	|	|	|	|	0.01
91.167	0.00	0.00	0.001	O	|	|	|	|	0.01
91.250	0.00	0.00	0.001	O	|	|	|	|	0.01
91.333	0.00	0.00	0.001	O	|	|	|	|	0.01
91.417	0.00	0.00	0.001	O	|	|	|	|	0.01
91.500	0.00	0.00	0.001	O	|	|	|	|	0.01
91.583	0.00	0.00	0.001	O	|	|	|	|	0.01
91.667	0.00	0.00	0.001	O	|	|	|	|	0.01
91.750	0.00	0.00	0.001	O	|	|	|	|	0.01
91.833	0.00	0.00	0.001	O	|	|	|	|	0.01
91.917	0.00	0.00	0.001	O	|	|	|	|	0.01
92.000	0.00	0.00	0.001	O	|	|	|	|	0.01
92.083	0.00	0.00	0.001	O	|	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 1105
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 17.100 (CFS)
Total volume = 5.503 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Villaasterprobroute

FLOOD HYDROGRAPH ROUTING PROGRAM

Study date: 03/10/22

Villa and Aster
Basin Routing
Area B - 100yr 24hr

Program License Serial Number 6232

********** HYDROGRAPH INFORMATION **********

From study/file name: villaasterprob.rte
**********HYDROGRAPH DATA**********
Number of intervals = 305
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.844 (CFS)
Total volume = 1.451 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 202.000 to Point/Station 203.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 305
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.067	0.060	0.067	0.067
2.000	0.152	7.900	0.125	0.179
3.000	0.256	7.900	0.229	0.283
4.000	0.382	7.900	0.355	0.409

Villaasterprobroute
Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.7 5.42 8.13 10.84	Depth (Ft.)
0.083	0.01	0.00	0.000	O	0.00
0.167	0.09	0.00	0.000	O	0.01
0.250	0.19	0.00	0.001	O	0.02
0.333	0.25	0.00	0.003	O	0.04
0.417	0.27	0.00	0.005	O	0.07
0.500	0.29	0.01	0.007	O	0.10
0.583	0.31	0.01	0.009	O	0.13
0.667	0.32	0.01	0.011	O	0.16
0.750	0.33	0.01	0.013	O	0.19
0.833	0.34	0.01	0.015	O	0.22
0.917	0.34	0.02	0.017	OI	0.26
1.000	0.35	0.02	0.020	OI	0.29
1.083	0.35	0.02	0.022	OI	0.32
1.167	0.35	0.02	0.024	OI	0.36
1.250	0.35	0.02	0.026	OI	0.39
1.333	0.36	0.03	0.029	OI	0.43
1.417	0.36	0.03	0.031	OI	0.46
1.500	0.36	0.03	0.033	OI	0.49
1.583	0.36	0.03	0.035	OI	0.53
1.667	0.36	0.03	0.038	OI	0.56
1.750	0.36	0.04	0.040	OI	0.60
1.833	0.36	0.04	0.042	OI	0.63
1.917	0.37	0.04	0.044	OI	0.66
2.000	0.37	0.04	0.047	OI	0.70
2.083	0.37	0.04	0.049	OI	0.73
2.167	0.37	0.05	0.051	OI	0.76
2.250	0.37	0.05	0.053	OI	0.80
2.333	0.37	0.05	0.056	OI	0.83
2.417	0.37	0.05	0.058	OI	0.86
2.500	0.37	0.05	0.060	OI	0.90
2.583	0.37	0.06	0.062	OI	0.93
2.667	0.38	0.06	0.064	OI	0.96
2.750	0.38	0.06	0.067	OI	0.99
2.833	0.38	0.19	0.068	OI	1.02
2.917	0.38	0.28	0.069	OI	1.03
3.000	0.38	0.33	0.070	OI	1.03
3.083	0.38	0.35	0.070	|O	1.04
3.167	0.38	0.37	0.070	|O	1.04
3.250	0.38	0.38	0.070	|O	1.04
3.333	0.39	0.38	0.070	|O	1.04
3.417	0.39	0.38	0.070	|O	1.04
3.500	0.39	0.38	0.071	|O	1.04
3.583	0.39	0.39	0.071	|O	1.04
3.667	0.39	0.39	0.071	|O	1.04
3.750	0.39	0.39	0.071	|O	1.04
3.833	0.39	0.39	0.071	|O	1.04
3.917	0.39	0.39	0.071	|O	1.04
4.000	0.40	0.39	0.071	|O	1.04
4.083	0.40	0.39	0.071	|O	1.04
4.167	0.40	0.40	0.071	|O	1.04
4.250	0.40	0.40	0.071	|O	1.04
4.333	0.40	0.40	0.071	|O	1.04
4.417	0.40	0.40	0.071	|O	1.04
4.500	0.40	0.40	0.071	|O	1.04
4.583	0.41	0.40	0.071	|O	1.04
4.667	0.41	0.40	0.071	|O	1.04

4.750	0.41	0.41	0.071	O				1.04
4.833	0.41	0.41	0.071	O				1.04
4.917	0.41	0.41	0.071	O				1.04
5.000	0.41	0.41	0.071	O				1.04
5.083	0.41	0.41	0.071	O				1.04
5.167	0.42	0.41	0.071	O				1.05
5.250	0.42	0.42	0.071	O				1.05
5.333	0.42	0.42	0.071	O				1.05
5.417	0.42	0.42	0.071	O				1.05
5.500	0.42	0.42	0.071	O				1.05
5.583	0.42	0.42	0.071	O				1.05
5.667	0.43	0.42	0.071	O				1.05
5.750	0.43	0.42	0.071	O				1.05
5.833	0.43	0.43	0.071	O				1.05
5.917	0.43	0.43	0.071	O				1.05
6.000	0.43	0.43	0.071	O				1.05
6.083	0.43	0.43	0.071	O				1.05
6.167	0.44	0.43	0.071	O				1.05
6.250	0.44	0.44	0.071	O				1.05
6.333	0.44	0.44	0.071	O				1.05
6.417	0.44	0.44	0.071	O				1.05
6.500	0.44	0.44	0.071	O				1.05
6.583	0.45	0.44	0.071	O				1.05
6.667	0.45	0.44	0.071	O				1.05
6.750	0.45	0.45	0.071	O				1.05
6.833	0.45	0.45	0.071	O				1.05
6.917	0.45	0.45	0.071	O				1.05
7.000	0.46	0.45	0.071	O				1.05
7.083	0.46	0.45	0.071	O				1.05
7.167	0.46	0.46	0.071	O				1.05
7.250	0.46	0.46	0.071	O				1.05
7.333	0.46	0.46	0.071	O				1.05
7.417	0.47	0.46	0.071	O				1.05
7.500	0.47	0.46	0.071	O				1.05
7.583	0.47	0.47	0.071	O				1.05
7.667	0.47	0.47	0.071	O				1.05
7.750	0.47	0.47	0.071	O				1.05
7.833	0.48	0.47	0.071	O				1.05
7.917	0.48	0.48	0.072	O				1.05
8.000	0.48	0.48	0.072	O				1.05
8.083	0.48	0.48	0.072	O				1.05
8.167	0.49	0.48	0.072	O				1.05
8.250	0.49	0.49	0.072	O				1.05
8.333	0.49	0.49	0.072	O				1.05
8.417	0.49	0.49	0.072	O				1.05
8.500	0.50	0.49	0.072	O				1.06
8.583	0.50	0.50	0.072	O				1.06
8.667	0.50	0.50	0.072	O				1.06
8.750	0.51	0.50	0.072	O				1.06
8.833	0.51	0.50	0.072	O				1.06
8.917	0.51	0.51	0.072	O				1.06
9.000	0.51	0.51	0.072	O				1.06
9.083	0.52	0.51	0.072	O				1.06
9.167	0.52	0.52	0.072	O				1.06
9.250	0.52	0.52	0.072	O				1.06
9.333	0.53	0.52	0.072	O				1.06
9.417	0.53	0.52	0.072	O				1.06
9.500	0.53	0.53	0.072	O				1.06
9.583	0.54	0.53	0.072	O				1.06
9.667	0.54	0.53	0.072	O				1.06
9.750	0.54	0.54	0.072	O				1.06
9.833	0.55	0.54	0.072	O				1.06
9.917	0.55	0.54	0.072	O				1.06

10.000	0.55	0.55	0.072	O				1.06
10.083	0.56	0.55	0.072	O				1.06
10.167	0.56	0.55	0.072	O				1.06
10.250	0.56	0.56	0.072	O				1.06
10.333	0.57	0.56	0.072	O				1.06
10.417	0.57	0.57	0.072	O				1.06
10.500	0.58	0.57	0.073	O				1.07
10.583	0.58	0.57	0.073	O				1.07
10.667	0.59	0.58	0.073	O				1.07
10.750	0.59	0.58	0.073	O				1.07
10.833	0.59	0.59	0.073	O				1.07
10.917	0.60	0.59	0.073	O				1.07
11.000	0.60	0.60	0.073	O				1.07
11.083	0.61	0.60	0.073	O				1.07
11.167	0.61	0.61	0.073	O				1.07
11.250	0.62	0.61	0.073	O				1.07
11.333	0.62	0.62	0.073	O				1.07
11.417	0.63	0.62	0.073	O				1.07
11.500	0.63	0.63	0.073	O				1.07
11.583	0.64	0.63	0.073	O				1.07
11.667	0.65	0.64	0.073	O				1.07
11.750	0.65	0.64	0.073	O				1.07
11.833	0.66	0.65	0.073	O				1.08
11.917	0.66	0.65	0.073	O				1.08
12.000	0.67	0.66	0.074	O				1.08
12.083	0.67	0.67	0.074	O				1.08
12.167	0.66	0.67	0.074	O				1.08
12.250	0.64	0.66	0.073	O				1.08
12.333	0.63	0.65	0.073	O				1.07
12.417	0.63	0.64	0.073	O				1.07
12.500	0.63	0.63	0.073	O				1.07
12.583	0.63	0.63	0.073	O				1.07
12.667	0.64	0.63	0.073	O				1.07
12.750	0.65	0.64	0.073	O				1.07
12.833	0.65	0.64	0.073	O				1.07
12.917	0.66	0.65	0.073	O				1.08
13.000	0.67	0.66	0.073	O				1.08
13.083	0.68	0.67	0.074	OI				1.08
13.167	0.69	0.67	0.074	OI				1.08
13.250	0.70	0.68	0.074	O				1.08
13.333	0.71	0.69	0.074	O				1.08
13.417	0.72	0.70	0.074	O				1.08
13.500	0.73	0.71	0.074	O				1.08
13.583	0.74	0.73	0.074	O				1.08
13.667	0.76	0.74	0.074	O				1.09
13.750	0.77	0.75	0.074	O				1.09
13.833	0.79	0.76	0.075	O				1.09
13.917	0.80	0.78	0.075	O				1.09
14.000	0.82	0.79	0.075	O				1.09
14.083	0.84	0.81	0.075	O				1.10
14.167	0.85	0.83	0.075	O				1.10
14.250	0.87	0.85	0.076	O				1.10
14.333	0.90	0.86	0.076	O				1.10
14.417	0.92	0.88	0.076	O				1.11
14.500	0.94	0.91	0.076	O				1.11
14.583	0.97	0.93	0.076	O				1.11
14.667	1.00	0.96	0.077	O				1.11
14.750	1.04	0.99	0.077	OI				1.12
14.833	1.08	1.02	0.077	O				1.12
14.917	1.12	1.06	0.078	O				1.13
15.000	1.17	1.10	0.078	O				1.13
15.083	1.23	1.15	0.079	O				1.14
15.167	1.29	1.20	0.079	O				1.15

15.250	1.36	1.26	0.080	OI					1.15
15.333	1.43	1.33	0.081	OI					1.16
15.417	1.50	1.39	0.081	O					1.17
15.500	1.47	1.44	0.082	O					1.18
15.583	1.40	1.44	0.082	O					1.18
15.667	1.45	1.43	0.082	O					1.18
15.750	1.58	1.47	0.082	O					1.18
15.833	1.78	1.57	0.083	OI					1.19
15.917	2.11	1.75	0.085	OI					1.22
16.000	2.71	2.07	0.089	O I					1.26
16.083	4.43	2.79	0.097	O I					1.35
16.167	9.07	4.70	0.117	O			I		1.59
16.250	10.84	7.24	0.145	O				I	1.92
16.333	6.47	7.90	0.152	I O					2.00
16.417	4.47	6.75	0.140	I	O				1.85
16.500	3.49	5.41	0.125	I O					1.68
16.583	2.99	4.37	0.114	I O					1.55
16.667	2.52	3.59	0.105	I O					1.45
16.750	2.20	3.00	0.099	I O					1.37
16.833	1.93	2.55	0.094	I O					1.32
16.917	1.71	2.20	0.090	IO					1.27
17.000	1.51	1.91	0.087	IO					1.24
17.083	1.34	1.68	0.085	IO					1.21
17.167	1.22	1.48	0.082	IO					1.18
17.250	1.16	1.34	0.081	O					1.16
17.333	1.09	1.24	0.080	O					1.15
17.417	0.99	1.14	0.079	IO					1.14
17.500	0.91	1.05	0.078	IO					1.13
17.583	0.82	0.96	0.077	O					1.11
17.667	0.78	0.88	0.076	O					1.10
17.750	0.75	0.83	0.075	O					1.10
17.833	0.73	0.78	0.075	O					1.09
17.917	0.70	0.75	0.074	O					1.09
18.000	0.68	0.72	0.074	O					1.08
18.083	0.66	0.70	0.074	IO					1.08
18.167	0.66	0.68	0.074	IO					1.08
18.250	0.68	0.68	0.074	O					1.08
18.333	0.68	0.68	0.074	O					1.08
18.417	0.67	0.67	0.074	O					1.08
18.500	0.66	0.67	0.074	O					1.08
18.583	0.65	0.66	0.074	O					1.08
18.667	0.64	0.65	0.073	O					1.08
18.750	0.63	0.65	0.073	O					1.07
18.833	0.62	0.64	0.073	O					1.07
18.917	0.61	0.63	0.073	O					1.07
19.000	0.60	0.62	0.073	O					1.07
19.083	0.60	0.61	0.073	O					1.07
19.167	0.59	0.60	0.073	O					1.07
19.250	0.58	0.59	0.073	O					1.07
19.333	0.57	0.58	0.073	O					1.07
19.417	0.56	0.58	0.073	O					1.07
19.500	0.56	0.57	0.073	O					1.06
19.583	0.55	0.56	0.072	O					1.06
19.667	0.54	0.55	0.072	O					1.06
19.750	0.53	0.55	0.072	O					1.06
19.833	0.53	0.54	0.072	O					1.06
19.917	0.52	0.53	0.072	O					1.06
20.000	0.52	0.53	0.072	O					1.06
20.083	0.51	0.52	0.072	O					1.06
20.167	0.50	0.51	0.072	O					1.06
20.250	0.50	0.51	0.072	O					1.06
20.333	0.49	0.50	0.072	O					1.06
20.417	0.49	0.50	0.072	O					1.06

20.500	0.48	0.49	0.072	|O	|	|	|	1.06
20.583	0.48	0.49	0.072	|O	|	|	|	1.05
20.667	0.47	0.48	0.072	|O	|	|	|	1.05
20.750	0.47	0.48	0.072	|O	|	|	|	1.05
20.833	0.46	0.47	0.071	|O	|	|	|	1.05
20.917	0.46	0.47	0.071	|O	|	|	|	1.05
21.000	0.46	0.46	0.071	|O	|	|	|	1.05
21.083	0.45	0.46	0.071	|O	|	|	|	1.05
21.167	0.45	0.45	0.071	|O	|	|	|	1.05
21.250	0.44	0.45	0.071	|O	|	|	|	1.05
21.333	0.44	0.45	0.071	|O	|	|	|	1.05
21.417	0.44	0.44	0.071	|O	|	|	|	1.05
21.500	0.43	0.44	0.071	|O	|	|	|	1.05
21.583	0.43	0.44	0.071	|O	|	|	|	1.05
21.667	0.43	0.43	0.071	|O	|	|	|	1.05
21.750	0.42	0.43	0.071	|O	|	|	|	1.05
21.833	0.42	0.43	0.071	|O	|	|	|	1.05
21.917	0.42	0.42	0.071	|O	|	|	|	1.05
22.000	0.41	0.42	0.071	|O	|	|	|	1.05
22.083	0.41	0.42	0.071	|O	|	|	|	1.05
22.167	0.41	0.41	0.071	|O	|	|	|	1.04
22.250	0.40	0.41	0.071	|O	|	|	|	1.04
22.333	0.40	0.41	0.071	|O	|	|	|	1.04
22.417	0.40	0.40	0.071	|O	|	|	|	1.04
22.500	0.40	0.40	0.071	|O	|	|	|	1.04
22.583	0.39	0.40	0.071	|O	|	|	|	1.04
22.667	0.39	0.40	0.071	|O	|	|	|	1.04
22.750	0.39	0.39	0.071	|O	|	|	|	1.04
22.833	0.39	0.39	0.071	|O	|	|	|	1.04
22.917	0.38	0.39	0.071	|O	|	|	|	1.04
23.000	0.38	0.38	0.071	|O	|	|	|	1.04
23.083	0.38	0.38	0.070	|O	|	|	|	1.04
23.167	0.38	0.38	0.070	|O	|	|	|	1.04
23.250	0.37	0.38	0.070	|O	|	|	|	1.04
23.333	0.37	0.38	0.070	|O	|	|	|	1.04
23.417	0.37	0.37	0.070	|O	|	|	|	1.04
23.500	0.37	0.37	0.070	|O	|	|	|	1.04
23.583	0.37	0.37	0.070	|O	|	|	|	1.04
23.667	0.36	0.37	0.070	|O	|	|	|	1.04
23.750	0.36	0.36	0.070	|O	|	|	|	1.04
23.833	0.36	0.36	0.070	|O	|	|	|	1.04
23.917	0.36	0.36	0.070	|O	|	|	|	1.04
24.000	0.36	0.36	0.070	|O	|	|	|	1.04
24.083	0.34	0.35	0.070	|O	|	|	|	1.04
24.167	0.26	0.33	0.070	O	|	|	|	1.03
24.250	0.16	0.27	0.069	O	|	|	|	1.03
24.333	0.11	0.20	0.069	O	|	|	|	1.02
24.417	0.08	0.15	0.068	O	|	|	|	1.01
24.500	0.06	0.11	0.068	O	|	|	|	1.01
24.583	0.04	0.08	0.067	O	|	|	|	1.00
24.667	0.03	0.06	0.067	O	|	|	|	1.00
24.750	0.02	0.06	0.067	O	|	|	|	1.00
24.833	0.02	0.06	0.067	O	|	|	|	0.99
24.917	0.01	0.06	0.066	O	|	|	|	0.99
25.000	0.01	0.06	0.066	O	|	|	|	0.98
25.083	0.01	0.06	0.066	O	|	|	|	0.98
25.167	0.01	0.06	0.065	O	|	|	|	0.97
25.250	0.00	0.06	0.065	O	|	|	|	0.97
25.333	0.00	0.06	0.064	O	|	|	|	0.96
25.417	0.00	0.06	0.064	O	|	|	|	0.96
25.500	0.00	0.06	0.064	O	|	|	|	0.95
25.583	0.00	0.06	0.063	O	|	|	|	0.94
25.667	0.00	0.06	0.063	O	|	|	|	0.94

25.750	0.00	0.06	0.062	O				0.93
25.833	0.00	0.06	0.062	O				0.93
25.917	0.00	0.06	0.062	O				0.92
26.000	0.00	0.05	0.061	O				0.92
26.083	0.00	0.05	0.061	O				0.91
26.167	0.00	0.05	0.061	O				0.90
26.250	0.00	0.05	0.060	O				0.90
26.333	0.00	0.05	0.060	O				0.89
26.417	0.00	0.05	0.059	O				0.89
26.500	0.00	0.05	0.059	O				0.88
26.583	0.00	0.05	0.059	O				0.88
26.667	0.00	0.05	0.058	O				0.87
26.750	0.00	0.05	0.058	O				0.87
26.833	0.00	0.05	0.058	O				0.86
26.917	0.00	0.05	0.057	O				0.86
27.000	0.00	0.05	0.057	O				0.85
27.083	0.00	0.05	0.057	O				0.84
27.167	0.00	0.05	0.056	O				0.84
27.250	0.00	0.05	0.056	O				0.83
27.333	0.00	0.05	0.056	O				0.83
27.417	0.00	0.05	0.055	O				0.82
27.500	0.00	0.05	0.055	O				0.82
27.583	0.00	0.05	0.055	O				0.81
27.667	0.00	0.05	0.054	O				0.81
27.750	0.00	0.05	0.054	O				0.80
27.833	0.00	0.05	0.054	O				0.80
27.917	0.00	0.05	0.053	O				0.79
28.000	0.00	0.05	0.053	O				0.79
28.083	0.00	0.05	0.053	O				0.78
28.167	0.00	0.05	0.052	O				0.78
28.250	0.00	0.05	0.052	O				0.77
28.333	0.00	0.05	0.052	O				0.77
28.417	0.00	0.05	0.051	O				0.77
28.500	0.00	0.05	0.051	O				0.76
28.583	0.00	0.05	0.051	O				0.76
28.667	0.00	0.05	0.050	O				0.75
28.750	0.00	0.04	0.050	O				0.75
28.833	0.00	0.04	0.050	O				0.74
28.917	0.00	0.04	0.049	O				0.74
29.000	0.00	0.04	0.049	O				0.73
29.083	0.00	0.04	0.049	O				0.73
29.167	0.00	0.04	0.049	O				0.72
29.250	0.00	0.04	0.048	O				0.72
29.333	0.00	0.04	0.048	O				0.72
29.417	0.00	0.04	0.048	O				0.71
29.500	0.00	0.04	0.047	O				0.71
29.583	0.00	0.04	0.047	O				0.70
29.667	0.00	0.04	0.047	O				0.70
29.750	0.00	0.04	0.046	O				0.69
29.833	0.00	0.04	0.046	O				0.69
29.917	0.00	0.04	0.046	O				0.68
30.000	0.00	0.04	0.046	O				0.68
30.083	0.00	0.04	0.045	O				0.68
30.167	0.00	0.04	0.045	O				0.67
30.250	0.00	0.04	0.045	O				0.67
30.333	0.00	0.04	0.044	O				0.66
30.417	0.00	0.04	0.044	O				0.66
30.500	0.00	0.04	0.044	O				0.66
30.583	0.00	0.04	0.044	O				0.65
30.667	0.00	0.04	0.043	O				0.65
30.750	0.00	0.04	0.043	O				0.64
30.833	0.00	0.04	0.043	O				0.64
30.917	0.00	0.04	0.043	O				0.64

31.000	0.00	0.04	0.042	O				0.63
31.083	0.00	0.04	0.042	O				0.63
31.167	0.00	0.04	0.042	O				0.62
31.250	0.00	0.04	0.042	O				0.62
31.333	0.00	0.04	0.041	O				0.62
31.417	0.00	0.04	0.041	O				0.61
31.500	0.00	0.04	0.041	O				0.61
31.583	0.00	0.04	0.041	O				0.61
31.667	0.00	0.04	0.040	O				0.60
31.750	0.00	0.04	0.040	O				0.60
31.833	0.00	0.04	0.040	O				0.59
31.917	0.00	0.04	0.040	O				0.59
32.000	0.00	0.04	0.039	O				0.59
32.083	0.00	0.04	0.039	O				0.58
32.167	0.00	0.03	0.039	O				0.58
32.250	0.00	0.03	0.039	O				0.58
32.333	0.00	0.03	0.038	O				0.57
32.417	0.00	0.03	0.038	O				0.57
32.500	0.00	0.03	0.038	O				0.57
32.583	0.00	0.03	0.038	O				0.56
32.667	0.00	0.03	0.037	O				0.56
32.750	0.00	0.03	0.037	O				0.56
32.833	0.00	0.03	0.037	O				0.55
32.917	0.00	0.03	0.037	O				0.55
33.000	0.00	0.03	0.037	O				0.55
33.083	0.00	0.03	0.036	O				0.54
33.167	0.00	0.03	0.036	O				0.54
33.250	0.00	0.03	0.036	O				0.54
33.333	0.00	0.03	0.036	O				0.53
33.417	0.00	0.03	0.035	O				0.53
33.500	0.00	0.03	0.035	O				0.53
33.583	0.00	0.03	0.035	O				0.52
33.667	0.00	0.03	0.035	O				0.52
33.750	0.00	0.03	0.035	O				0.52
33.833	0.00	0.03	0.034	O				0.51
33.917	0.00	0.03	0.034	O				0.51
34.000	0.00	0.03	0.034	O				0.51
34.083	0.00	0.03	0.034	O				0.50
34.167	0.00	0.03	0.034	O				0.50
34.250	0.00	0.03	0.033	O				0.50
34.333	0.00	0.03	0.033	O				0.49
34.417	0.00	0.03	0.033	O				0.49
34.500	0.00	0.03	0.033	O				0.49
34.583	0.00	0.03	0.032	O				0.48
34.667	0.00	0.03	0.032	O				0.48
34.750	0.00	0.03	0.032	O				0.48
34.833	0.00	0.03	0.032	O				0.48
34.917	0.00	0.03	0.032	O				0.47
35.000	0.00	0.03	0.032	O				0.47
35.083	0.00	0.03	0.031	O				0.47
35.167	0.00	0.03	0.031	O				0.46
35.250	0.00	0.03	0.031	O				0.46
35.333	0.00	0.03	0.031	O				0.46
35.417	0.00	0.03	0.031	O				0.46
35.500	0.00	0.03	0.030	O				0.45
35.583	0.00	0.03	0.030	O				0.45
35.667	0.00	0.03	0.030	O				0.45
35.750	0.00	0.03	0.030	O				0.44
35.833	0.00	0.03	0.030	O				0.44
35.917	0.00	0.03	0.029	O				0.44
36.000	0.00	0.03	0.029	O				0.44
36.083	0.00	0.03	0.029	O				0.43
36.167	0.00	0.03	0.029	O				0.43

36.250	0.00	0.03	0.029	O				0.43
36.333	0.00	0.03	0.029	O				0.43
36.417	0.00	0.03	0.028	O				0.42
36.500	0.00	0.03	0.028	O				0.42
36.583	0.00	0.03	0.028	O				0.42
36.667	0.00	0.02	0.028	O				0.42
36.750	0.00	0.02	0.028	O				0.41
36.833	0.00	0.02	0.028	O				0.41
36.917	0.00	0.02	0.027	O				0.41
37.000	0.00	0.02	0.027	O				0.41
37.083	0.00	0.02	0.027	O				0.40
37.167	0.00	0.02	0.027	O				0.40
37.250	0.00	0.02	0.027	O				0.40
37.333	0.00	0.02	0.027	O				0.40
37.417	0.00	0.02	0.026	O				0.39
37.500	0.00	0.02	0.026	O				0.39
37.583	0.00	0.02	0.026	O				0.39
37.667	0.00	0.02	0.026	O				0.39
37.750	0.00	0.02	0.026	O				0.38
37.833	0.00	0.02	0.026	O				0.38
37.917	0.00	0.02	0.025	O				0.38
38.000	0.00	0.02	0.025	O				0.38
38.083	0.00	0.02	0.025	O				0.37
38.167	0.00	0.02	0.025	O				0.37
38.250	0.00	0.02	0.025	O				0.37
38.333	0.00	0.02	0.025	O				0.37
38.417	0.00	0.02	0.024	O				0.37
38.500	0.00	0.02	0.024	O				0.36
38.583	0.00	0.02	0.024	O				0.36
38.667	0.00	0.02	0.024	O				0.36
38.750	0.00	0.02	0.024	O				0.36
38.833	0.00	0.02	0.024	O				0.35
38.917	0.00	0.02	0.024	O				0.35
39.000	0.00	0.02	0.023	O				0.35
39.083	0.00	0.02	0.023	O				0.35
39.167	0.00	0.02	0.023	O				0.35
39.250	0.00	0.02	0.023	O				0.34
39.333	0.00	0.02	0.023	O				0.34
39.417	0.00	0.02	0.023	O				0.34
39.500	0.00	0.02	0.023	O				0.34
39.583	0.00	0.02	0.022	O				0.33
39.667	0.00	0.02	0.022	O				0.33
39.750	0.00	0.02	0.022	O				0.33
39.833	0.00	0.02	0.022	O				0.33
39.917	0.00	0.02	0.022	O				0.33
40.000	0.00	0.02	0.022	O				0.32
40.083	0.00	0.02	0.022	O				0.32
40.167	0.00	0.02	0.021	O				0.32
40.250	0.00	0.02	0.021	O				0.32
40.333	0.00	0.02	0.021	O				0.32
40.417	0.00	0.02	0.021	O				0.31
40.500	0.00	0.02	0.021	O				0.31
40.583	0.00	0.02	0.021	O				0.31
40.667	0.00	0.02	0.021	O				0.31
40.750	0.00	0.02	0.021	O				0.31
40.833	0.00	0.02	0.020	O				0.31
40.917	0.00	0.02	0.020	O				0.30
41.000	0.00	0.02	0.020	O				0.30
41.083	0.00	0.02	0.020	O				0.30
41.167	0.00	0.02	0.020	O				0.30
41.250	0.00	0.02	0.020	O				0.30
41.333	0.00	0.02	0.020	O				0.29
41.417	0.00	0.02	0.020	O				0.29

41.500	0.00	0.02	0.019	O					0.29
41.583	0.00	0.02	0.019	O					0.29
41.667	0.00	0.02	0.019	O					0.29
41.750	0.00	0.02	0.019	O					0.29
41.833	0.00	0.02	0.019	O					0.28
41.917	0.00	0.02	0.019	O					0.28
42.000	0.00	0.02	0.019	O					0.28
42.083	0.00	0.02	0.019	O					0.28
42.167	0.00	0.02	0.019	O					0.28
42.250	0.00	0.02	0.018	O					0.27
42.333	0.00	0.02	0.018	O					0.27
42.417	0.00	0.02	0.018	O					0.27
42.500	0.00	0.02	0.018	O					0.27
42.583	0.00	0.02	0.018	O					0.27
42.667	0.00	0.02	0.018	O					0.27
42.750	0.00	0.02	0.018	O					0.26
42.833	0.00	0.02	0.018	O					0.26
42.917	0.00	0.02	0.018	O					0.26
43.000	0.00	0.02	0.017	O					0.26
43.083	0.00	0.02	0.017	O					0.26
43.167	0.00	0.02	0.017	O					0.26
43.250	0.00	0.02	0.017	O					0.26
43.333	0.00	0.02	0.017	O					0.25
43.417	0.00	0.02	0.017	O					0.25
43.500	0.00	0.02	0.017	O					0.25
43.583	0.00	0.01	0.017	O					0.25
43.667	0.00	0.01	0.017	O					0.25
43.750	0.00	0.01	0.016	O					0.25
43.833	0.00	0.01	0.016	O					0.24
43.917	0.00	0.01	0.016	O					0.24
44.000	0.00	0.01	0.016	O					0.24
44.083	0.00	0.01	0.016	O					0.24
44.167	0.00	0.01	0.016	O					0.24
44.250	0.00	0.01	0.016	O					0.24
44.333	0.00	0.01	0.016	O					0.24
44.417	0.00	0.01	0.016	O					0.23
44.500	0.00	0.01	0.016	O					0.23
44.583	0.00	0.01	0.015	O					0.23
44.667	0.00	0.01	0.015	O					0.23
44.750	0.00	0.01	0.015	O					0.23
44.833	0.00	0.01	0.015	O					0.23
44.917	0.00	0.01	0.015	O					0.23
45.000	0.00	0.01	0.015	O					0.22
45.083	0.00	0.01	0.015	O					0.22
45.167	0.00	0.01	0.015	O					0.22
45.250	0.00	0.01	0.015	O					0.22
45.333	0.00	0.01	0.015	O					0.22
45.417	0.00	0.01	0.015	O					0.22
45.500	0.00	0.01	0.014	O					0.22
45.583	0.00	0.01	0.014	O					0.21
45.667	0.00	0.01	0.014	O					0.21
45.750	0.00	0.01	0.014	O					0.21
45.833	0.00	0.01	0.014	O					0.21
45.917	0.00	0.01	0.014	O					0.21
46.000	0.00	0.01	0.014	O					0.21
46.083	0.00	0.01	0.014	O					0.21
46.167	0.00	0.01	0.014	O					0.21
46.250	0.00	0.01	0.014	O					0.20
46.333	0.00	0.01	0.014	O					0.20
46.417	0.00	0.01	0.014	O					0.20
46.500	0.00	0.01	0.013	O					0.20
46.583	0.00	0.01	0.013	O					0.20
46.667	0.00	0.01	0.013	O					0.20

46.750	0.00	0.01	0.013	O					0.20
46.833	0.00	0.01	0.013	O					0.20
46.917	0.00	0.01	0.013	O					0.19
47.000	0.00	0.01	0.013	O					0.19
47.083	0.00	0.01	0.013	O					0.19
47.167	0.00	0.01	0.013	O					0.19
47.250	0.00	0.01	0.013	O					0.19
47.333	0.00	0.01	0.013	O					0.19
47.417	0.00	0.01	0.013	O					0.19
47.500	0.00	0.01	0.012	O					0.19
47.583	0.00	0.01	0.012	O					0.19
47.667	0.00	0.01	0.012	O					0.18
47.750	0.00	0.01	0.012	O					0.18
47.833	0.00	0.01	0.012	O					0.18
47.917	0.00	0.01	0.012	O					0.18
48.000	0.00	0.01	0.012	O					0.18
48.083	0.00	0.01	0.012	O					0.18
48.167	0.00	0.01	0.012	O					0.18
48.250	0.00	0.01	0.012	O					0.18
48.333	0.00	0.01	0.012	O					0.18
48.417	0.00	0.01	0.012	O					0.17
48.500	0.00	0.01	0.012	O					0.17
48.583	0.00	0.01	0.012	O					0.17
48.667	0.00	0.01	0.011	O					0.17
48.750	0.00	0.01	0.011	O					0.17
48.833	0.00	0.01	0.011	O					0.17
48.917	0.00	0.01	0.011	O					0.17
49.000	0.00	0.01	0.011	O					0.17
49.083	0.00	0.01	0.011	O					0.17
49.167	0.00	0.01	0.011	O					0.16
49.250	0.00	0.01	0.011	O					0.16
49.333	0.00	0.01	0.011	O					0.16
49.417	0.00	0.01	0.011	O					0.16
49.500	0.00	0.01	0.011	O					0.16
49.583	0.00	0.01	0.011	O					0.16
49.667	0.00	0.01	0.011	O					0.16
49.750	0.00	0.01	0.011	O					0.16
49.833	0.00	0.01	0.011	O					0.16
49.917	0.00	0.01	0.010	O					0.16
50.000	0.00	0.01	0.010	O					0.15
50.083	0.00	0.01	0.010	O					0.15
50.167	0.00	0.01	0.010	O					0.15
50.250	0.00	0.01	0.010	O					0.15
50.333	0.00	0.01	0.010	O					0.15
50.417	0.00	0.01	0.010	O					0.15
50.500	0.00	0.01	0.010	O					0.15
50.583	0.00	0.01	0.010	O					0.15
50.667	0.00	0.01	0.010	O					0.15
50.750	0.00	0.01	0.010	O					0.15
50.833	0.00	0.01	0.010	O					0.15
50.917	0.00	0.01	0.010	O					0.14
51.000	0.00	0.01	0.010	O					0.14
51.083	0.00	0.01	0.010	O					0.14
51.167	0.00	0.01	0.010	O					0.14
51.250	0.00	0.01	0.009	O					0.14
51.333	0.00	0.01	0.009	O					0.14
51.417	0.00	0.01	0.009	O					0.14
51.500	0.00	0.01	0.009	O					0.14
51.583	0.00	0.01	0.009	O					0.14
51.667	0.00	0.01	0.009	O					0.14
51.750	0.00	0.01	0.009	O					0.14
51.833	0.00	0.01	0.009	O					0.14
51.917	0.00	0.01	0.009	O					0.13

52.000	0.00	0.01	0.009	O				0.13
52.083	0.00	0.01	0.009	O				0.13
52.167	0.00	0.01	0.009	O				0.13
52.250	0.00	0.01	0.009	O				0.13
52.333	0.00	0.01	0.009	O				0.13
52.417	0.00	0.01	0.009	O				0.13
52.500	0.00	0.01	0.009	O				0.13
52.583	0.00	0.01	0.009	O				0.13
52.667	0.00	0.01	0.009	O				0.13
52.750	0.00	0.01	0.008	O				0.13
52.833	0.00	0.01	0.008	O				0.13
52.917	0.00	0.01	0.008	O				0.12
53.000	0.00	0.01	0.008	O				0.12
53.083	0.00	0.01	0.008	O				0.12
53.167	0.00	0.01	0.008	O				0.12
53.250	0.00	0.01	0.008	O				0.12
53.333	0.00	0.01	0.008	O				0.12
53.417	0.00	0.01	0.008	O				0.12
53.500	0.00	0.01	0.008	O				0.12
53.583	0.00	0.01	0.008	O				0.12
53.667	0.00	0.01	0.008	O				0.12
53.750	0.00	0.01	0.008	O				0.12
53.833	0.00	0.01	0.008	O				0.12
53.917	0.00	0.01	0.008	O				0.12
54.000	0.00	0.01	0.008	O				0.12
54.083	0.00	0.01	0.008	O				0.11
54.167	0.00	0.01	0.008	O				0.11
54.250	0.00	0.01	0.008	O				0.11
54.333	0.00	0.01	0.008	O				0.11
54.417	0.00	0.01	0.007	O				0.11
54.500	0.00	0.01	0.007	O				0.11
54.583	0.00	0.01	0.007	O				0.11
54.667	0.00	0.01	0.007	O				0.11
54.750	0.00	0.01	0.007	O				0.11
54.833	0.00	0.01	0.007	O				0.11
54.917	0.00	0.01	0.007	O				0.11
55.000	0.00	0.01	0.007	O				0.11
55.083	0.00	0.01	0.007	O				0.11
55.167	0.00	0.01	0.007	O				0.11
55.250	0.00	0.01	0.007	O				0.11
55.333	0.00	0.01	0.007	O				0.10
55.417	0.00	0.01	0.007	O				0.10
55.500	0.00	0.01	0.007	O				0.10
55.583	0.00	0.01	0.007	O				0.10
55.667	0.00	0.01	0.007	O				0.10
55.750	0.00	0.01	0.007	O				0.10
55.833	0.00	0.01	0.007	O				0.10
55.917	0.00	0.01	0.007	O				0.10
56.000	0.00	0.01	0.007	O				0.10
56.083	0.00	0.01	0.007	O				0.10
56.167	0.00	0.01	0.007	O				0.10
56.250	0.00	0.01	0.007	O				0.10
56.333	0.00	0.01	0.006	O				0.10
56.417	0.00	0.01	0.006	O				0.10
56.500	0.00	0.01	0.006	O				0.10
56.583	0.00	0.01	0.006	O				0.10
56.667	0.00	0.01	0.006	O				0.09
56.750	0.00	0.01	0.006	O				0.09
56.833	0.00	0.01	0.006	O				0.09
56.917	0.00	0.01	0.006	O				0.09
57.000	0.00	0.01	0.006	O				0.09
57.083	0.00	0.01	0.006	O				0.09
57.167	0.00	0.01	0.006	O				0.09

57.250	0.00	0.01	0.006	O				0.09
57.333	0.00	0.01	0.006	O				0.09
57.417	0.00	0.01	0.006	O				0.09
57.500	0.00	0.01	0.006	O				0.09
57.583	0.00	0.01	0.006	O				0.09
57.667	0.00	0.01	0.006	O				0.09
57.750	0.00	0.01	0.006	O				0.09
57.833	0.00	0.01	0.006	O				0.09
57.917	0.00	0.01	0.006	O				0.09
58.000	0.00	0.01	0.006	O				0.09
58.083	0.00	0.01	0.006	O				0.09
58.167	0.00	0.01	0.006	O				0.08
58.250	0.00	0.01	0.006	O				0.08
58.333	0.00	0.01	0.006	O				0.08
58.417	0.00	0.00	0.006	O				0.08
58.500	0.00	0.00	0.006	O				0.08
58.583	0.00	0.00	0.005	O				0.08
58.667	0.00	0.00	0.005	O				0.08
58.750	0.00	0.00	0.005	O				0.08
58.833	0.00	0.00	0.005	O				0.08
58.917	0.00	0.00	0.005	O				0.08
59.000	0.00	0.00	0.005	O				0.08
59.083	0.00	0.00	0.005	O				0.08
59.167	0.00	0.00	0.005	O				0.08
59.250	0.00	0.00	0.005	O				0.08
59.333	0.00	0.00	0.005	O				0.08
59.417	0.00	0.00	0.005	O				0.08
59.500	0.00	0.00	0.005	O				0.08
59.583	0.00	0.00	0.005	O				0.08
59.667	0.00	0.00	0.005	O				0.08
59.750	0.00	0.00	0.005	O				0.08
59.833	0.00	0.00	0.005	O				0.07
59.917	0.00	0.00	0.005	O				0.07
60.000	0.00	0.00	0.005	O				0.07
60.083	0.00	0.00	0.005	O				0.07
60.167	0.00	0.00	0.005	O				0.07
60.250	0.00	0.00	0.005	O				0.07
60.333	0.00	0.00	0.005	O				0.07
60.417	0.00	0.00	0.005	O				0.07
60.500	0.00	0.00	0.005	O				0.07
60.583	0.00	0.00	0.005	O				0.07
60.667	0.00	0.00	0.005	O				0.07
60.750	0.00	0.00	0.005	O				0.07
60.833	0.00	0.00	0.005	O				0.07
60.917	0.00	0.00	0.005	O				0.07
61.000	0.00	0.00	0.005	O				0.07
61.083	0.00	0.00	0.005	O				0.07
61.167	0.00	0.00	0.005	O				0.07
61.250	0.00	0.00	0.005	O				0.07
61.333	0.00	0.00	0.004	O				0.07
61.417	0.00	0.00	0.004	O				0.07
61.500	0.00	0.00	0.004	O				0.07
61.583	0.00	0.00	0.004	O				0.07
61.667	0.00	0.00	0.004	O				0.07
61.750	0.00	0.00	0.004	O				0.06
61.833	0.00	0.00	0.004	O				0.06
61.917	0.00	0.00	0.004	O				0.06
62.000	0.00	0.00	0.004	O				0.06
62.083	0.00	0.00	0.004	O				0.06
62.167	0.00	0.00	0.004	O				0.06
62.250	0.00	0.00	0.004	O				0.06
62.333	0.00	0.00	0.004	O				0.06
62.417	0.00	0.00	0.004	O				0.06

62.500	0.00	0.00	0.004	O				0.06
62.583	0.00	0.00	0.004	O				0.06
62.667	0.00	0.00	0.004	O				0.06
62.750	0.00	0.00	0.004	O				0.06
62.833	0.00	0.00	0.004	O				0.06
62.917	0.00	0.00	0.004	O				0.06
63.000	0.00	0.00	0.004	O				0.06
63.083	0.00	0.00	0.004	O				0.06
63.167	0.00	0.00	0.004	O				0.06
63.250	0.00	0.00	0.004	O				0.06
63.333	0.00	0.00	0.004	O				0.06
63.417	0.00	0.00	0.004	O				0.06
63.500	0.00	0.00	0.004	O				0.06
63.583	0.00	0.00	0.004	O				0.06
63.667	0.00	0.00	0.004	O				0.06
63.750	0.00	0.00	0.004	O				0.06
63.833	0.00	0.00	0.004	O				0.06
63.917	0.00	0.00	0.004	O				0.06
64.000	0.00	0.00	0.004	O				0.05
64.083	0.00	0.00	0.004	O				0.05
64.167	0.00	0.00	0.004	O				0.05
64.250	0.00	0.00	0.004	O				0.05
64.333	0.00	0.00	0.004	O				0.05
64.417	0.00	0.00	0.004	O				0.05
64.500	0.00	0.00	0.004	O				0.05
64.583	0.00	0.00	0.004	O				0.05
64.667	0.00	0.00	0.004	O				0.05
64.750	0.00	0.00	0.003	O				0.05
64.833	0.00	0.00	0.003	O				0.05
64.917	0.00	0.00	0.003	O				0.05
65.000	0.00	0.00	0.003	O				0.05
65.083	0.00	0.00	0.003	O				0.05
65.167	0.00	0.00	0.003	O				0.05
65.250	0.00	0.00	0.003	O				0.05
65.333	0.00	0.00	0.003	O				0.05
65.417	0.00	0.00	0.003	O				0.05
65.500	0.00	0.00	0.003	O				0.05
65.583	0.00	0.00	0.003	O				0.05
65.667	0.00	0.00	0.003	O				0.05
65.750	0.00	0.00	0.003	O				0.05
65.833	0.00	0.00	0.003	O				0.05
65.917	0.00	0.00	0.003	O				0.05
66.000	0.00	0.00	0.003	O				0.05
66.083	0.00	0.00	0.003	O				0.05
66.167	0.00	0.00	0.003	O				0.05
66.250	0.00	0.00	0.003	O				0.05
66.333	0.00	0.00	0.003	O				0.05
66.417	0.00	0.00	0.003	O				0.05
66.500	0.00	0.00	0.003	O				0.05
66.583	0.00	0.00	0.003	O				0.05
66.667	0.00	0.00	0.003	O				0.05
66.750	0.00	0.00	0.003	O				0.04
66.833	0.00	0.00	0.003	O				0.04
66.917	0.00	0.00	0.003	O				0.04
67.000	0.00	0.00	0.003	O				0.04
67.083	0.00	0.00	0.003	O				0.04
67.167	0.00	0.00	0.003	O				0.04
67.250	0.00	0.00	0.003	O				0.04
67.333	0.00	0.00	0.003	O				0.04
67.417	0.00	0.00	0.003	O				0.04
67.500	0.00	0.00	0.003	O				0.04
67.583	0.00	0.00	0.003	O				0.04
67.667	0.00	0.00	0.003	O				0.04

67.750	0.00	0.00	0.003	O					0.04
67.833	0.00	0.00	0.003	O					0.04
67.917	0.00	0.00	0.003	O					0.04
68.000	0.00	0.00	0.003	O					0.04
68.083	0.00	0.00	0.003	O					0.04
68.167	0.00	0.00	0.003	O					0.04
68.250	0.00	0.00	0.003	O					0.04
68.333	0.00	0.00	0.003	O					0.04
68.417	0.00	0.00	0.003	O					0.04
68.500	0.00	0.00	0.003	O					0.04
68.583	0.00	0.00	0.003	O					0.04
68.667	0.00	0.00	0.003	O					0.04
68.750	0.00	0.00	0.003	O					0.04
68.833	0.00	0.00	0.003	O					0.04
68.917	0.00	0.00	0.003	O					0.04
69.000	0.00	0.00	0.003	O					0.04
69.083	0.00	0.00	0.003	O					0.04
69.167	0.00	0.00	0.003	O					0.04
69.250	0.00	0.00	0.002	O					0.04
69.333	0.00	0.00	0.002	O					0.04
69.417	0.00	0.00	0.002	O					0.04
69.500	0.00	0.00	0.002	O					0.04
69.583	0.00	0.00	0.002	O					0.04
69.667	0.00	0.00	0.002	O					0.04
69.750	0.00	0.00	0.002	O					0.04
69.833	0.00	0.00	0.002	O					0.04
69.917	0.00	0.00	0.002	O					0.04
70.000	0.00	0.00	0.002	O					0.04
70.083	0.00	0.00	0.002	O					0.04
70.167	0.00	0.00	0.002	O					0.03
70.250	0.00	0.00	0.002	O					0.03
70.333	0.00	0.00	0.002	O					0.03
70.417	0.00	0.00	0.002	O					0.03
70.500	0.00	0.00	0.002	O					0.03
70.583	0.00	0.00	0.002	O					0.03
70.667	0.00	0.00	0.002	O					0.03
70.750	0.00	0.00	0.002	O					0.03
70.833	0.00	0.00	0.002	O					0.03
70.917	0.00	0.00	0.002	O					0.03
71.000	0.00	0.00	0.002	O					0.03
71.083	0.00	0.00	0.002	O					0.03
71.167	0.00	0.00	0.002	O					0.03
71.250	0.00	0.00	0.002	O					0.03
71.333	0.00	0.00	0.002	O					0.03
71.417	0.00	0.00	0.002	O					0.03
71.500	0.00	0.00	0.002	O					0.03
71.583	0.00	0.00	0.002	O					0.03
71.667	0.00	0.00	0.002	O					0.03
71.750	0.00	0.00	0.002	O					0.03
71.833	0.00	0.00	0.002	O					0.03
71.917	0.00	0.00	0.002	O					0.03
72.000	0.00	0.00	0.002	O					0.03
72.083	0.00	0.00	0.002	O					0.03
72.167	0.00	0.00	0.002	O					0.03
72.250	0.00	0.00	0.002	O					0.03
72.333	0.00	0.00	0.002	O					0.03
72.417	0.00	0.00	0.002	O					0.03
72.500	0.00	0.00	0.002	O					0.03
72.583	0.00	0.00	0.002	O					0.03
72.667	0.00	0.00	0.002	O					0.03
72.750	0.00	0.00	0.002	O					0.03
72.833	0.00	0.00	0.002	O					0.03
72.917	0.00	0.00	0.002	O					0.03

73.000	0.00	0.00	0.002	O					0.03
73.083	0.00	0.00	0.002	O					0.03
73.167	0.00	0.00	0.002	O					0.03
73.250	0.00	0.00	0.002	O					0.03
73.333	0.00	0.00	0.002	O					0.03
73.417	0.00	0.00	0.002	O					0.03
73.500	0.00	0.00	0.002	O					0.03
73.583	0.00	0.00	0.002	O					0.03
73.667	0.00	0.00	0.002	O					0.03
73.750	0.00	0.00	0.002	O					0.03
73.833	0.00	0.00	0.002	O					0.03
73.917	0.00	0.00	0.002	O					0.03
74.000	0.00	0.00	0.002	O					0.03
74.083	0.00	0.00	0.002	O					0.03
74.167	0.00	0.00	0.002	O					0.03
74.250	0.00	0.00	0.002	O					0.03
74.333	0.00	0.00	0.002	O					0.03
74.417	0.00	0.00	0.002	O					0.03
74.500	0.00	0.00	0.002	O					0.03
74.583	0.00	0.00	0.002	O					0.03
74.667	0.00	0.00	0.002	O					0.02
74.750	0.00	0.00	0.002	O					0.02
74.833	0.00	0.00	0.002	O					0.02
74.917	0.00	0.00	0.002	O					0.02
75.000	0.00	0.00	0.002	O					0.02
75.083	0.00	0.00	0.002	O					0.02
75.167	0.00	0.00	0.002	O					0.02
75.250	0.00	0.00	0.002	O					0.02
75.333	0.00	0.00	0.002	O					0.02
75.417	0.00	0.00	0.002	O					0.02
75.500	0.00	0.00	0.002	O					0.02
75.583	0.00	0.00	0.002	O					0.02
75.667	0.00	0.00	0.002	O					0.02
75.750	0.00	0.00	0.002	O					0.02
75.833	0.00	0.00	0.002	O					0.02
75.917	0.00	0.00	0.002	O					0.02
76.000	0.00	0.00	0.002	O					0.02
76.083	0.00	0.00	0.002	O					0.02
76.167	0.00	0.00	0.001	O					0.02
76.250	0.00	0.00	0.001	O					0.02
76.333	0.00	0.00	0.001	O					0.02
76.417	0.00	0.00	0.001	O					0.02
76.500	0.00	0.00	0.001	O					0.02
76.583	0.00	0.00	0.001	O					0.02
76.667	0.00	0.00	0.001	O					0.02
76.750	0.00	0.00	0.001	O					0.02
76.833	0.00	0.00	0.001	O					0.02
76.917	0.00	0.00	0.001	O					0.02
77.000	0.00	0.00	0.001	O					0.02
77.083	0.00	0.00	0.001	O					0.02
77.167	0.00	0.00	0.001	O					0.02
77.250	0.00	0.00	0.001	O					0.02
77.333	0.00	0.00	0.001	O					0.02
77.417	0.00	0.00	0.001	O					0.02
77.500	0.00	0.00	0.001	O					0.02
77.583	0.00	0.00	0.001	O					0.02
77.667	0.00	0.00	0.001	O					0.02
77.750	0.00	0.00	0.001	O					0.02
77.833	0.00	0.00	0.001	O					0.02
77.917	0.00	0.00	0.001	O					0.02
78.000	0.00	0.00	0.001	O					0.02
78.083	0.00	0.00	0.001	O					0.02
78.167	0.00	0.00	0.001	O					0.02

78.250	0.00	0.00	0.001	O	|	|	|	|	0.02
78.333	0.00	0.00	0.001	O	|	|	|	|	0.02
78.417	0.00	0.00	0.001	O	|	|	|	|	0.02
78.500	0.00	0.00	0.001	O	|	|	|	|	0.02
78.583	0.00	0.00	0.001	O	|	|	|	|	0.02
78.667	0.00	0.00	0.001	O	|	|	|	|	0.02
78.750	0.00	0.00	0.001	O	|	|	|	|	0.02
78.833	0.00	0.00	0.001	O	|	|	|	|	0.02
78.917	0.00	0.00	0.001	O	|	|	|	|	0.02
79.000	0.00	0.00	0.001	O	|	|	|	|	0.02
79.083	0.00	0.00	0.001	O	|	|	|	|	0.02
79.167	0.00	0.00	0.001	O	|	|	|	|	0.02
79.250	0.00	0.00	0.001	O	|	|	|	|	0.02
79.333	0.00	0.00	0.001	O	|	|	|	|	0.02
79.417	0.00	0.00	0.001	O	|	|	|	|	0.02
79.500	0.00	0.00	0.001	O	|	|	|	|	0.02
79.583	0.00	0.00	0.001	O	|	|	|	|	0.02
79.667	0.00	0.00	0.001	O	|	|	|	|	0.02
79.750	0.00	0.00	0.001	O	|	|	|	|	0.02
79.833	0.00	0.00	0.001	O	|	|	|	|	0.02
79.917	0.00	0.00	0.001	O	|	|	|	|	0.02
80.000	0.00	0.00	0.001	O	|	|	|	|	0.02
80.083	0.00	0.00	0.001	O	|	|	|	|	0.02
80.167	0.00	0.00	0.001	O	|	|	|	|	0.02

Remaining water in basin = 0.00 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 962
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.900 (CFS)
Total volume = 1.449 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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villaasterproaroute

FLOOD HYDROGRAPH ROUTING PROGRAM

Study date: 03/10/22

Villa Aster
Basin Routing
Area A 100yr 24hr

Program License Serial Number 6232

********** HYDROGRAPH INFORMATION **********

From study/file name: villaasterproa.rte
**********HYDROGRAPH DATA**********
Number of intervals = 307
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 17.322 (CFS)
Total volume = 2.353 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 102.000 to Point/Station 103.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 307
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.138	0.130	0.138	0.138
2.000	0.300	0.130	0.300	0.300
3.000	0.488	8.000	0.460	0.516
4.000	0.704	8.000	0.676	0.732

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villaasterproaroute
Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.3 8.66 12.99 17.32	Depth (Ft.)
0.083	0.02	0.00	0.000	O	0.00
0.167	0.11	0.00	0.000	O	0.00
0.250	0.29	0.00	0.002	O	0.01
0.333	0.38	0.00	0.004	O	0.03
0.417	0.44	0.01	0.007	O	0.05
0.500	0.47	0.01	0.010	O	0.07
0.583	0.50	0.01	0.013	O	0.10
0.667	0.52	0.02	0.017	O	0.12
0.750	0.53	0.02	0.020	O	0.15
0.833	0.54	0.02	0.024	OI	0.17
0.917	0.55	0.03	0.027	OI	0.20
1.000	0.56	0.03	0.031	OI	0.22
1.083	0.57	0.03	0.035	OI	0.25
1.167	0.58	0.04	0.038	OI	0.28
1.250	0.58	0.04	0.042	OI	0.31
1.333	0.58	0.04	0.046	OI	0.33
1.417	0.59	0.05	0.050	OI	0.36
1.500	0.59	0.05	0.053	OI	0.39
1.583	0.60	0.05	0.057	OI	0.41
1.667	0.60	0.06	0.061	OI	0.44
1.750	0.60	0.06	0.065	OI	0.47
1.833	0.60	0.06	0.068	OI	0.49
1.917	0.60	0.07	0.072	OI	0.52
2.000	0.61	0.07	0.076	OI	0.55
2.083	0.61	0.07	0.079	OI	0.57
2.167	0.61	0.08	0.083	OI	0.60
2.250	0.61	0.08	0.087	OI	0.63
2.333	0.61	0.09	0.090	OI	0.65
2.417	0.61	0.09	0.094	OI	0.68
2.500	0.62	0.09	0.097	OI	0.71
2.583	0.62	0.10	0.101	OI	0.73
2.667	0.62	0.10	0.105	OI	0.76
2.750	0.62	0.10	0.108	OI	0.78
2.833	0.62	0.11	0.112	OI	0.81
2.917	0.63	0.11	0.115	OI	0.84
3.000	0.63	0.11	0.119	OI	0.86
3.083	0.63	0.12	0.123	OI	0.89
3.167	0.63	0.12	0.126	OI	0.91
3.250	0.63	0.12	0.130	OI	0.94
3.333	0.64	0.13	0.133	OI	0.96
3.417	0.64	0.13	0.137	OI	0.99
3.500	0.64	0.13	0.140	OI	1.01
3.583	0.64	0.13	0.144	OI	1.04
3.667	0.64	0.13	0.147	OI	1.06
3.750	0.65	0.13	0.151	OI	1.08
3.833	0.65	0.13	0.154	OI	1.10
3.917	0.65	0.13	0.158	OI	1.12
4.000	0.65	0.13	0.162	OI	1.15
4.083	0.66	0.13	0.165	OI	1.17
4.167	0.66	0.13	0.169	OI	1.19
4.250	0.66	0.13	0.172	OI	1.21
4.333	0.66	0.13	0.176	OI	1.23
4.417	0.66	0.13	0.180	OI	1.26
4.500	0.67	0.13	0.183	OI	1.28
4.583	0.67	0.13	0.187	OI	1.30
4.667	0.67	0.13	0.191	OI	1.33

4.750	0.67	0.13	0.195	OI				1.35
4.833	0.68	0.13	0.198	OI				1.37
4.917	0.68	0.13	0.202	OI				1.40
5.000	0.68	0.13	0.206	OI				1.42
5.083	0.68	0.13	0.210	OI				1.44
5.167	0.69	0.13	0.214	OI				1.47
5.250	0.69	0.13	0.217	OI				1.49
5.333	0.69	0.13	0.221	OI				1.51
5.417	0.69	0.13	0.225	OI				1.54
5.500	0.70	0.13	0.229	OI				1.56
5.583	0.70	0.13	0.233	OI				1.59
5.667	0.70	0.13	0.237	OI				1.61
5.750	0.71	0.13	0.241	OI				1.63
5.833	0.71	0.13	0.245	OI				1.66
5.917	0.71	0.13	0.249	OI				1.68
6.000	0.71	0.13	0.253	OI				1.71
6.083	0.72	0.13	0.257	OI				1.73
6.167	0.72	0.13	0.261	OI				1.76
6.250	0.72	0.13	0.265	OI				1.78
6.333	0.73	0.13	0.269	OI				1.81
6.417	0.73	0.13	0.273	OI				1.83
6.500	0.73	0.13	0.277	OI				1.86
6.583	0.73	0.13	0.281	OI				1.89
6.667	0.74	0.13	0.286	OI				1.91
6.750	0.74	0.13	0.290	OI				1.94
6.833	0.74	0.13	0.294	OI				1.96
6.917	0.75	0.13	0.298	OI				1.99
7.000	0.75	0.22	0.302	OI				2.01
7.083	0.75	0.36	0.305	OI				2.03
7.167	0.76	0.46	0.308	OI				2.04
7.250	0.76	0.53	0.310	OI				2.05
7.333	0.76	0.59	0.311	|O				2.06
7.417	0.77	0.64	0.312	|O				2.06
7.500	0.77	0.67	0.313	|O				2.07
7.583	0.78	0.70	0.314	|O				2.07
7.667	0.78	0.72	0.314	|O				2.07
7.750	0.78	0.73	0.314	|O				2.08
7.833	0.79	0.75	0.315	|O				2.08
7.917	0.79	0.76	0.315	|O				2.08
8.000	0.80	0.77	0.315	|O				2.08
8.083	0.80	0.77	0.315	|O				2.08
8.167	0.80	0.78	0.316	|O				2.08
8.250	0.81	0.79	0.316	|O				2.08
8.333	0.81	0.79	0.316	|O				2.08
8.417	0.82	0.80	0.316	|O				2.08
8.500	0.82	0.80	0.316	|O				2.09
8.583	0.82	0.81	0.316	|O				2.09
8.667	0.83	0.81	0.316	|O				2.09
8.750	0.83	0.82	0.316	|O				2.09
8.833	0.84	0.82	0.317	|O				2.09
8.917	0.84	0.83	0.317	|O				2.09
9.000	0.85	0.83	0.317	|O				2.09
9.083	0.85	0.84	0.317	|O				2.09
9.167	0.86	0.84	0.317	|O				2.09
9.250	0.86	0.85	0.317	|O				2.09
9.333	0.87	0.85	0.317	|O				2.09
9.417	0.87	0.86	0.317	|O				2.09
9.500	0.88	0.86	0.317	|O				2.09
9.583	0.88	0.87	0.318	|O				2.09
9.667	0.89	0.87	0.318	|O				2.09
9.750	0.89	0.88	0.318	|O				2.09
9.833	0.90	0.88	0.318	|O				2.10
9.917	0.91	0.89	0.318	|O				2.10

10.000	0.91	0.89	0.318	O				2.10
10.083	0.92	0.90	0.318	O				2.10
10.167	0.92	0.90	0.318	O				2.10
10.250	0.93	0.91	0.319	O				2.10
10.333	0.94	0.92	0.319	O				2.10
10.417	0.94	0.92	0.319	O				2.10
10.500	0.95	0.93	0.319	O				2.10
10.583	0.96	0.94	0.319	O				2.10
10.667	0.96	0.94	0.319	O				2.10
10.750	0.97	0.95	0.320	O				2.10
10.833	0.98	0.96	0.320	O				2.10
10.917	0.99	0.96	0.320	O				2.11
11.000	0.99	0.97	0.320	O				2.11
11.083	1.00	0.98	0.320	O				2.11
11.167	1.01	0.98	0.320	O				2.11
11.250	1.02	0.99	0.321	O				2.11
11.333	1.03	1.00	0.321	O				2.11
11.417	1.04	1.01	0.321	O				2.11
11.500	1.04	1.02	0.321	O				2.11
11.583	1.05	1.02	0.321	O				2.11
11.667	1.06	1.03	0.322	O				2.11
11.750	1.07	1.04	0.322	O				2.12
11.833	1.08	1.05	0.322	OI				2.12
11.917	1.09	1.06	0.322	OI				2.12
12.000	1.10	1.07	0.322	OI				2.12
12.083	1.11	1.08	0.323	OI				2.12
12.167	1.09	1.08	0.323	O				2.12
12.250	1.06	1.08	0.323	O				2.12
12.333	1.04	1.07	0.323	O				2.12
12.417	1.04	1.07	0.322	O				2.12
12.500	1.04	1.06	0.322	O				2.12
12.583	1.05	1.06	0.322	O				2.12
12.667	1.06	1.05	0.322	O				2.12
12.750	1.07	1.06	0.322	O				2.12
12.833	1.08	1.06	0.322	O				2.12
12.917	1.09	1.07	0.322	OI				2.12
13.000	1.10	1.07	0.323	OI				2.12
13.083	1.12	1.08	0.323	OI				2.12
13.167	1.13	1.09	0.323	O				2.12
13.250	1.15	1.11	0.323	O				2.12
13.333	1.17	1.12	0.324	O				2.13
13.417	1.18	1.13	0.324	O				2.13
13.500	1.20	1.15	0.324	O				2.13
13.583	1.22	1.16	0.325	O				2.13
13.667	1.25	1.18	0.325	O				2.13
13.750	1.27	1.20	0.326	O				2.14
13.833	1.29	1.22	0.326	O				2.14
13.917	1.32	1.24	0.327	O				2.14
14.000	1.34	1.26	0.327	O				2.14
14.083	1.37	1.29	0.328	O				2.15
14.167	1.40	1.31	0.328	O				2.15
14.250	1.44	1.34	0.329	O				2.15
14.333	1.47	1.37	0.330	O				2.16
14.417	1.51	1.40	0.330	O				2.16
14.500	1.54	1.43	0.331	O				2.17
14.583	1.59	1.46	0.332	O				2.17
14.667	1.63	1.50	0.333	OI				2.17
14.750	1.68	1.54	0.334	OI				2.18
14.833	1.73	1.58	0.335	OI				2.18
14.917	1.79	1.63	0.336	O				2.19
15.000	1.86	1.68	0.337	O				2.20
15.083	1.93	1.73	0.338	O				2.20
15.167	2.01	1.79	0.340	O				2.21

15.250	2.10	1.86	0.341	O				2.22
15.333	2.20	1.93	0.343	OI				2.23
15.417	2.29	2.01	0.345	OI				2.24
15.500	2.28	2.08	0.347	OI				2.25
15.583	2.19	2.12	0.347	OI				2.25
15.667	2.23	2.14	0.348	OI				2.26
15.750	2.39	2.18	0.349	O				2.26
15.833	2.63	2.26	0.351	O				2.27
15.917	3.05	2.41	0.354	OI				2.29
16.000	3.84	2.67	0.361	O I				2.32
16.083	6.29	3.27	0.375	O I				2.40
16.167	12.52	4.82	0.412	O		I		2.60
16.250	17.32	7.37	0.473	O			I	2.92
16.333	10.93	8.00	0.517	O	I			3.14
16.417	7.39	8.00	0.525	IO				3.17
16.500	5.71	8.00	0.515	I O				3.13
16.583	4.84	8.00	0.496	I O				3.04
16.667	4.17	7.43	0.474	I O				2.93
16.750	3.59	6.54	0.453	I O				2.81
16.833	3.20	5.74	0.434	I O				2.71
16.917	2.85	5.06	0.418	I O				2.63
17.000	2.57	4.47	0.404	I O				2.55
17.083	2.32	3.96	0.391	I O				2.49
17.167	2.09	3.52	0.381	I O				2.43
17.250	1.90	3.13	0.372	I O				2.38
17.333	1.82	2.81	0.364	I O				2.34
17.417	1.74	2.55	0.358	IO				2.31
17.500	1.62	2.33	0.353	I O				2.28
17.583	1.49	2.14	0.348	IO				2.25
17.667	1.38	1.96	0.344	IO				2.23
17.750	1.26	1.80	0.340	IO				2.21
17.833	1.22	1.66	0.337	IO				2.19
17.917	1.18	1.54	0.334	O				2.18
18.000	1.14	1.44	0.331	O				2.17
18.083	1.11	1.36	0.329	O				2.16
18.167	1.10	1.30	0.328	O				2.15
18.250	1.12	1.25	0.327	O				2.14
18.333	1.12	1.22	0.326	O				2.14
18.417	1.11	1.19	0.325	O				2.14
18.500	1.10	1.17	0.325	O				2.13
18.583	1.08	1.15	0.324	IO				2.13
18.667	1.06	1.13	0.324	IO				2.13
18.750	1.05	1.11	0.323	IO				2.12
18.833	1.03	1.09	0.323	IO				2.12
18.917	1.02	1.08	0.323	O				2.12
19.000	1.00	1.06	0.322	O				2.12
19.083	0.99	1.04	0.322	O				2.12
19.167	0.97	1.03	0.321	O				2.11
19.250	0.96	1.01	0.321	O				2.11
19.333	0.95	1.00	0.321	O				2.11
19.417	0.93	0.98	0.320	O				2.11
19.500	0.92	0.97	0.320	O				2.11
19.583	0.91	0.96	0.320	O				2.11
19.667	0.90	0.94	0.319	O				2.10
19.750	0.89	0.93	0.319	O				2.10
19.833	0.88	0.92	0.319	O				2.10
19.917	0.87	0.91	0.319	O				2.10
20.000	0.86	0.90	0.318	O				2.10
20.083	0.85	0.88	0.318	O				2.10
20.167	0.84	0.87	0.318	O				2.09
20.250	0.83	0.86	0.318	O				2.09
20.333	0.82	0.85	0.317	O				2.09
20.417	0.81	0.84	0.317	O				2.09

20.500	0.80	0.83	0.317	|O	|	|	|	2.09
20.583	0.79	0.82	0.317	|O	|	|	|	2.09
20.667	0.79	0.82	0.316	|O	|	|	|	2.09
20.750	0.78	0.81	0.316	|O	|	|	|	2.09
20.833	0.77	0.80	0.316	|O	|	|	|	2.09
20.917	0.76	0.79	0.316	|O	|	|	|	2.08
21.000	0.76	0.78	0.316	|O	|	|	|	2.08
21.083	0.75	0.78	0.315	|O	|	|	|	2.08
21.167	0.74	0.77	0.315	|O	|	|	|	2.08
21.250	0.74	0.76	0.315	|O	|	|	|	2.08
21.333	0.73	0.75	0.315	|O	|	|	|	2.08
21.417	0.72	0.75	0.315	|O	|	|	|	2.08
21.500	0.72	0.74	0.315	|O	|	|	|	2.08
21.583	0.71	0.73	0.314	|O	|	|	|	2.08
21.667	0.71	0.73	0.314	|O	|	|	|	2.08
21.750	0.70	0.72	0.314	|O	|	|	|	2.08
21.833	0.70	0.72	0.314	|O	|	|	|	2.07
21.917	0.69	0.71	0.314	|O	|	|	|	2.07
22.000	0.69	0.70	0.314	|O	|	|	|	2.07
22.083	0.68	0.70	0.314	|O	|	|	|	2.07
22.167	0.68	0.69	0.313	|O	|	|	|	2.07
22.250	0.67	0.69	0.313	|O	|	|	|	2.07
22.333	0.67	0.68	0.313	|O	|	|	|	2.07
22.417	0.66	0.68	0.313	|O	|	|	|	2.07
22.500	0.66	0.67	0.313	|O	|	|	|	2.07
22.583	0.65	0.67	0.313	|O	|	|	|	2.07
22.667	0.65	0.66	0.313	|O	|	|	|	2.07
22.750	0.64	0.66	0.313	|O	|	|	|	2.07
22.833	0.64	0.65	0.313	|O	|	|	|	2.07
22.917	0.64	0.65	0.312	|O	|	|	|	2.07
23.000	0.63	0.65	0.312	|O	|	|	|	2.07
23.083	0.63	0.64	0.312	|O	|	|	|	2.07
23.167	0.62	0.64	0.312	|O	|	|	|	2.06
23.250	0.62	0.63	0.312	|O	|	|	|	2.06
23.333	0.62	0.63	0.312	|O	|	|	|	2.06
23.417	0.61	0.63	0.312	|O	|	|	|	2.06
23.500	0.61	0.62	0.312	|O	|	|	|	2.06
23.583	0.60	0.62	0.312	|O	|	|	|	2.06
23.667	0.60	0.61	0.312	|O	|	|	|	2.06
23.750	0.60	0.61	0.311	|O	|	|	|	2.06
23.833	0.59	0.61	0.311	|O	|	|	|	2.06
23.917	0.59	0.60	0.311	|O	|	|	|	2.06
24.000	0.59	0.60	0.311	|O	|	|	|	2.06
24.083	0.57	0.59	0.311	|O	|	|	|	2.06
24.167	0.47	0.58	0.311	IO	|	|	|	2.06
24.250	0.29	0.53	0.309	O	|	|	|	2.05
24.333	0.20	0.45	0.308	O	|	|	|	2.04
24.417	0.14	0.38	0.306	O	|	|	|	2.03
24.500	0.11	0.32	0.305	O	|	|	|	2.02
24.583	0.08	0.26	0.303	O	|	|	|	2.02
24.667	0.06	0.21	0.302	O	|	|	|	2.01
24.750	0.05	0.18	0.301	O	|	|	|	2.01
24.833	0.04	0.14	0.300	O	|	|	|	2.00
24.917	0.03	0.13	0.300	O	|	|	|	2.00
25.000	0.02	0.13	0.299	O	|	|	|	1.99
25.083	0.02	0.13	0.298	O	|	|	|	1.99
25.167	0.01	0.13	0.297	O	|	|	|	1.98
25.250	0.01	0.13	0.297	O	|	|	|	1.98
25.333	0.01	0.13	0.296	O	|	|	|	1.97
25.417	0.00	0.13	0.295	O	|	|	|	1.97
25.500	0.00	0.13	0.294	O	|	|	|	1.96
25.583	0.00	0.13	0.293	O	|	|	|	1.96
25.667	0.00	0.13	0.292	O	|	|	|	1.95

25.750	0.00	0.13	0.291	O				1.95
25.833	0.00	0.13	0.290	O				1.94
25.917	0.00	0.13	0.289	O				1.94
26.000	0.00	0.13	0.289	O				1.93
26.083	0.00	0.13	0.288	O				1.92
26.167	0.00	0.13	0.287	O				1.92
26.250	0.00	0.13	0.286	O				1.91
26.333	0.00	0.13	0.285	O				1.91
26.417	0.00	0.13	0.284	O				1.90
26.500	0.00	0.13	0.283	O				1.90
26.583	0.00	0.13	0.282	O				1.89
26.667	0.00	0.13	0.281	O				1.89
26.750	0.00	0.13	0.281	O				1.88
26.833	0.00	0.13	0.280	O				1.87
26.917	0.00	0.13	0.279	O				1.87
27.000	0.00	0.13	0.278	O				1.86
27.083	0.00	0.13	0.277	O				1.86
27.167	0.00	0.13	0.276	O				1.85
27.250	0.00	0.13	0.275	O				1.85
27.333	0.00	0.13	0.274	O				1.84
27.417	0.00	0.13	0.273	O				1.84
27.500	0.00	0.13	0.272	O				1.83
27.583	0.00	0.13	0.272	O				1.82
27.667	0.00	0.13	0.271	O				1.82
27.750	0.00	0.13	0.270	O				1.81
27.833	0.00	0.13	0.269	O				1.81
27.917	0.00	0.13	0.268	O				1.80
28.000	0.00	0.13	0.267	O				1.80
28.083	0.00	0.13	0.266	O				1.79
28.167	0.00	0.13	0.265	O				1.79
28.250	0.00	0.13	0.264	O				1.78
28.333	0.00	0.13	0.264	O				1.77
28.417	0.00	0.13	0.263	O				1.77
28.500	0.00	0.13	0.262	O				1.76
28.583	0.00	0.13	0.261	O				1.76
28.667	0.00	0.13	0.260	O				1.75
28.750	0.00	0.13	0.259	O				1.75
28.833	0.00	0.13	0.258	O				1.74
28.917	0.00	0.13	0.257	O				1.74
29.000	0.00	0.13	0.256	O				1.73
29.083	0.00	0.13	0.255	O				1.73
29.167	0.00	0.13	0.255	O				1.72
29.250	0.00	0.13	0.254	O				1.71
29.333	0.00	0.13	0.253	O				1.71
29.417	0.00	0.13	0.252	O				1.70
29.500	0.00	0.13	0.251	O				1.70
29.583	0.00	0.13	0.250	O				1.69
29.667	0.00	0.13	0.249	O				1.69
29.750	0.00	0.13	0.248	O				1.68
29.833	0.00	0.13	0.247	O				1.68
29.917	0.00	0.13	0.247	O				1.67
30.000	0.00	0.13	0.246	O				1.66
30.083	0.00	0.13	0.245	O				1.66
30.167	0.00	0.13	0.244	O				1.65
30.250	0.00	0.13	0.243	O				1.65
30.333	0.00	0.13	0.242	O				1.64
30.417	0.00	0.13	0.241	O				1.64
30.500	0.00	0.13	0.240	O				1.63
30.583	0.00	0.13	0.239	O				1.63
30.667	0.00	0.13	0.238	O				1.62
30.750	0.00	0.13	0.238	O				1.61
30.833	0.00	0.13	0.237	O				1.61
30.917	0.00	0.13	0.236	O				1.60

31.000	0.00	0.13	0.235	O				1.60
31.083	0.00	0.13	0.234	O				1.59
31.167	0.00	0.13	0.233	O				1.59
31.250	0.00	0.13	0.232	O				1.58
31.333	0.00	0.13	0.231	O				1.58
31.417	0.00	0.13	0.230	O				1.57
31.500	0.00	0.13	0.230	O				1.56
31.583	0.00	0.13	0.229	O				1.56
31.667	0.00	0.13	0.228	O				1.55
31.750	0.00	0.13	0.227	O				1.55
31.833	0.00	0.13	0.226	O				1.54
31.917	0.00	0.13	0.225	O				1.54
32.000	0.00	0.13	0.224	O				1.53
32.083	0.00	0.13	0.223	O				1.53
32.167	0.00	0.13	0.222	O				1.52
32.250	0.00	0.13	0.221	O				1.52
32.333	0.00	0.13	0.221	O				1.51
32.417	0.00	0.13	0.220	O				1.50
32.500	0.00	0.13	0.219	O				1.50
32.583	0.00	0.13	0.218	O				1.49
32.667	0.00	0.13	0.217	O				1.49
32.750	0.00	0.13	0.216	O				1.48
32.833	0.00	0.13	0.215	O				1.48
32.917	0.00	0.13	0.214	O				1.47
33.000	0.00	0.13	0.213	O				1.47
33.083	0.00	0.13	0.212	O				1.46
33.167	0.00	0.13	0.212	O				1.45
33.250	0.00	0.13	0.211	O				1.45
33.333	0.00	0.13	0.210	O				1.44
33.417	0.00	0.13	0.209	O				1.44
33.500	0.00	0.13	0.208	O				1.43
33.583	0.00	0.13	0.207	O				1.43
33.667	0.00	0.13	0.206	O				1.42
33.750	0.00	0.13	0.205	O				1.42
33.833	0.00	0.13	0.204	O				1.41
33.917	0.00	0.13	0.204	O				1.40
34.000	0.00	0.13	0.203	O				1.40
34.083	0.00	0.13	0.202	O				1.39
34.167	0.00	0.13	0.201	O				1.39
34.250	0.00	0.13	0.200	O				1.38
34.333	0.00	0.13	0.199	O				1.38
34.417	0.00	0.13	0.198	O				1.37
34.500	0.00	0.13	0.197	O				1.37
34.583	0.00	0.13	0.196	O				1.36
34.667	0.00	0.13	0.195	O				1.35
34.750	0.00	0.13	0.195	O				1.35
34.833	0.00	0.13	0.194	O				1.34
34.917	0.00	0.13	0.193	O				1.34
35.000	0.00	0.13	0.192	O				1.33
35.083	0.00	0.13	0.191	O				1.33
35.167	0.00	0.13	0.190	O				1.32
35.250	0.00	0.13	0.189	O				1.32
35.333	0.00	0.13	0.188	O				1.31
35.417	0.00	0.13	0.187	O				1.31
35.500	0.00	0.13	0.187	O				1.30
35.583	0.00	0.13	0.186	O				1.29
35.667	0.00	0.13	0.185	O				1.29
35.750	0.00	0.13	0.184	O				1.28
35.833	0.00	0.13	0.183	O				1.28
35.917	0.00	0.13	0.182	O				1.27
36.000	0.00	0.13	0.181	O				1.27
36.083	0.00	0.13	0.180	O				1.26
36.167	0.00	0.13	0.179	O				1.26

36.250	0.00	0.13	0.178	O				1.25
36.333	0.00	0.13	0.178	O				1.24
36.417	0.00	0.13	0.177	O				1.24
36.500	0.00	0.13	0.176	O				1.23
36.583	0.00	0.13	0.175	O				1.23
36.667	0.00	0.13	0.174	O				1.22
36.750	0.00	0.13	0.173	O				1.22
36.833	0.00	0.13	0.172	O				1.21
36.917	0.00	0.13	0.171	O				1.21
37.000	0.00	0.13	0.170	O				1.20
37.083	0.00	0.13	0.170	O				1.19
37.167	0.00	0.13	0.169	O				1.19
37.250	0.00	0.13	0.168	O				1.18
37.333	0.00	0.13	0.167	O				1.18
37.417	0.00	0.13	0.166	O				1.17
37.500	0.00	0.13	0.165	O				1.17
37.583	0.00	0.13	0.164	O				1.16
37.667	0.00	0.13	0.163	O				1.16
37.750	0.00	0.13	0.162	O				1.15
37.833	0.00	0.13	0.161	O				1.14
37.917	0.00	0.13	0.161	O				1.14
38.000	0.00	0.13	0.160	O				1.13
38.083	0.00	0.13	0.159	O				1.13
38.167	0.00	0.13	0.158	O				1.12
38.250	0.00	0.13	0.157	O				1.12
38.333	0.00	0.13	0.156	O				1.11
38.417	0.00	0.13	0.155	O				1.11
38.500	0.00	0.13	0.154	O				1.10
38.583	0.00	0.13	0.153	O				1.10
38.667	0.00	0.13	0.153	O				1.09
38.750	0.00	0.13	0.152	O				1.08
38.833	0.00	0.13	0.151	O				1.08
38.917	0.00	0.13	0.150	O				1.07
39.000	0.00	0.13	0.149	O				1.07
39.083	0.00	0.13	0.148	O				1.06
39.167	0.00	0.13	0.147	O				1.06
39.250	0.00	0.13	0.146	O				1.05
39.333	0.00	0.13	0.145	O				1.05
39.417	0.00	0.13	0.144	O				1.04
39.500	0.00	0.13	0.144	O				1.03
39.583	0.00	0.13	0.143	O				1.03
39.667	0.00	0.13	0.142	O				1.02
39.750	0.00	0.13	0.141	O				1.02
39.833	0.00	0.13	0.140	O				1.01
39.917	0.00	0.13	0.139	O				1.01
40.000	0.00	0.13	0.138	O				1.00
40.083	0.00	0.13	0.137	O				0.99
40.167	0.00	0.13	0.136	O				0.99
40.250	0.00	0.13	0.136	O				0.98
40.333	0.00	0.13	0.135	O				0.98
40.417	0.00	0.13	0.134	O				0.97
40.500	0.00	0.13	0.133	O				0.96
40.583	0.00	0.12	0.132	O				0.96
40.667	0.00	0.12	0.131	O				0.95
40.750	0.00	0.12	0.130	O				0.94
40.833	0.00	0.12	0.130	O				0.94
40.917	0.00	0.12	0.129	O				0.93
41.000	0.00	0.12	0.128	O				0.93
41.083	0.00	0.12	0.127	O				0.92
41.167	0.00	0.12	0.126	O				0.91
41.250	0.00	0.12	0.125	O				0.91
41.333	0.00	0.12	0.125	O				0.90
41.417	0.00	0.12	0.124	O				0.90

41.500	0.00	0.12	0.123	O	|	|	|	0.89
41.583	0.00	0.12	0.122	O	|	|	|	0.89
41.667	0.00	0.11	0.121	O	|	|	|	0.88
41.750	0.00	0.11	0.121	O	|	|	|	0.87
41.833	0.00	0.11	0.120	O	|	|	|	0.87
41.917	0.00	0.11	0.119	O	|	|	|	0.86
42.000	0.00	0.11	0.118	O	|	|	|	0.86
42.083	0.00	0.11	0.117	O	|	|	|	0.85
42.167	0.00	0.11	0.117	O	|	|	|	0.85
42.250	0.00	0.11	0.116	O	|	|	|	0.84
42.333	0.00	0.11	0.115	O	|	|	|	0.83
42.417	0.00	0.11	0.114	O	|	|	|	0.83
42.500	0.00	0.11	0.114	O	|	|	|	0.82
42.583	0.00	0.11	0.113	O	|	|	|	0.82
42.667	0.00	0.11	0.112	O	|	|	|	0.81
42.750	0.00	0.11	0.112	O	|	|	|	0.81
42.833	0.00	0.10	0.111	O	|	|	|	0.80
42.917	0.00	0.10	0.110	O	|	|	|	0.80
43.000	0.00	0.10	0.109	O	|	|	|	0.79
43.083	0.00	0.10	0.109	O	|	|	|	0.79
43.167	0.00	0.10	0.108	O	|	|	|	0.78
43.250	0.00	0.10	0.107	O	|	|	|	0.78
43.333	0.00	0.10	0.107	O	|	|	|	0.77
43.417	0.00	0.10	0.106	O	|	|	|	0.77
43.500	0.00	0.10	0.105	O	|	|	|	0.76
43.583	0.00	0.10	0.105	O	|	|	|	0.76
43.667	0.00	0.10	0.104	O	|	|	|	0.75
43.750	0.00	0.10	0.103	O	|	|	|	0.75
43.833	0.00	0.10	0.103	O	|	|	|	0.74
43.917	0.00	0.10	0.102	O	|	|	|	0.74
44.000	0.00	0.10	0.101	O	|	|	|	0.73
44.083	0.00	0.09	0.101	O	|	|	|	0.73
44.167	0.00	0.09	0.100	O	|	|	|	0.72
44.250	0.00	0.09	0.099	O	|	|	|	0.72
44.333	0.00	0.09	0.099	O	|	|	|	0.71
44.417	0.00	0.09	0.098	O	|	|	|	0.71
44.500	0.00	0.09	0.097	O	|	|	|	0.71
44.583	0.00	0.09	0.097	O	|	|	|	0.70
44.667	0.00	0.09	0.096	O	|	|	|	0.70
44.750	0.00	0.09	0.095	O	|	|	|	0.69
44.833	0.00	0.09	0.095	O	|	|	|	0.69
44.917	0.00	0.09	0.094	O	|	|	|	0.68
45.000	0.00	0.09	0.094	O	|	|	|	0.68
45.083	0.00	0.09	0.093	O	|	|	|	0.67
45.167	0.00	0.09	0.092	O	|	|	|	0.67
45.250	0.00	0.09	0.092	O	|	|	|	0.67
45.333	0.00	0.09	0.091	O	|	|	|	0.66
45.417	0.00	0.09	0.091	O	|	|	|	0.66
45.500	0.00	0.08	0.090	O	|	|	|	0.65
45.583	0.00	0.08	0.089	O	|	|	|	0.65
45.667	0.00	0.08	0.089	O	|	|	|	0.64
45.750	0.00	0.08	0.088	O	|	|	|	0.64
45.833	0.00	0.08	0.088	O	|	|	|	0.64
45.917	0.00	0.08	0.087	O	|	|	|	0.63
46.000	0.00	0.08	0.087	O	|	|	|	0.63
46.083	0.00	0.08	0.086	O	|	|	|	0.62
46.167	0.00	0.08	0.085	O	|	|	|	0.62
46.250	0.00	0.08	0.085	O	|	|	|	0.62
46.333	0.00	0.08	0.084	O	|	|	|	0.61
46.417	0.00	0.08	0.084	O	|	|	|	0.61
46.500	0.00	0.08	0.083	O	|	|	|	0.60
46.583	0.00	0.08	0.083	O	|	|	|	0.60
46.667	0.00	0.08	0.082	O	|	|	|	0.60

46.750	0.00	0.08	0.082	O				0.59
46.833	0.00	0.08	0.081	O				0.59
46.917	0.00	0.08	0.081	O				0.58
47.000	0.00	0.08	0.080	O				0.58
47.083	0.00	0.07	0.080	O				0.58
47.167	0.00	0.07	0.079	O				0.57
47.250	0.00	0.07	0.079	O				0.57
47.333	0.00	0.07	0.078	O				0.57
47.417	0.00	0.07	0.078	O				0.56
47.500	0.00	0.07	0.077	O				0.56
47.583	0.00	0.07	0.077	O				0.55
47.667	0.00	0.07	0.076	O				0.55
47.750	0.00	0.07	0.076	O				0.55
47.833	0.00	0.07	0.075	O				0.54
47.917	0.00	0.07	0.075	O				0.54
48.000	0.00	0.07	0.074	O				0.54
48.083	0.00	0.07	0.074	O				0.53
48.167	0.00	0.07	0.073	O				0.53
48.250	0.00	0.07	0.073	O				0.53
48.333	0.00	0.07	0.072	O				0.52
48.417	0.00	0.07	0.072	O				0.52
48.500	0.00	0.07	0.071	O				0.52
48.583	0.00	0.07	0.071	O				0.51
48.667	0.00	0.07	0.070	O				0.51
48.750	0.00	0.07	0.070	O				0.51
48.833	0.00	0.07	0.069	O				0.50
48.917	0.00	0.07	0.069	O				0.50
49.000	0.00	0.06	0.069	O				0.50
49.083	0.00	0.06	0.068	O				0.49
49.167	0.00	0.06	0.068	O				0.49
49.250	0.00	0.06	0.067	O				0.49
49.333	0.00	0.06	0.067	O				0.48
49.417	0.00	0.06	0.066	O				0.48
49.500	0.00	0.06	0.066	O				0.48
49.583	0.00	0.06	0.066	O				0.47
49.667	0.00	0.06	0.065	O				0.47
49.750	0.00	0.06	0.065	O				0.47
49.833	0.00	0.06	0.064	O				0.47
49.917	0.00	0.06	0.064	O				0.46
50.000	0.00	0.06	0.063	O				0.46
50.083	0.00	0.06	0.063	O				0.46
50.167	0.00	0.06	0.063	O				0.45
50.250	0.00	0.06	0.062	O				0.45
50.333	0.00	0.06	0.062	O				0.45
50.417	0.00	0.06	0.061	O				0.45
50.500	0.00	0.06	0.061	O				0.44
50.583	0.00	0.06	0.061	O				0.44
50.667	0.00	0.06	0.060	O				0.44
50.750	0.00	0.06	0.060	O				0.43
50.833	0.00	0.06	0.059	O				0.43
50.917	0.00	0.06	0.059	O				0.43
51.000	0.00	0.06	0.059	O				0.43
51.083	0.00	0.05	0.058	O				0.42
51.167	0.00	0.05	0.058	O				0.42
51.250	0.00	0.05	0.058	O				0.42
51.333	0.00	0.05	0.057	O				0.41
51.417	0.00	0.05	0.057	O				0.41
51.500	0.00	0.05	0.056	O				0.41
51.583	0.00	0.05	0.056	O				0.41
51.667	0.00	0.05	0.056	O				0.40
51.750	0.00	0.05	0.055	O				0.40
51.833	0.00	0.05	0.055	O				0.40
51.917	0.00	0.05	0.055	O				0.40

52.000	0.00	0.05	0.054	O				0.39
52.083	0.00	0.05	0.054	O				0.39
52.167	0.00	0.05	0.054	O				0.39
52.250	0.00	0.05	0.053	O				0.39
52.333	0.00	0.05	0.053	O				0.38
52.417	0.00	0.05	0.053	O				0.38
52.500	0.00	0.05	0.052	O				0.38
52.583	0.00	0.05	0.052	O				0.38
52.667	0.00	0.05	0.052	O				0.37
52.750	0.00	0.05	0.051	O				0.37
52.833	0.00	0.05	0.051	O				0.37
52.917	0.00	0.05	0.051	O				0.37
53.000	0.00	0.05	0.050	O				0.36
53.083	0.00	0.05	0.050	O				0.36
53.167	0.00	0.05	0.050	O				0.36
53.250	0.00	0.05	0.049	O				0.36
53.333	0.00	0.05	0.049	O				0.35
53.417	0.00	0.05	0.049	O				0.35
53.500	0.00	0.05	0.048	O				0.35
53.583	0.00	0.05	0.048	O				0.35
53.667	0.00	0.04	0.048	O				0.35
53.750	0.00	0.04	0.047	O				0.34
53.833	0.00	0.04	0.047	O				0.34
53.917	0.00	0.04	0.047	O				0.34
54.000	0.00	0.04	0.046	O				0.34
54.083	0.00	0.04	0.046	O				0.33
54.167	0.00	0.04	0.046	O				0.33
54.250	0.00	0.04	0.046	O				0.33
54.333	0.00	0.04	0.045	O				0.33
54.417	0.00	0.04	0.045	O				0.33
54.500	0.00	0.04	0.045	O				0.32
54.583	0.00	0.04	0.044	O				0.32
54.667	0.00	0.04	0.044	O				0.32
54.750	0.00	0.04	0.044	O				0.32
54.833	0.00	0.04	0.044	O				0.32
54.917	0.00	0.04	0.043	O				0.31
55.000	0.00	0.04	0.043	O				0.31
55.083	0.00	0.04	0.043	O				0.31
55.167	0.00	0.04	0.042	O				0.31
55.250	0.00	0.04	0.042	O				0.31
55.333	0.00	0.04	0.042	O				0.30
55.417	0.00	0.04	0.042	O				0.30
55.500	0.00	0.04	0.041	O				0.30
55.583	0.00	0.04	0.041	O				0.30
55.667	0.00	0.04	0.041	O				0.30
55.750	0.00	0.04	0.041	O				0.29
55.833	0.00	0.04	0.040	O				0.29
55.917	0.00	0.04	0.040	O				0.29
56.000	0.00	0.04	0.040	O				0.29
56.083	0.00	0.04	0.040	O				0.29
56.167	0.00	0.04	0.039	O				0.28
56.250	0.00	0.04	0.039	O				0.28
56.333	0.00	0.04	0.039	O				0.28
56.417	0.00	0.04	0.038	O				0.28
56.500	0.00	0.04	0.038	O				0.28
56.583	0.00	0.04	0.038	O				0.28
56.667	0.00	0.04	0.038	O				0.27
56.750	0.00	0.04	0.038	O				0.27
56.833	0.00	0.04	0.037	O				0.27
56.917	0.00	0.03	0.037	O				0.27
57.000	0.00	0.03	0.037	O				0.27
57.083	0.00	0.03	0.037	O				0.26
57.167	0.00	0.03	0.036	O				0.26

57.250	0.00	0.03	0.036	O				0.26
57.333	0.00	0.03	0.036	O				0.26
57.417	0.00	0.03	0.036	O				0.26
57.500	0.00	0.03	0.035	O				0.26
57.583	0.00	0.03	0.035	O				0.25
57.667	0.00	0.03	0.035	O				0.25
57.750	0.00	0.03	0.035	O				0.25
57.833	0.00	0.03	0.034	O				0.25
57.917	0.00	0.03	0.034	O				0.25
58.000	0.00	0.03	0.034	O				0.25
58.083	0.00	0.03	0.034	O				0.24
58.167	0.00	0.03	0.034	O				0.24
58.250	0.00	0.03	0.033	O				0.24
58.333	0.00	0.03	0.033	O				0.24
58.417	0.00	0.03	0.033	O				0.24
58.500	0.00	0.03	0.033	O				0.24
58.583	0.00	0.03	0.033	O				0.24
58.667	0.00	0.03	0.032	O				0.23
58.750	0.00	0.03	0.032	O				0.23
58.833	0.00	0.03	0.032	O				0.23
58.917	0.00	0.03	0.032	O				0.23
59.000	0.00	0.03	0.031	O				0.23
59.083	0.00	0.03	0.031	O				0.23
59.167	0.00	0.03	0.031	O				0.23
59.250	0.00	0.03	0.031	O				0.22
59.333	0.00	0.03	0.031	O				0.22
59.417	0.00	0.03	0.030	O				0.22
59.500	0.00	0.03	0.030	O				0.22
59.583	0.00	0.03	0.030	O				0.22
59.667	0.00	0.03	0.030	O				0.22
59.750	0.00	0.03	0.030	O				0.22
59.833	0.00	0.03	0.030	O				0.21
59.917	0.00	0.03	0.029	O				0.21
60.000	0.00	0.03	0.029	O				0.21
60.083	0.00	0.03	0.029	O				0.21
60.167	0.00	0.03	0.029	O				0.21
60.250	0.00	0.03	0.029	O				0.21
60.333	0.00	0.03	0.028	O				0.21
60.417	0.00	0.03	0.028	O				0.20
60.500	0.00	0.03	0.028	O				0.20
60.583	0.00	0.03	0.028	O				0.20
60.667	0.00	0.03	0.028	O				0.20
60.750	0.00	0.03	0.027	O				0.20
60.833	0.00	0.03	0.027	O				0.20
60.917	0.00	0.03	0.027	O				0.20
61.000	0.00	0.03	0.027	O				0.20
61.083	0.00	0.03	0.027	O				0.19
61.167	0.00	0.03	0.027	O				0.19
61.250	0.00	0.02	0.026	O				0.19
61.333	0.00	0.02	0.026	O				0.19
61.417	0.00	0.02	0.026	O				0.19
61.500	0.00	0.02	0.026	O				0.19
61.583	0.00	0.02	0.026	O				0.19
61.667	0.00	0.02	0.026	O				0.19
61.750	0.00	0.02	0.025	O				0.18
61.833	0.00	0.02	0.025	O				0.18
61.917	0.00	0.02	0.025	O				0.18
62.000	0.00	0.02	0.025	O				0.18
62.083	0.00	0.02	0.025	O				0.18
62.167	0.00	0.02	0.025	O				0.18
62.250	0.00	0.02	0.024	O				0.18
62.333	0.00	0.02	0.024	O				0.18
62.417	0.00	0.02	0.024	O				0.17

62.500	0.00	0.02	0.024	O				0.17
62.583	0.00	0.02	0.024	O				0.17
62.667	0.00	0.02	0.024	O				0.17
62.750	0.00	0.02	0.024	O				0.17
62.833	0.00	0.02	0.023	O				0.17
62.917	0.00	0.02	0.023	O				0.17
63.000	0.00	0.02	0.023	O				0.17
63.083	0.00	0.02	0.023	O				0.17
63.167	0.00	0.02	0.023	O				0.16
63.250	0.00	0.02	0.023	O				0.16
63.333	0.00	0.02	0.022	O				0.16
63.417	0.00	0.02	0.022	O				0.16
63.500	0.00	0.02	0.022	O				0.16
63.583	0.00	0.02	0.022	O				0.16
63.667	0.00	0.02	0.022	O				0.16
63.750	0.00	0.02	0.022	O				0.16
63.833	0.00	0.02	0.022	O				0.16
63.917	0.00	0.02	0.021	O				0.16
64.000	0.00	0.02	0.021	O				0.15
64.083	0.00	0.02	0.021	O				0.15
64.167	0.00	0.02	0.021	O				0.15
64.250	0.00	0.02	0.021	O				0.15
64.333	0.00	0.02	0.021	O				0.15
64.417	0.00	0.02	0.021	O				0.15
64.500	0.00	0.02	0.021	O				0.15
64.583	0.00	0.02	0.020	O				0.15
64.667	0.00	0.02	0.020	O				0.15
64.750	0.00	0.02	0.020	O				0.15
64.833	0.00	0.02	0.020	O				0.14
64.917	0.00	0.02	0.020	O				0.14
65.000	0.00	0.02	0.020	O				0.14
65.083	0.00	0.02	0.020	O				0.14
65.167	0.00	0.02	0.019	O				0.14
65.250	0.00	0.02	0.019	O				0.14
65.333	0.00	0.02	0.019	O				0.14
65.417	0.00	0.02	0.019	O				0.14
65.500	0.00	0.02	0.019	O				0.14
65.583	0.00	0.02	0.019	O				0.14
65.667	0.00	0.02	0.019	O				0.14
65.750	0.00	0.02	0.019	O				0.13
65.833	0.00	0.02	0.018	O				0.13
65.917	0.00	0.02	0.018	O				0.13
66.000	0.00	0.02	0.018	O				0.13
66.083	0.00	0.02	0.018	O				0.13
66.167	0.00	0.02	0.018	O				0.13
66.250	0.00	0.02	0.018	O				0.13
66.333	0.00	0.02	0.018	O				0.13
66.417	0.00	0.02	0.018	O				0.13
66.500	0.00	0.02	0.018	O				0.13
66.583	0.00	0.02	0.017	O				0.13
66.667	0.00	0.02	0.017	O				0.13
66.750	0.00	0.02	0.017	O				0.12
66.833	0.00	0.02	0.017	O				0.12
66.917	0.00	0.02	0.017	O				0.12
67.000	0.00	0.02	0.017	O				0.12
67.083	0.00	0.02	0.017	O				0.12
67.167	0.00	0.02	0.017	O				0.12
67.250	0.00	0.02	0.017	O				0.12
67.333	0.00	0.02	0.016	O				0.12
67.417	0.00	0.02	0.016	O				0.12
67.500	0.00	0.02	0.016	O				0.12
67.583	0.00	0.02	0.016	O				0.12
67.667	0.00	0.02	0.016	O				0.12

67.750	0.00	0.02	0.016	O				0.12
67.833	0.00	0.01	0.016	O				0.11
67.917	0.00	0.01	0.016	O				0.11
68.000	0.00	0.01	0.016	O				0.11
68.083	0.00	0.01	0.016	O				0.11
68.167	0.00	0.01	0.015	O				0.11
68.250	0.00	0.01	0.015	O				0.11
68.333	0.00	0.01	0.015	O				0.11
68.417	0.00	0.01	0.015	O				0.11
68.500	0.00	0.01	0.015	O				0.11
68.583	0.00	0.01	0.015	O				0.11
68.667	0.00	0.01	0.015	O				0.11
68.750	0.00	0.01	0.015	O				0.11
68.833	0.00	0.01	0.015	O				0.11
68.917	0.00	0.01	0.015	O				0.11
69.000	0.00	0.01	0.014	O				0.10
69.083	0.00	0.01	0.014	O				0.10
69.167	0.00	0.01	0.014	O				0.10
69.250	0.00	0.01	0.014	O				0.10
69.333	0.00	0.01	0.014	O				0.10
69.417	0.00	0.01	0.014	O				0.10
69.500	0.00	0.01	0.014	O				0.10
69.583	0.00	0.01	0.014	O				0.10
69.667	0.00	0.01	0.014	O				0.10
69.750	0.00	0.01	0.014	O				0.10
69.833	0.00	0.01	0.014	O				0.10
69.917	0.00	0.01	0.013	O				0.10
70.000	0.00	0.01	0.013	O				0.10
70.083	0.00	0.01	0.013	O				0.10
70.167	0.00	0.01	0.013	O				0.10
70.250	0.00	0.01	0.013	O				0.10
70.333	0.00	0.01	0.013	O				0.09
70.417	0.00	0.01	0.013	O				0.09
70.500	0.00	0.01	0.013	O				0.09
70.583	0.00	0.01	0.013	O				0.09
70.667	0.00	0.01	0.013	O				0.09
70.750	0.00	0.01	0.013	O				0.09
70.833	0.00	0.01	0.013	O				0.09
70.917	0.00	0.01	0.012	O				0.09
71.000	0.00	0.01	0.012	O				0.09
71.083	0.00	0.01	0.012	O				0.09
71.167	0.00	0.01	0.012	O				0.09
71.250	0.00	0.01	0.012	O				0.09
71.333	0.00	0.01	0.012	O				0.09
71.417	0.00	0.01	0.012	O				0.09
71.500	0.00	0.01	0.012	O				0.09
71.583	0.00	0.01	0.012	O				0.09
71.667	0.00	0.01	0.012	O				0.09
71.750	0.00	0.01	0.012	O				0.08
71.833	0.00	0.01	0.012	O				0.08
71.917	0.00	0.01	0.012	O				0.08
72.000	0.00	0.01	0.011	O				0.08
72.083	0.00	0.01	0.011	O				0.08
72.167	0.00	0.01	0.011	O				0.08
72.250	0.00	0.01	0.011	O				0.08
72.333	0.00	0.01	0.011	O				0.08
72.417	0.00	0.01	0.011	O				0.08
72.500	0.00	0.01	0.011	O				0.08
72.583	0.00	0.01	0.011	O				0.08
72.667	0.00	0.01	0.011	O				0.08
72.750	0.00	0.01	0.011	O				0.08
72.833	0.00	0.01	0.011	O				0.08
72.917	0.00	0.01	0.011	O				0.08

73.000	0.00	0.01	0.011	O				0.08
73.083	0.00	0.01	0.011	O				0.08
73.167	0.00	0.01	0.010	O				0.08
73.250	0.00	0.01	0.010	O				0.08
73.333	0.00	0.01	0.010	O				0.07
73.417	0.00	0.01	0.010	O				0.07
73.500	0.00	0.01	0.010	O				0.07
73.583	0.00	0.01	0.010	O				0.07
73.667	0.00	0.01	0.010	O				0.07
73.750	0.00	0.01	0.010	O				0.07
73.833	0.00	0.01	0.010	O				0.07
73.917	0.00	0.01	0.010	O				0.07
74.000	0.00	0.01	0.010	O				0.07
74.083	0.00	0.01	0.010	O				0.07
74.167	0.00	0.01	0.010	O				0.07
74.250	0.00	0.01	0.010	O				0.07
74.333	0.00	0.01	0.010	O				0.07
74.417	0.00	0.01	0.009	O				0.07
74.500	0.00	0.01	0.009	O				0.07
74.583	0.00	0.01	0.009	O				0.07
74.667	0.00	0.01	0.009	O				0.07
74.750	0.00	0.01	0.009	O				0.07
74.833	0.00	0.01	0.009	O				0.07
74.917	0.00	0.01	0.009	O				0.07
75.000	0.00	0.01	0.009	O				0.07
75.083	0.00	0.01	0.009	O				0.07
75.167	0.00	0.01	0.009	O				0.06
75.250	0.00	0.01	0.009	O				0.06
75.333	0.00	0.01	0.009	O				0.06
75.417	0.00	0.01	0.009	O				0.06
75.500	0.00	0.01	0.009	O				0.06
75.583	0.00	0.01	0.009	O				0.06
75.667	0.00	0.01	0.009	O				0.06
75.750	0.00	0.01	0.009	O				0.06
75.833	0.00	0.01	0.008	O				0.06
75.917	0.00	0.01	0.008	O				0.06
76.000	0.00	0.01	0.008	O				0.06
76.083	0.00	0.01	0.008	O				0.06
76.167	0.00	0.01	0.008	O				0.06
76.250	0.00	0.01	0.008	O				0.06
76.333	0.00	0.01	0.008	O				0.06
76.417	0.00	0.01	0.008	O				0.06
76.500	0.00	0.01	0.008	O				0.06
76.583	0.00	0.01	0.008	O				0.06
76.667	0.00	0.01	0.008	O				0.06
76.750	0.00	0.01	0.008	O				0.06
76.833	0.00	0.01	0.008	O				0.06
76.917	0.00	0.01	0.008	O				0.06
77.000	0.00	0.01	0.008	O				0.06
77.083	0.00	0.01	0.008	O				0.06
77.167	0.00	0.01	0.008	O				0.06
77.250	0.00	0.01	0.008	O				0.06
77.333	0.00	0.01	0.008	O				0.05
77.417	0.00	0.01	0.008	O				0.05
77.500	0.00	0.01	0.007	O				0.05
77.583	0.00	0.01	0.007	O				0.05
77.667	0.00	0.01	0.007	O				0.05
77.750	0.00	0.01	0.007	O				0.05
77.833	0.00	0.01	0.007	O				0.05
77.917	0.00	0.01	0.007	O				0.05
78.000	0.00	0.01	0.007	O				0.05
78.083	0.00	0.01	0.007	O				0.05
78.167	0.00	0.01	0.007	O				0.05

78.250	0.00	0.01	0.007	O				0.05
78.333	0.00	0.01	0.007	O				0.05
78.417	0.00	0.01	0.007	O				0.05
78.500	0.00	0.01	0.007	O				0.05
78.583	0.00	0.01	0.007	O				0.05
78.667	0.00	0.01	0.007	O				0.05
78.750	0.00	0.01	0.007	O				0.05
78.833	0.00	0.01	0.007	O				0.05
78.917	0.00	0.01	0.007	O				0.05
79.000	0.00	0.01	0.007	O				0.05
79.083	0.00	0.01	0.007	O				0.05
79.167	0.00	0.01	0.007	O				0.05
79.250	0.00	0.01	0.007	O				0.05
79.333	0.00	0.01	0.006	O				0.05
79.417	0.00	0.01	0.006	O				0.05
79.500	0.00	0.01	0.006	O				0.05
79.583	0.00	0.01	0.006	O				0.05
79.667	0.00	0.01	0.006	O				0.05
79.750	0.00	0.01	0.006	O				0.05
79.833	0.00	0.01	0.006	O				0.05
79.917	0.00	0.01	0.006	O				0.04
80.000	0.00	0.01	0.006	O				0.04
80.083	0.00	0.01	0.006	O				0.04
80.167	0.00	0.01	0.006	O				0.04
80.250	0.00	0.01	0.006	O				0.04
80.333	0.00	0.01	0.006	O				0.04
80.417	0.00	0.01	0.006	O				0.04
80.500	0.00	0.01	0.006	O				0.04
80.583	0.00	0.01	0.006	O				0.04
80.667	0.00	0.01	0.006	O				0.04
80.750	0.00	0.01	0.006	O				0.04
80.833	0.00	0.01	0.006	O				0.04
80.917	0.00	0.01	0.006	O				0.04
81.000	0.00	0.01	0.006	O				0.04
81.083	0.00	0.01	0.006	O				0.04
81.167	0.00	0.01	0.006	O				0.04
81.250	0.00	0.01	0.006	O				0.04
81.333	0.00	0.01	0.006	O				0.04
81.417	0.00	0.01	0.005	O				0.04
81.500	0.00	0.01	0.005	O				0.04
81.583	0.00	0.01	0.005	O				0.04
81.667	0.00	0.01	0.005	O				0.04
81.750	0.00	0.01	0.005	O				0.04
81.833	0.00	0.01	0.005	O				0.04
81.917	0.00	0.00	0.005	O				0.04
82.000	0.00	0.00	0.005	O				0.04
82.083	0.00	0.00	0.005	O				0.04
82.167	0.00	0.00	0.005	O				0.04
82.250	0.00	0.00	0.005	O				0.04
82.333	0.00	0.00	0.005	O				0.04
82.417	0.00	0.00	0.005	O				0.04
82.500	0.00	0.00	0.005	O				0.04
82.583	0.00	0.00	0.005	O				0.04
82.667	0.00	0.00	0.005	O				0.04
82.750	0.00	0.00	0.005	O				0.04
82.833	0.00	0.00	0.005	O				0.04
82.917	0.00	0.00	0.005	O				0.04
83.000	0.00	0.00	0.005	O				0.04
83.083	0.00	0.00	0.005	O				0.03
83.167	0.00	0.00	0.005	O				0.03
83.250	0.00	0.00	0.005	O				0.03
83.333	0.00	0.00	0.005	O				0.03
83.417	0.00	0.00	0.005	O				0.03

83.500	0.00	0.00	0.005	O				0.03
83.583	0.00	0.00	0.005	O				0.03
83.667	0.00	0.00	0.005	O				0.03
83.750	0.00	0.00	0.005	O				0.03
83.833	0.00	0.00	0.005	O				0.03
83.917	0.00	0.00	0.005	O				0.03
84.000	0.00	0.00	0.004	O				0.03
84.083	0.00	0.00	0.004	O				0.03
84.167	0.00	0.00	0.004	O				0.03
84.250	0.00	0.00	0.004	O				0.03
84.333	0.00	0.00	0.004	O				0.03
84.417	0.00	0.00	0.004	O				0.03
84.500	0.00	0.00	0.004	O				0.03
84.583	0.00	0.00	0.004	O				0.03
84.667	0.00	0.00	0.004	O				0.03
84.750	0.00	0.00	0.004	O				0.03
84.833	0.00	0.00	0.004	O				0.03
84.917	0.00	0.00	0.004	O				0.03
85.000	0.00	0.00	0.004	O				0.03
85.083	0.00	0.00	0.004	O				0.03
85.167	0.00	0.00	0.004	O				0.03
85.250	0.00	0.00	0.004	O				0.03
85.333	0.00	0.00	0.004	O				0.03
85.417	0.00	0.00	0.004	O				0.03
85.500	0.00	0.00	0.004	O				0.03
85.583	0.00	0.00	0.004	O				0.03
85.667	0.00	0.00	0.004	O				0.03
85.750	0.00	0.00	0.004	O				0.03
85.833	0.00	0.00	0.004	O				0.03
85.917	0.00	0.00	0.004	O				0.03
86.000	0.00	0.00	0.004	O				0.03
86.083	0.00	0.00	0.004	O				0.03
86.167	0.00	0.00	0.004	O				0.03
86.250	0.00	0.00	0.004	O				0.03
86.333	0.00	0.00	0.004	O				0.03
86.417	0.00	0.00	0.004	O				0.03
86.500	0.00	0.00	0.004	O				0.03
86.583	0.00	0.00	0.004	O				0.03
86.667	0.00	0.00	0.004	O				0.03
86.750	0.00	0.00	0.004	O				0.03
86.833	0.00	0.00	0.004	O				0.03
86.917	0.00	0.00	0.004	O				0.03
87.000	0.00	0.00	0.004	O				0.03
87.083	0.00	0.00	0.004	O				0.03
87.167	0.00	0.00	0.004	O				0.03
87.250	0.00	0.00	0.003	O				0.03
87.333	0.00	0.00	0.003	O				0.03
87.417	0.00	0.00	0.003	O				0.02
87.500	0.00	0.00	0.003	O				0.02
87.583	0.00	0.00	0.003	O				0.02
87.667	0.00	0.00	0.003	O				0.02
87.750	0.00	0.00	0.003	O				0.02
87.833	0.00	0.00	0.003	O				0.02
87.917	0.00	0.00	0.003	O				0.02
88.000	0.00	0.00	0.003	O				0.02
88.083	0.00	0.00	0.003	O				0.02
88.167	0.00	0.00	0.003	O				0.02
88.250	0.00	0.00	0.003	O				0.02
88.333	0.00	0.00	0.003	O				0.02
88.417	0.00	0.00	0.003	O				0.02
88.500	0.00	0.00	0.003	O				0.02
88.583	0.00	0.00	0.003	O				0.02
88.667	0.00	0.00	0.003	O				0.02

88.750	0.00	0.00	0.003	O				0.02
88.833	0.00	0.00	0.003	O				0.02
88.917	0.00	0.00	0.003	O				0.02
89.000	0.00	0.00	0.003	O				0.02
89.083	0.00	0.00	0.003	O				0.02
89.167	0.00	0.00	0.003	O				0.02
89.250	0.00	0.00	0.003	O				0.02
89.333	0.00	0.00	0.003	O				0.02
89.417	0.00	0.00	0.003	O				0.02
89.500	0.00	0.00	0.003	O				0.02
89.583	0.00	0.00	0.003	O				0.02
89.667	0.00	0.00	0.003	O				0.02
89.750	0.00	0.00	0.003	O				0.02
89.833	0.00	0.00	0.003	O				0.02
89.917	0.00	0.00	0.003	O				0.02
90.000	0.00	0.00	0.003	O				0.02
90.083	0.00	0.00	0.003	O				0.02
90.167	0.00	0.00	0.003	O				0.02
90.250	0.00	0.00	0.003	O				0.02
90.333	0.00	0.00	0.003	O				0.02
90.417	0.00	0.00	0.003	O				0.02
90.500	0.00	0.00	0.003	O				0.02
90.583	0.00	0.00	0.003	O				0.02
90.667	0.00	0.00	0.003	O				0.02
90.750	0.00	0.00	0.003	O				0.02
90.833	0.00	0.00	0.003	O				0.02
90.917	0.00	0.00	0.003	O				0.02
91.000	0.00	0.00	0.003	O				0.02
91.083	0.00	0.00	0.003	O				0.02
91.167	0.00	0.00	0.003	O				0.02
91.250	0.00	0.00	0.003	O				0.02
91.333	0.00	0.00	0.003	O				0.02
91.417	0.00	0.00	0.003	O				0.02
91.500	0.00	0.00	0.003	O				0.02
91.583	0.00	0.00	0.002	O				0.02
91.667	0.00	0.00	0.002	O				0.02
91.750	0.00	0.00	0.002	O				0.02
91.833	0.00	0.00	0.002	O				0.02
91.917	0.00	0.00	0.002	O				0.02
92.000	0.00	0.00	0.002	O				0.02
92.083	0.00	0.00	0.002	O				0.02
92.167	0.00	0.00	0.002	O				0.02
92.250	0.00	0.00	0.002	O				0.02
92.333	0.00	0.00	0.002	O				0.02
92.417	0.00	0.00	0.002	O				0.02
92.500	0.00	0.00	0.002	O				0.02
92.583	0.00	0.00	0.002	O				0.02
92.667	0.00	0.00	0.002	O				0.02
92.750	0.00	0.00	0.002	O				0.02
92.833	0.00	0.00	0.002	O				0.02
92.917	0.00	0.00	0.002	O				0.02
93.000	0.00	0.00	0.002	O				0.02
93.083	0.00	0.00	0.002	O				0.02
93.167	0.00	0.00	0.002	O				0.02
93.250	0.00	0.00	0.002	O				0.02
93.333	0.00	0.00	0.002	O				0.02
93.417	0.00	0.00	0.002	O				0.02
93.500	0.00	0.00	0.002	O				0.02
93.583	0.00	0.00	0.002	O				0.02
93.667	0.00	0.00	0.002	O				0.02
93.750	0.00	0.00	0.002	O				0.02
93.833	0.00	0.00	0.002	O				0.02
93.917	0.00	0.00	0.002	O				0.02

94.000	0.00	0.00	0.002	O					0.01
94.083	0.00	0.00	0.002	O					0.01
94.167	0.00	0.00	0.002	O					0.01
94.250	0.00	0.00	0.002	O					0.01
94.333	0.00	0.00	0.002	O					0.01
94.417	0.00	0.00	0.002	O					0.01
94.500	0.00	0.00	0.002	O					0.01
94.583	0.00	0.00	0.002	O					0.01
94.667	0.00	0.00	0.002	O					0.01
94.750	0.00	0.00	0.002	O					0.01
94.833	0.00	0.00	0.002	O					0.01
94.917	0.00	0.00	0.002	O					0.01
95.000	0.00	0.00	0.002	O					0.01
95.083	0.00	0.00	0.002	O					0.01
95.167	0.00	0.00	0.002	O					0.01
95.250	0.00	0.00	0.002	O					0.01
95.333	0.00	0.00	0.002	O					0.01
95.417	0.00	0.00	0.002	O					0.01
95.500	0.00	0.00	0.002	O					0.01
95.583	0.00	0.00	0.002	O					0.01
95.667	0.00	0.00	0.002	O					0.01
95.750	0.00	0.00	0.002	O					0.01
95.833	0.00	0.00	0.002	O					0.01
95.917	0.00	0.00	0.002	O					0.01
96.000	0.00	0.00	0.002	O					0.01
96.083	0.00	0.00	0.002	O					0.01
96.167	0.00	0.00	0.002	O					0.01
96.250	0.00	0.00	0.002	O					0.01
96.333	0.00	0.00	0.002	O					0.01
96.417	0.00	0.00	0.002	O					0.01
96.500	0.00	0.00	0.002	O					0.01
96.583	0.00	0.00	0.002	O					0.01
96.667	0.00	0.00	0.002	O					0.01
96.750	0.00	0.00	0.002	O					0.01
96.833	0.00	0.00	0.002	O					0.01
96.917	0.00	0.00	0.002	O					0.01
97.000	0.00	0.00	0.002	O					0.01
97.083	0.00	0.00	0.002	O					0.01
97.167	0.00	0.00	0.002	O					0.01
97.250	0.00	0.00	0.002	O					0.01
97.333	0.00	0.00	0.002	O					0.01
97.417	0.00	0.00	0.002	O					0.01
97.500	0.00	0.00	0.002	O					0.01
97.583	0.00	0.00	0.002	O					0.01
97.667	0.00	0.00	0.002	O					0.01
97.750	0.00	0.00	0.002	O					0.01
97.833	0.00	0.00	0.002	O					0.01
97.917	0.00	0.00	0.002	O					0.01
98.000	0.00	0.00	0.002	O					0.01
98.083	0.00	0.00	0.002	O					0.01
98.167	0.00	0.00	0.001	O					0.01
98.250	0.00	0.00	0.001	O					0.01
98.333	0.00	0.00	0.001	O					0.01
98.417	0.00	0.00	0.001	O					0.01
98.500	0.00	0.00	0.001	O					0.01
98.583	0.00	0.00	0.001	O					0.01
98.667	0.00	0.00	0.001	O					0.01
98.750	0.00	0.00	0.001	O					0.01
98.833	0.00	0.00	0.001	O					0.01
98.917	0.00	0.00	0.001	O					0.01
99.000	0.00	0.00	0.001	O					0.01
99.083	0.00	0.00	0.001	O					0.01
99.167	0.00	0.00	0.001	O					0.01

99.250	0.00	0.00	0.001	O	|	|	|	|	0.01
99.333	0.00	0.00	0.001	O	|	|	|	|	0.01
99.417	0.00	0.00	0.001	O	|	|	|	|	0.01
99.500	0.00	0.00	0.001	O	|	|	|	|	0.01
99.583	0.00	0.00	0.001	O	|	|	|	|	0.01
99.667	0.00	0.00	0.001	O	|	|	|	|	0.01
99.750	0.00	0.00	0.001	O	|	|	|	|	0.01
99.833	0.00	0.00	0.001	O	|	|	|	|	0.01
99.917	0.00	0.00	0.001	O	|	|	|	|	0.01
100.000	0.00	0.00	0.001	O	|	|	|	|	0.01
100.083	0.00	0.00	0.001	O	|	|	|	|	0.01
100.167	0.00	0.00	0.001	O	|	|	|	|	0.01
100.250	0.00	0.00	0.001	O	|	|	|	|	0.01
100.333	0.00	0.00	0.001	O	|	|	|	|	0.01
100.417	0.00	0.00	0.001	O	|	|	|	|	0.01
100.500	0.00	0.00	0.001	O	|	|	|	|	0.01
100.583	0.00	0.00	0.001	O	|	|	|	|	0.01
100.667	0.00	0.00	0.001	O	|	|	|	|	0.01
100.750	0.00	0.00	0.001	O	|	|	|	|	0.01
100.833	0.00	0.00	0.001	O	|	|	|	|	0.01
100.917	0.00	0.00	0.001	O	|	|	|	|	0.01
101.000	0.00	0.00	0.001	O	|	|	|	|	0.01
101.083	0.00	0.00	0.001	O	|	|	|	|	0.01
101.167	0.00	0.00	0.001	O	|	|	|	|	0.01
101.250	0.00	0.00	0.001	O	|	|	|	|	0.01
101.333	0.00	0.00	0.001	O	|	|	|	|	0.01
101.417	0.00	0.00	0.001	O	|	|	|	|	0.01
101.500	0.00	0.00	0.001	O	|	|	|	|	0.01
101.583	0.00	0.00	0.001	O	|	|	|	|	0.01
101.667	0.00	0.00	0.001	O	|	|	|	|	0.01
101.750	0.00	0.00	0.001	O	|	|	|	|	0.01
101.833	0.00	0.00	0.001	O	|	|	|	|	0.01
101.917	0.00	0.00	0.001	O	|	|	|	|	0.01
102.000	0.00	0.00	0.001	O	|	|	|	|	0.01
102.083	0.00	0.00	0.001	O	|	|	|	|	0.01
102.167	0.00	0.00	0.001	O	|	|	|	|	0.01
102.250	0.00	0.00	0.001	O	|	|	|	|	0.01
102.333	0.00	0.00	0.001	O	|	|	|	|	0.01
102.417	0.00	0.00	0.001	O	|	|	|	|	0.01
102.500	0.00	0.00	0.001	O	|	|	|	|	0.01
102.583	0.00	0.00	0.001	O	|	|	|	|	0.01

Remaining water in basin = 0.00 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 1231
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.000 (CFS)
Total volume = 2.352 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

APPENDIX F:
PROJECT HYDRAULIC CALCULATIONS

Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. Thursday, Mar 10 2022

24 in overflow outlet - Prelim Sizing

Circular

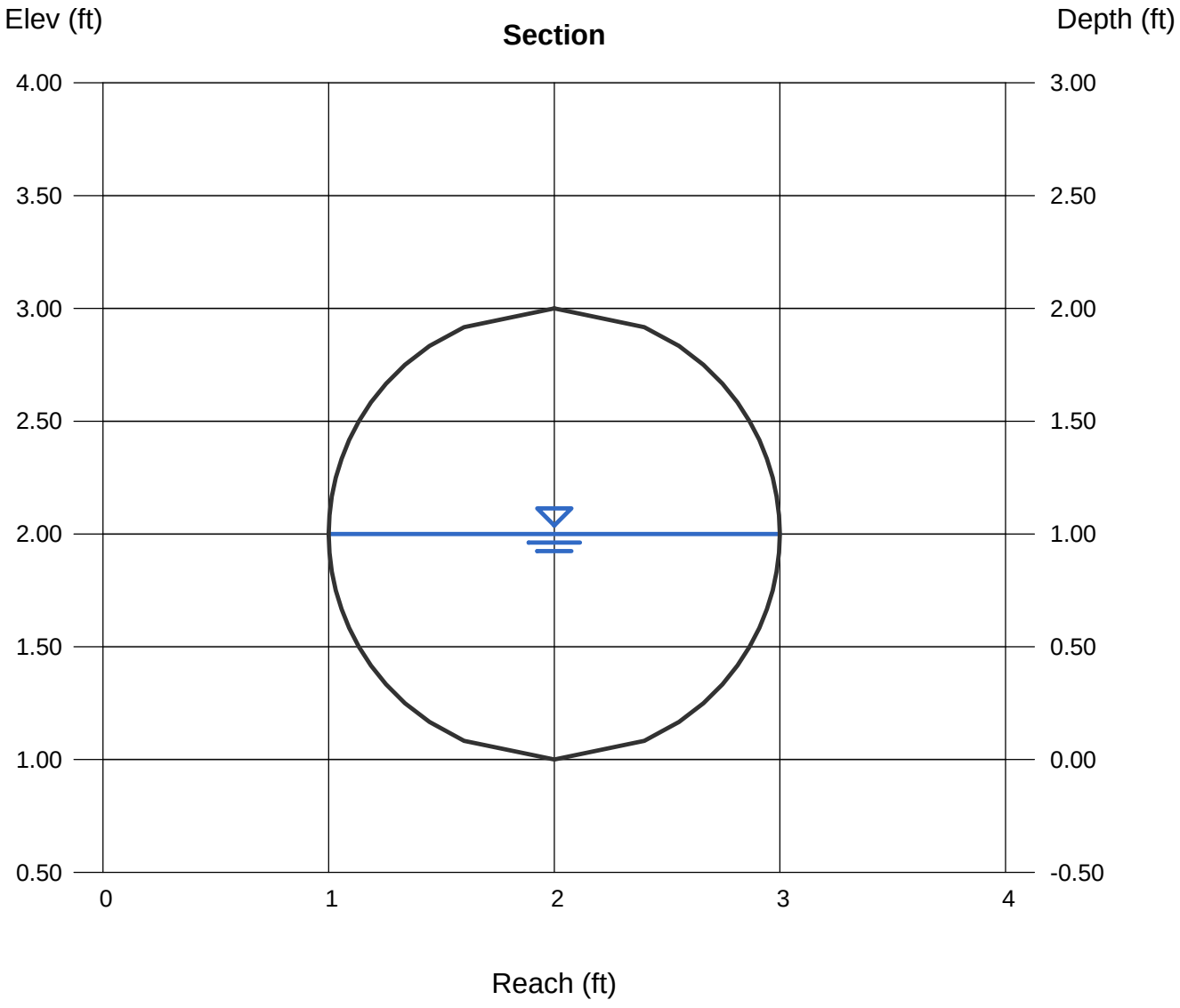
Diameter (ft)	= 2.00
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Q vs Depth
No. Increments	= 10

Highlighted

Depth (ft)	= 1.00
Q (cfs)	= 8.053
Area (sqft)	= 1.58
Velocity (ft/s)	= 5.10
Wetted Perim (ft)	= 3.15
Crit Depth, Yc (ft)	= 0.82
Top Width (ft)	= 2.00
EGL (ft)	= 1.40



Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. Thursday, Mar 10 2022

24 in overflow outlet - Prelim Sizing

Circular

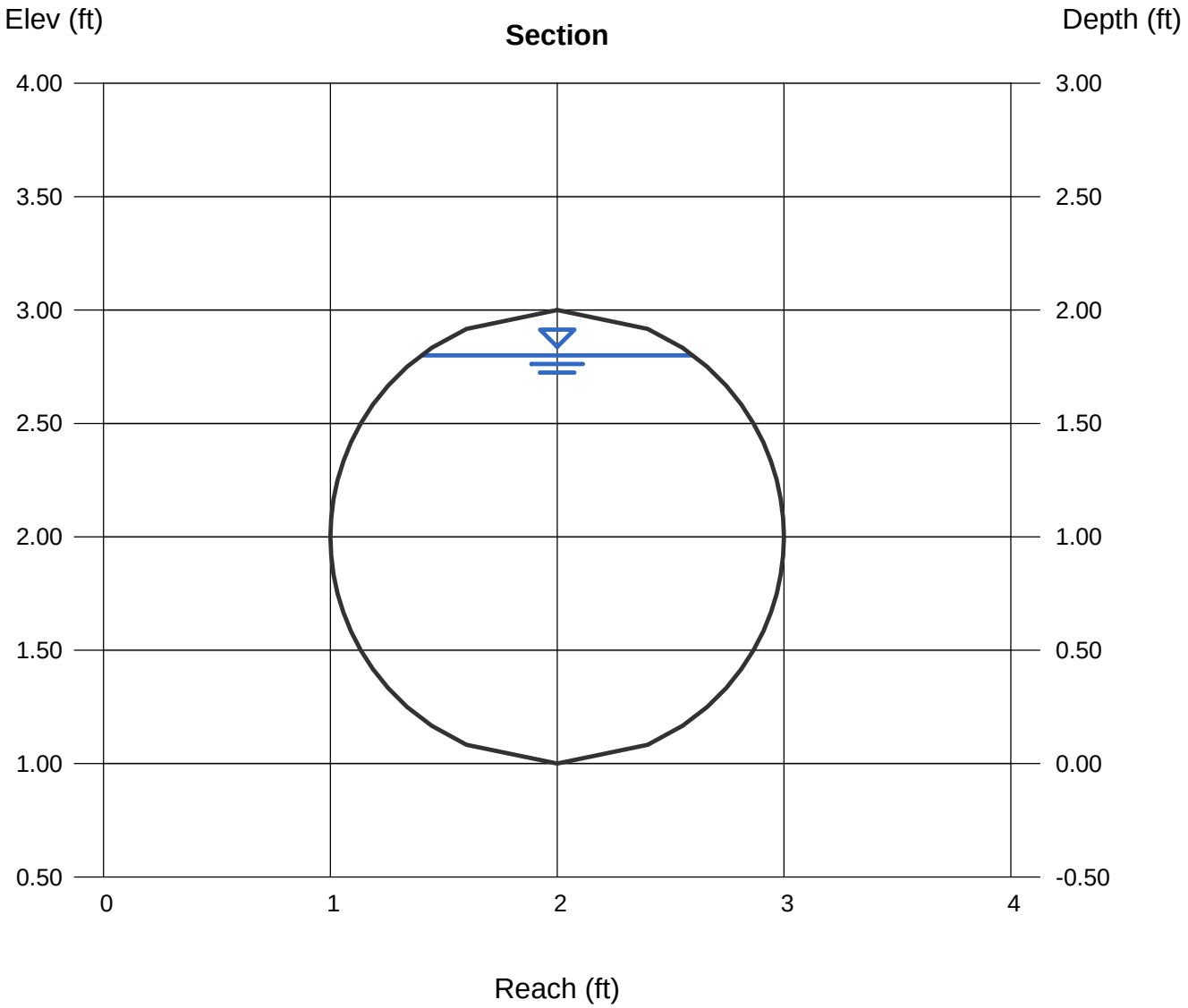
Diameter (ft)	= 2.00
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Q vs Depth
No. Increments	= 10

Highlighted

Depth (ft)	= 1.80
Q (cfs)	= 17.05
Area (sqft)	= 2.98
Velocity (ft/s)	= 5.72
Wetted Perim (ft)	= 5.00
Crit Depth, Yc (ft)	= 1.43
Top Width (ft)	= 1.20
EGL (ft)	= 2.31



Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. Thursday, Mar 10 2022

18 in overflow outlet - Prelim Sizing

Circular

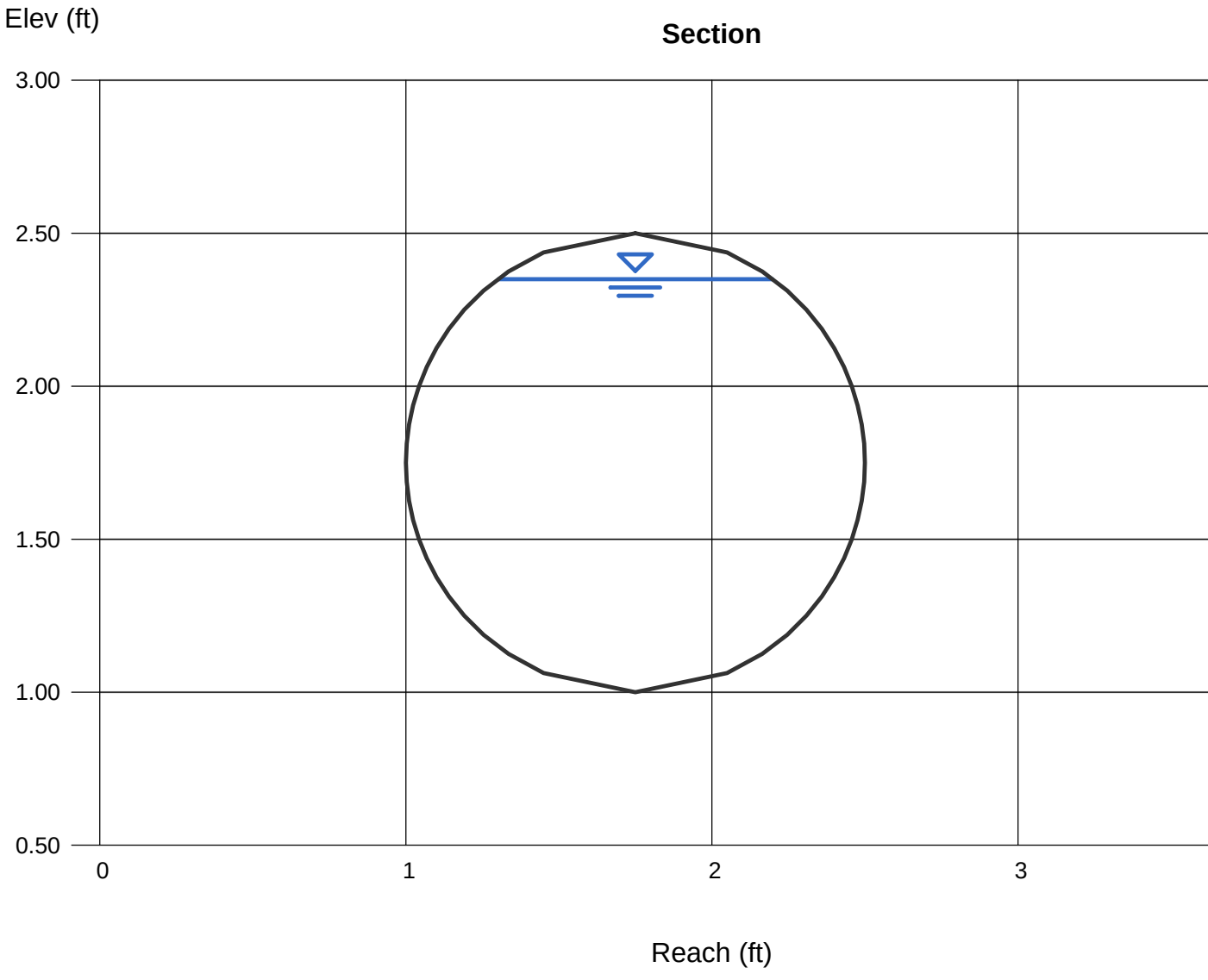
Diameter (ft)	= 1.50
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Q vs Depth
No. Increments	= 10

Highlighted

Depth (ft)	= 1.35
Q (cfs)	= 7.916
Area (sqft)	= 1.68
Velocity (ft/s)	= 4.72
Wetted Perim (ft)	= 3.75
Crit Depth, Yc (ft)	= 1.05
Top Width (ft)	= 0.90
EGL (ft)	= 1.70



Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. Thursday, Aug 12 2021

Seneca & Stevens - Channel 2B Design

User-defined

Invert Elev (ft)	= 129.47
Slope (%)	= 0.10
N-Value	= 0.020

Calculations

Compute by:	Known Q
Known Q (cfs)	= 450.00

Highlighted

Depth (ft)	= 4.71
Q (cfs)	= 450.00
Area (sqft)	= 95.41
Velocity (ft/s)	= 4.72
Wetted Perim (ft)	= 33.65
Crit Depth, Yc (ft)	= 3.26
Top Width (ft)	= 31.90
EGL (ft)	= 5.06

(Sta, El, n)-(Sta, El, n)...

(0.00, 135.47)-(13.00, 129.97, 0.013)-(19.00, 129.47, 0.030)-(25.00, 129.97, 0.030)-(38.00, 135.47, 0.013)